FAP24

Government of the People's Republic of Bangladesh

Water Resources Planning Organization

European Commission

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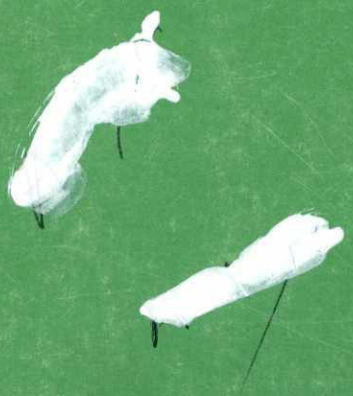
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RIVER SURVEY PROJECT

Special Report No.22



River Data Book January 1993 - March 1995

Part C: Special Surveys

October 1996

Special Report 22

River Data Book
January 1993 - March 1995

Part C: Special surveys

October 1996

Contents of entire Data Book

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Part C: Special surveys June 1994 - March 1995

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Additional flow measurements at Bahadurabad

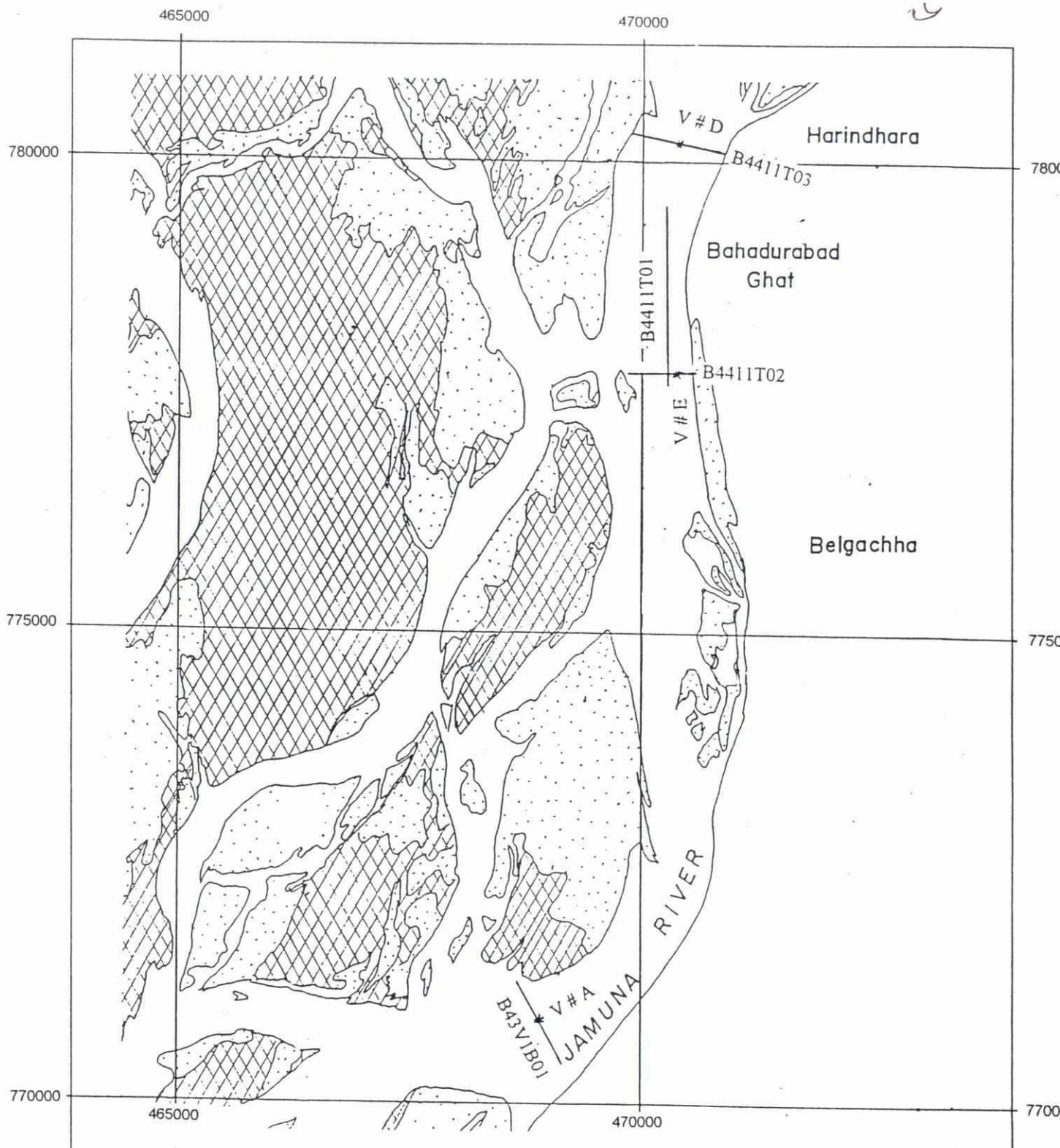
Survey No.	Date
9001	23/694
9003	28/694
9006	13/794
9007	16/794
9011	2/894
9019	18/894
9022	30/894
9023	6/994
9026	17/994
9027	28/994
9032	17/1094
9035	23/1094
9039	26/1194
9041	13/1294
9045	8/295
9049	11/395
9052	27/395

Bedform inventory programme

Survey No.	Reach	Date
9020	Bahadurabad → Aricha	19-20/8 94
9021	Aricha → Bahadurabad	28-29/8 94
9024	Bahadurabad → Aricha	7-8/9 94
9025	Siranganj → Bahadurabad	16/9 94
9029	Bahadurabad → Aricha	1-6/10 94
9030	Aricha → Siranganj	15/10 94
9031	Siranganj → Bahadurabad	16/10 94
9036	Bahadurabad → Siranganj	25/10 94
9042	Bahadurabad → Siranganj	14/12 94
9043	Siranganj → Aricha	17/12 94
9046	Bahadurabad → Siranganj	11/2 95
9047	Siranganj → Aricha	14/2 95
9050	Bahadurabad → Siranganj	14/3 95

Other special surveys

Survey no.	Place	Time	Scope
9000	Bahadurabad	31/3 - 1/4 94	optimization study
9000B	Baruria	12-13/4 94	optimization study
9000C	Bahadurabad	18-19/5 94	bar dynamics
9004	Arial Khan	8/7 94	off-take and tidal survey
9012	Bahadurabad	2-4/8 94	near bed measurements
9014	Kushtia -> Aricha	6/8 94	bed material sampling
9016	Old Brahmaputra	9-20/8 94	bed sampling
9017	Bahadurabad	10-14/8 94	bars and dune fields
9018	Bahadurabad	14-18/8 94	bar dynamics
9022B	Bahadurabad	31/8-1/9 94	slope mapping
9026B	Bahadurabad	18/9 94	bar dynamics
9026C	Bahadurabad	19-20/9 94	bars and dune fields
9033	Hardinge Bridge	19/10 94	constriction effects, sediment transport
9034	Hardinge Bridge	21/10 94	sediment transport study
9037	Bahadurabad	4/11 94	bar dynamics
9037B	Bahadurabad	6/11 94	turbulence study
9040	Bahadurabad	4-12/12 94	optimization study and bar dynamics



FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9000 : 31 March - 01 April, 1994
		Jamuna River, Optimization of flow measuring time
	Date : 18 June 1996	Location map
	Init : sik / kah	page 1.1

Type of measurement	Method	No of measurements in Lines				
		BB2Y 001-011	BB2Y 005	BB2Y 020	BB2Y 021	BB2Y 022
Discharge	ADCP transect	1	1	-	1	1
	EMF transect	1	1	-	1	1
	Echo-Sounding	1	1	1	1	1
Vertical current profile	No. of verticals in channel	1	-	-	1	1
	ADCP	1	-	1	1	1
	S4 current meter	-	-	-	-	1
	Ott current meter	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-
	Andreasen Settling tube	1	-	-	1	1
	MEX turbidity meter	1	-	-	-	1
	Integrated bottle sampling	-	-	-	-	-
	Collapsible bag	-	-	-	-	-
Bed load	Dune tracking	-	-	-	-	-
	Helly-smith sampler	-	-	-	-	-
	Delft Bottle	-	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-	-
	Van Veen bed sampler	-	-	-	-	-

Table 2.1: Survey programme as made

Transect name	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)
B4411t03	1022.41	7395.18	15.24	7233.46	-	-

Table 2.2: Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	31 March 94	15.34	FAP24
Bahadurabad	01 April 94	15.24	FAP24

Table 2.3: Water Levels

Short Description:

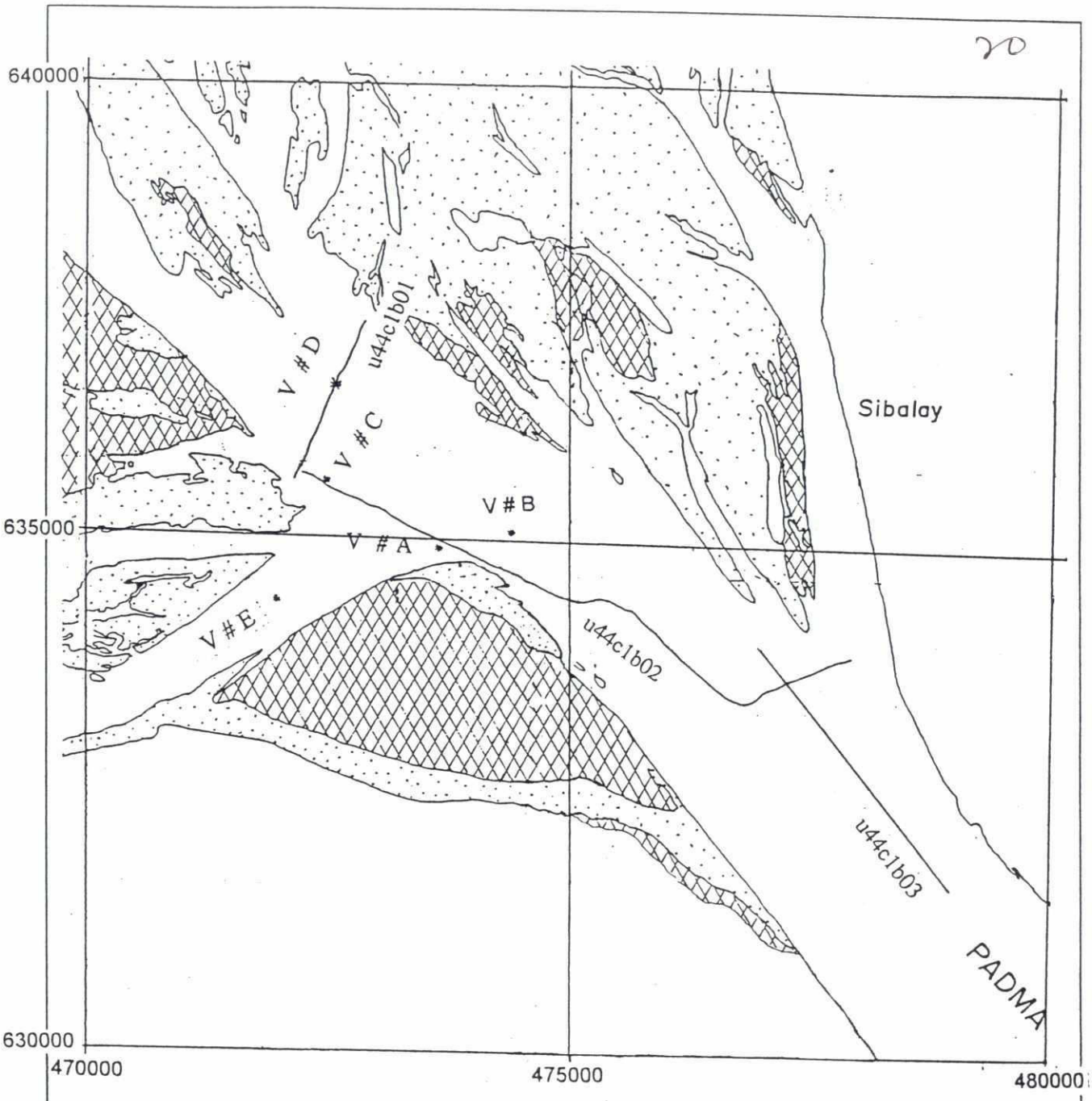
This survey was executed in the Jamuna River left channel near Bahadurabad to determine optimal measuring time for a current meter and turbulence flow structure. The survey was made on 31 March - 01 April' 94. Results are reported in Special Report 11.

Transect /Echosounding file name	Profile file name	Line no	Survey date	Type of data
B43V1T01 *		BB2Y001 - 11	1994-03-31	ADCP/EMF+Echosounding
	B43V1P02	BB2Y011	1994-03-31	ADCP/EMF+Echosounding+Sediment + MEX
B43V1B01		BB2Y020	1994-03-31	Echosounding
B4411T01 *		BB2Y005	1994-04-01	ADCP/EMF+Echosounding
B4411T02 *		BB2Y022	1994-04-01	ADCP/EMF+Echosounding
	B4411P01	BB2Y022	1994-04-01	ADCP/EMF+Echosounding+Sediment + S4 + MEX
B4411T03 *		BB2Y021	1994-04-01	ADCP/EMF+Echosounding
	B4411P02	BB2Y021	1994-04-01	ADCP/EMF+Echosounding+Sediment

* : Transect / Echo sounding in PSD24 data base

Survey data	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-03-31	B43V1T01	BB2Y001- 11	+	+	-					+		
1994-04-01	B4411T01	BB2Y005	+	+	+							
1994-04-01	B4411T02	BB2Y022	+	+	+					+		
1994-04-01	B4411T03	BB2Y021	+	+	+					+		
Total number of files			4	4	3					3		

Table 4.1 PSD 24 Database file description



LEGEND :

ADCP transect line
Vertical profile
Low char
High land

N

2500m 0

Map based on SPOT Image on March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9000B : 12 - 13 April, 1994	
		Padma River, Optimization of flow measuring time	
	Date : 20 June 1996	Location map	page 1.1
	Init : sik		

Type of measurement	Method	No. of measurements in Lines		
		UB1X 001	UB1X 002	UB1X 005
Discharge	ADCP transect	-	-	-
	EMF transect	-	-	-
	Echo-Sounding	1	1	1
Vertical current profile	No. of verticals in channel	-	-	-
	ADCP	2	3	-
	S4 current meter	2	3	-
	Ott current meter	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-
	Andreasen Settling tube	2	3	-
	MEX turbidity meter	2	2	-
	Integrated bottle sampling	-	-	-
	Collapsible bag	-	-	-
Bed load	Dune tracking	-	-	-
	Helly-smith sampler	-	-	-
	Delft Bottle	-	-	-
Bed material	US BM-54 bed sampler	-	-	-
	Van Veen bed sampler	-	-	-

Table 2.1: Survey programme as made

Transect name	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)
U44C1B01	1022.41	7395.18	3.29	7233.46	--	--

Table 2.2: Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Baruria	12 April 94	3.29	FAP24
Baruria	13 April 94	3.28	FAP24

Table 2.3: Water Levels

Short Description :

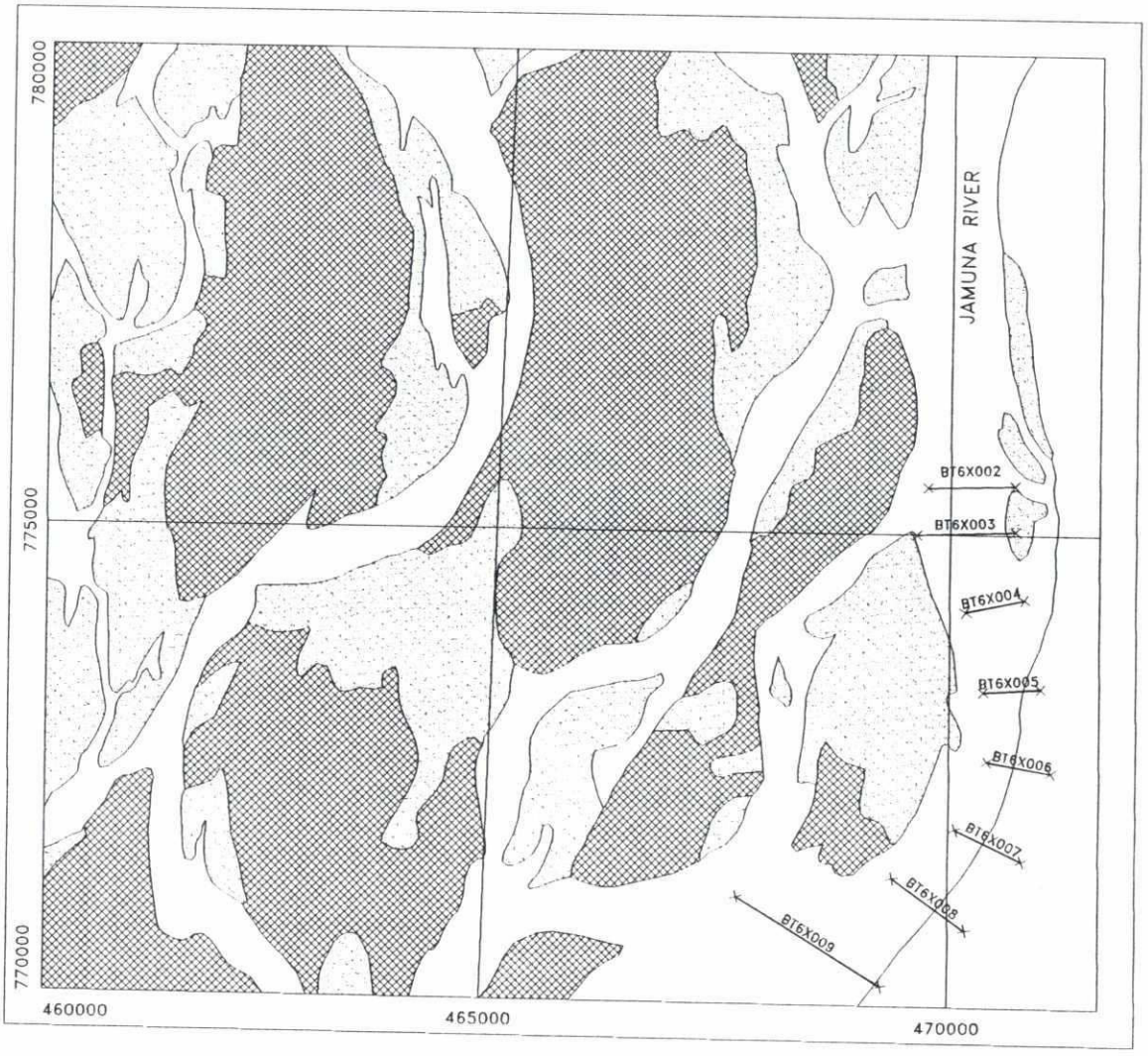
This survey was executed near the Ganges-Jamuna confluence to determine optimal measuring time for a current meter and turbulence flow structure. The survey was made on 12 -13 April 1994. Results are reported in RSP Special Report # 11.

Transect /Echosounding file name	Profile file name	Vertical no.	Line no	Survey date	Type of data
U44C1B01 *			UB1X001	1994-04-12	Echosounding
	U44D1P01	V # D	UB1X001	1994-04-13	ADCP/EMF+Echosounding+Sediment+S4+MEX
	U44D1P02	V # C	UB1X001	1994-04-13	ADCP/EMF+Echosounding+Sediment+S4
U44C1B02 *	-		UB1X002	1994-04-12	Echosounding
	U44C1P01	V # E	UB1X002	1994-04-12	ADCP/EMF+Echosounding+Sediment+S4+MEX
	U44C1P02	V # A	UB1X002	1994-04-12	ADCP/EMF+Echosounding+Sediment+S4+MEX
	U44D1P03	V # B	UB1X002	1994-04-13	ADCP/EMF+Echosounding+Sediment+S4+MEX
U44C1B03 *	-		UB1X005	1994-04-12	Echosounding

* : Transect / Echo sounding in PSD24 data base

Survey data	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-04-12	U44C1B01	UB1X001	+	+	+					+		
1994-04-12	U44C1B02	UB1X002	+	+	+					+		
1994-04-12	U44C1B03	UB1X005	-	-	-							+
Total number of files			2	2	2					2		1

Table 4.1 PSD 24 Database file description



FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9000C: 18 - 19 May, 1994	
	Jamuna River, Bifurcation flow	
Date : 29 July 1996 Init : kah	Location map	page 1.1

Type of measurement	Method	No. of measurements in Lines							
		BT6X 002	BT6X 003	BT6X 004	BT6X 005	BT6X 006	BT6X 007	BT6X 008	BT6X 009
Discharge	ADCP transect	1	1	1	1	1	1	1	1
	EMF transect	1	1	1	1	1	1	1	1
	Echo-Sounding	1	1	1	1	1	1	1	1
Vertical current profile	No.of verticals in channel	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-
	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

Line no	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)
BT6X002	1660.29	6672.47	16.15	6797.70	-	-
BT6X003	1453.83	6877.74	16.15	6706.89	-	-
BT6X004	1480.42	4984.71	16.15	5186.27	-	-
BT6X005	1615.93	5497.30	16.15	5787.14	-	-
BT6X006	1420.61	5679.93	16.15	6063.79	-	-
BT6X007	1012.20	5969.27	16.15	6525.23	-	-
BT6X008	1369.22	6920.27	16.15	6256.43	-	-
BT6X009	3125.37	11361.73	16.23	7745.31	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	18 May 94	16.23	FAP24
Bahadurabad	19 May 94	16.15	FAP24

Table 2.3 : Water levels

Short Description :

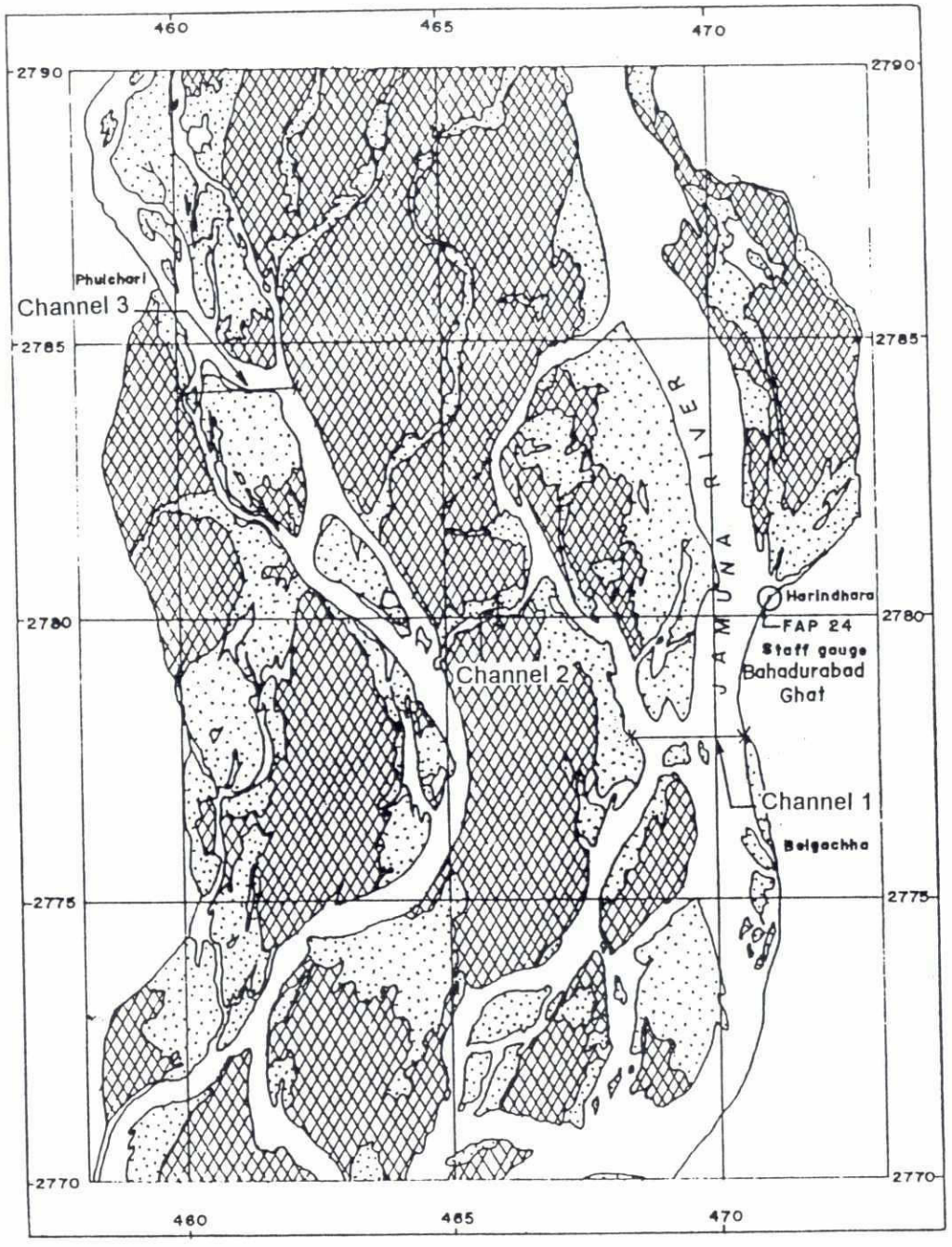
Transect measurements made around Roy's bar on 18 -19 May 1994. Results are reported an RSP Special Report 16.

Transect file name	Profile file name	Line no	Survey date	Type of data
B45I1T01 *		BT6X009	1994-05-18	ADCP/EMF+Echosounding
B45I1T02 *		BT6X009	1994-05-18	ADCP/EMF+Echosounding
B45J1T01 *		BT6X008	1994-05-19	ADCP/EMF+Echosounding
B45J1T02 *		BT6X008	1994-05-19	ADCP/EMF+Echosounding
B45J1T03 *		BT6X007	1994-05-19	ADCP/EMF+Echosounding
B45J1T04 *		BT6X007	1994-05-19	ADCP/EMF+Echosounding
B45J1T05 *		BT6X006	1994-05-19	ADCP/EMF+Echosounding
B45J1T05 *		BT6X006	1994-05-19	ADCP/EMF+Echosounding
B45J1T07 *		BT6X005	1994-05-19	ADCP/EMF+Echosounding
B45J1T08 *		BT6X005	1994-05-19	ADCP/EMF+Echosounding
B45J1T09 *		BT6X004	1994-05-19	ADCP/EMF+Echosounding
B45J1T10 *		BT6X004	1994-05-19	ADCP/EMF+Echosounding
B45J1T11 *		BT6X003	1994-05-19	ADCP/EMF+Echosounding
B45J1T12 *		BT6X003	1994-05-19	ADCP/EMF+Echosounding
B45J1T13 *		BT6X002	1994-05-19	ADCP/EMF+Echosounding
B45J1T14 *		BT6X002	1994-05-19	ADCP/EMF+Echosounding

* : Transect / Echo sounding in PSD24 data base

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-05-18	B45I1T01	BT6X009	+	+	+							
1994-05-18	B45I1T02	BT6X009	+	+	+							
1994-05-19	B45J1T01	BT6X008	+	+	+							
1994-05-19	B45J1T02	BT6X008	+	+	+							
1994-05-19	B45J1T03	BT6X007	+	+	+							
1994-05-19	B45J1T04	BT6X007	+	+	+							
1994-05-19	B45J1T05	BT6X006	+	+	+							
1994-05-19	B45J1T05	BT6X006	+	+	+							
1994-05-19	B45J1T07	BT6X005	+	+	+							
1994-05-19	B45J1T08	BT6X005	+	+	+							
1994-05-19	B45J1T09	BT6X004	+	+	+							
1994-05-19	B45J1T10	BT6X004	+	+	+							
1994-05-19	B45J1T11	BT6X003	+	+	+							
1994-05-19	B45J1T12	BT6X003	+	+	+							
1994-05-19	B45J1T13	BT6X002	+	+	+							
1994-05-19	B45J1T14	BT6X002	+	+	+							
Total number of files			16	16	16	-	-	-	-	-	-	-

Table 4.1: PSD24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable / low char
- FAP 24 Staff gauge

N

5000 m 2500 m 0

Map is based on satellite images of March 1994

FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities DELFT - DHI		Survey Bulletin 9001 : 23 June, 1994
		Location 1 : Jamuna River, Bahadurabad
	Date : 14 Sep 1994	Location map
	Init : mzh	1.1

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

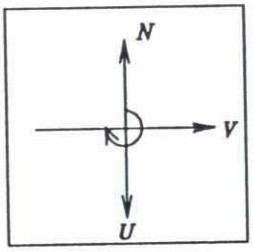
Table 2.1: Survey programme as made

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	2954	17063	18.54	23773	-	-
Channel 2	391	1471	18.54	1574	-	-
Channel 3	2143	10528	18.54	8819	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	23 Jun 94	18.54	FAP 24
	Channel 2	23 Jun 94	18.54	
	Channel 3	23 Jun 94	18.54	

Table 2.3: Water-levels

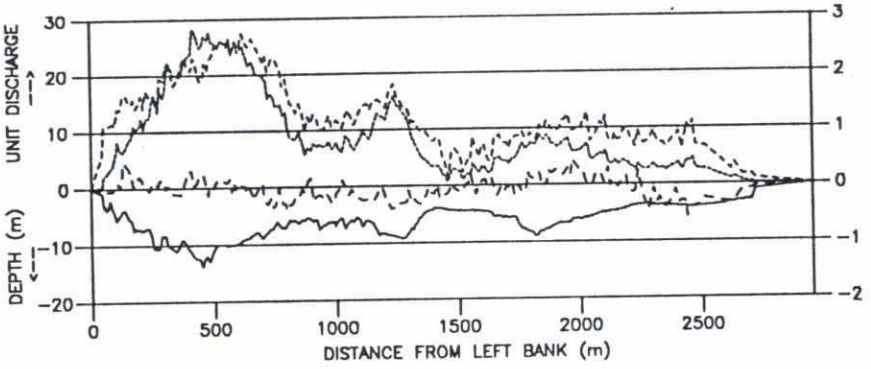


TRANSECT AZIMUTH = 270°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 18.54 (m+PWD)

A = 17063 (m²)

Q = 23773 (m³/s)

FLOW

Sample not collected

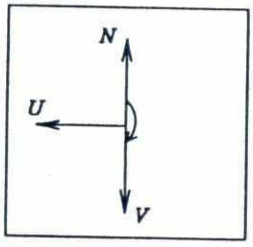
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9001 : 23 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46N1T05	Date : 14 Sep 1994	Horizontal distribution of flow and sediments	page
	Init : mzh	Channel 1	3.1

22

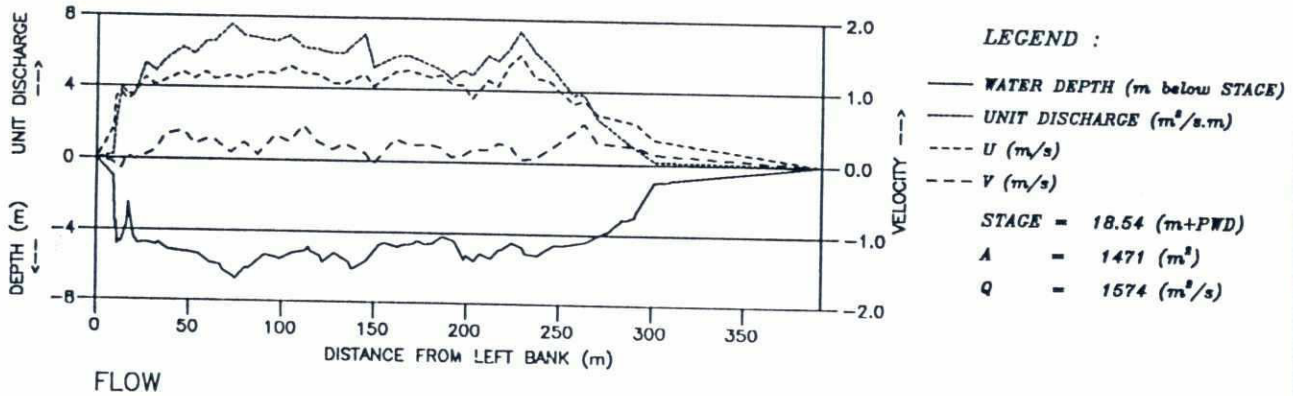


TRANSECT AZIMUTH = 180°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

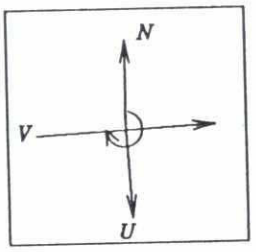
Sample not collected

SEDIMENT TRANSPORT

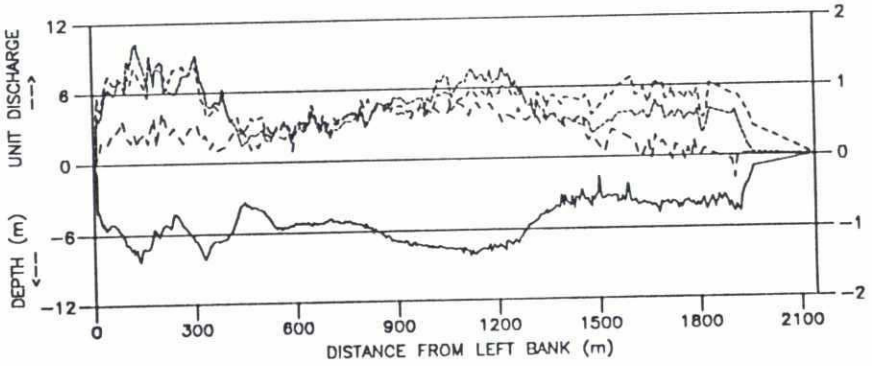
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9001 : 23 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46N1T03	Date : 14 Sep 1994	Horizontal distribution of flow and sediments	page
	Init : mzh	Channel 2	3.2



TRANSECT AZIMUTH = 267°
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 (m²/s.m)
U (m/s)
V (m/s)

STAGE = 18.54 (m+PWD)
A = 10528 (m²)
Q = 8819 (m³/s)

FLOW

Sample not collected

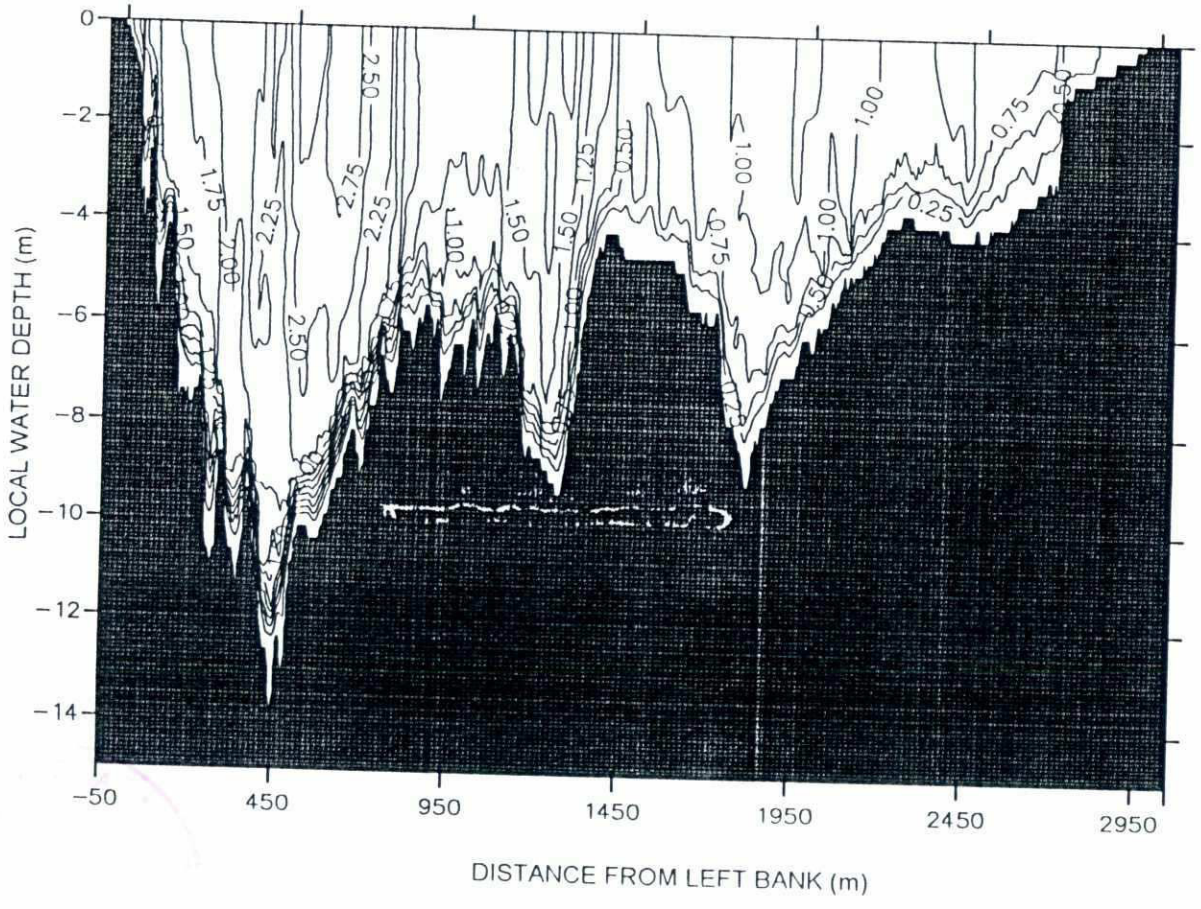
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

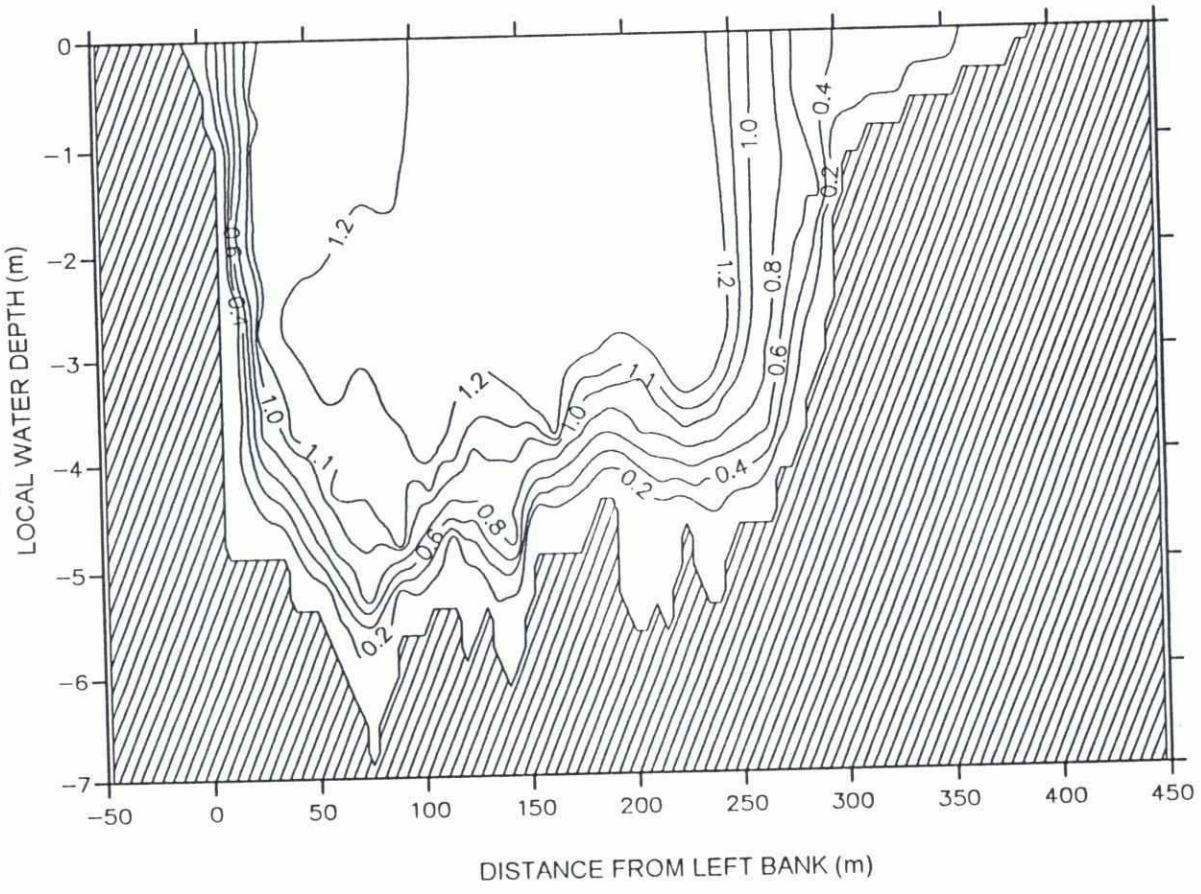
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FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9001 : 23 June, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B46N1T01	Date : 14 Sep 1994 Init : mzh	Horizontal distribution of flow and sediments Channel 3	page 3.3



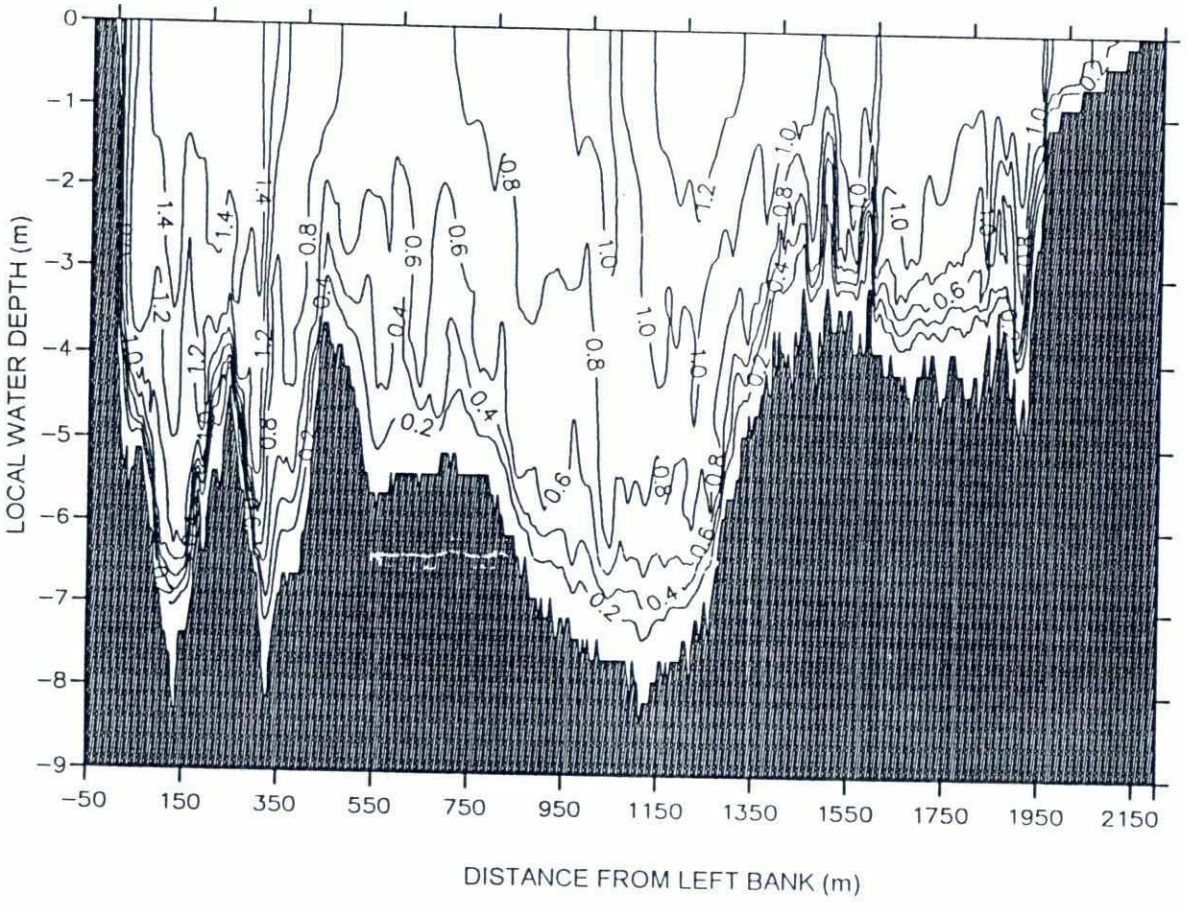
Iso-velocity contours (m/s)
Water level : 18.54 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9001 : 23 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46N1T05	Date : 14 Sep 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh	Channel 1	4.1



Iso-velocity contours (m/s)
Water level : 18.54 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 9001 : 23 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46N1T03	Date : 14 Sep 1994 Init : mzh	Cross-sectional distribution of flow velocity Channel 2	page 4.2



Iso-velocity contours (m/s)
Water level : 18.54 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 9001 : 23 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46N1T01	Date : 14 Sep 1994	Cross-sectional distribution of flow velocity	page 4.3
	Init : mzh	Channel 3	

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)
Sample not collected							

Table 5.3 : Grain sizes of bed load

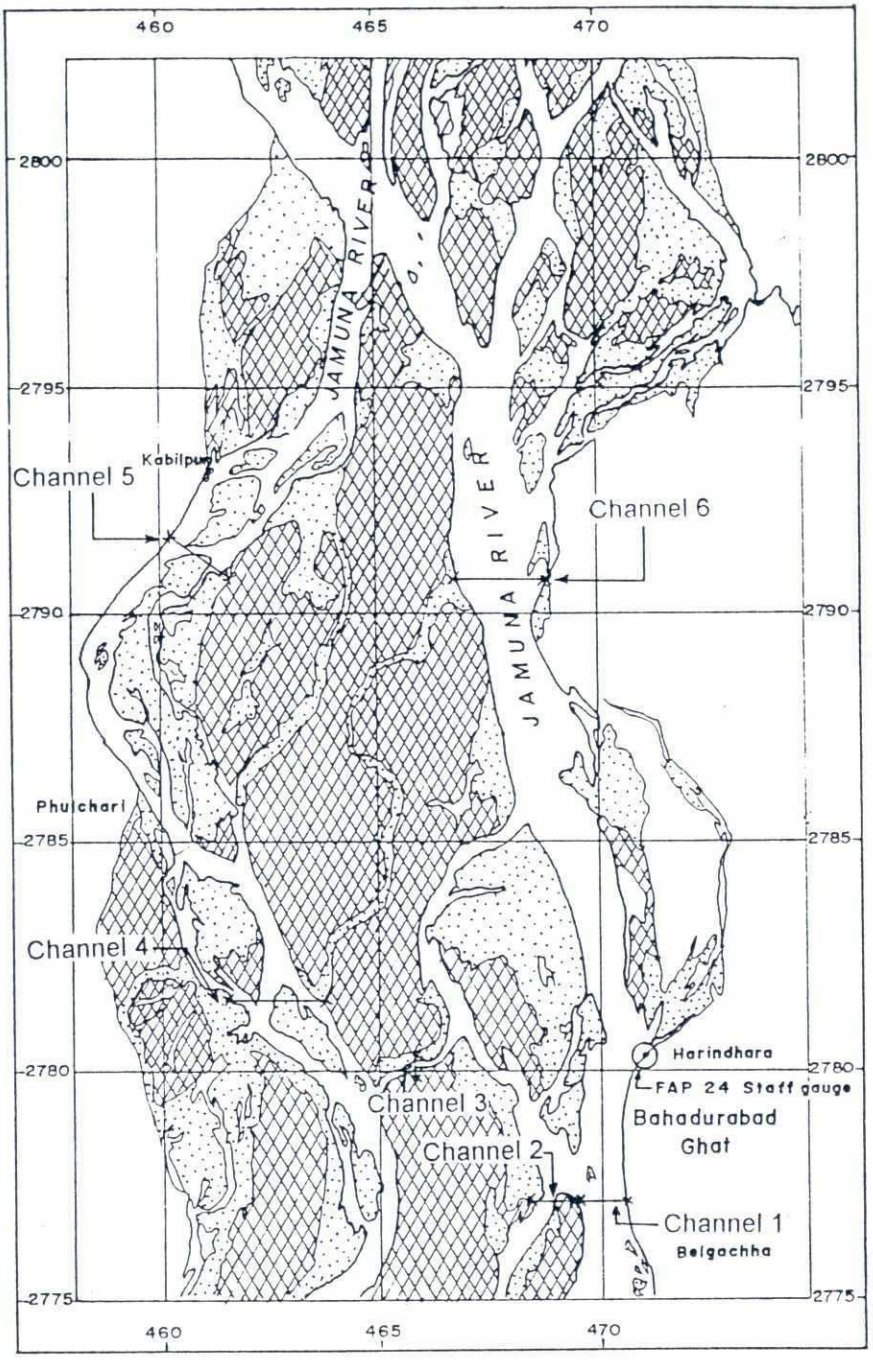
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9406231013-1034	B46N1T05 *
		9406231042-1106	B46N1T06
	2	9406230918-0922	B46N1T03 *
		9406230924-0928	B46N1T04
	3	9406230802-0819	B46N1T01 *
		9406230826-0842	B46N1T02

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	B46N1T05 .ase
ADCP/S4/EMF	2	QUATTRO	B46N1T03 .ase
ADCP/S4/EMF	3	QUATTRO	B46N1T01 .ase
Echosounder	1	QUATTRO	B46N1T05 .ech
Echosounder	2	QUATTRO	B46N1T03 .ech
Echosounder	3	QUATTRO	B46N1T01 .ech
Transect plot data	1	QUATTRO	B46N1T05 .trs
Transect plot data	2	QUATTRO	B46N1T03 .trs
Transect plot data	3	QUATTRO	B46N1T01 .trs
Iso-velocity plot data	1	MIKE 21	B46N1T05 .ct2
		MIKE 21	B46N1T05 .dt2
Iso-velocity plot data	2	MIKE 21	B46N1T03 .ct2
		MIKE 21	B46N1T03 .dt2
Iso-velocity plot data	3	MIKE 21	B46N1T01 .ct2
		MIKE 21	B46N1T01 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

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

N

5000 m 2500 m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 21 Sep1994	Location map	page 1.1
	Init : mzh/sjr		

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

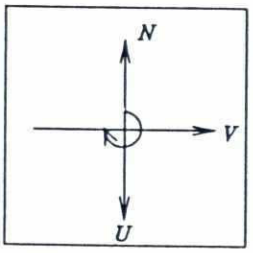
Table 2.1: Survey programme as made

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	1657	11804	18.66	20536	-	-
Channel 2	760	4438	18.66	4705	-	-
Channel 3	371	1477	18.66	1789	-	-
Channel 4	2670	12452	18.66	10322	-	-
Channel 5	1691	9218	18.66	9758	-	-
Channel 6	2489	16034	18.66	28626	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	27 June 94	18.66	FAP 24
	Channel 2	27 June 94	18.66	FAP 24
	Channel 3	27 June 94	18.66	FAP 24
	Channel 4	27 June 94	18.66	FAP 24
	Channel 5	27 June 94	18.66	FAP 24
	Channel 6	27 June 94	18.66	FAP 24

Table 2.3: Water-levels

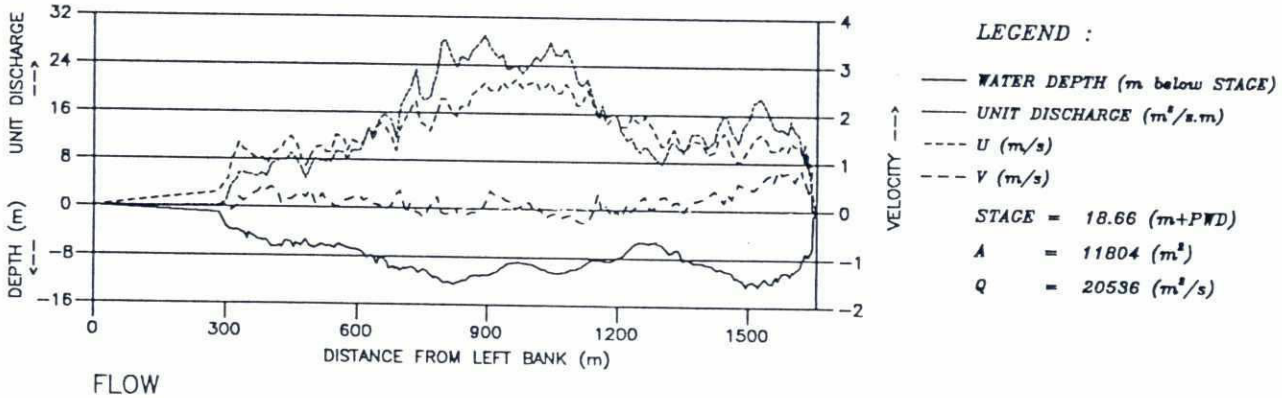


TRANSECT AZIMUTH = 270°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

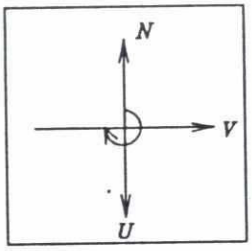
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T02	Date : 21 Sep 1994	Horizontal distribution of flow and sediments	page 3.1
	Init : mzh/sjr	Channel 1	

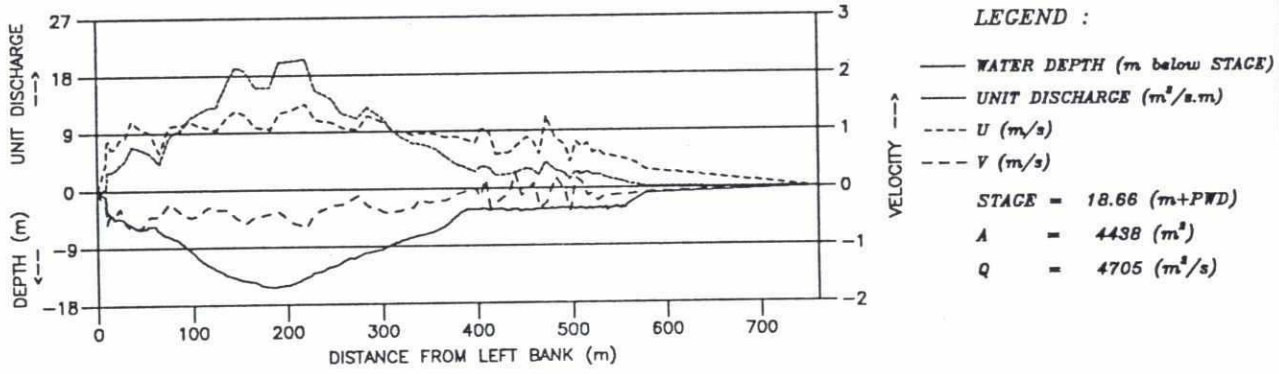


TRANSECT AZIMUTH = 270°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

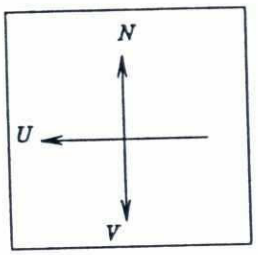
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T01	Date : 21 Sep 1994	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 2	3.2

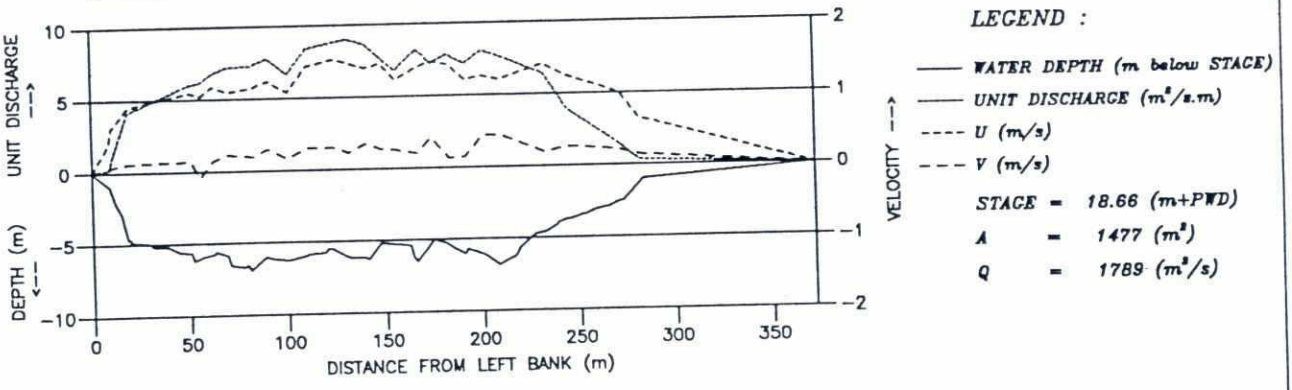


TRANSECT AZIMUTH = 0°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

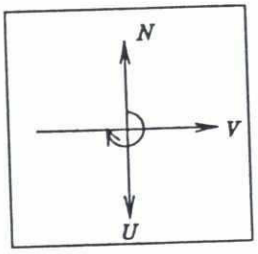
Sample not collected

SEDIMENT TRANSPORT

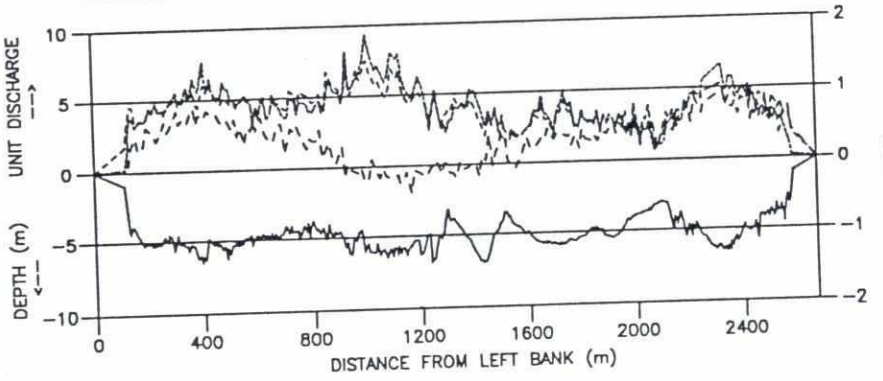
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI; RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities		Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T03	Date : 21 Sep 1994	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 3	3.3



TRANSECT AZIMUTH = 270°
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 (m²/s.m)
U (m/s)
V (m/s)
STAGE = 18.66 (m+PWD)
A = 12452 (m²)
Q = 10322 (m³/s)

FLOW

Sample not collected

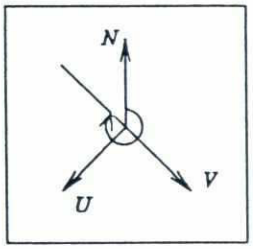
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

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FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T05	Date : 21 Sep 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 4	page 3.4

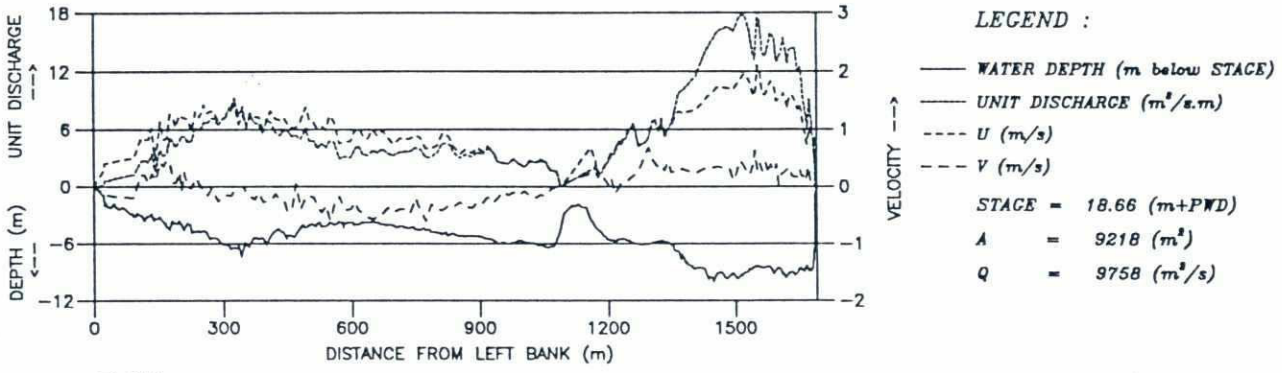


TRANSECT AZIMUTH = 315°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

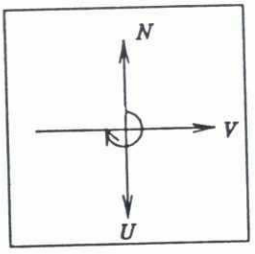
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9002 : 27 June, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B46R1T07	Date : 21 Sep 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 5	page 3.5

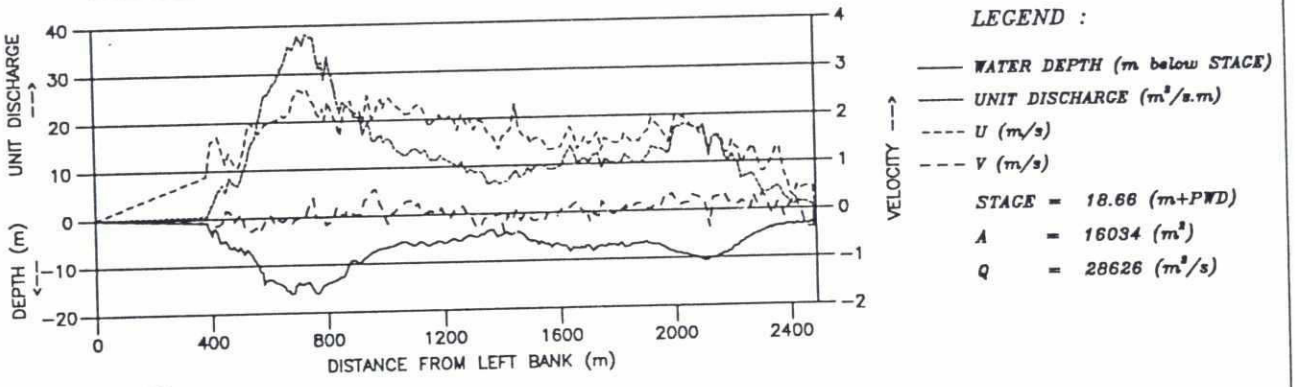


TRANSECT AZIMUTH = 270°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

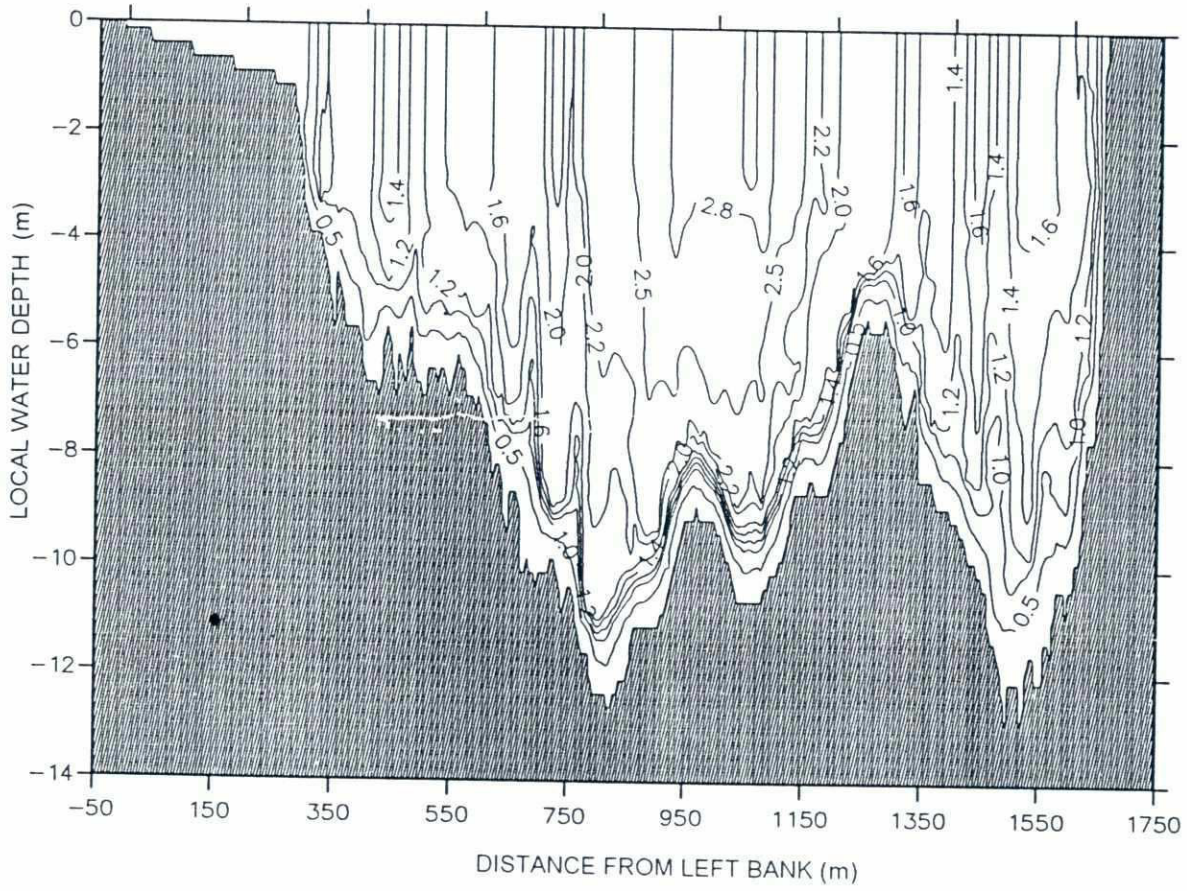
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

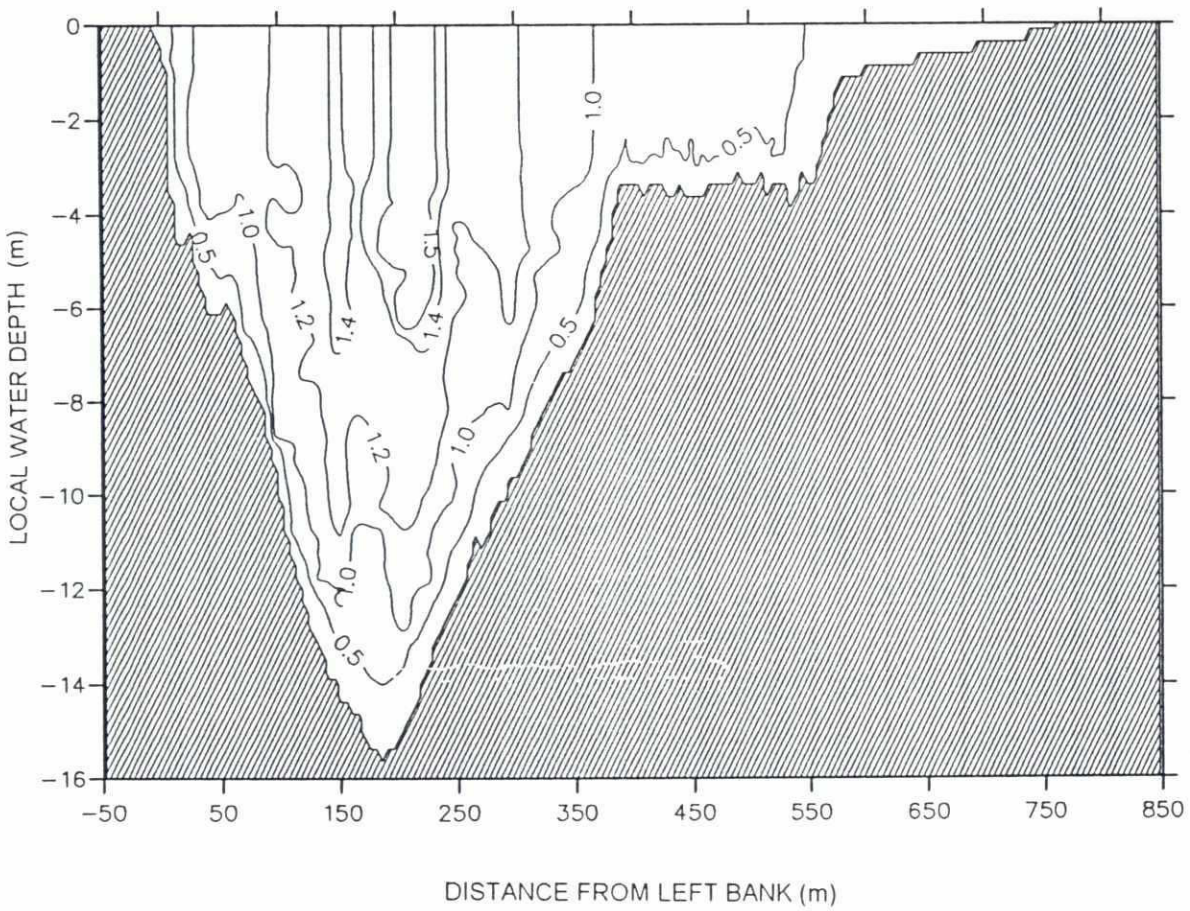
GRAIN SIZE

FAP 24 DELFT - DHI; RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities		Survey Bulletin 9002 : 27 June, 1994
		Location 1 : Jamuna River, Bahadurabad
File : B46R1T09	Date : 21 Sep 1994	Horizontal distribution of flow and sediments
	Init : mzh/sjr	Channel 6
		page 3.6



Iso-velocity contours (m/s)
Water-level : 18.66 m + PWD measured at the station indicated on Page 1.1

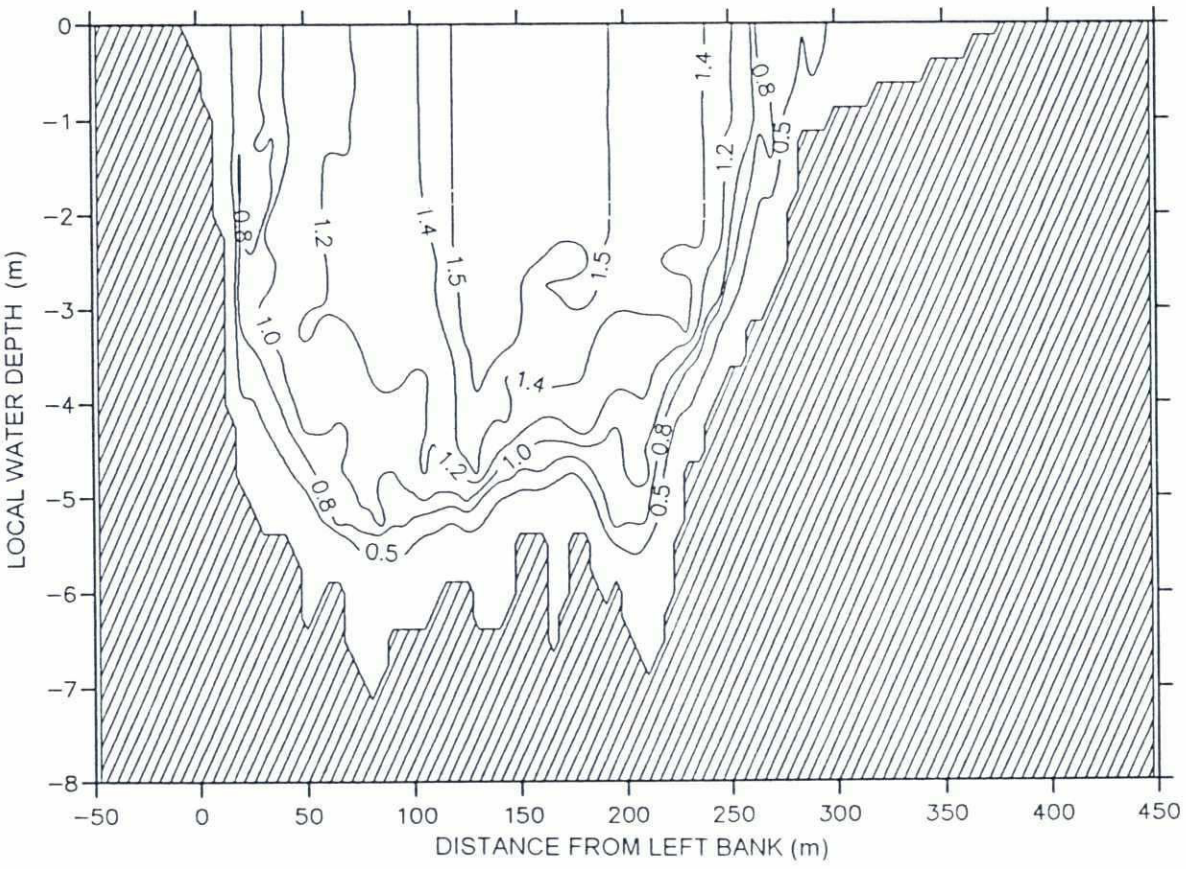
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T02	Date : 21 Sep 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 1	4.1



Iso-velocity contours (m/s)

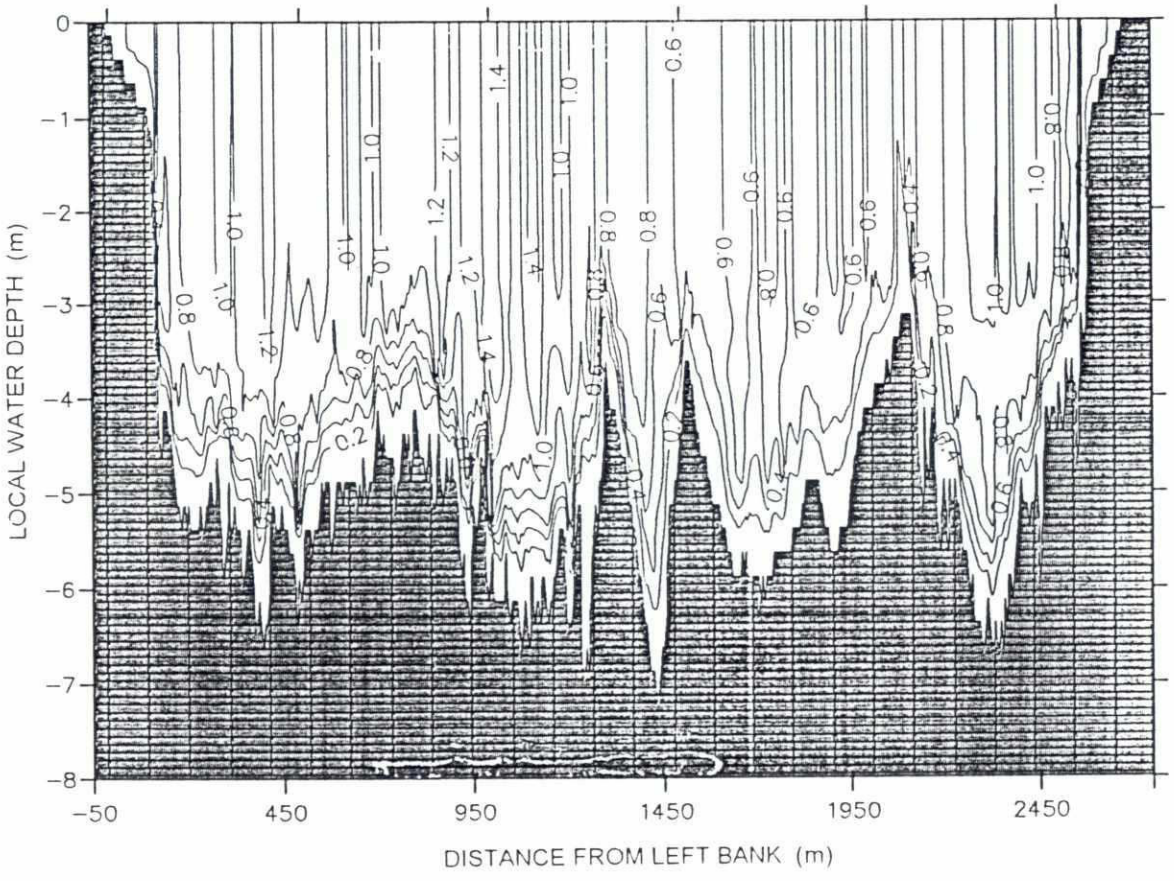
Water-level : 18.66 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T01	Date : 21 Sep 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 2	4.2



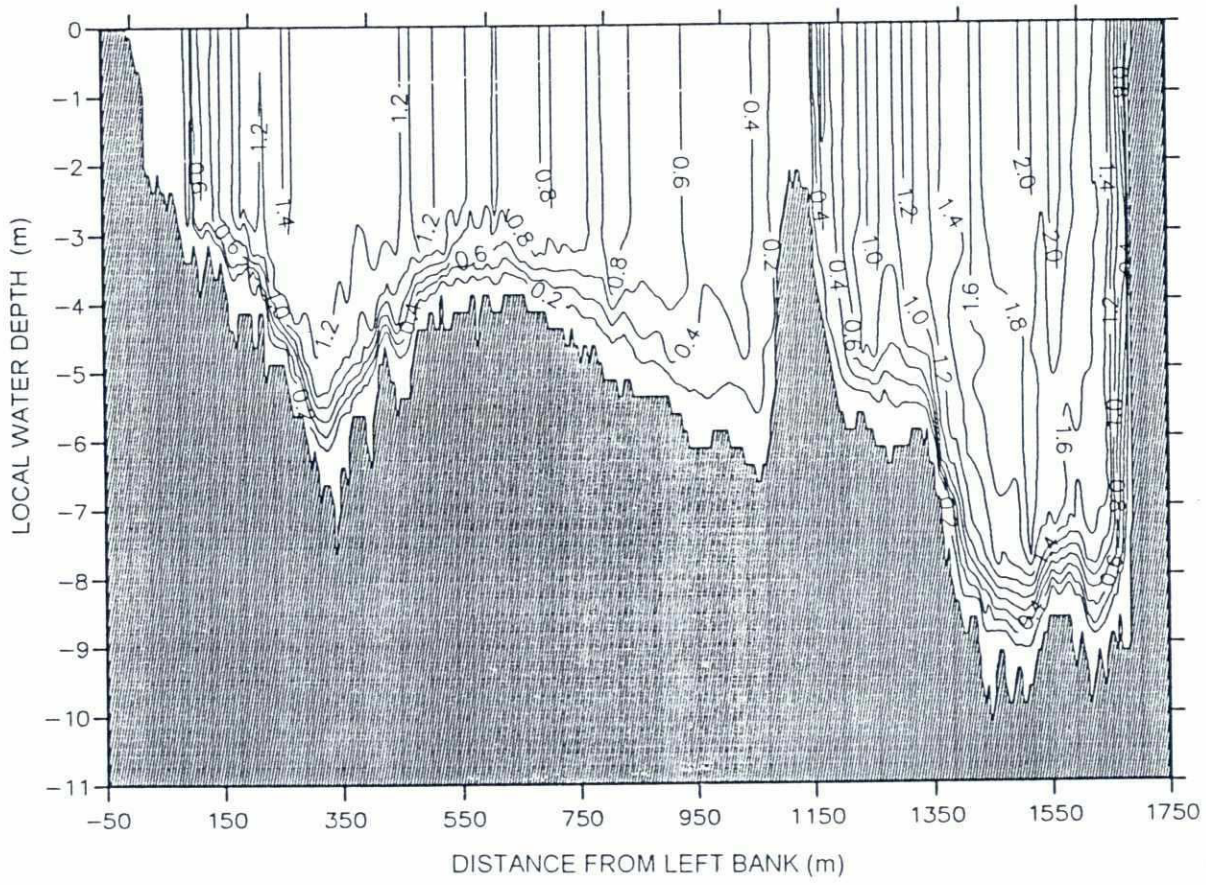
Iso-velocity contours (m/s)
Water-level : 18.66 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T03	Date : 21 Sep 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 3	4.3



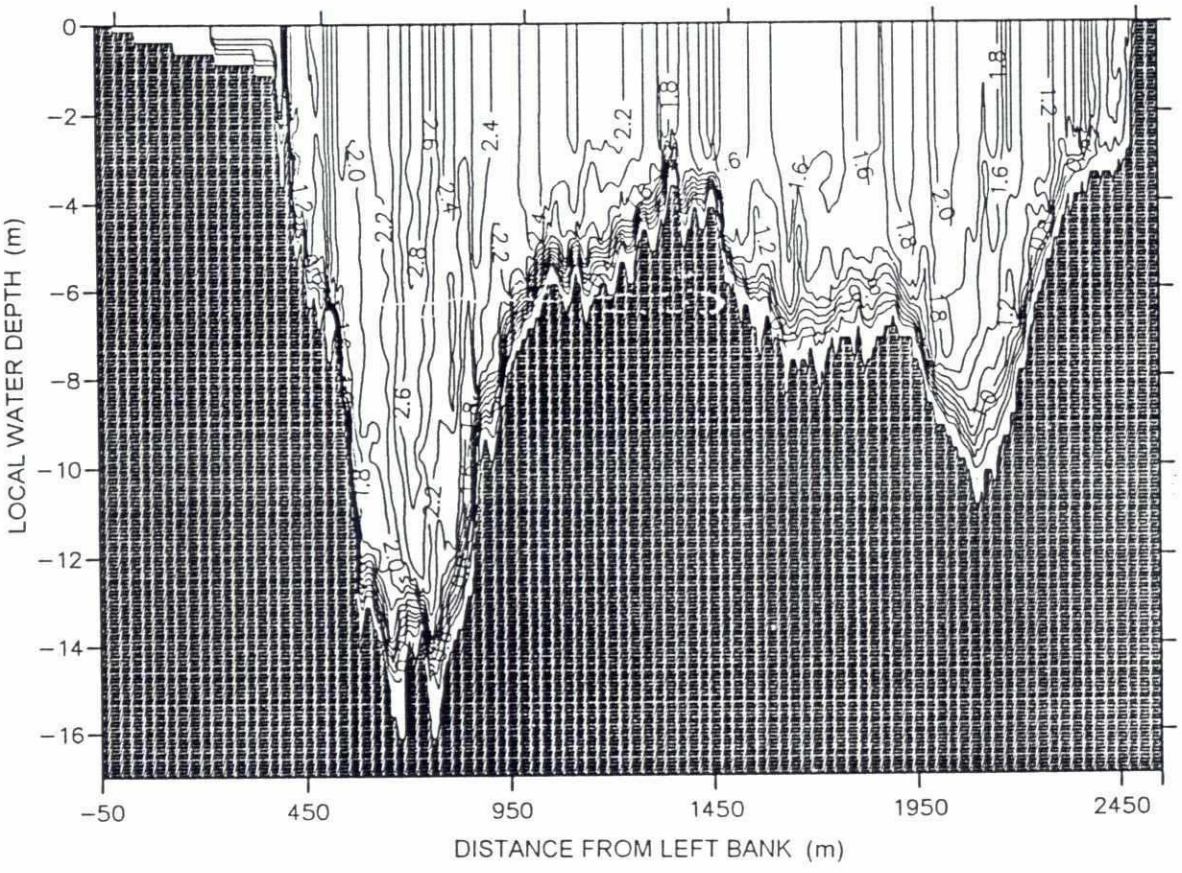
Iso-velocity contours (m/s)
Water level : 18.66 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T05	Date : 21 Sep 1994 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 4	page 4.4



Iso-velocity contours (m/s)
Water-level : 18.66 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 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T07	Date : 21 Sep 1994 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 5	page 4.5



Iso-velocity contours (m/s)
Water level : 18.66 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 9002 : 27 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46R1T09	Date : 21 Sep 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 6	4.6

Andreasen settling tube							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth (m)	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 (m)	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)
Sample not collected							

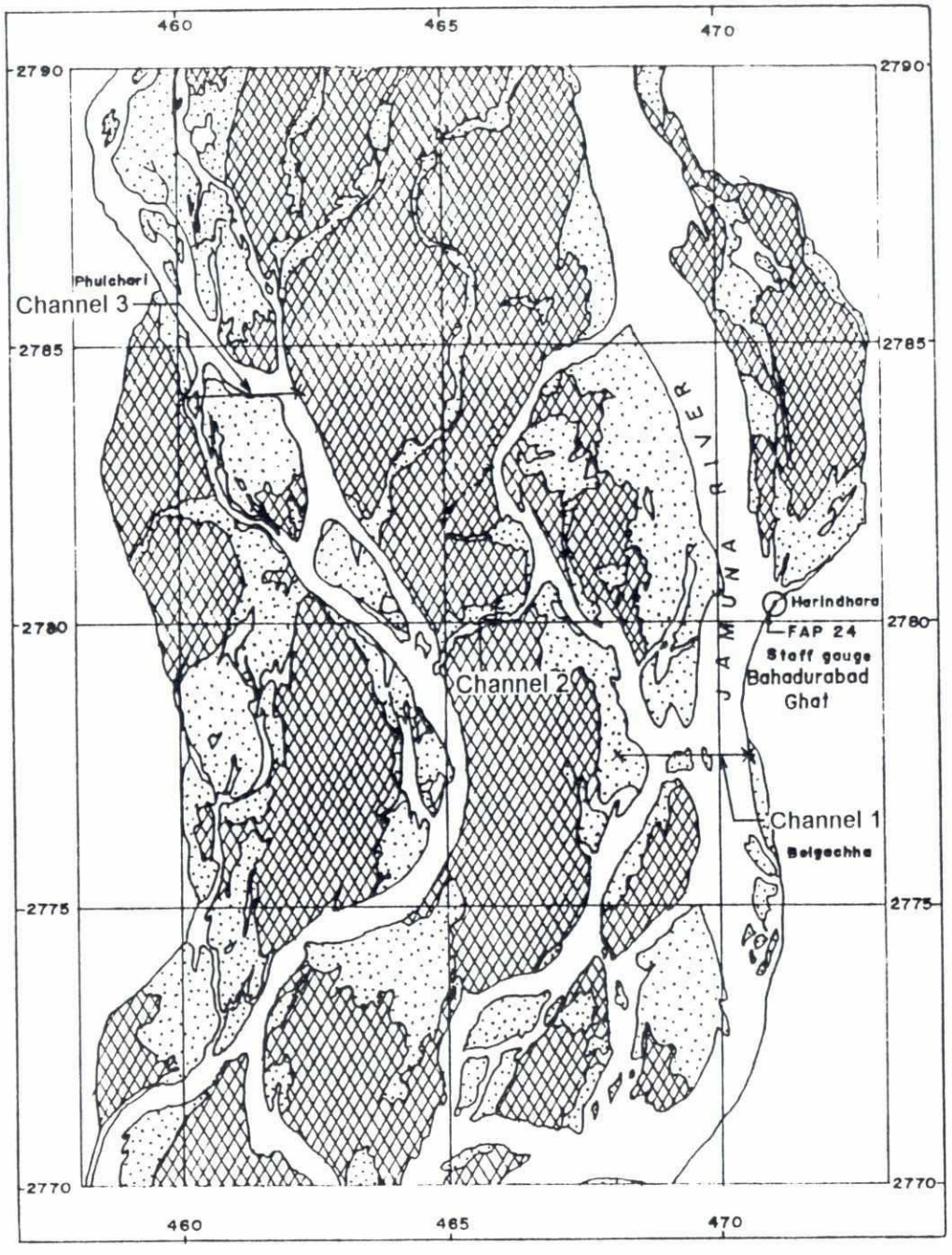
Table 5.3 : Grain sizes of bed load

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9407270855-0907	B46R1T02 *
	2	9407270832-0838	B46R1T01 *
	3	9407270943-0946	B46R1T03 *
	4	9407271128-1148	B46R1T05 *
	5	9407271541-1557	B46R1T07 *
	6	9407271841-1855	B46R1T09 *

Table 6.1: ADCP & EMF transects * : transect in PSD 24 data base and presented in Sections 3 and 4

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	B46R1T02 .ase
ADCP/S4/EMF	2	QUATTRO	B46R1T01 .ase
ADCP/S4/EMF	3	QUATTRO	B46R1T03 .ase
ADCP/S4/EMF	4	QUATTRO	B46R1T05 .ase
ADCP/S4/EMF	5	QUATTRO	B46R1T07 .ase
ADCP/S4/EMF	6	QUATTRO	B46R1T09 .ase
Echosounder	1	QUATTRO	B46R1T02 .ech
Echosounder	2	QUATTRO	B46R1T01 .ech
Echosounder	3	QUATTRO	B46R1T03 .ech
Echosounder	4	QUATTRO	B46R1T05 .ech
Echosounder	5	QUATTRO	B46R1T07 .ech
Echosounder	6	QUATTRO	B46R1T09 .ech
Transect plot data	1	QUATTRO	B46R1T02 .trs
Transect plot data	2	QUATTRO	B46R1T01 .trs
Transect plot data	3	QUATTRO	B46R1T03 .trs
Transect plot data	4	QUATTRO	B46R1T05 .trs
Transect plot data	5	QUATTRO	B46R1T07 .trs
Transect plot data	6	QUATTRO	B46R1T09 .trs
Iso-velocity plot data	1	MIKE 21 MIKE 21	B46R1T02 .ct2 B46R1T02 .dt2
Iso-velocity plot data	2	MIKE 21 MIKE 21	B46R1T01 .ct2 B46R1T01 .dt2
Iso-velocity plot data	3	MIKE 21 MIKE 21	B46R1T03 .ct2 B46R1T03 .dt2
Iso-velocity plot data	4	MIKE 21 MIKE 21	B46R1T05 .ct2 B46R1T05 .dt2
Iso-velocity plot data	5	MIKE 21 MIKE 21	B46R1T07 .ct2 B46R1T07 .dt2
Iso-velocity plot data	6	MIKE 21 MIKE 21	B46R1T09 .ct2 B46R1T09 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable / low char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9003 : 28 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 19 Sep 1994	Location map	page 1.1
	Init : mzh/sjr		

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

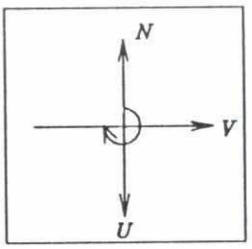
Table 2.1: Survey programme as made

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	2933	18097	18.59	23513	-	-
Channel 2	372	1498	18.59	1588	-	-
Channel 3	2118	10774	18.59	8450	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	28 June 95	18.59	FAP 24
	Channel 2		18.59	
	Channel 3		18.59	

Table 2.3: Water-levels

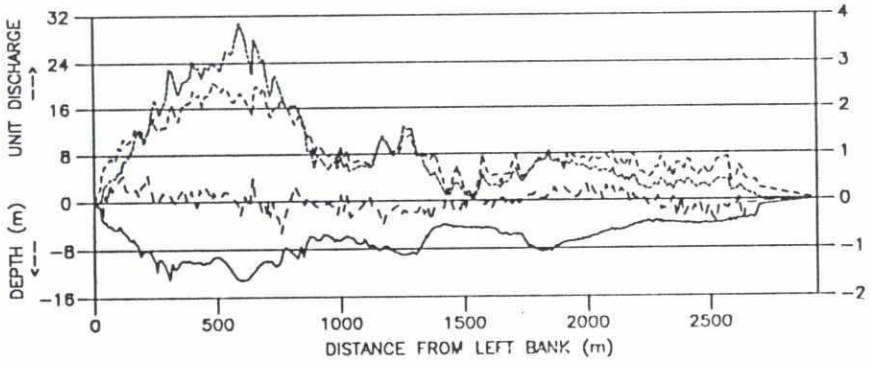


TRANSECT AZIMUTH = 270°

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 (m^2/s.m)

U (m/s)

V (m/s)

STAGE = 15.59 (m+PWD)

A = 18097 (m^2)

Q = 23513 (m^3/s)

FLOW

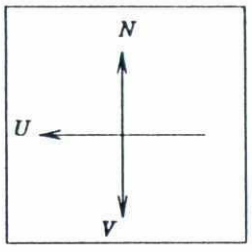
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9003 : 28 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46S1T03	Date : 19 Sep 1994	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 1	3.1

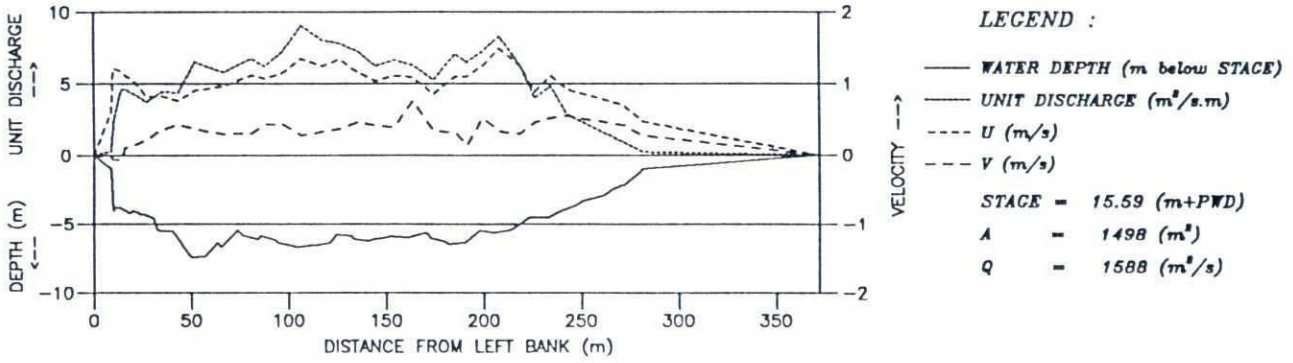


TRANSECT AZIMUTH = 0°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

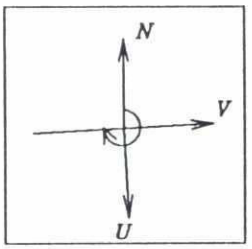
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9003 : 28 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46S1T05	Date : 19 Sep 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2	page 3.2

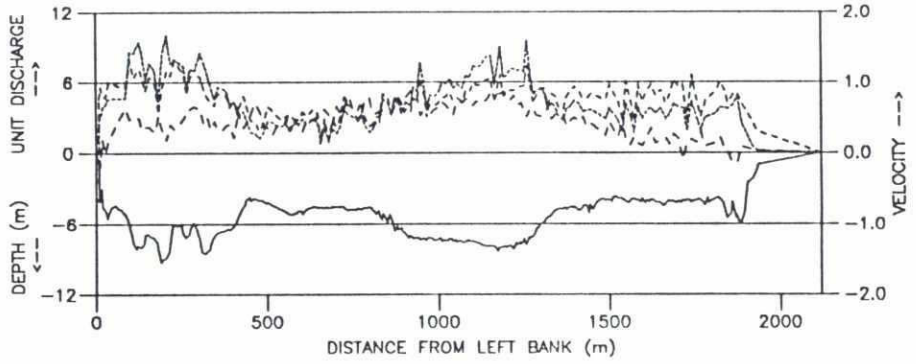


TRANSECT AZIMUTH = 267°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MACNETIC NORTH



LEGEND :

WATER DEPTH (m below STAGE)

UNIT DISCHARGE (m²/s.m)

U (m/s)

V (m/s)

STAGE = 15.59 (m+PWD)

A = 10774 (m²)

Q = 8450 (m³/s)

FLOW

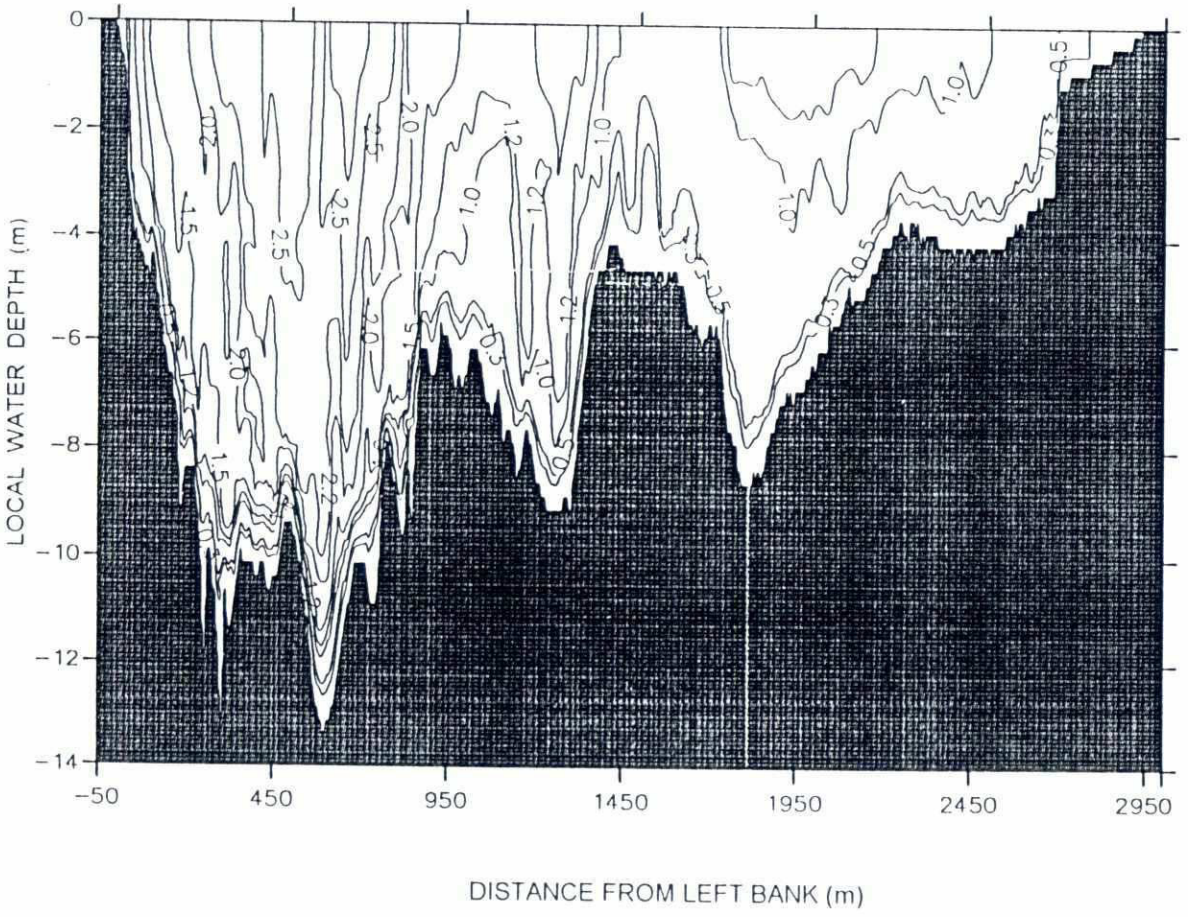
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

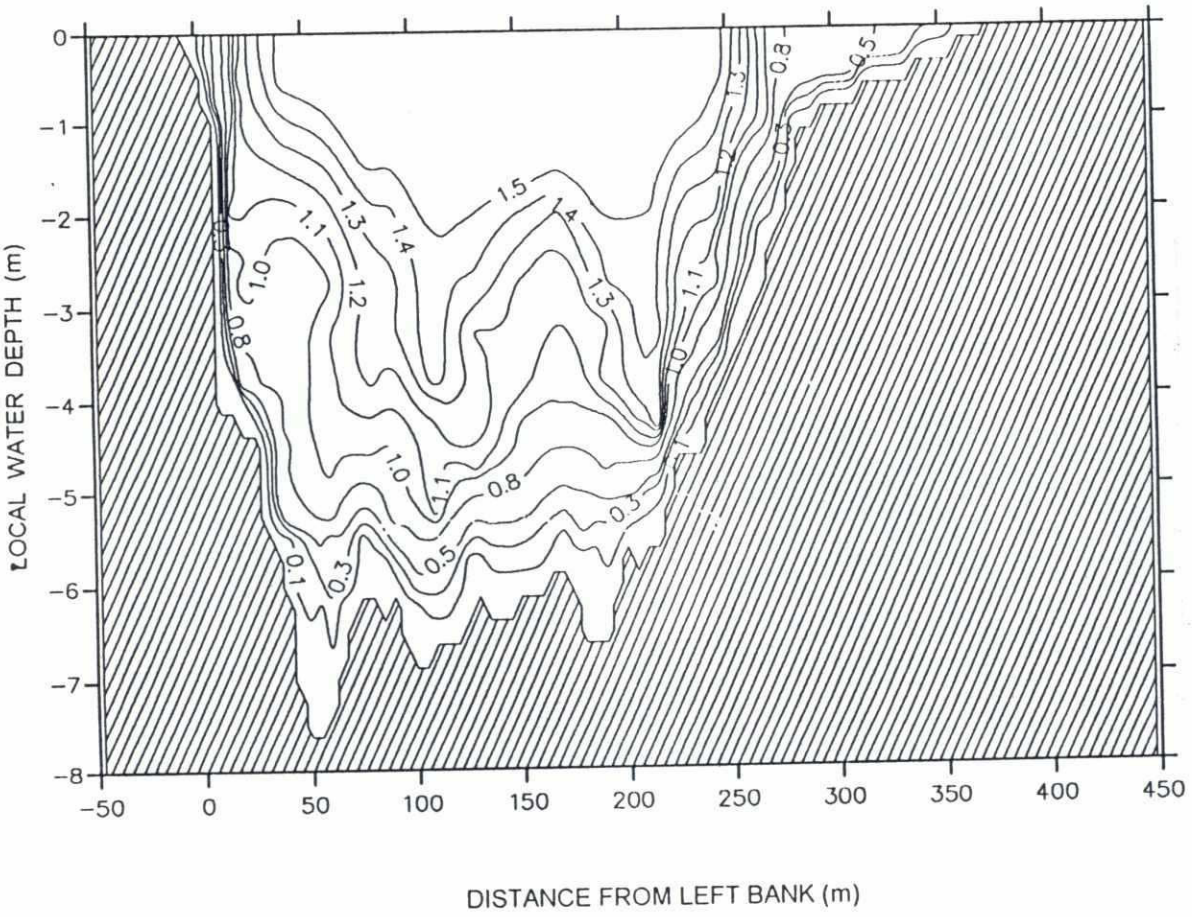
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9003 : 28 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46S1T07	Date : 19 Sep 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 3	page 3.3



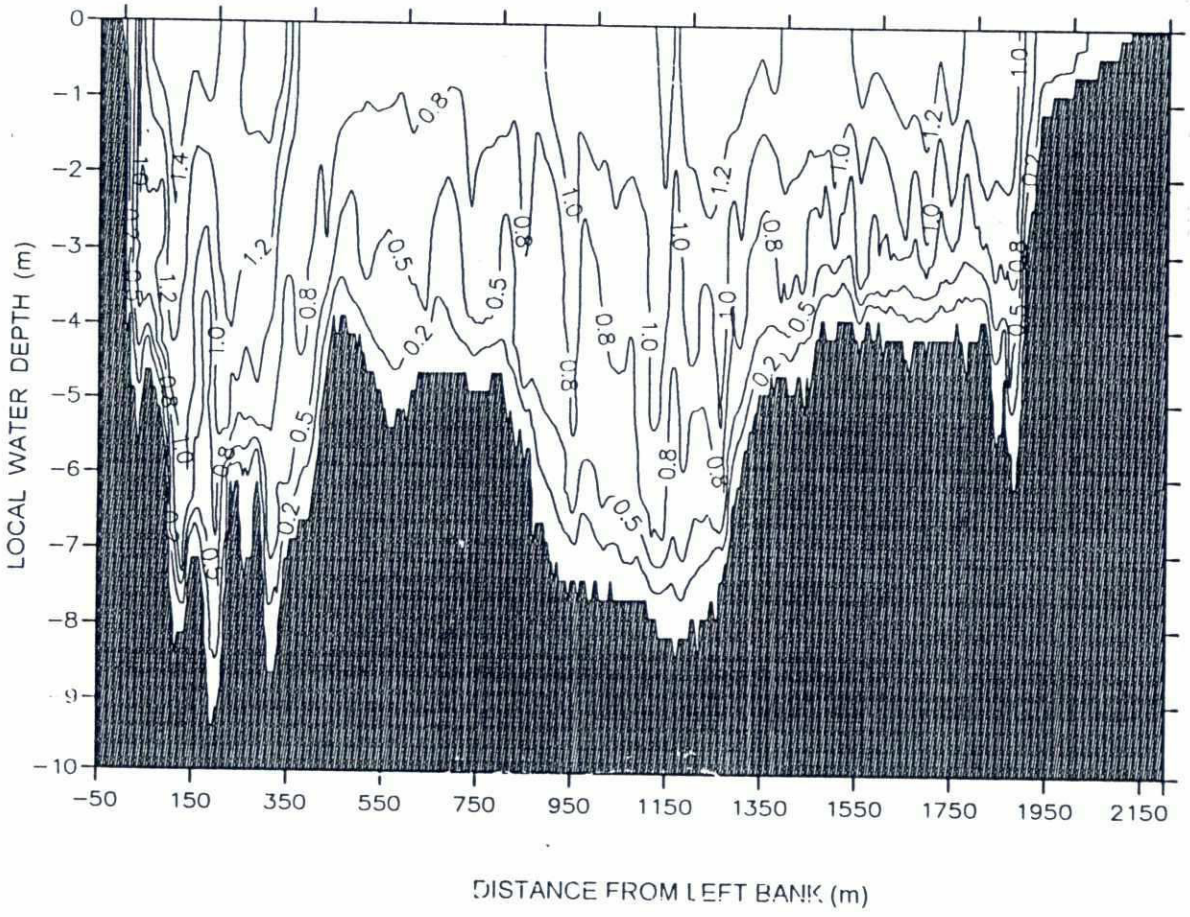
Iso-velocity contours (m/s)
Water-level : 18.59 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9003 : 28 June, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B46S1T03	Date : 19 Sep 1994 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 4.1



Iso-velocity contours (m/s)
Water-level : 18.59 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 9003 : 28 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46S1T05	Date : 19 Sep 1994	Cross-sectional distribution of flow velocity	page 4.2
	Init : mzh/sjr	Channel 2	



Iso-velocity contours (m/s)
Water-level : 18.59 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 9003 : 28 June, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B46S1T07	Date : 19 Sep 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 3	4.3

Andreasen settling tube							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth (m)	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 (m)	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)
Sample not collected							

Table 5.3 : Grain sizes of bed load

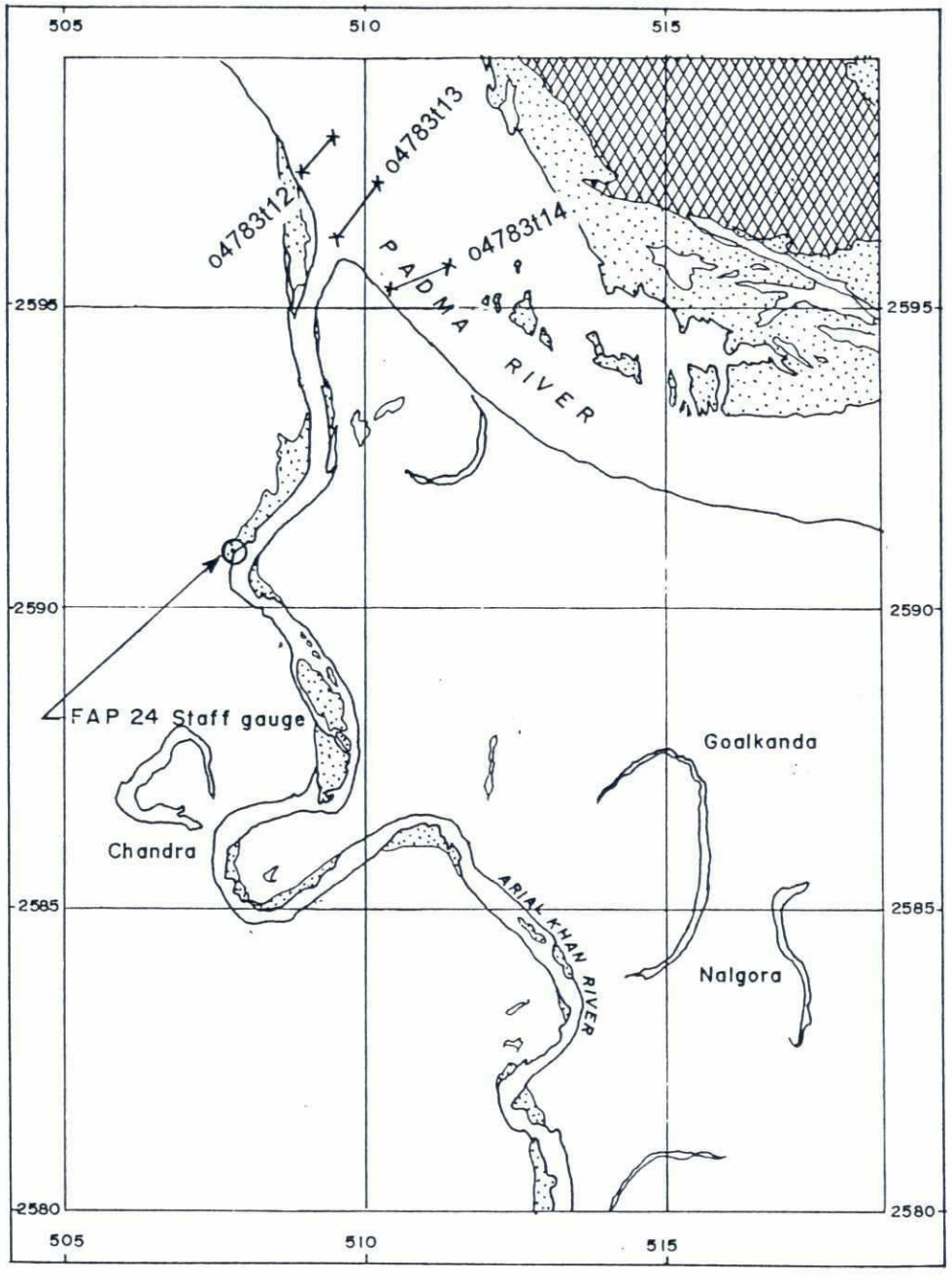
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9407281056-1115	B46S1T03 *
		9407281119-1143	B46S1T04
	2	9407281420-1423	B46S1T05 *
		9407281423-1426	B46S1T06
	3	9407281501-1516	B46S1T07 *
		9407281519-1535	B46S1T08

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	B46S1T03 .ase
ADCP/S4/EMF	2	QUATTRO	B46S1T05 .ase
ADCP/S4/EMF	3	QUATTRO	B46S1T07 .ase
Echosounder	1	QUATTRO	B46S1T03 .ech
Echosounder	2	QUATTRO	B46S1T05 .ech
Echosounder	3	QUATTRO	B46S1T07 .ech
Transect plot data	1	QUATTRO	B46S1T03 .trs
Transect plot data	2	QUATTRO	B46S1T05 .trs
Transect plot data	3	QUATTRO	B46S1T07 .trs
Iso-velocity plot data	1	MIKE 21	B46S1T03 .ct2
		MIKE 21	B46S1T03 .dt2
Iso-velocity plot data	2	MIKE 21	B46S1T05 .ct2
		MIKE 21	B46S1T05 .dt2
Iso-velocity plot data	3	MIKE 21	B46S1T07 .ct2
		MIKE 21	B46S1T07 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

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

2500 m 1000 m 0 2.5 km

Scale

N

Map is based on satellite images of March 1994

FAP 24 RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities, DELFT - DHI		Survey Bulletin 9004: 08 July, 1994	
		Arial Khan River, Offtake flow measurement	
	Date : 27 May 1996	Location map	page 1.1
	Init : kah		

Type of measurement	Method	Name of Transects		
		O4783T12	O4783T13	O4783T14
Discharge	ADCP transect	1	1	1
	EMF transect	1	1	1
	Echo-Sounding	1	1	1
Vertical current profile	No.of verticals in channel	-	-	-
	ADCP	-	-	-
	S4 current meter	-	-	-
	Ott current meter	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-
	Andreasen settling tube	-	-	-
	MEX turbidity meter	-	-	-
	Integrated bottle sampling	-	-	-
	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

Transect name	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)
o4783t14	600.99	10170.50	5.22	11505.23	-	-
o4783t13	1035.38	11443.98	5.22	5414.21	-	-
o4783t12	662.37	5871.86	5.22	2933.86	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Arial Khan	08 July 94	5.22	FAP24

Table 2.3 : Water levels

Short Description :

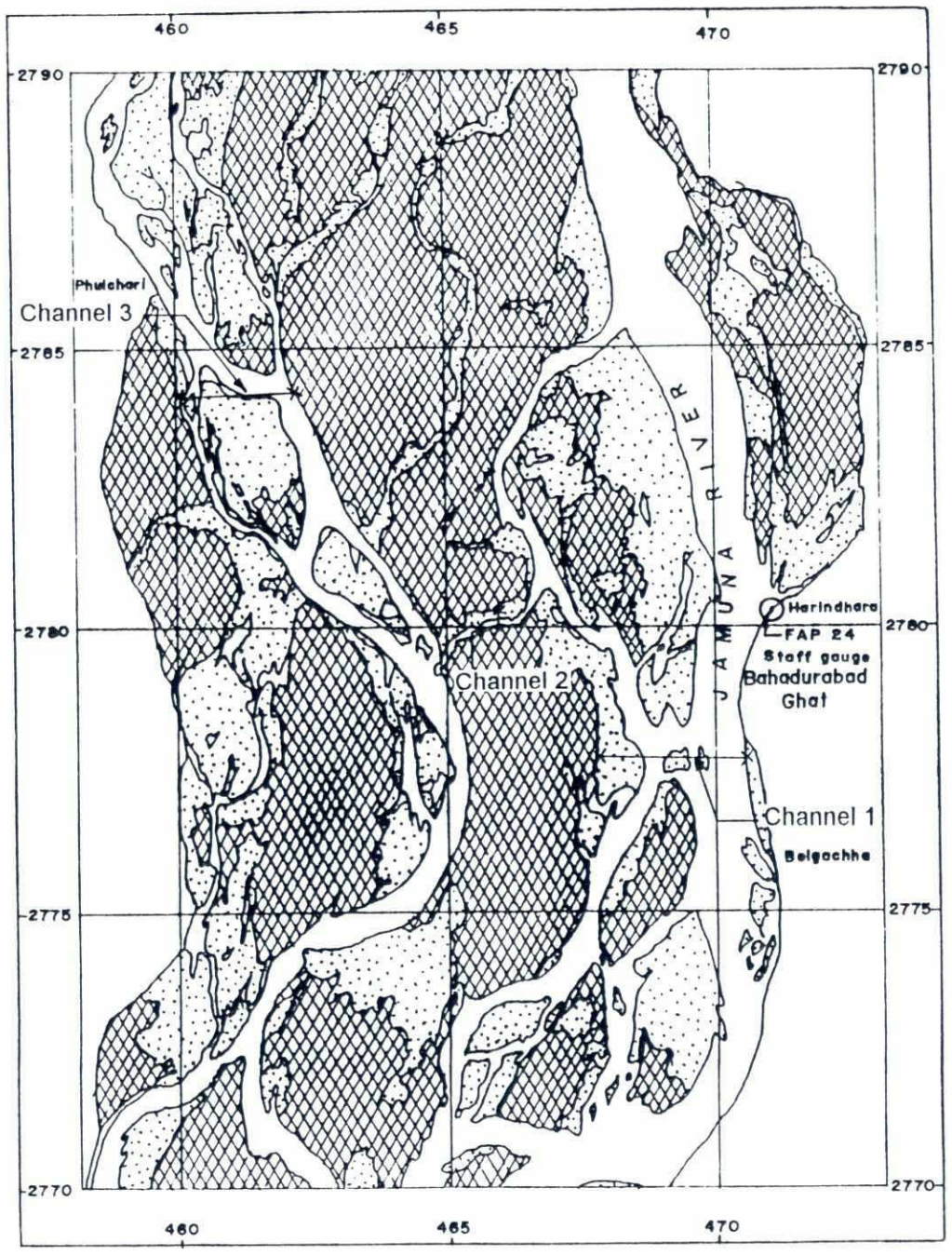
This survey was executed to indicate flow distribution around Arial Khan Offtake and to estimate discharge distribution at a tidal circle. It was executed on 8 July 1994.

Transect / Echosounding file name	Profile file name	Line no	Survey date	Type of data
O4783T12 *		OT1X001	1994-07-08	ADCP/EMF+Echo-sounding
O4783T13 *		OT1X001	1994-07-08	ADCP/EMF+Echo-sounding
O4783T14 *		OT1X001	1994-07-08	ADCP/EMF+Echo-sounding

* : Transect / Echo sounding in PSD24 data base

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-07-08	O4783T12	OT1X001	+	+	+							
1994-07-08	O4783T13	OT1X001	+	+	+							
1994-07-08	O4783T14	OT1X001	+	+	+							
Total number of files			3	3	3							

Table 4.1: PSD24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable / low char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9006 : 13 July, 1994 Location 1 : Jamuna River, Bahadurabad	
Date : 28 Sep 1994 Init : mzh/sjr	Location map	page 1.1

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

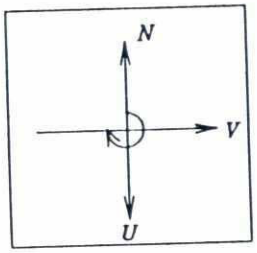
Table 2.1: Survey programme as made

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	2954	17183	18.19	20395	-	-
Channel 2	380	1113	18.19	1605	-	-
Channel 3	2234	9963	18.19	7036	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	13 July 94	18.19	FAP 24
	Channel 2	13 July 94	18.19	FAP 24
	Channel 3	13 July 94	18.19	FAP 24

Table 2.3: Water-levels

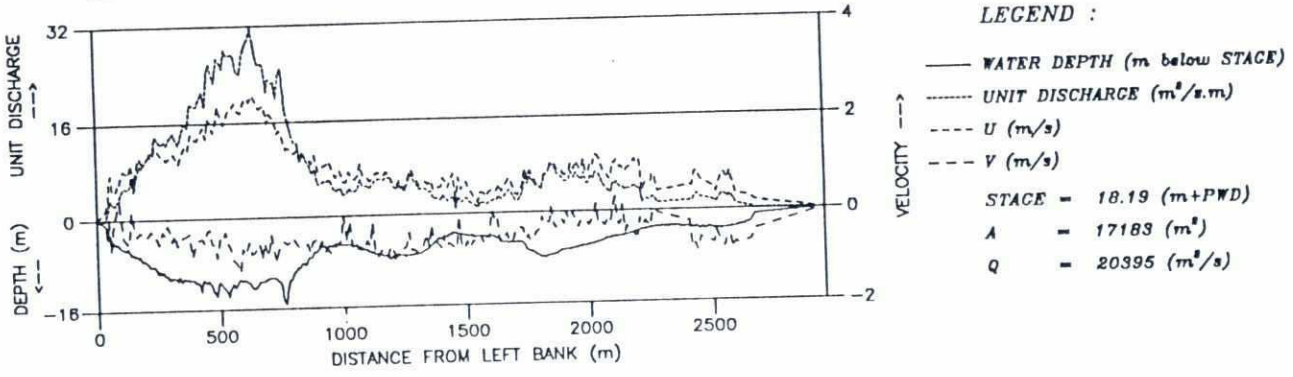


TRANSECT AZIMUTH = 270°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N -- MAGNETIC NORTH



FLOW

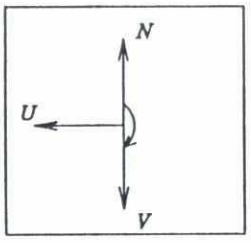
Sample not collected

SEDIMENT TRANSPORT

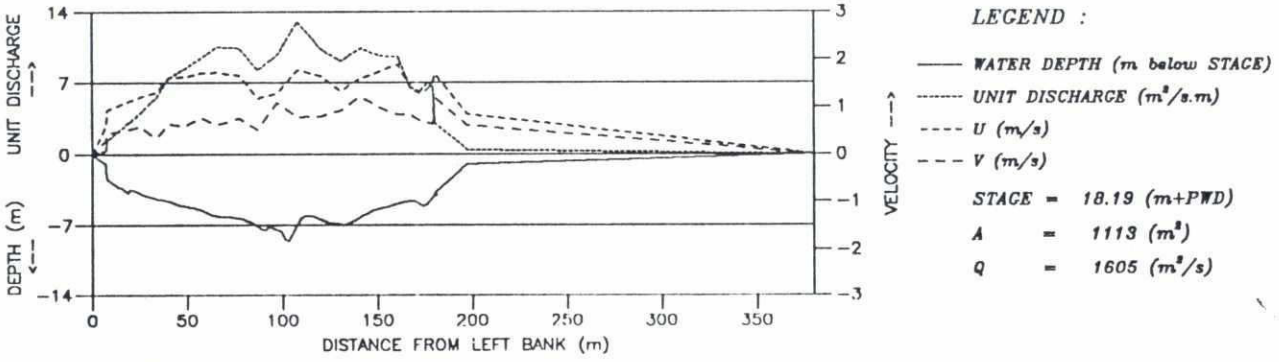
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9006 : 13 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47D1T06	Date : 28 Sep 1994 Init : mzh	Horizontal distribution of flow and sediments Channel 1	page 3.1



TRANSECT AZIMUTH = 180°
U – VELOCITY NORMAL TO TRANSECT (m/s)
V – VELOCITY PARALLEL TO TRANSECT (m/s)
N – MAGNETIC NORTH



FLOW

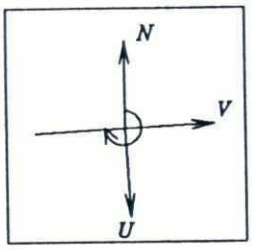
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9006 : 13 July, 1994 Location 1 : Jamuna River, Bahadurabad
File : B47D1T04	Date : 28 Sep 1994 Init : mzh	Horizontal distribution of flow and sediments Channel 2
		page 3.2

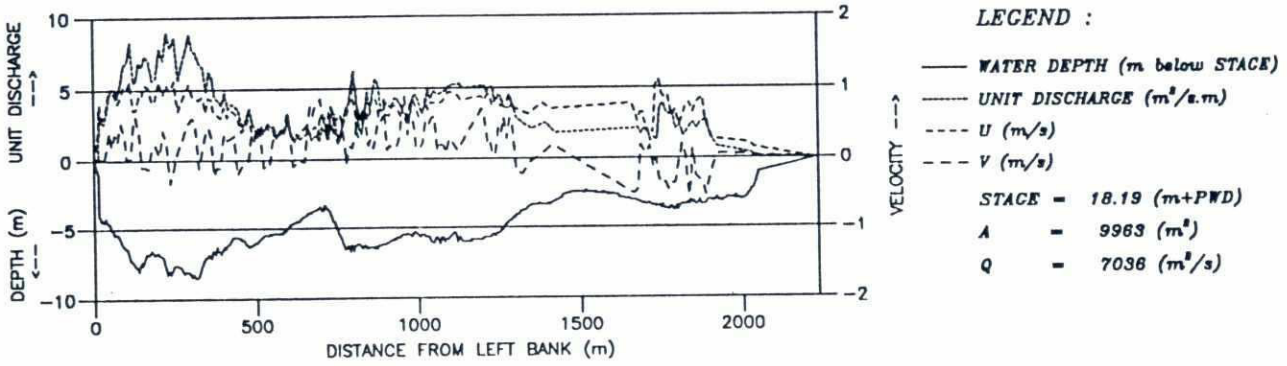


TRANSECT AZIMUTH = 267°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 18.19 (m+PWD)

A = 9963 (m²)

Q = 7036 (m³/s)

FLOW

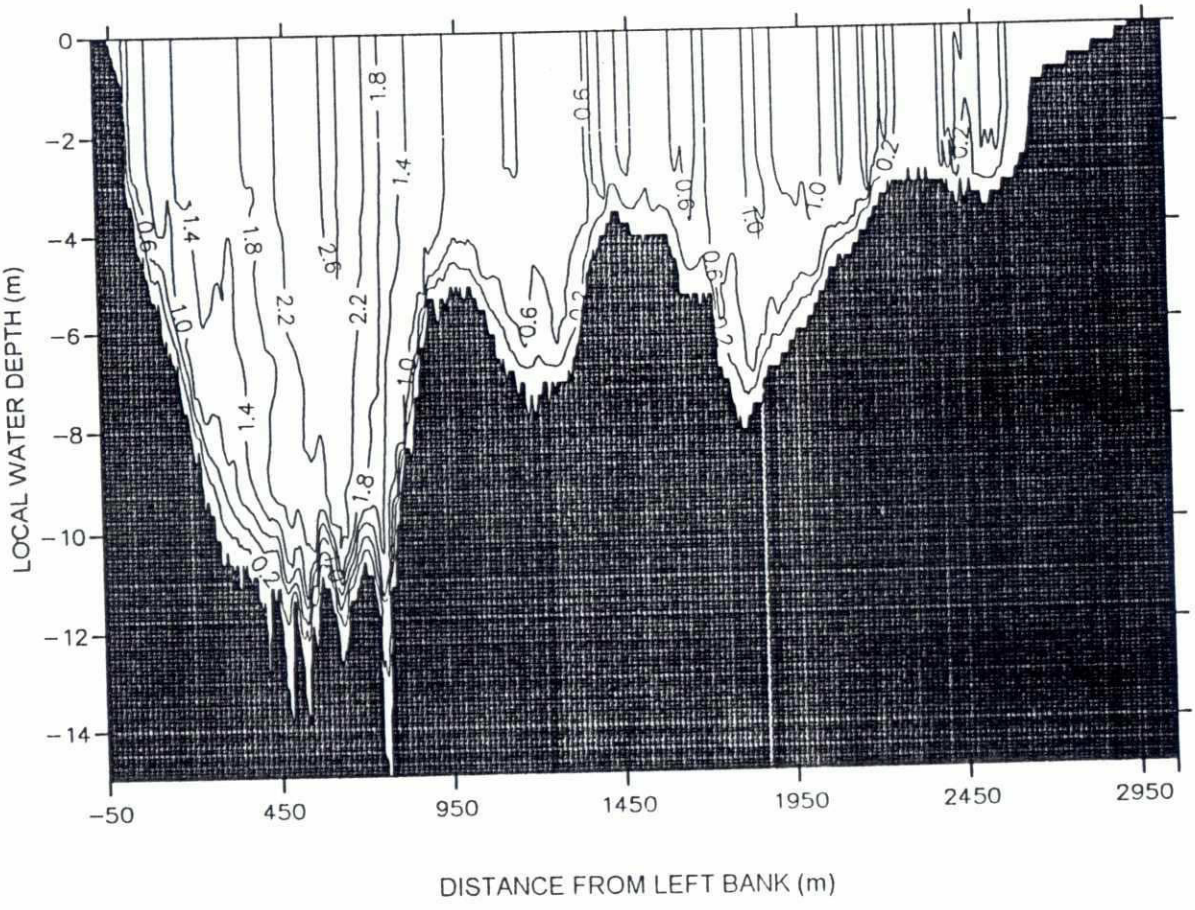
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

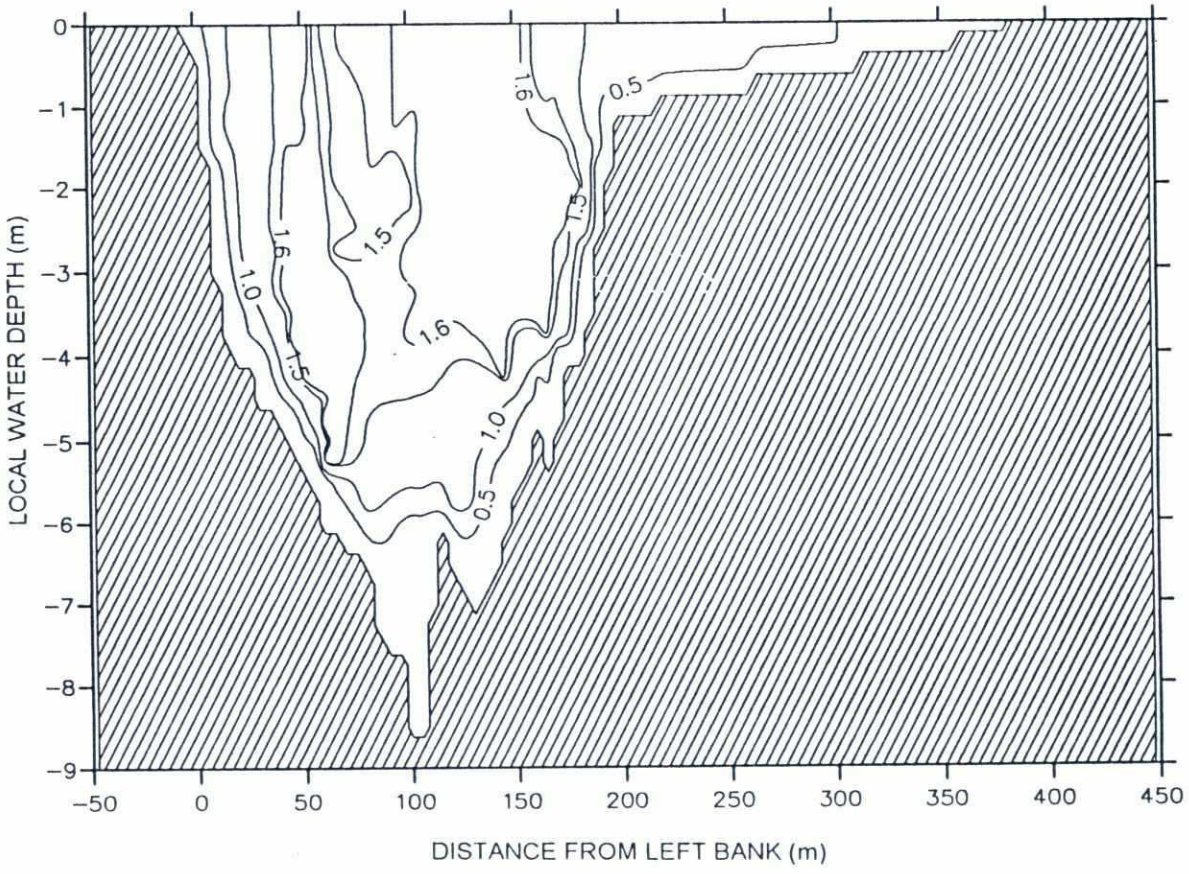
GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9006 : 13 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47D1T01	Date : 28 Sep 1994	Horizontal distribution of flow and sediments	page
	Init : mzh	Channel 3	3.3



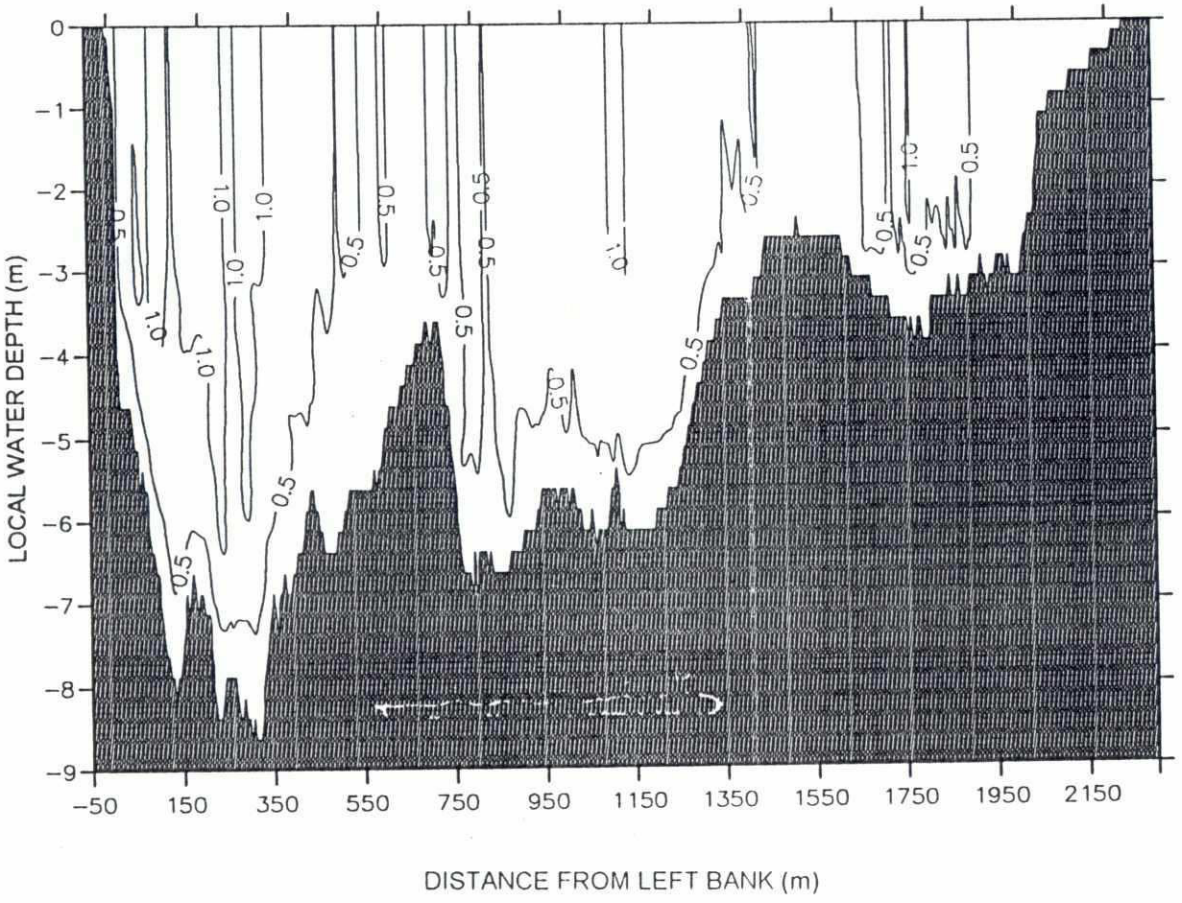
Iso-velocity contours (m/s)
Water level : 18.19 m + PWD measured at the station indicated on page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9006 : 13 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47D1T06	Date : 28 Sep 1994 Init : mzh	Cross-sectional distribution of flow velocity Channel 1	page 4.1



Iso-velocity contours (m/s)
Water-level : 18.19 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 9006 : 13 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47D1T04	Date : 28 Sep 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh	Channel 2	4.2



Iso-velocity contours (m/s)
Water level : 18.19 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 9006 : 13 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47D1T01	Date : 28 Sep 1994	Cross-sectional distribution of flow velocity	page 4.3
	Init : mzh	Channel 3	

Andreasen settling tube							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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	D35 (mm)	D50 (mm)	D65 (mm)
Sample not collected							

Table 5.2 : Grain size of bed material

Helley - Smith							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth	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

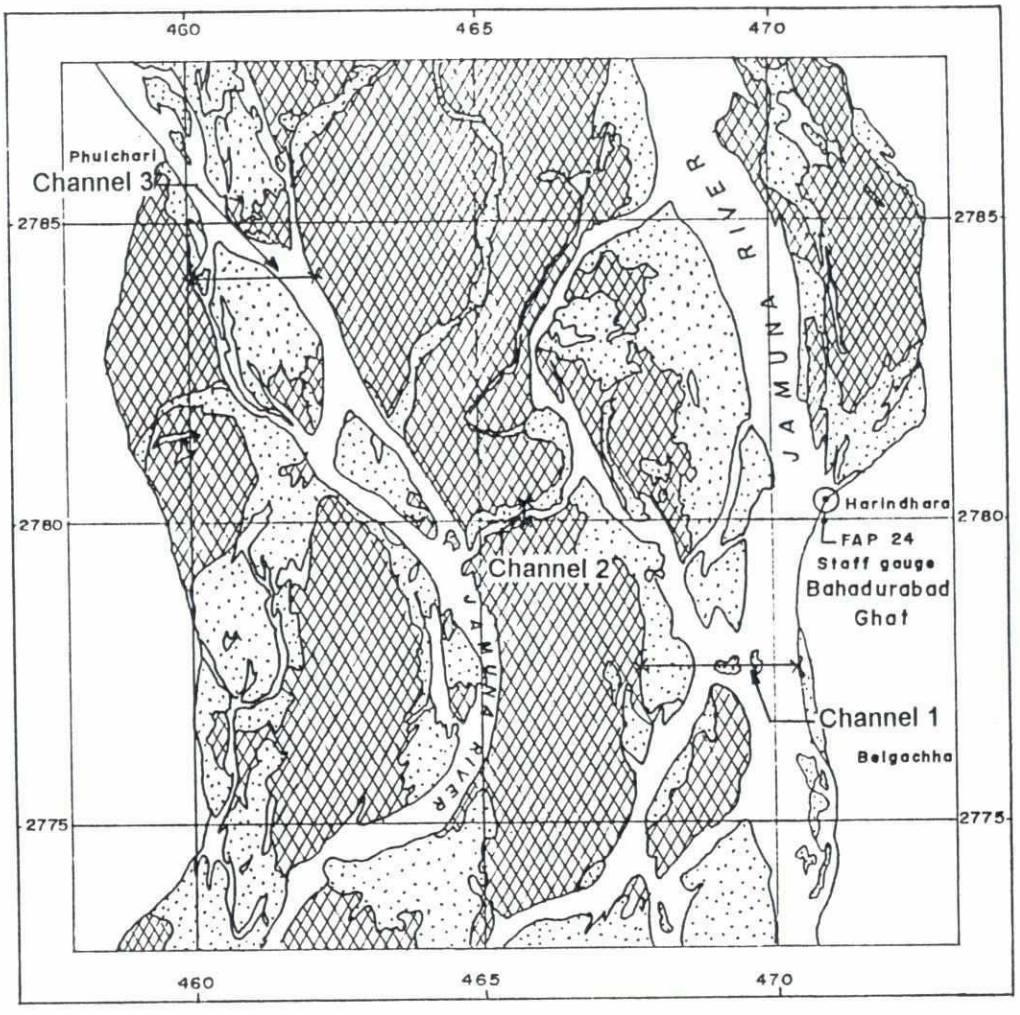
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9407131113-1156	B47D1T06 *
		9407131218-1246	B47D1T08
	2	9407131043-1050	B47D1T03
		9407131059-1102	B47D1T04 *
		9407131105-1107	B47D1T05
	3	9407130925-0944	B47D1T01 *
		9407130946-1006	B47D1T02

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	B47D1T06 .ase
ADCP/S4/EMF	2	QUATTRO	B47D1T04 .ase
ADCP/S4/EMF	3	QUATTRO	B47D1T01 .ase
Echosounder	1	QUATTRO	B47D1T06 .ech
Echosounder	2	QUATTRO	B47D1T04 .ech
Echosounder	3	QUATTRO	B47D1T01 .ech
Transect plot data	1	QUATTRO	B47D1T06 .trs
Transect plot data	2	QUATTRO	B47D1T04 .trs
Transect plot data	3	QUATTRO	B47D1T01 .trs
Iso-velocity plot data	1	MIKE 21	B47D1T06 .ct2
		MIKE 21	B47D1T06 .dt2
Iso-velocity plot data	2	MIKE 21	B47D1T04 .ct2
		MIKE 21	B47D1T04 .dt2
Iso-velocity plot data	3	MIKE 21	B47D1T01 .ct2
		MIKE 21	B47D1T01 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable/law char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9007 : 16 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 02 Oct 1994	Location map	page 1.1
	Init : mzh/sjr		

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

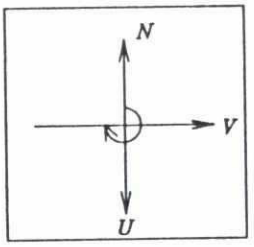
Table 2.1: Survey programme as made

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	3001	16675	17.84	16747	-	-
Channel 2	505	1251	17.84	1215	-	-
Channel 3	2278	9082	17.84	5909	-	-

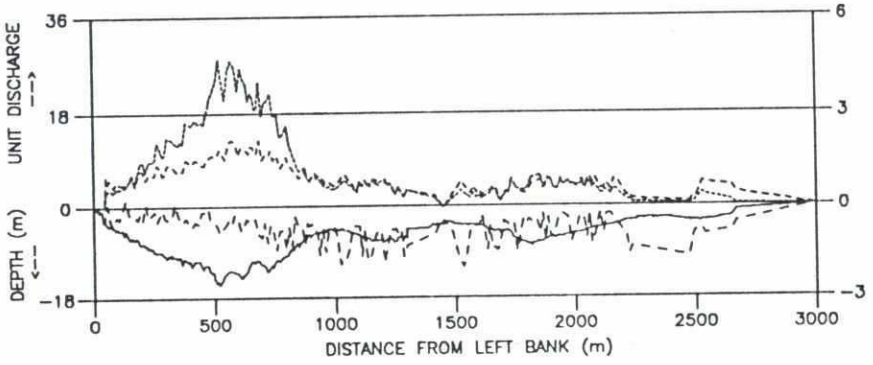
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	16 July 94	17.84	FAP 24
	Channel 2	16 July 94	17.84	FAP 24
	Channel 3	16 July 94	17.84	FAP 24

Table 2.3: Water-levels



TRANSECT AZIMUTH = 270°
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 (m²/s.m)
U (m/s)
V (m/s)

STAGE = 17.84 (m+PWD)
A = 16675 (m²)
Q = 16747 (m³/s)

FLOW

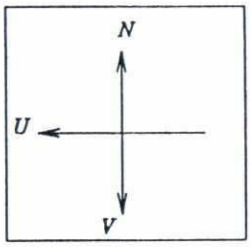
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9007 : 16 July, 1994
		Location 1 : Jamuna River, Bahadurabad
File : B47G1T01	Date : 02 Oct 1994 Init : sjr	Horizontal distribution of flow and sediments Channel 1
		page 3.1

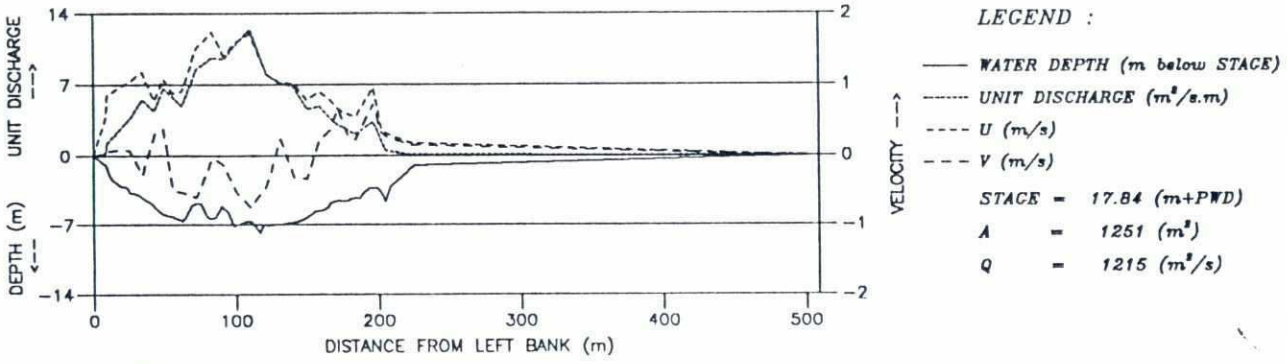


TRANSECT AZIMUTH = 0°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

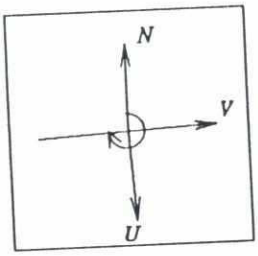
Sample not collected

SEDIMENT TRANSPORT

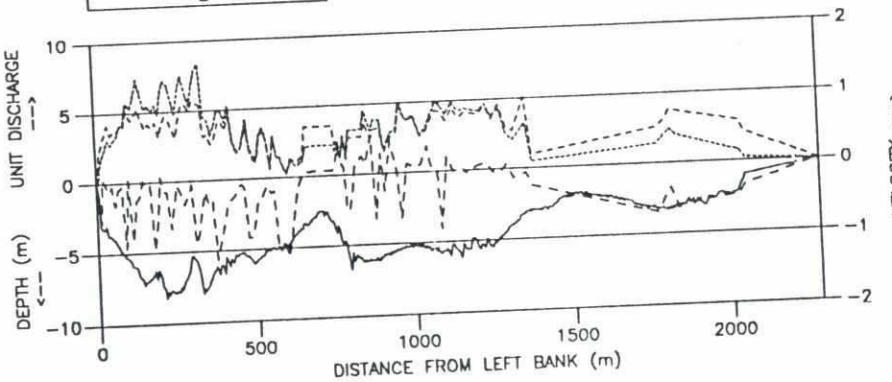
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9007 : 16 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47G1T05	Date : 02 Oct 1994 Init : sjr/mzh	Horizontal distribution of flow and sediments Channel 2	page 3.2



TRANSECT AZIMUTH = 267°
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 (m^2/s.m)
---- U (m/s)
- - - V (m/s)
STAGE = 17.84 (m+PWD)
A = 9082 (m^2)
Q = 5909 (m^3/s)

FLOW

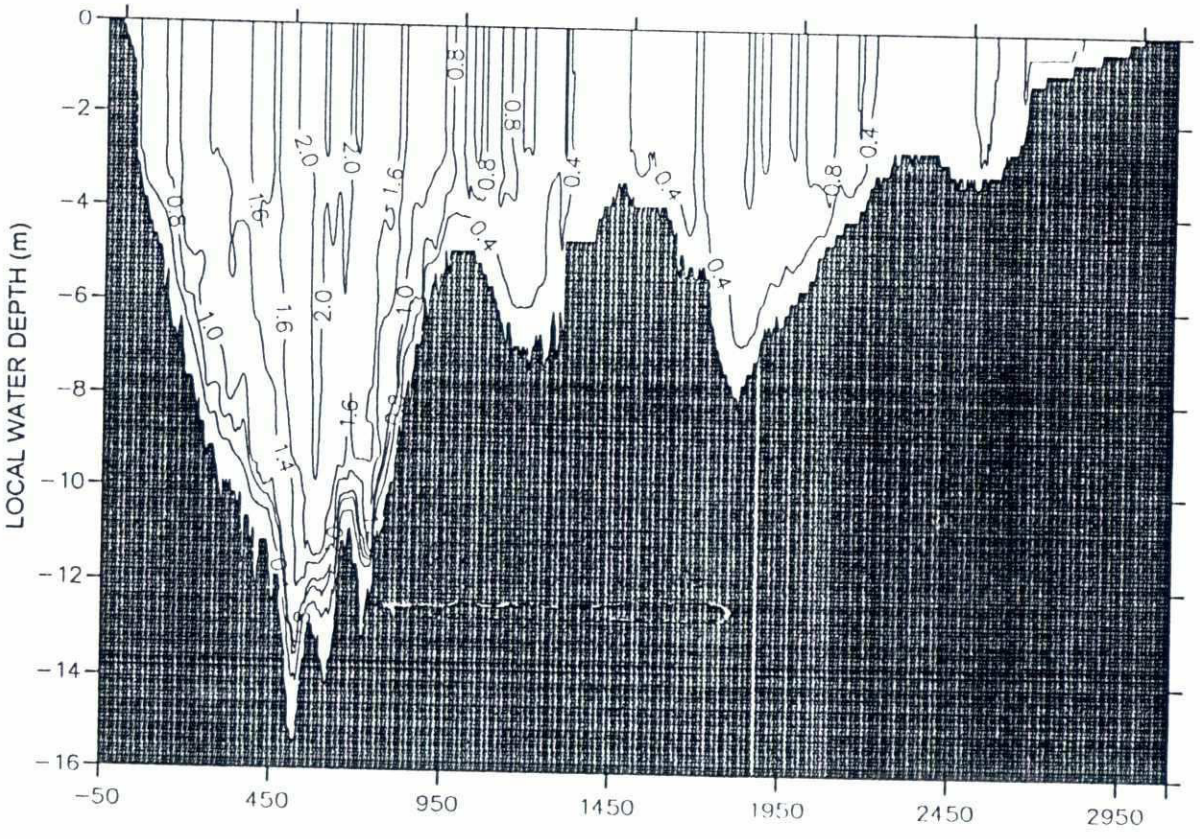
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

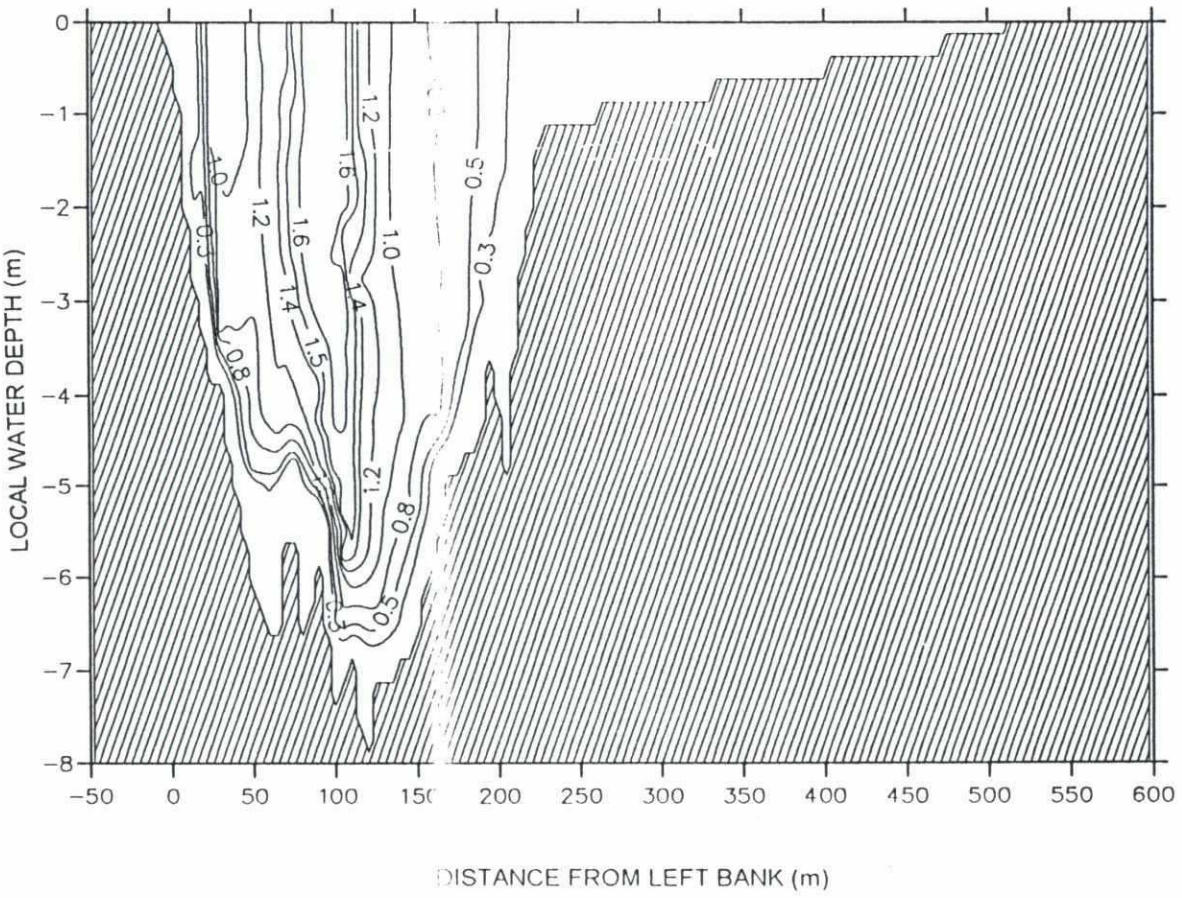
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9007 : 16 July, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B47G1T03	Date : 02 Oct 1994 Init : sjr	Horizontal distribution of flow and sediments Channel 3
		page 3.3



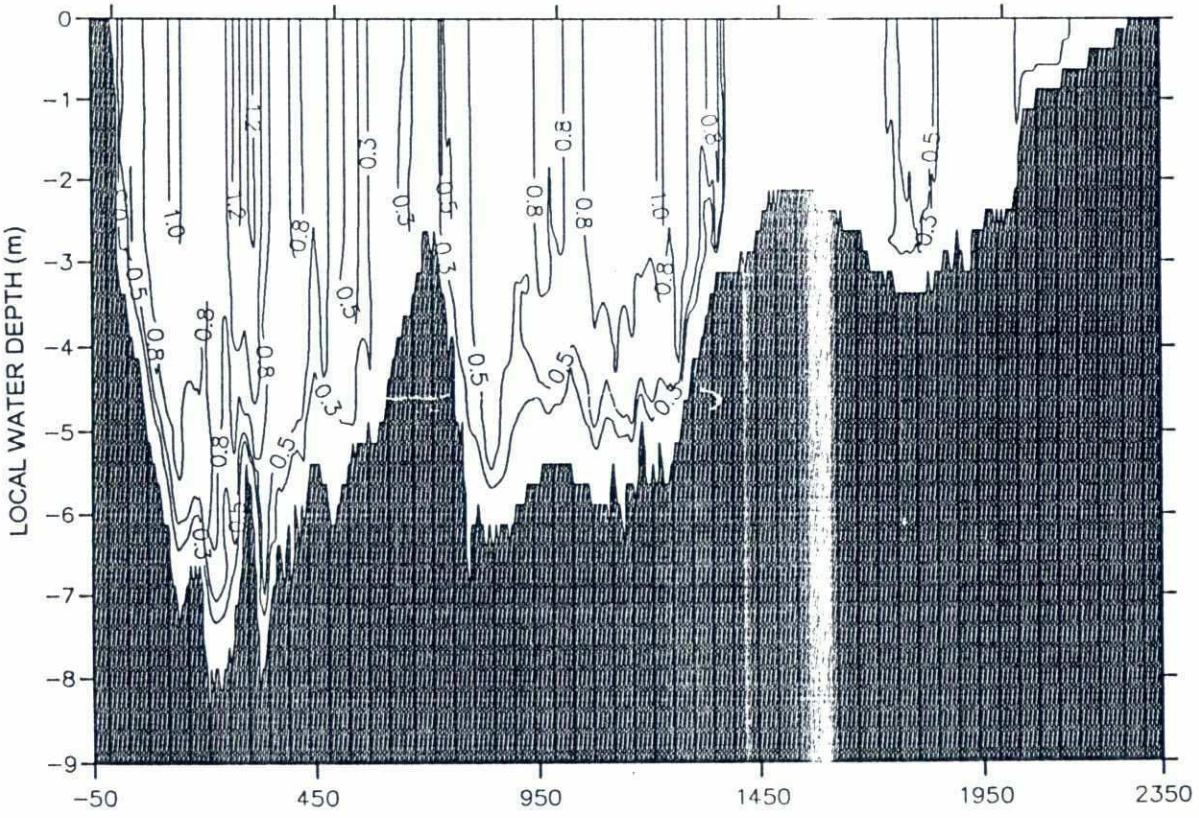
Iso-velocity contours (m/s)
Water level : 17.84 m + PWD measured at the station indicated on page 1.1

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9007 : 16 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47G1T01	Date : 02 Oct 1994	Cross-sectional distribution of flow velocity	page
	Init : sjr/mzh	Channel 1	4.1



Iso-velocity contours (m/s)
Water level : 17.84 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 9007 : 16 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47G1T05	Date : 02 Oct 1994 Init : sjr/mzh	Cross-sectional distribution of flow velocity Channel 2	page 4.2



Iso-velocity contours (m/s)
Water level : 17.84 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 9007 : 16 July, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B47G1T03	Date : 02 Oct 1994	Cross-sectional distribution of flow velocity	page
	Init : sjr/mzh	Channel 3	4.3

50

Andreasen settling tube							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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	D35 (mm)	D50 (mm)	D65 (mm)
Sample not collected							

Table 5.2 : Grain size of bed material

Helley - Smith							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth	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

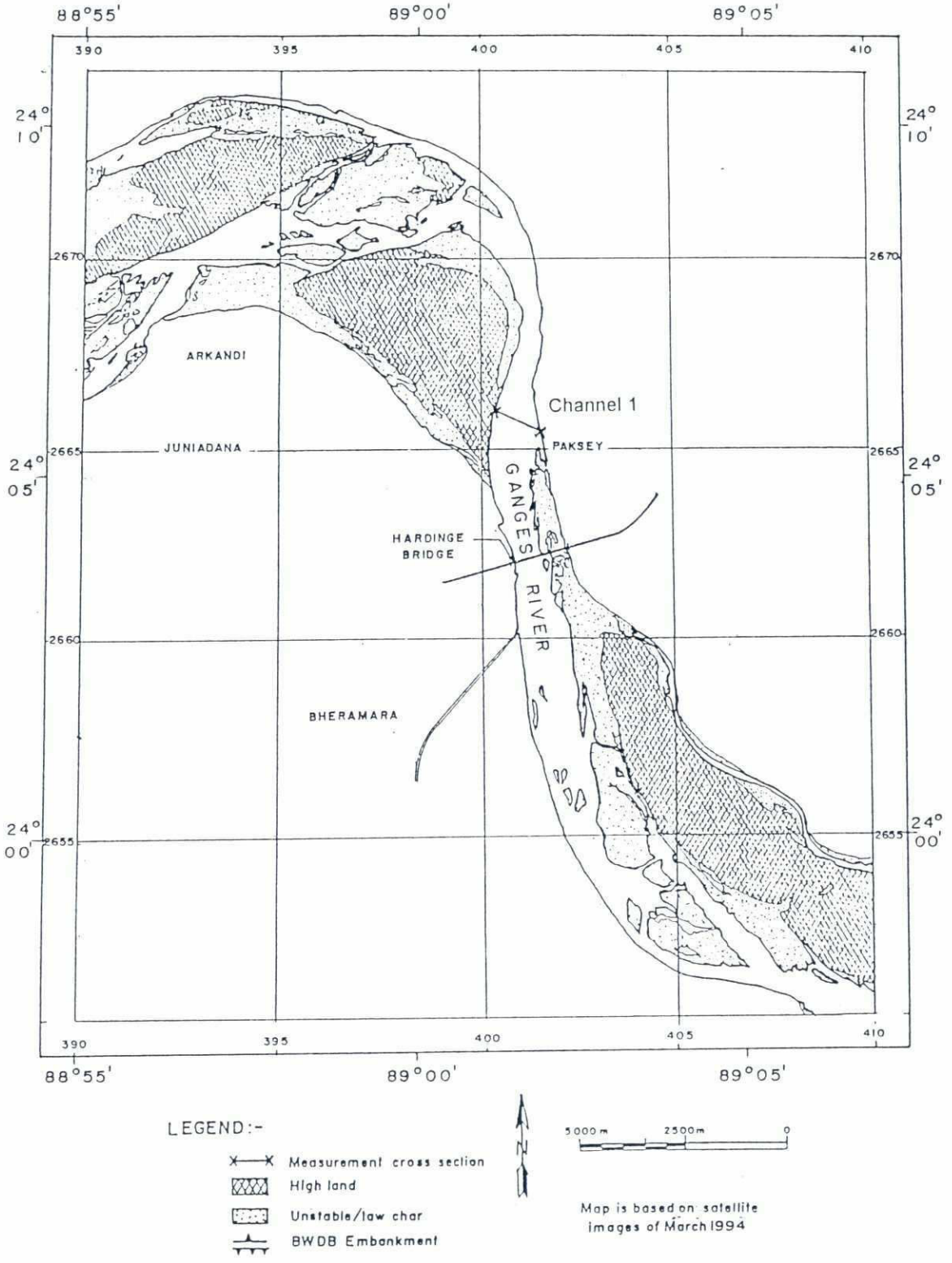
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9407160729-0749 9407160752-0818	B47G1T01 * B47G1T02
	2	9407161027-1030 9407161037-1040	B47G1T05 * B47G1T06
	3	9407160918-0935 9407160941-0959	B47G1T03 * B47G1T04

Table 6.1: ADCP & EMF transects

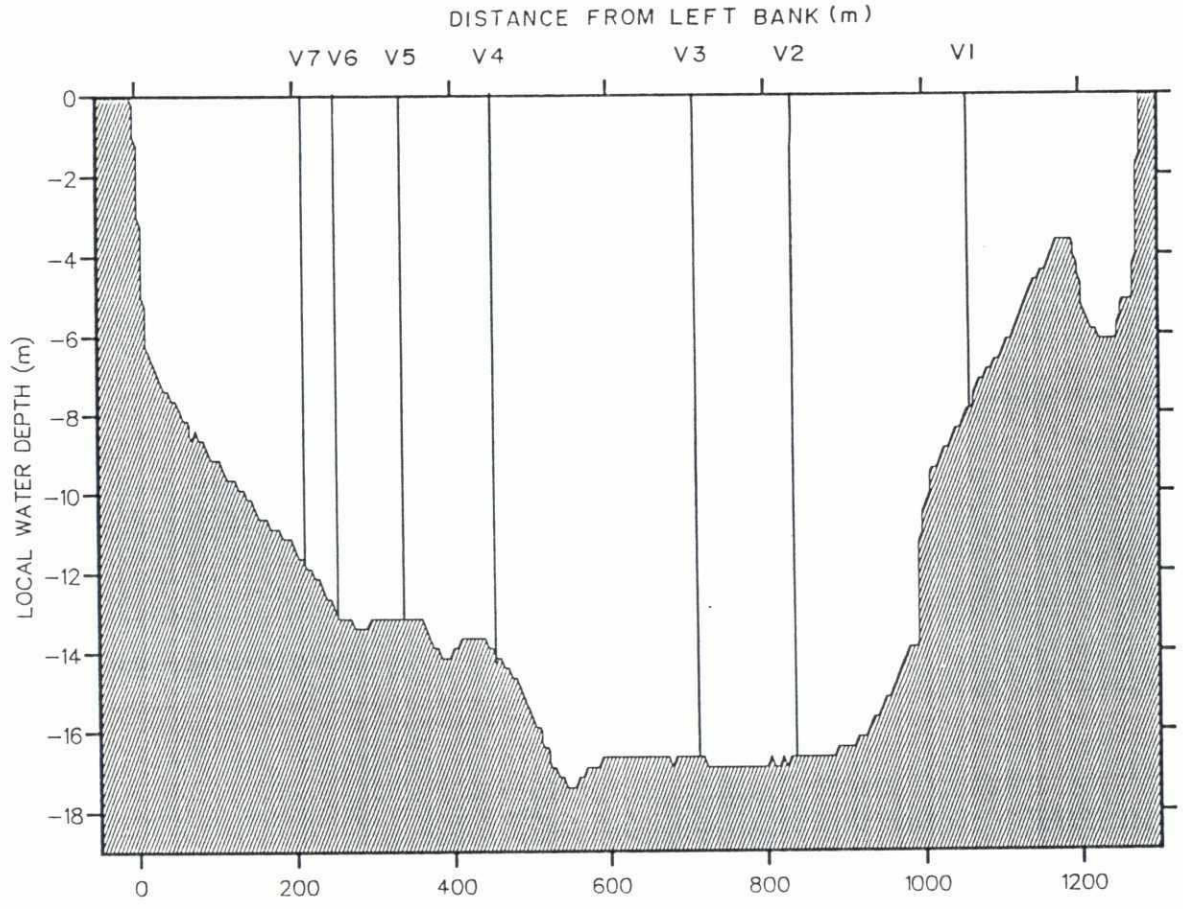
*: transect in PSD 24 data base and presented in Sections 3 and 4

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	B47G1T01 .ase
ADCP/S4/EMF	2	QUATTRO	B47G1T05 .ase
ADCP/S4/EMF	3	QUATTRO	B47G1T03 .ase
Echosounder	1	QUATTRO	B47G1T01 .ech
Echosounder	2	QUATTRO	B47G1T05 .ech
Echosounder	3	QUATTRO	B47G1T03 .ech
Transect plot data	1	QUATTRO	B47G1T01 .trs
Transect plot data	2	QUATTRO	B47G1T05 .trs
Transect plot data	3	QUATTRO	B47G1T03 .trs
Iso-velocity plot data	1	MIKE 21	B47G1T01 .ct2
		MIKE 21	B47G1T01 .dt2
Iso-velocity plot data	2	MIKE 21	B47G1T05 .ct2
		MIKE 21	B47G1T05 .dt2
Iso-velocity plot data	3	MIKE 21	B47G1T03 .ct2
		MIKE 21	B47G1T03 .dt2

Table 7.1 PSD 24 Database file description



FAP 24 RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities; DELFT - DHI	Survey Bulletin 9010 : 02 August, 1994	
	Location 4 : Ganges River, Hardinge Bridge	
	Date : 14 Dec1994	Location map
	Init : mk	page 1.1



Water-level : 12.80 m + PWD

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9010 : 02 August, 1994	
		Location 4 : Ganges River, Hardinge Bridge	
H4823T07	Date : 14 Dec1994	Cross-sections and measured verticals	page
	Init : mk	Channel 1	1.2

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	7			
	ADCP	7	-	-	-
	S4 current meter	1	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	15	-	-	-
	Andreasen settling tube	2	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	3	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	6	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	7	-	-	-
	Van Veen bed sampler	-	-	-	-

Table 2.1: Survey programme as made

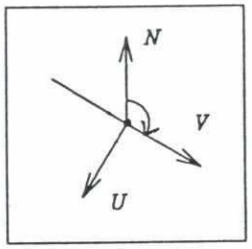
Chanel	Width (m)	Area (m^2)	Stage h (m+PWD)	Discharge Q (m^3/s)	Bed load transport Sb (kg/s)	Suspended Sedimen transport Ss total (kg/s)
Channel 1	1247	15508	12.80	33510	-	92364

Table 2.2: Key figures

- Bed load is not calculated due to insufficient samples

Gauge Location	Date	Water level Daily average) (m+PWD)
Hardinge Bridge	02 Aug 94	12.80

Table 2.3: Water-levels

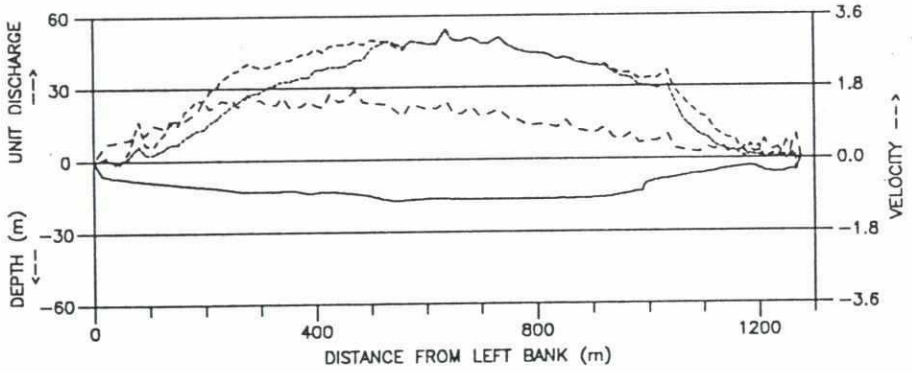


TRANSECT AZIMUTH = 121°

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^2/s/m)

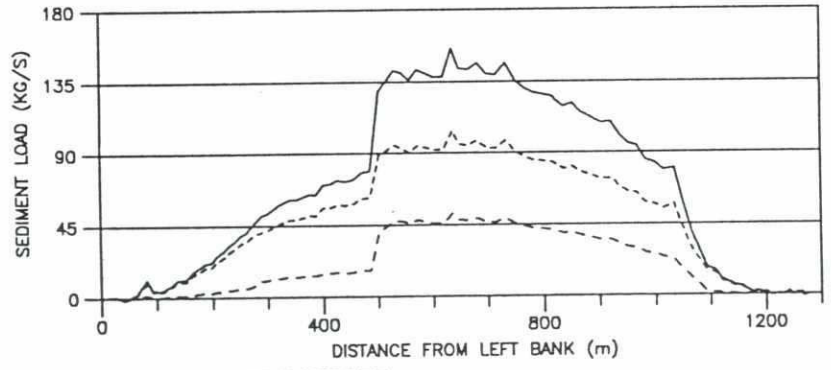
U – (m/s)

V – (m/s)

STAGE = 12.80 (m+PWD)

A = 16021 (m^2)

Q = 33506 (m^3/s)



SEDIMENT TRANSPORT

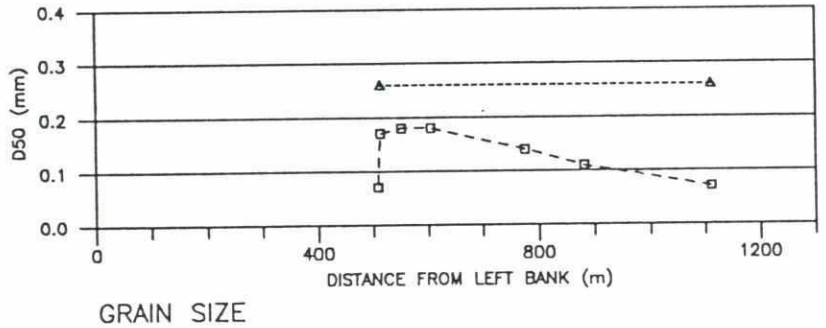
LEGEND :

S_{TOTAL} 93261 (kg/s)

$S_{WASH\ LOAD}$ 66113 (kg/s)

$S_{SUSP.\ BED}$ 27148 (kg/s)

$S_{BED\ LOAD}$ – (kg/s)



GRAIN SIZE

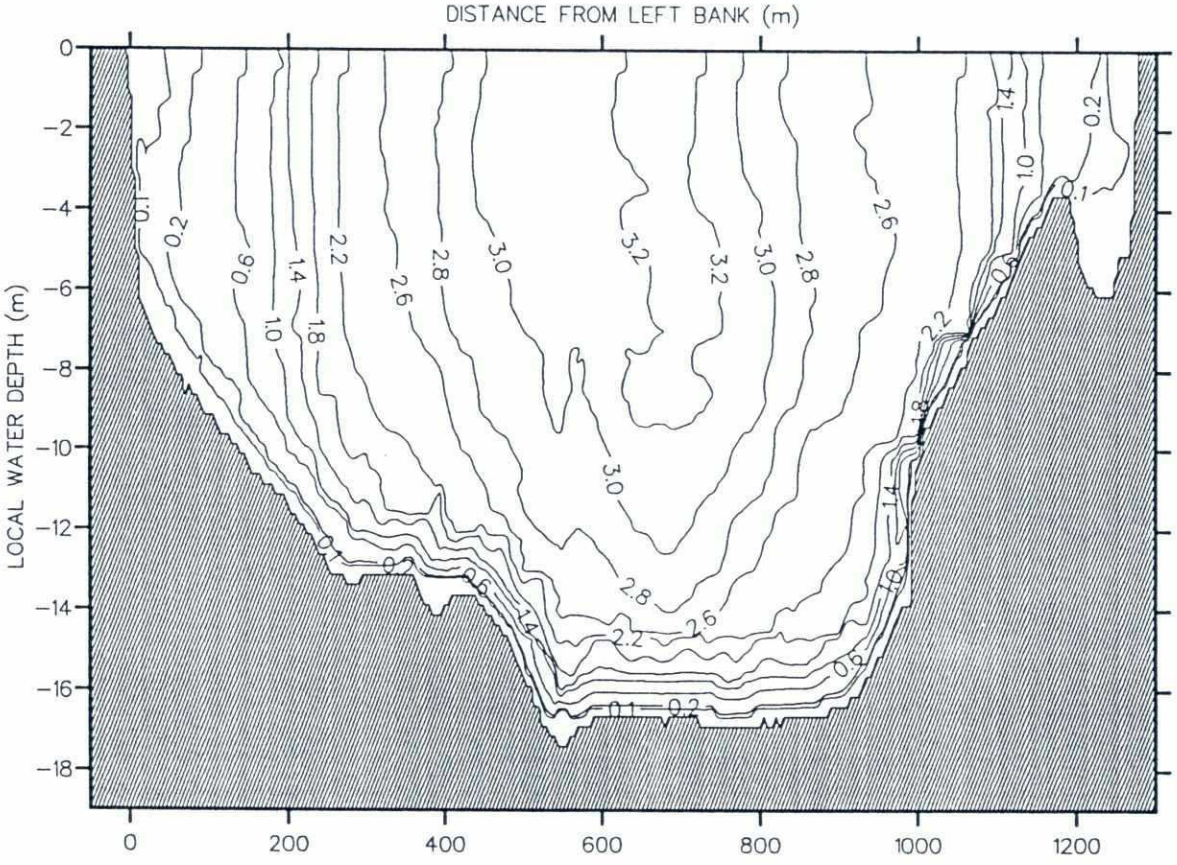
LEGEND :

$D_{50\ SUSP.}$ (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 DELFT - DHI		Survey Bulletin 9010 : 02 August, 1994	
		Location 4 : Ganges River, Hardinge Bridge	
H4823T07	Date : 14 Dec1994	Horizontal distribution of flow and sediments	page
	Init : mk	Channel 1	3.1



Iso-velocity contours (m/s)
Water level : 12.80 m + PWD

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9010 : 02 August, 1994	
		Location 4 : Ganges River, Hardinge Bridge	
H4823T07	Date : 14 Dec1994	Cross-sectional distribution of flow velocity	page 4.1
	Init : mk	Channel 1	

Andreasen settling tube

Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm	Weight percent > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
1	6	9408021551-1559	7.20	76.810	23.190	-	0.017	0.151
	7	9408021608-1615	4.00	85.640	14.360	-	0.017	0.091

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	Weight percent > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
1	1	9408021156-1203	6.20	47.93	52.070	0.034	0.065	0.114
	2	9408021325-1333	16.20	6.805	93.195	0.066	0.108	0.209
	3	9408021452-1459	16.90	9.663	90.337	0.063	0.135	0.225
	4	9408021519-1525	17.60	2.165	97.835	0.126	0.176	0.246
	5	9408021529-1536	13.60	0.499	99.501	0.131	0.179	0.245
	6	9408021551-1559	7.20	0.973	99.027	0.125	0.171	0.235
	7	9408021608-1615	4.00	42.98	57.020	0.030	0.072	0.183

Table 5.2 : Grain size of bed material

Note : 3 samples were collected in each of 11 lines

Helley-Smith

Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth (m)	Weight percent < 0.06 mm	Weight percent > 0.06 mm	D35 (mm)	D50 (mm)	D65 (mm)
1	1	9408021156-1203	6.20	0.994	99.010	0.291	0.334	0.384
	1	9408021156-1203	6.20	17.66	82.340	0.143	0.190	0.253
	6	9408021551-1559	7.20	0.486	99.510	0.182	0.216	0.262
	6	9408021551-1559	7.20	0.696	99.300	0.166	0.190	0.217
	6	9408021551-1559	7.20	1.135	98.860	0.279	0.321	0.370
	6	9408021551-1559	7.20	1.192	98.810	0.247	0.293	0.346

Table 5.3 : Grain sizes of bed load

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9408021046-1059 9408021122-1135 9408021826-1840	H4823T03 H4823T05 H4823T07 *

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	9408021156-1203	400546	665889	6.20	H4823P01 *
		1	9408021156-1203	400546	665889	6.20	H4822P01 **
		2	9408021325-1333	400792	665853	16.20	H4823P02 *
		3	9408021452-1459	400922	665850	16.90	H4823P04 *
		4	9408021519-1525	401196	665866	17.60	H4823P05 *
		5	9408021529-1536	401316	665866	13.60	H4823P06 *
		6	9408021551-1559	401394	665850	7.20	H4823P07 *
		7	9408021608-1615	401432	665853	4.00	H4823P08 *

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 (pump bottle)	1	1	3	9408021156-1203	400546	665889	6.20
		2	3	9408021325-1333	400792	665853	16.20
		5	3	9408021529-1536	401316	665866	13.60
		6	3	9408021551-1559	401394	665850	7.20
		7	3	9408021608-1615	401432	665853	4.00

Table 6.3: Suspended sediment - point sample

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	1	1	9408021156-1203	400546	665889	6.20
		6	1	9408021551-1559	401394	665850	7.20
		7	1	9408021608-1615	401432	665853	4.00

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	9408021156-1203	400546	665889	6.20	A1935
	1	1	9408021156-1203	400546	665889	6.20	A104
	1	6	9408021551-1559	401394	665850	7.20	A1600
	1	6	9408021551-1559	401394	665850	7.20	A1811
	1	6	9408021551-1559	401394	665850	7.20	A1847
	1	6	9408021551-1559	401394	665850	7.20	A2134

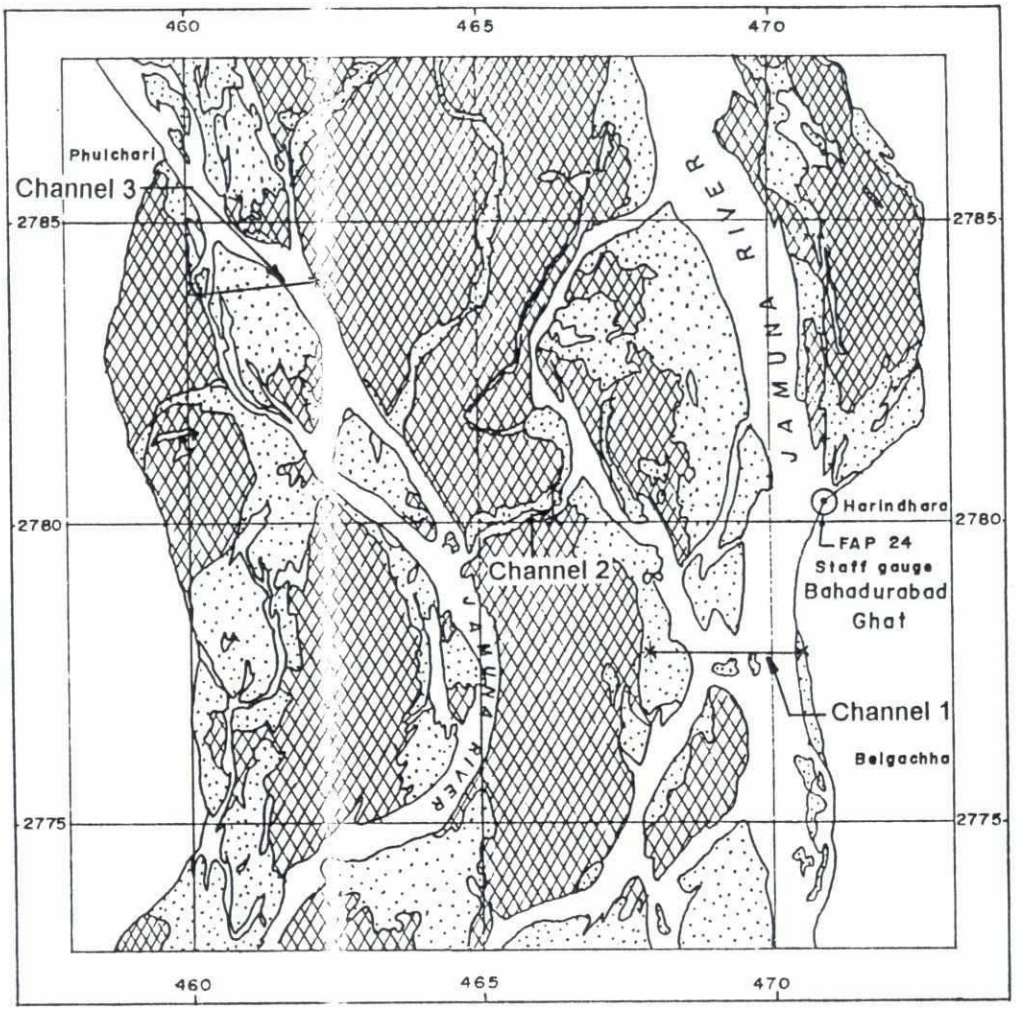
Table 6.5: Bed load

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
US BM-54 Sample	1	1	9408021156-1203	400546	665889	6.20	DHB-1
		2	9408021325-1333	400792	665853	16.20	DHB-2
		3	9408021452-1459	400922	665850	16.90	DHB-3
		4	9408021519-1525	401196	665866	17.60	DHB-4
		5	9408021529-1536	401316	665866	13.60	DHB-5
		6	9408021551-1559	401394	665850	7.20	DHB-6
		7	9408021608-1615	401432	665853	4.00	DHB-7

Table 6.6: Bed material

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	H4823T07 .ase
Echosounder data	1	QUATTRO	H4823T07 .ech
Sediment transport data	1	QUATTRO	H4823T07 .sed
Sus. sed. conc. analysis	1	QUATTRO	H4823T07 .ssc
Sus. sed. size. analysis	1	QUATTRO	H4823T07 .ssz
Bedload sediment analysis	1	QUATTRO	H4823T07 .bdl
Bed material analysis	1	QUATTRO	H4823T07 .bdm
Transect plot data	1	QUATTRO	H4823T07 .trs
Iso-velocity plot data	1	MIKE 21	H4823T07 .ct2 H4823T07 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

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

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9011 : 02 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 29 Oct 1994	Location map	page 1.1
	Init : mzh/sjr		

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

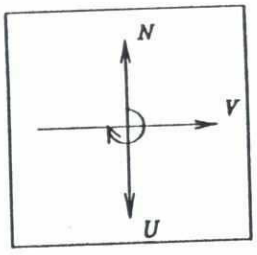
Table 2.1: Survey programme as made

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	2941	18048	18.08	20113	-	-
Channel 2	542	2314	18.08	1780	-	-
Channel 3	2065	9465	18.08	6856	-	-

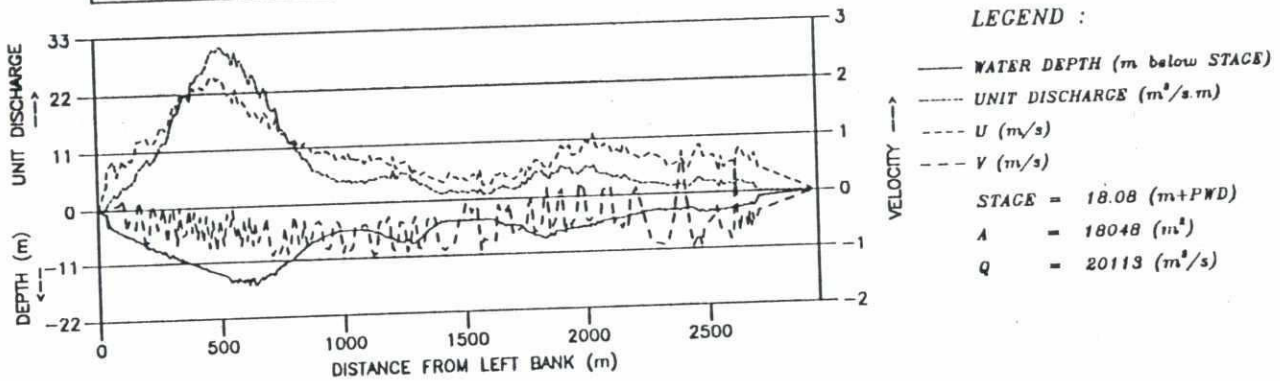
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	02 Aug 94	18.08	FAP 24
	Channel 2	02 Aug 94	18.08	FAP 24
	Channel 3	02 Aug 94	18.08	FAP 24

Table 2.3: Water-levels



TRANSECT AZIMUTH = 270°
U – VELOCITY NORMAL TO TRANSECT (m/s)
V – VELOCITY PARALLEL TO TRANSECT (m/s)
N – MAGNETIC NORTH



FLOW

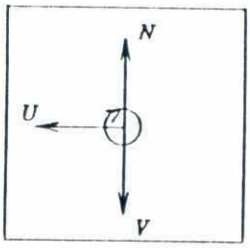
Sample not collected

SEDIMENT TRANSPORT

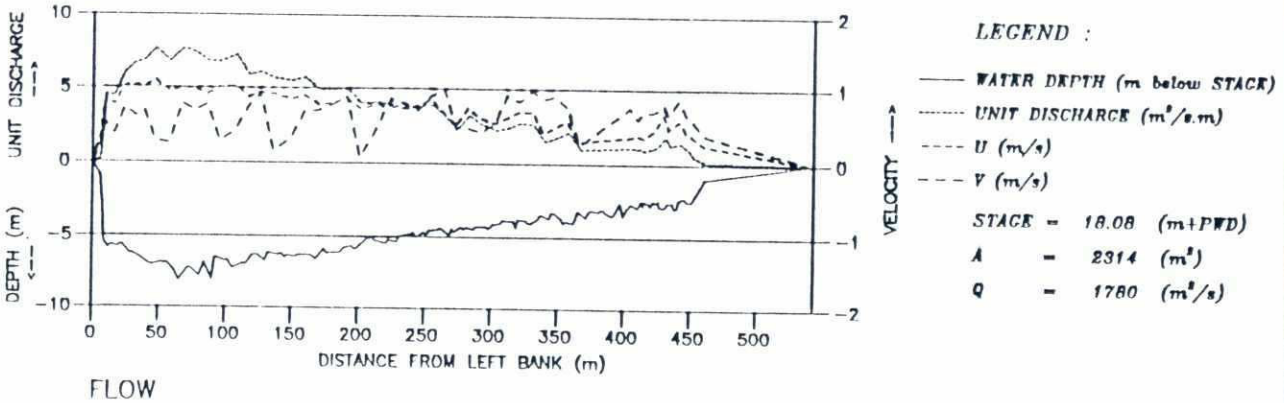
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		**Survey Bulletin 9011 : 02 August, 1994** **Location 1 : Jamuna River, Bahadurabad**
File : B4821T05	Date : 29 Oct 1994 Init : mzh/sjr	**Horizontal distribution of flow and sediments** **Channel 1**
		page 31



TRANSECT AZIMUTH = 360°
U – VELOCITY NORMAL TO TRANSECT (m/s)
V – VELOCITY PARALLEL TO TRANSECT (m/s)
N – MAGNETIC NORTH



FLOW

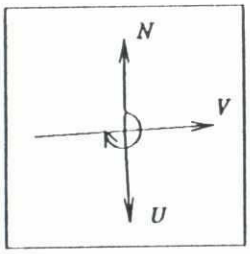
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9011 : 02 August, 1994	
	Location 1 : Jamuna River, Bahadurabad	
File B4821T03	Date : 29 Oct 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2
		page 3.2

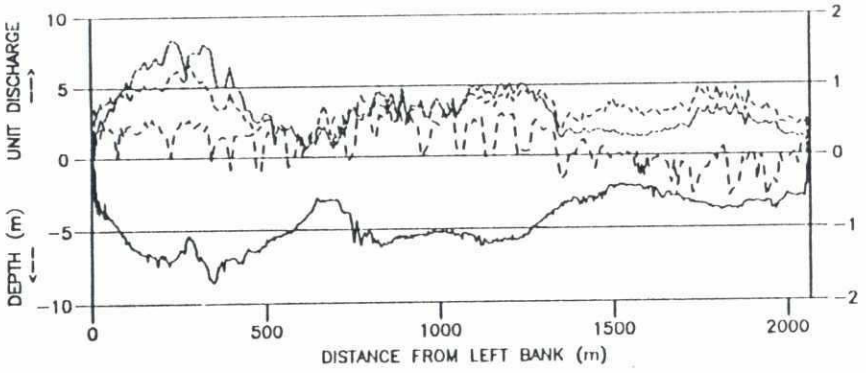


TRANSECT AZIMUTH = 267°

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 (m^2/s.m)

U (m/s)

V (m/s)

STAGE = 18.08 (m+PWD)

A = 9465 (m^2)

Q = 6856 (m^3/s)

FLOW

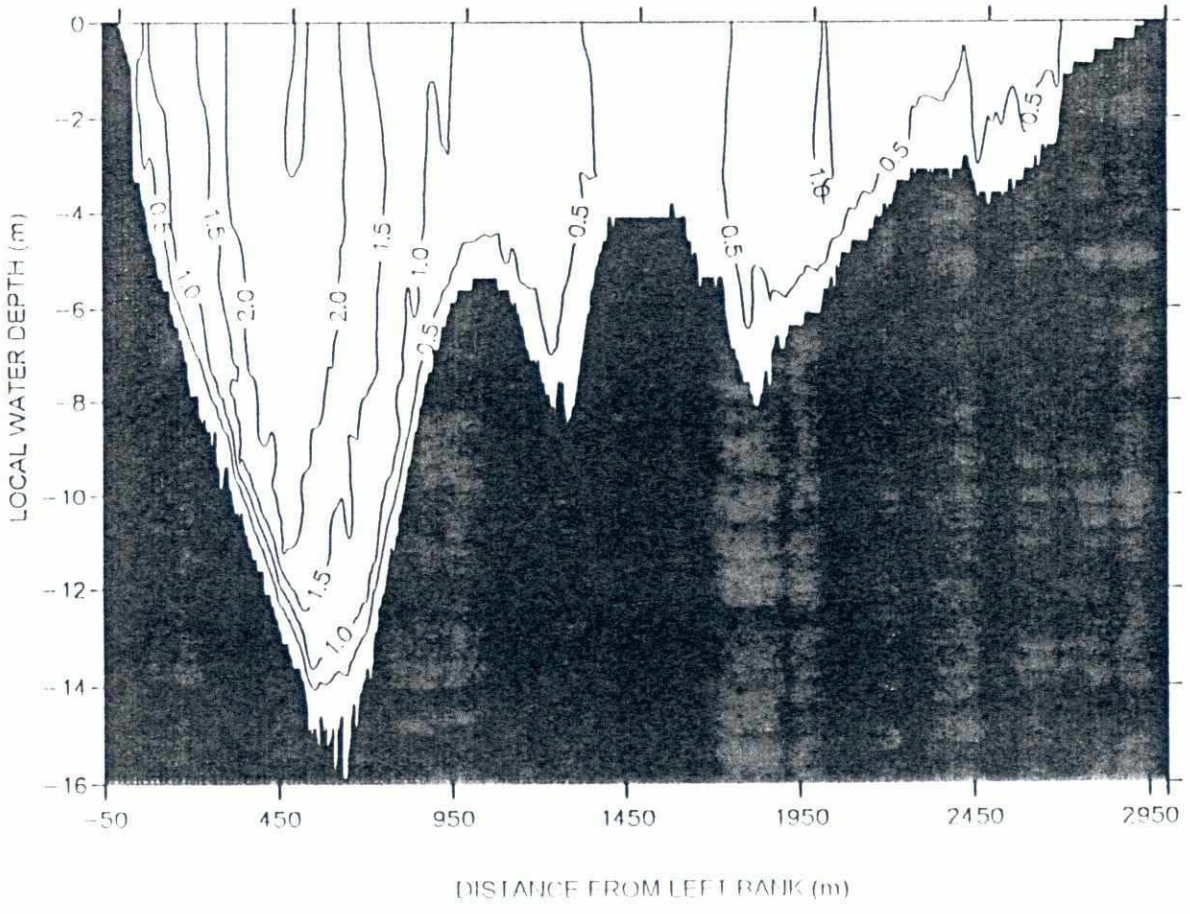
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

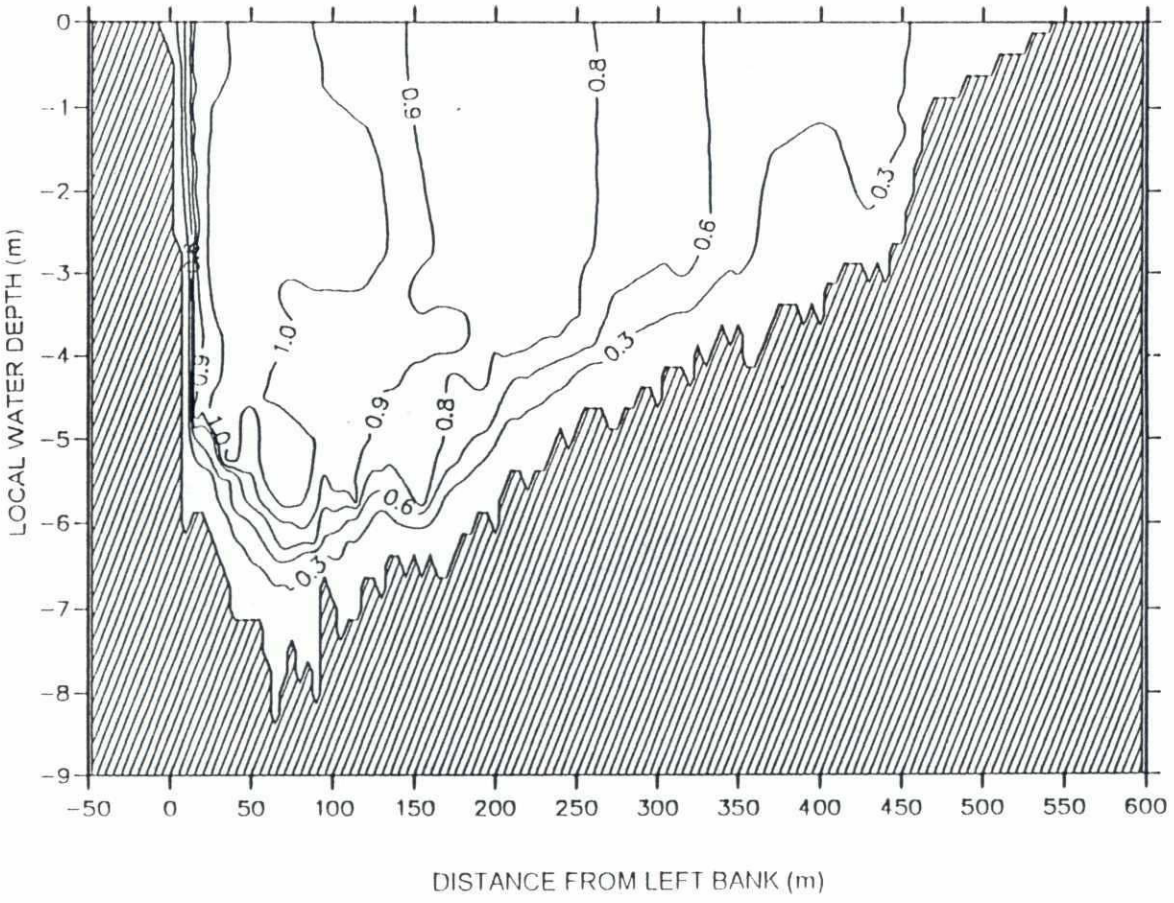
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9011 : 02 August, 1994	
	Location 1 : Jamuna River, Bahadurabad	
File : B4821T01	Date : 29 Oct 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 3
		page 33



Iso-velocity contours (m/s)
Water-level : 18.08 m + PWD measured at the station indicated on Page 1.1

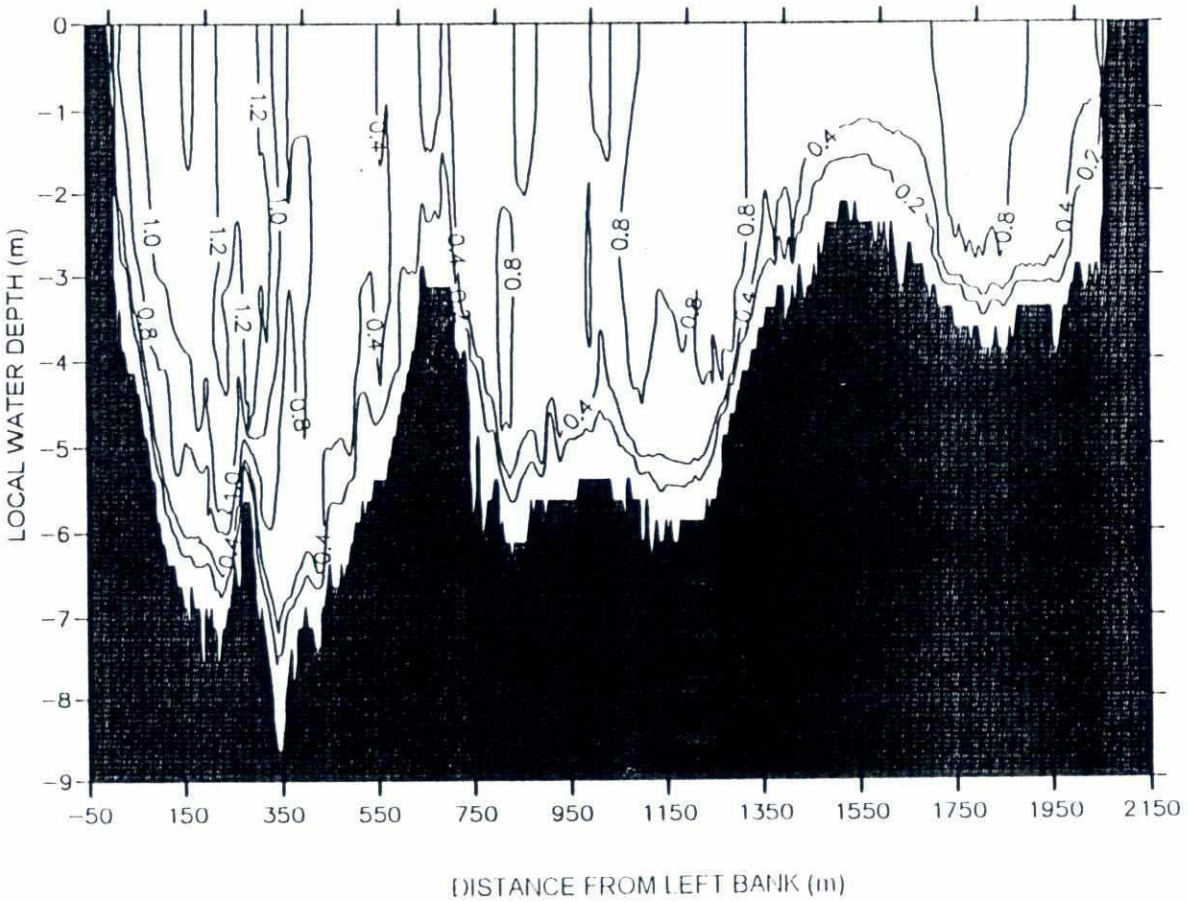
FAP 24 DELFT HYDRAULICS DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9011 : 02 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File B4821105	Date 29 Oct 1994	Cross-sectional distribution of flow velocity	page 41
	Init mzh/sjr	Channel 1	



Iso-velocity contours (m/s)
Water-level : 18.08 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 9011 : 02 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4821T03	Date : 29 Oct 1994 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 2	page 4.2

22



Iso-velocity contours (m/s)
Water-level : 18.08 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 9011 : 02 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File B4821T01	Date : 29 Oct 1994 Init mzh/sjt	Cross-sectional distribution of flow velocity Channel 3	page 4.3

Andreasen settling tube

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 5.1: 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 < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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)
Sample not collected							

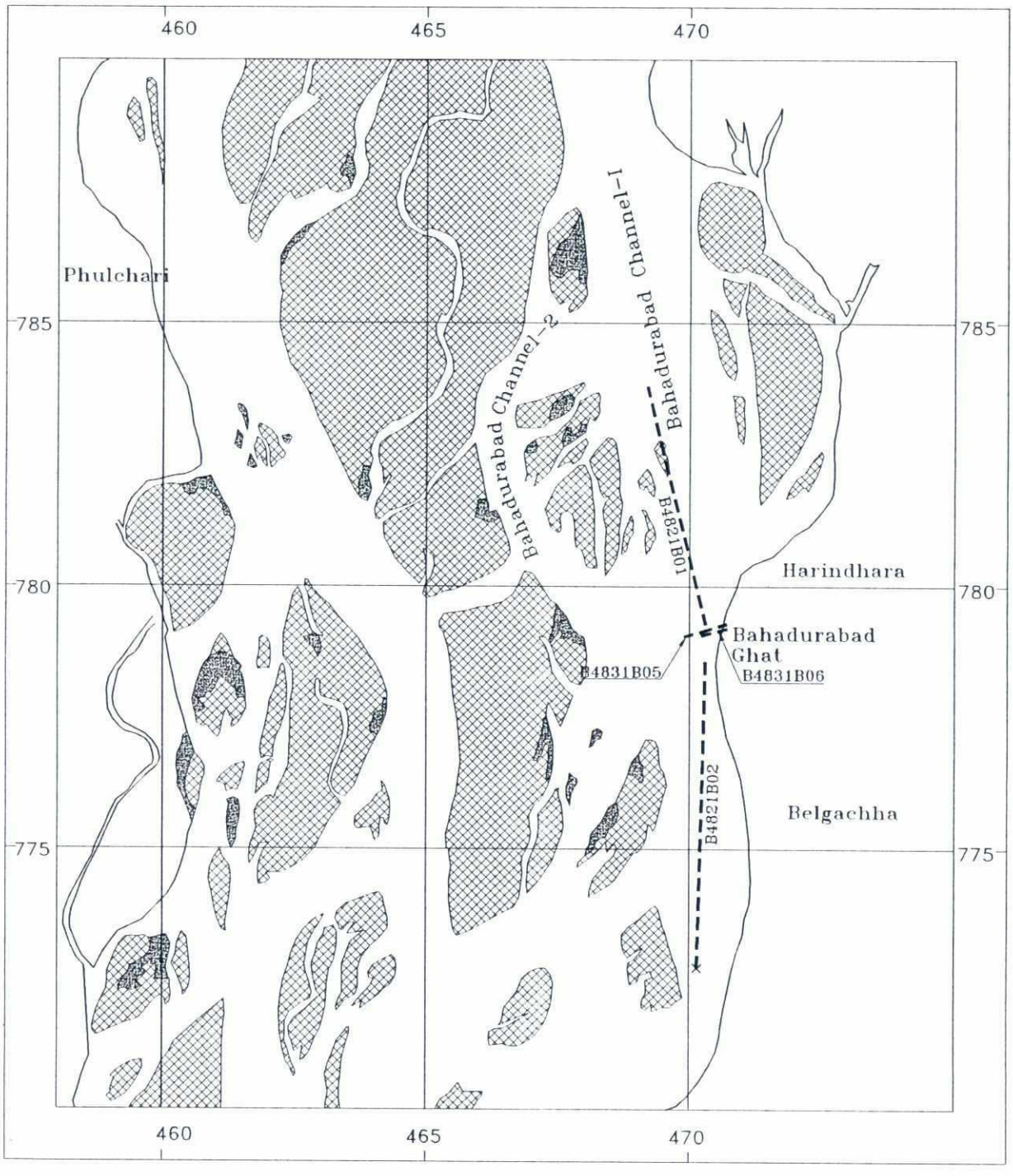
Table 5.3 : Grain size of bed load

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9408021111-1131	B4821T05 *
		9408021133-1157	B4821T06
	2	9408021031-1036	B4821T03 *
		9408021038-1043	B4821T04
	3	9408020921-0941	B4821T01 *
		9408020944-1002	B4821T02

Table 6.1: ADCP & EMF transects * : transect in PSD 24 data base and presented in Sections 3 and 4

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	B4821T05 .ase
ADCP/S4/EMF	2	QUATTRO	B4821T03 .ase
ADCP/S4/EMF	3	QUATTRO	B4821T01 .ase
Echosounder	1	QUATTRO	B4821T05 .ech
Echosounder	2	QUATTRO	B4821T03 .ech
Echosounder	3	QUATTRO	B4821T01 .ech
Transect plot data	1	QUATTRO	B4821T05 .trs
Transect plot data	2	QUATTRO	B4821T03 .trs
Transect plot data	3	QUATTRO	B4821T01 .trs
Iso-velocity plot data	1	MIKE 21	B4821T05 .dt2
		MIKE 21	B4821T05 .ct2
Iso-velocity plot data	2	MIKE 21	B4821T03 .dt2
		MIKE 21	B4821T03 .ct2
Iso-velocity plot data	3	MIKE 21	B4821T01 .dt2
		MIKE 21	B4821T01 .ct2

Table 7.1 PSD 24 Database file description



LEGEND:

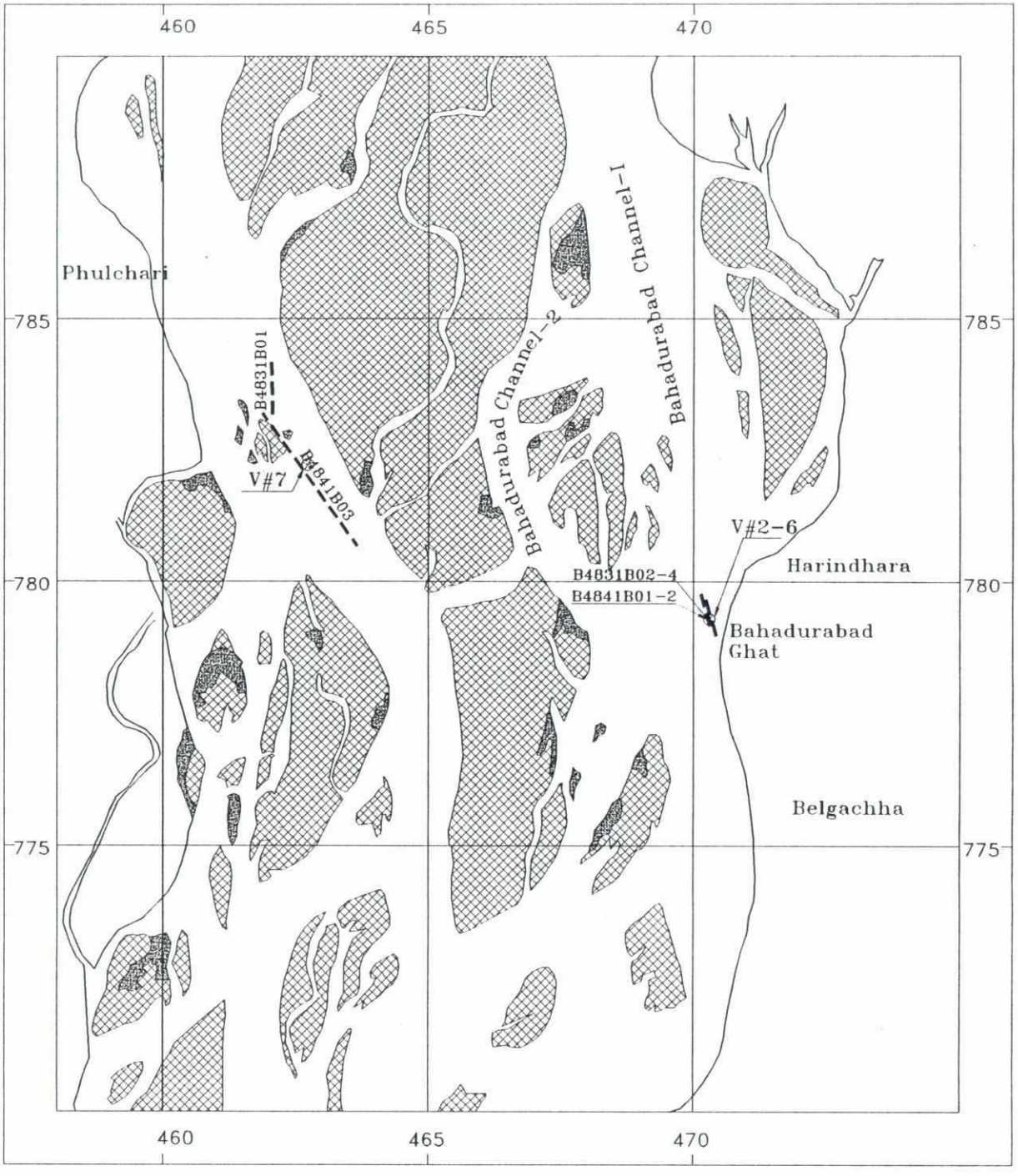
- High land
- Low char
- Longitudinal sounding profile

N

5000m 2500m 0

Map is based on SPOT images of October 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9012: 02 - 04 Aug, 1994	
		Jamuna River, Near bed transport	
	Date : 28 July 1996	Location map	page 1.1
	Init : kah		



FAP 24 DELFT - DHI; RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities	Survey Bulletin 9012: 02 - 04 Aug, 1994	
	Jamuna River, Near bed transport	
Date : 28 July 1996	Location map	page 1.2
Init : kah		

Type of measurement	Method	No. of measurements in Lines								
		BB1Y 023	BB1Y 026	BB1Y 027	BB1Y 028	BB1Y 030	BB1Y 031	BB1Y 032	BB1Y 033	BB1Y 034
Discharge	ADCP transect	-	-	-	-	-	-	-	-	-
	EMF transect	-	-	-	-	-	-	-	-	-
	Echo-Sounding	1	1	1	5	1	1	1	1	1
Vertical current profile	No.of verticals in channel	-	-	-	5	-	-	-	-	1
	ADCP	-	-	-	5	-	-	-	-	1
	S4 current meter	-	-	-	3	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	12	-	-	-	-	4
	Andreasen settling tube	-	-	-	3	-	-	-	-	1
	MEX turbidity meter	-	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	1	-	-	-	-	-
	Collapsible bag	-	-	-	7	-	-	-	-	5
Bed load	Dune tracking	-	-	-	-	-	-	-	-	-
	Helley-smith sampler	-	-	-	4	-	-	-	-	2
	Delft Bottle	-	-	-	12	-	-	-	-	4
Bed material	US BM-54 bed sampler	-	-	-	-	-	-	-	-	-
	Van Veen bed sampler	-	-	-	-	-	-	-	-	-

Table 2.1 : Survey programme as made

Line no	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)
BB1Y023	-	-	18.00	-	-	-
BB1Y026	-	-	18.08	-	-	-
BB1Y027	-	-	18.08	-	-	-
BB1Y028	387.36	3691.97	18.00	1936.44	244.12	1114.7
BB1Y030	-	-	18.00	-	-	-
BB1Y031	-	-	18.00	-	-	-
BB1Y032	-	-	18.00	-	-	-
BB1Y033	-	-	17.95	-	-	-
BB1Y034	-	-	17.95	-	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	02 Aug 94	18.08	FAP24
Bahadurabad	03 Aug 94	18.00	FAP24
Bahadurabad	04 Aug 94	17.95	FAP24

Table 2.3 : Water levels

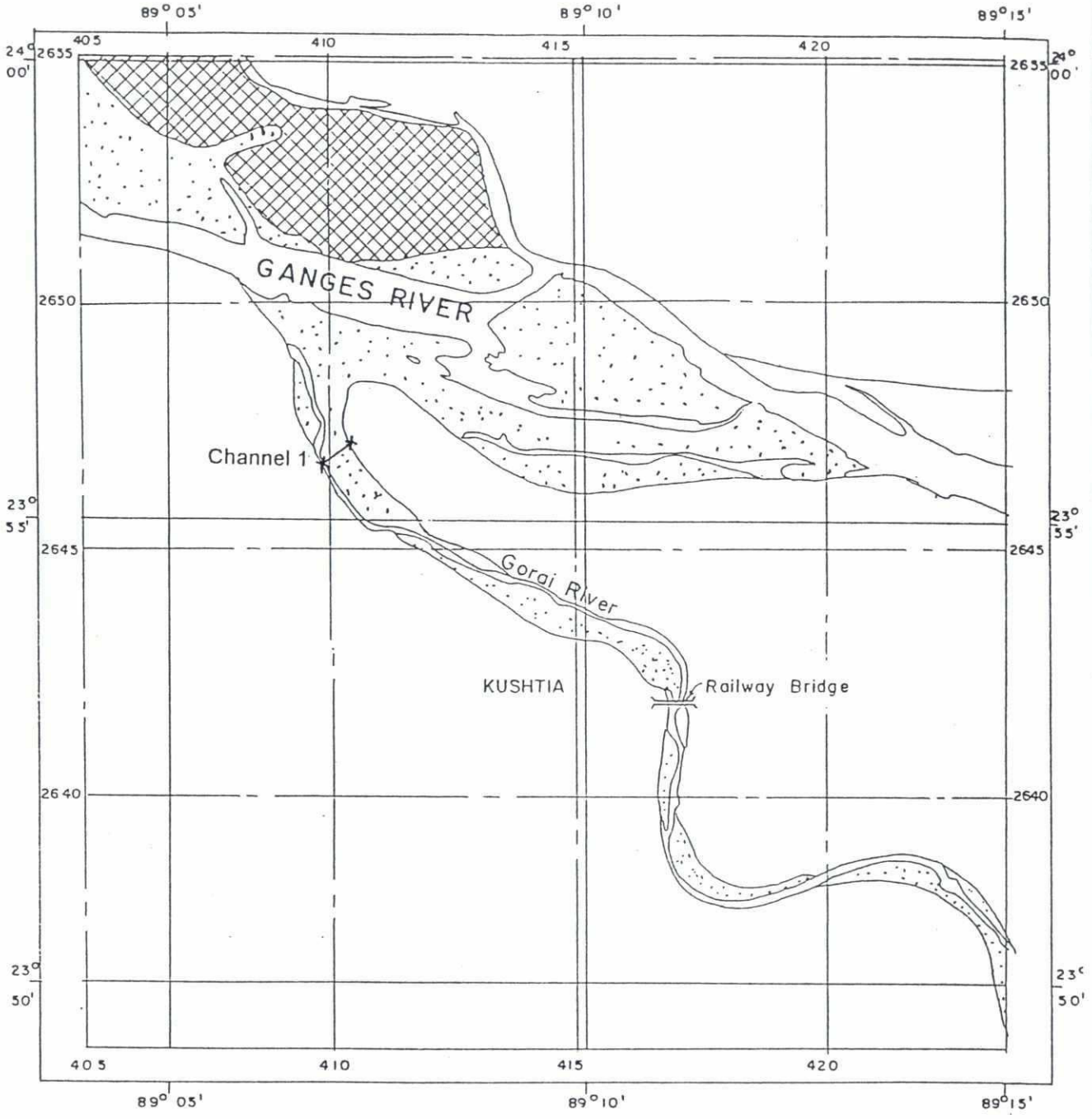
Short Description :
Near-bed sediment transport over dunes. Measurements of flow and sediment transport over stoss, crest and trough of selected dunes.

Transect / Echosounding file name	Profile file name	Vertical No.	Line no	Survey date	Type of data
B4821B01 *			BB1Y026	1995-08-02	Echo-sounding
B4821B02 *			BB1Y027	1995-08-02	Echo-sounding
B4831B01 *			BB1Y023	1995-08-03	Echo-sounding
B4831B02 *			BB1Y028	1995-08-03	Echo-sounding
	B4831P02	V # 2	BB1Y028	1995-08-03	Echo-sounding+s4+adcp
	B4831P03	V # 3	BB1Y028	1995-08-03	Echo-sounding+adcp
	B4831P04	V # 4	BB1Y028	1995-08-03	Echo-sounding+s4+adcp
	B4831P05	V # 5	BB1Y028	1995-08-03	Echo-sounding+adcp
	B4841P03	V # 6	BB1Y028	1995-08-04	Echo-sounding+s4+adcp
B4831B03 *			BB1Y030	1995-08-03	Echo-sounding
B4831B04 *			BB1Y031	1995-08-03	Echo-sounding
B4831B05 *			BB1Y032	1995-08-03	Echo-sounding
B4831B06 *			BB1Y033	1995-08-03	Echo-sounding
B4841B01 *			BB1Y028	1995-08-04	Echo-sounding
B4841B02 *			BB1Y028	1995-08-04	Echo-sounding
B4841B03 *			BB1Y028	1995-08-04	Echo-sounding
	B4841P05	V # 7	BB1Y034	1995-08-04	Echo-sounding+adcp

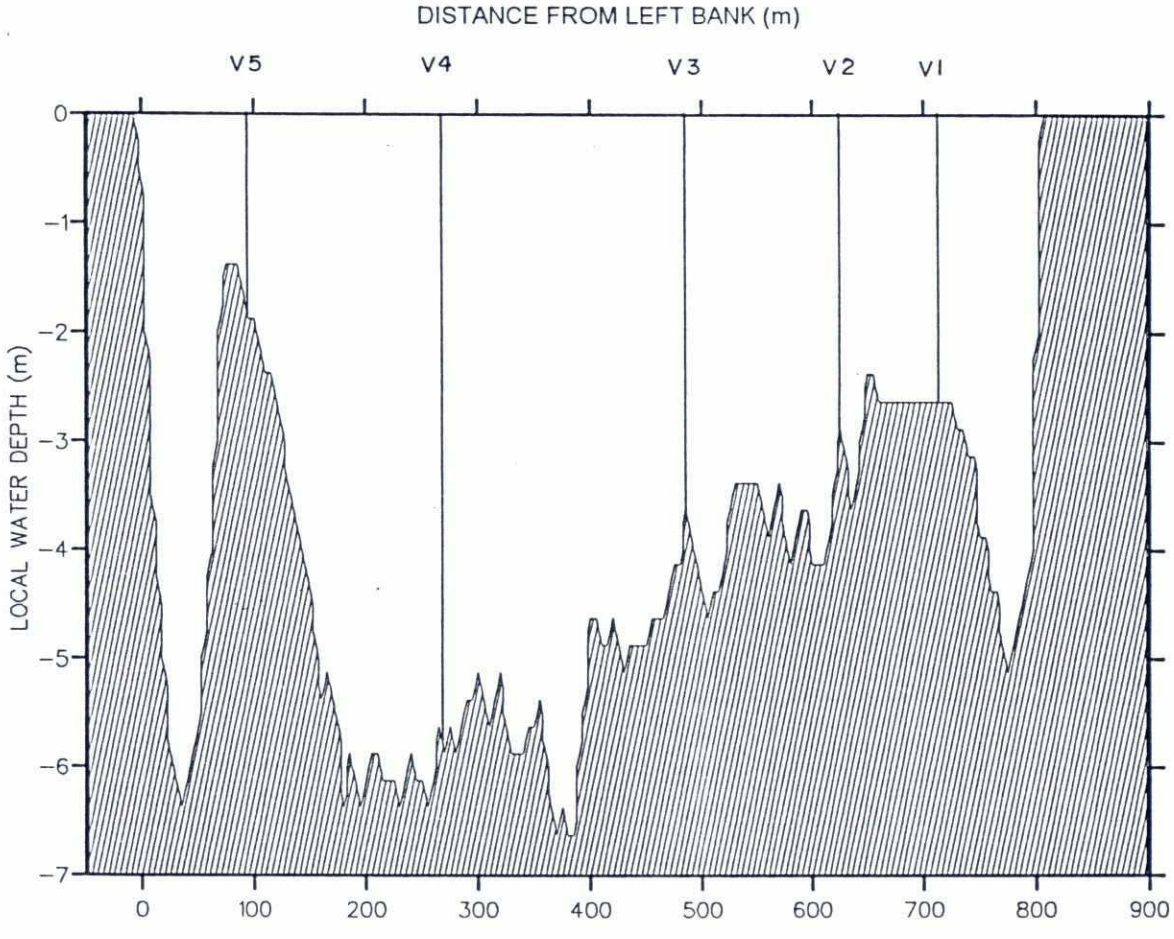
*** : Transect / Echo sounding in PSD24 data base**

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1995-08-02	B4821B01	BB1Y026										+
1995-08-02	B4821B02	BB1Y027										+
1995-08-03	B4831B01	BB1Y023										+
1995-08-03	B4831B02	BB1Y028	+	+		+	+		+	+		+
1995-08-03	B4831B03	BB1Y030										+
1995-08-03	B4831B04	BB1Y031										+
1995-08-03	B4831B05	BB1Y032										+
1995-08-03	B4831B06	BB1Y033										+
1995-08-03	B4831p02	BB1Y028									+	
1995-08-03	B4831p03	BB1Y028									+	
1995-08-03	B4831p04	BB1Y028									+	
1995-08-03	B4831p05	BB1Y028									+	
1995-08-04	B4841B01	BB1Y028										+
1995-08-04	B4841B02	BB1Y028										+
1995-08-04	B4841B03	BB1Y028										+
1995-08-04	B4841p03	BB1Y028									+	
1995-08-04	B4841p05	BB1Y034									+	
Total number of files			1	1	-	1	1	-	1	1	6	11

Table 4.1: PSD24 Database file description



FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9013 : 03 - 06 August, 1994
		Location 9 : Gorai River, Gorai Offtake
	Date : 21 Nov 1994	Location map
	Init : mk	page 1.1



Water level : 11.24 m + PWD

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9013 : 03 - 06 August, 1994	
		Location 9 : Gorai River, Gorai Offtake	
K4833T17	Date : 21 Nov 1994	Cross-sections and measured verticals	page
	Init : mk	Channel 1	1.2

Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	20	-	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	1	-	-	-
Vertical current profile	No.of verticals in channel	5	-	-	-
	ADCP	-	-	-	-
	S4 current meter	-	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	13	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	5	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-smith sampler	-	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	5	-	-	-
	Van Veen bed sampler	-	-	-	-

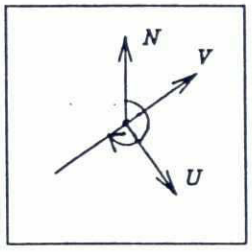
Table 2.1: Survey programme as made

	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	840	3454	11.24	3349	-	5989

Table 2.2: Key figures

Gauge Location	Date	Water level (Daily average) (m+PWD)
Gorai Offtake	03 Aug 94	11.24
	04 Aug 94	11.28
	05 Aug 94	11.34
	06 Aug 94	11.38

WARP LIBRARY DHAKA

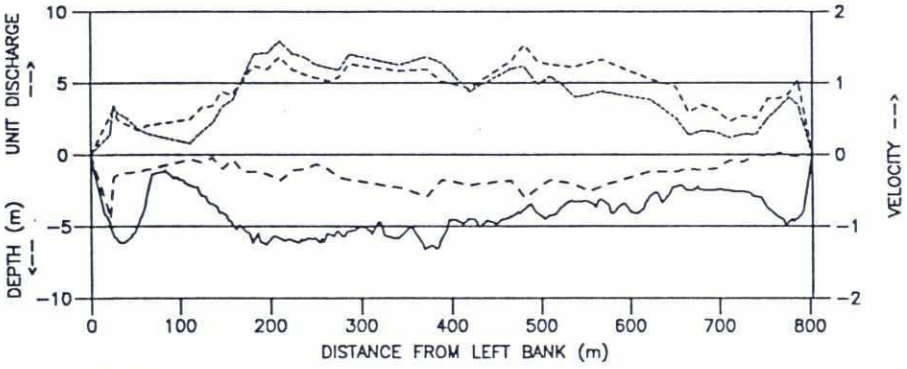


TRANSECT AZIMUTH = 235°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

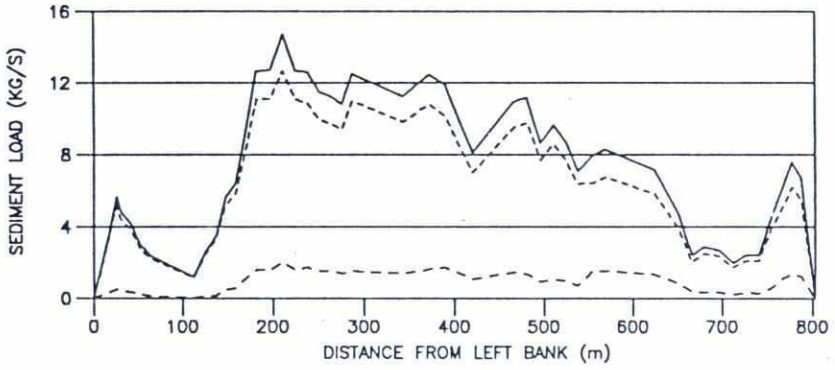
LEGEND :

- *WATER DEPTH (m below STAGE)*
- *UNIT DISCHARGE ($m^2/s/m$)*
- *U – (m/s)*
- *V – (m/s)*

STAGE = 11.24 (m+PWD)

A = 3454 (m^2)

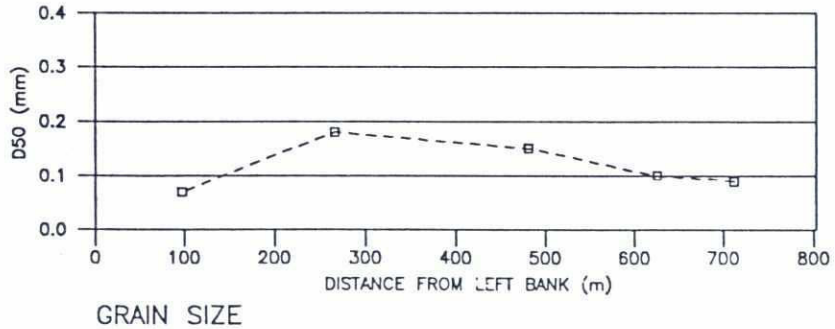
Q = 3349 (m^3/s)



SEDIMENT TRANSPORT

LEGEND :

- S_{TOTAL} 5989 (kg/s)
- $S_{WASH\ LOAD}$ 5180 (kg/s)
- $S_{SUSP.\ BED}$ 809 (kg/s)
- $S_{BED\ LOAD}$ – (kg/s)

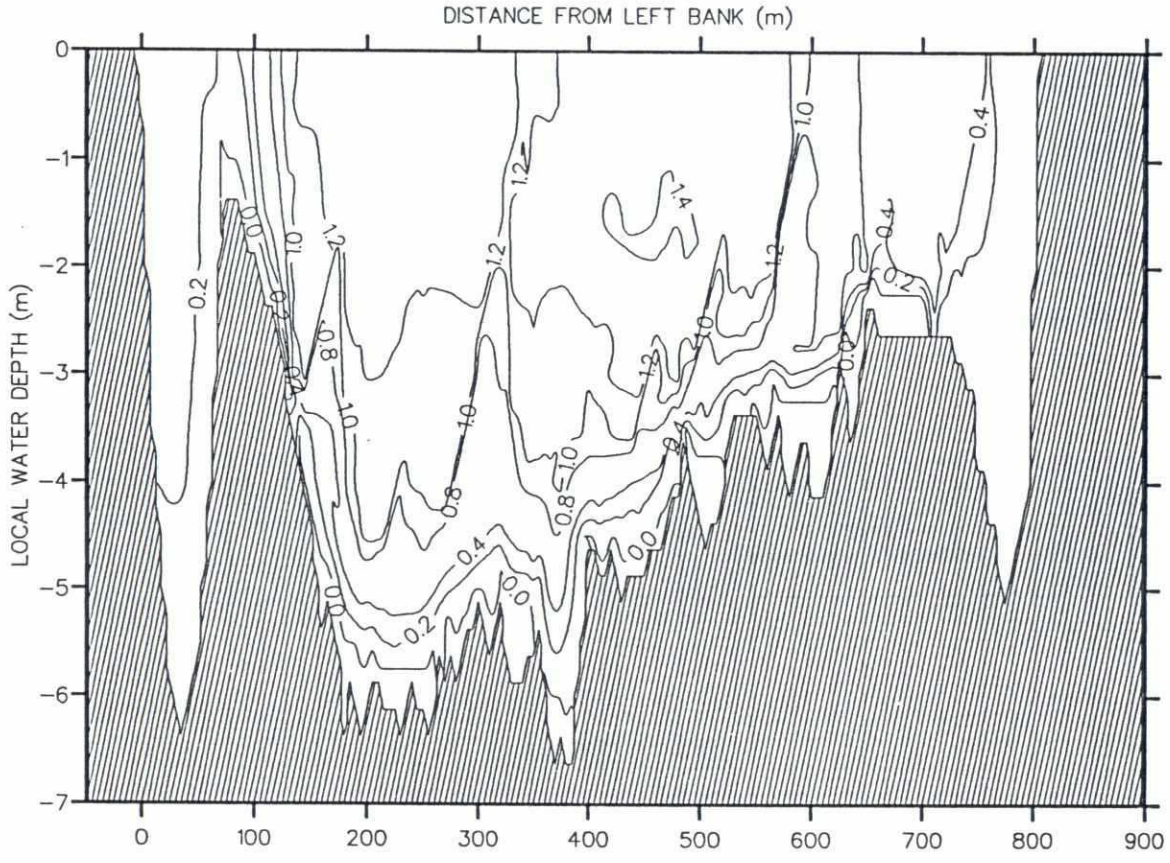


GRAIN SIZE

LEGEND :

- $D_{60\ SUSP.}$ (mm)
- $D_{60\ BED\ LOAD}$ (mm)
- $D_{60\ BED\ MAT.}$ (mm)

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9013 : 03 - 06 August, 1994	
		Location 9 : Gorai River, Gorai Offtake	
K4833T17	Date : 21 Nov 1994 Init : mk	Horizontal distribution of flow and sediments Channel 1	page 3.1



Iso-velocity contours (m/s)
Water level : 11.24 m + PWD

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9013 : 03 - 06 August, 1994	
		Location 9 : Gorai River, Gorai Offtake	
K4833T17	Date : 21 Nov 1994	Cross-sectional distribution of flow velocity	page
	Init : mk	Channel 1	4.1

Andreasen settling tube

Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm	Weight percent > 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	Weight percent > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
1	1	9408031640-1657	2.5	13.163	86.837	0.055	0.088	0.145
	2	9408031707-1724	2.8	6.1150	93.885	0.066	0.101	0.199
	3	9408041100-1130	3.5	1.3550	98.645	0.078	0.154	0.227
	4	9408041305-1336	6.0	1.5610	98.439	0.119	0.184	0.352
	5	9408041516-1546	3.6	45.230	54.770	0.025	0.068	0.136

Table 5.2 : Grain size of bed material

Helley - Smith

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

Table 5.3 : Grain sizes of bed load

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9408031438-1442	K4833T13
		9408031450-1451	K4833T14
		9408031458-1504	K4833T15
		9408031533-1540	K4833T16
		9408031545-1552	K4833T17 *
		9408031617-1622	K4833T18
		9408031625-1628	K4833T19
		9408031632-1636	K4833T20
		9408031641-1644	K4833T21
		9408031649-1653	K4833T22
		9408031659-1704	K4833T23
		9408040923-0929	K4843T01
		9408040932-0943	K4843T02
		9408041026-1036	K4843T05
		9408041046-1131	K4843T06
		9408041135-1146	K4843T07
		9408041149-1205	K4843T08
		9408041227-1237	K4843T09
		9408041244-1255	K4843T11
		9408041518-1521	K4843T18
Echo Sounding	1	9408031141-1341	K4833T11

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	9408031640-1657	409633	646644	2.5	K4833P01 *
		2	9408031707-1724	409706	646690	2.8	K4833P02 *
		3	9408041100-1130	409832	646762	3.5	K4843P01 *
		4	9408041305-1336	410001	646896	6.0	K4843P02 *
		5	9408041516-1546	410129	647038	3.6	K4843P03 *

Table 6.2: Vertical profiles

* ADCP,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	2	9408031640-1657	409633	646644	2.5
		2	2	9408031707-1724	409706	646690	2.8
		3	3	9408041100-1130	409832	646762	3.5
		4	3	9408041305-1336	410001	646896	6.0
		5	3	9408041516-1546	410129	647038	3.6

Table 6.3: Suspended sediment - point sampled

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHM	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	1	1	9408031640-1657	409633	646644	2.5
		2	1	9408031707-1724	409706	646690	2.8
		3	1	9408041100-1130	409832	646762	3.5
		4	1	9408041305-1336	410001	646896	6.0
		5	1	9408041516-1546	410129	647038	3.6

Table 6.4: Suspended sediment - depth integrated

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
Helley Smith Sample			Sample not collected				

Table 6.5: Bed load

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
Delft-Bottle Sample			Sample not collected				

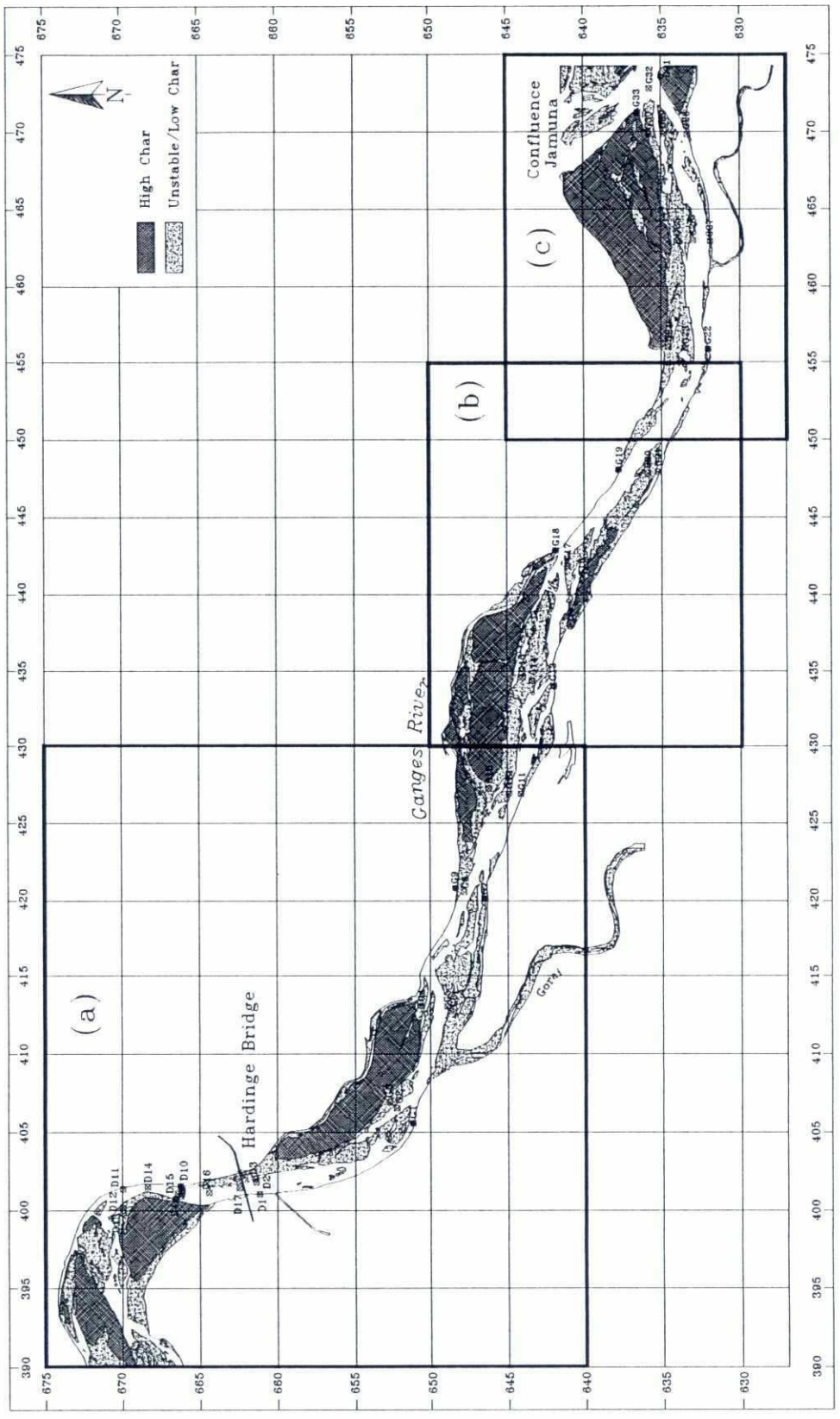
Table 6.6: Bed load

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
US BM-54 Sample	1	1	9408031640-1657	409633	646644	2.5	DHC-5,KT1X002
		2	9408031707-1724	409706	646690	2.8	DHC-4,KT1X002
		3	9408041100-1130	409832	646762	3.5	DHC-1,KT1X002
		4	9408041305-1336	410001	646896	6.0	DHC-2,KT1X002
		5	9408041516-1546	410129	647038	3.6	DHC-3,KT1X002

Table 6.7: Bed material

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	K4833T17 .ase
Echosounder data	1	QUATTRO	K4833T17 .ech
Sediment transport data	1	QUATTRO	K4833T17 .sed
Sus. sed. conc. analysis	1	QUATTRO	K4833T17 .ssc
Bed material analysis	1	QUATTRO	K4833T17 .bdm
Transect plot data	1	QUATTRO	K4833T17 .trs
Iso-velocity plot data	1	MIKE 21	K4833T17 .ct2 K4833T17 .dt2

Table 7.1 PSD 24 Database file description



FAP 24

DELFT - DHI

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

Survey Bulletin 9014: 06 August, 1994

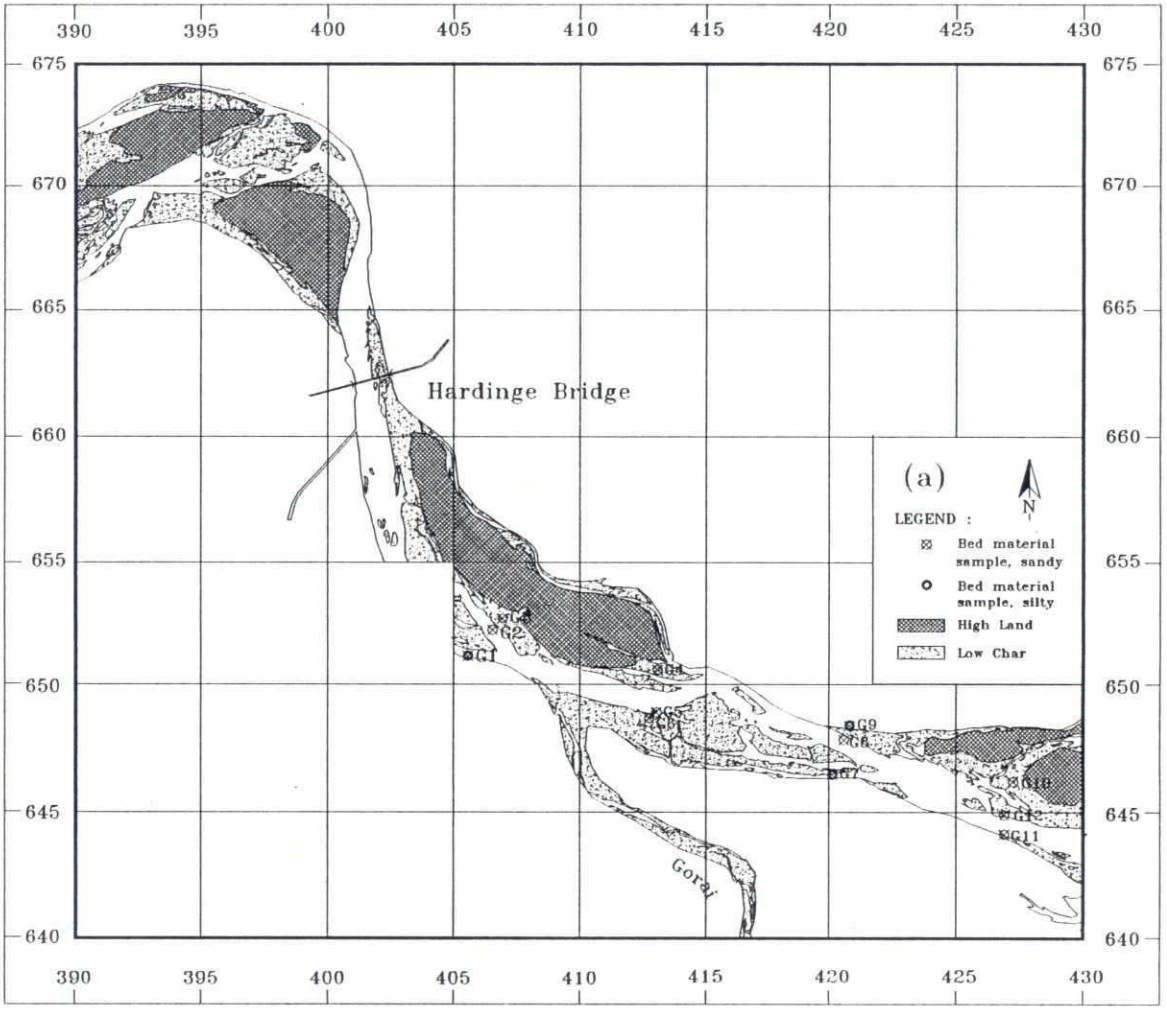
Gorai/Ganges River, Bed material sampling

Date : 15 May 1996

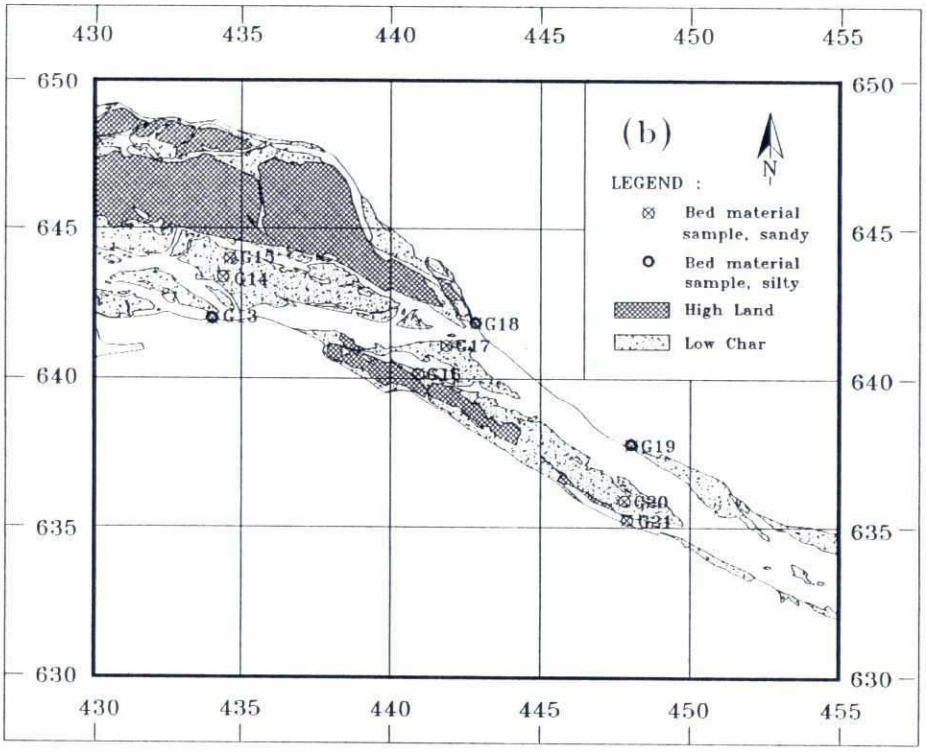
Init : kah

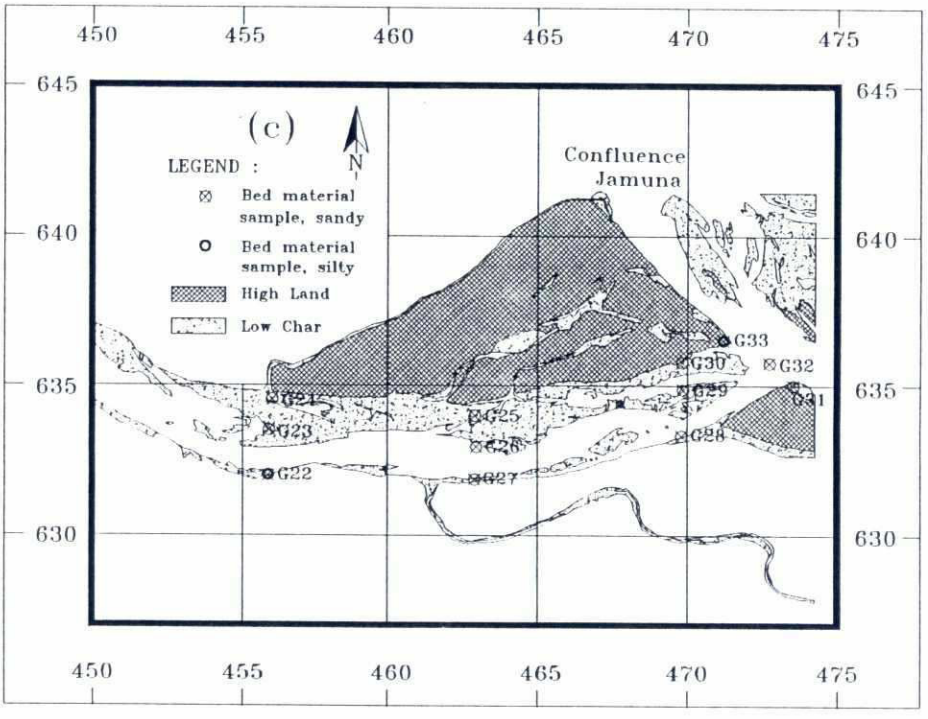
Location of bed material samples

page 1.1



FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization DELFT - DHI Commission of the European Communities		Survey Bulletin 9014: 06 August, 1994
		Gorai/Ganges River, Bed material sampling
	Date : 15 May 1996	Position of bed material samples (block a)
	Init : kah	page 1.2





FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9014: 06 August, 1994	
		Gorai/Ganges River, Bed material sampling	
	Date : 15 May 1996	Position of bed material samples (block b & c)	page 1.3
	Init : kah		

Line No.	Long Profile Location	Survey Date	Position		Sample No.	Total Depth (m)
			Easting (m)	Northing (m)		
1	1(r)	1994-08-06	405480.0	650700.0	Ganges - 01	3.6
1	1(m)	1994-08-06	406466.0	651733.0	Ganges - 02	6.8
1	1(l)	1994-08-06	406862.0	652207.0	Ganges - 03	1.6
2	2(l)	1994-08-06	413090.0	650150.0	Ganges - 04	3.1
2	2(m)	1994-08-06	413042.0	648455.0	Ganges - 05	6.2
2	2(r)	1994-08-06	412757.0	648214.0	Ganges - 06	6.0
3	3(r)	1994-08-06	420055.0	645983.0	Ganges - 07	7.2
3	3(m)	1994-08-06	420517.0	647358.0	Ganges - 08	9.4
3	3(l)	1994-08-06	420746.0	647922.0	Ganges -09	2.1
4	4(l)	1994-08-06	427236.0	645702.0	Ganges - 10	1.4
4	4(m)	1994-08-06	426881.0	644400.0	Ganges - 11	5.2
4	4(r)	1994-08-06	426878.0	643617.0	Ganges - 12	4.2
5	5(r)	1994-08-06	433973.0	641475.0	Ganges - 13	3.2
5	5(m)	1994-08-06	434316.0	642878.0	Ganges - 14	7.0
5	5(l)	1994-08-06	434549.0	643515.0	Ganges - 15	2.8
6	6(r)	1994-08-06	440930.0	639616.0	Ganges - 16	3.0
6	6(m)	1994-08-06	441881.0	640569.0	Ganges - 17	5.2
6	6(l)	1994-08-06	442874.0	641332.0	Ganges - 18	5.0
7	7(l)	1994-08-06	448146.0	637221.0	Ganges - 19	2.6
7	7(m)	1994-08-06	447900.0	635318.0	Ganges - 20	2.1
7	7(r)	1994-08-06	447988.0	634661.0	Ganges - 21	5.4
8	8(r)	1994-08-06	456014.0	631383.0	Ganges - 22	4.8
8	8(m)	1994-08-06	456045.0	632907.0	Ganges - 23	4.3
8	8(l)	1994-08-06	456149.0	633938.0	Ganges - 24	2.7
9	9(l)	1994-08-06	463020.0	633395.0	Ganges - 25	2.6
9	9(m)	1994-08-06	463062.0	632350.0	Ganges - 26	5.7
9	9(r)	1994-08-06	462998.0	631245.0	Ganges - 27	3.8
10	10(r)	1994-08-06	469985.0	632715.0	Ganges - 28	3.7
10	10(m)	1994-08-06	470022.0	634272.0	Ganges - 29	4.4
10	10(l)	1994-08-06	470007.0	635188.0	Ganges - 30	2.3
11	11(r)	1994-08-06	473716.0	634408.0	Ganges - 31	2.7
11	11(m)	1994-08-06	472924.0	635167.0	Ganges - 32	6.0
11	11(l)	1994-08-06	471376.0	635931.0	Ganges - 33	3.7

Table 2.1: Bed Material by USBM-54 sampler

Short Description :

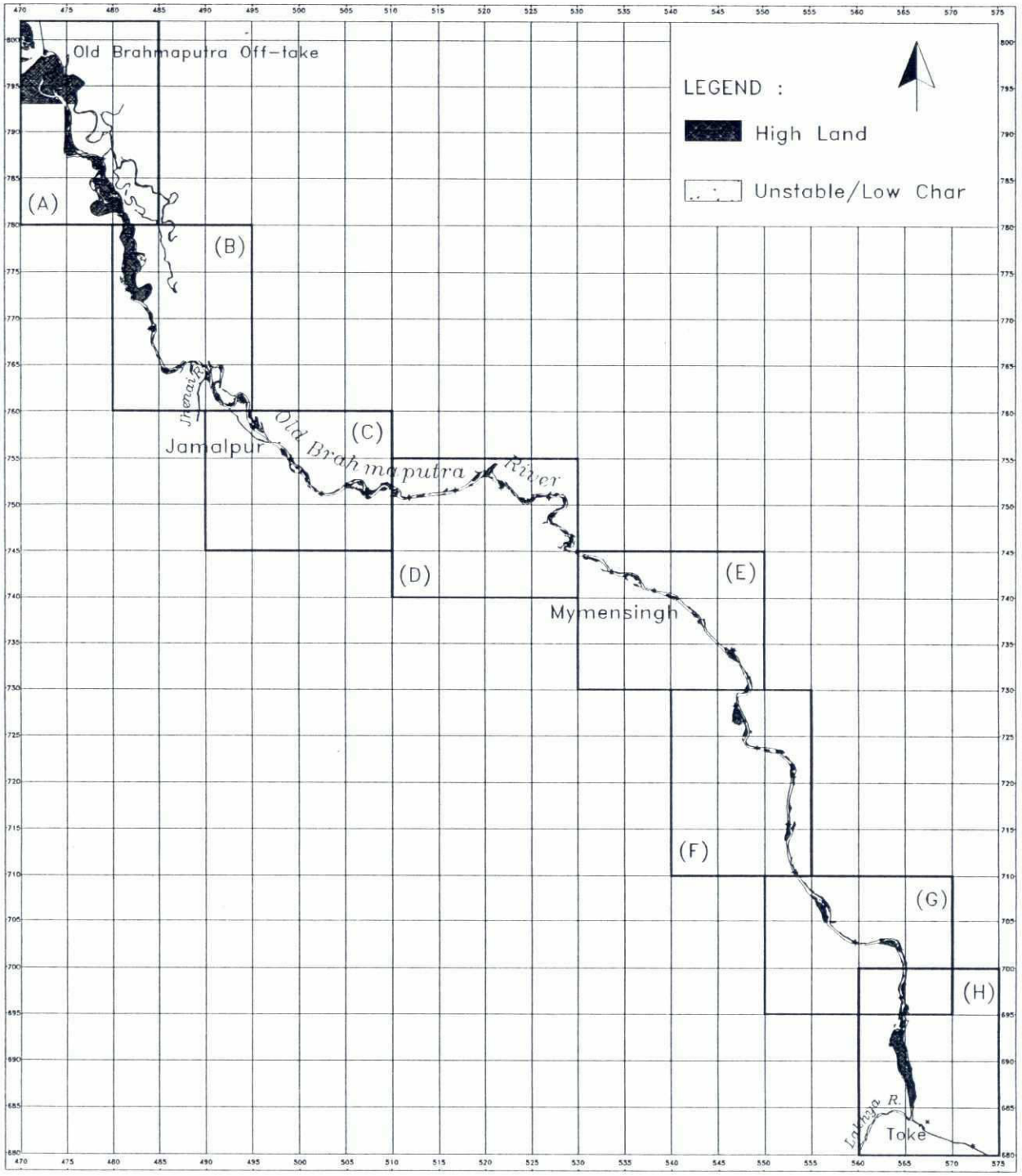
Bed material sampling in the Ganges River in order to study the variability of bed material composition on 06 August 199
Results are reported in RSP Special Report 08.

Line No.	Long Profile Location	Survey date	Total Depth (m)	Weight Percent		D16 (mm)	D35 (mm)	D50 (mm)	D84 (mm)
				<0.063 (mm)	>0.063 (mm)				
1	1(r)	1994-08-06	3.6	99.86	0.14	0.005	0.012	0.017	0.030
1	1(m)	1994-08-06	6.8	6.29	93.71	0.072	0.094	0.116	0.197
1	1(l)	1994-08-06	1.6	2.49	97.51	0.122	0.147	0.168	0.226
2	2(l)	1994-08-06	3.1	2.66	97.34	0.115	0.145	0.164	0.220
2	2(m)	1994-08-06	6.2	0.60	99.40	0.142	0.173	0.204	0.349
2	2(r)	1994-08-06	6.0	2.13	97.87	0.080	0.110	0.137	0.207
3	3(r)	1994-08-06	7.2	51.70	48.30	0.022	0.043	0.061	0.156
3	3(m)	1994-08-06	9.4	3.75	96.25	0.088	0.133	0.155	0.222
3	3(l)	1994-08-06	2.1	82.95	17.05	0.013	0.022	0.030	0.064
4	4(l)	1994-08-06	1.4	6.01	93.99	0.073	0.098	0.124	0.202
4	4(m)	1994-08-06	5.2	0.90	99.10	0.135	0.157	0.177	0.232
4	4(r)	1994-08-06	4.2	1.65	98.35	0.137	0.160	0.181	0.239
5	5(r)	1994-08-06	3.2	90.12	9.88	0.007	0.012	0.017	0.041
5	5(m)	1994-08-06	7.0	0.73	99.27	0.129	0.150	0.170	0.226
5	5(l)	1994-08-06	2.8	0.88	99.12	0.132	0.154	0.173	0.226
6	6(r)	1994-08-06	3.0	11.54	88.46	0.066	0.083	0.099	0.177
6	6(m)	1994-08-06	5.2	1.82	98.18	0.096	0.138	0.159	0.219
6	6(l)	1994-08-06	5.0	88.12	11.88	0.007	0.014	0.020	0.064
7	7(l)	1994-08-06	2.6	49.81	50.19	0.030	0.049	0.063	0.135
7	7(m)	1994-08-06	2.1	16.10	83.90	0.063	0.075	0.087	0.120
7	7(r)	1994-08-06	5.4	0.72	99.28	0.138	0.163	0.185	0.248
8	8(r)	1994-08-06	4.8	82.41	17.59	0.020	0.028	0.034	0.068
8	8(m)	1994-08-06	4.3	4.07	95.93	0.084	0.129	0.150	0.214
8	8(l)	1994-08-06	2.7	28.12	71.88	0.051	0.067	0.078	0.110
9	9(l)	1994-08-06	2.6	6.83	93.17	0.069	0.083	0.097	0.158
9	9(m)	1994-08-06	5.7	1.98	98.02	0.127	0.149	0.168	0.222
9	9(r)	1994-08-06	3.8	4.50	95.50	0.074	0.096	0.119	0.198
10	10(r)	1994-08-06	3.7	2.76	97.24	0.076	0.100	0.124	0.202
10	10(m)	1994-08-06	4.4	1.84	98.16	0.127	0.150	0.171	0.229
10	10(l)	1994-08-06	2.3	2.97	97.03	0.080	0.114	0.140	0.208
11	11(r)	1994-08-06	2.7	9.78	90.22	0.067	0.083	0.098	0.169
11	11(m)	1994-08-06	6.0	1.10	98.90	0.094	0.135	0.156	0.216
11	11(l)	1994-08-06	3.7	99.01	0.99	0.004	0.010	0.014	0.029

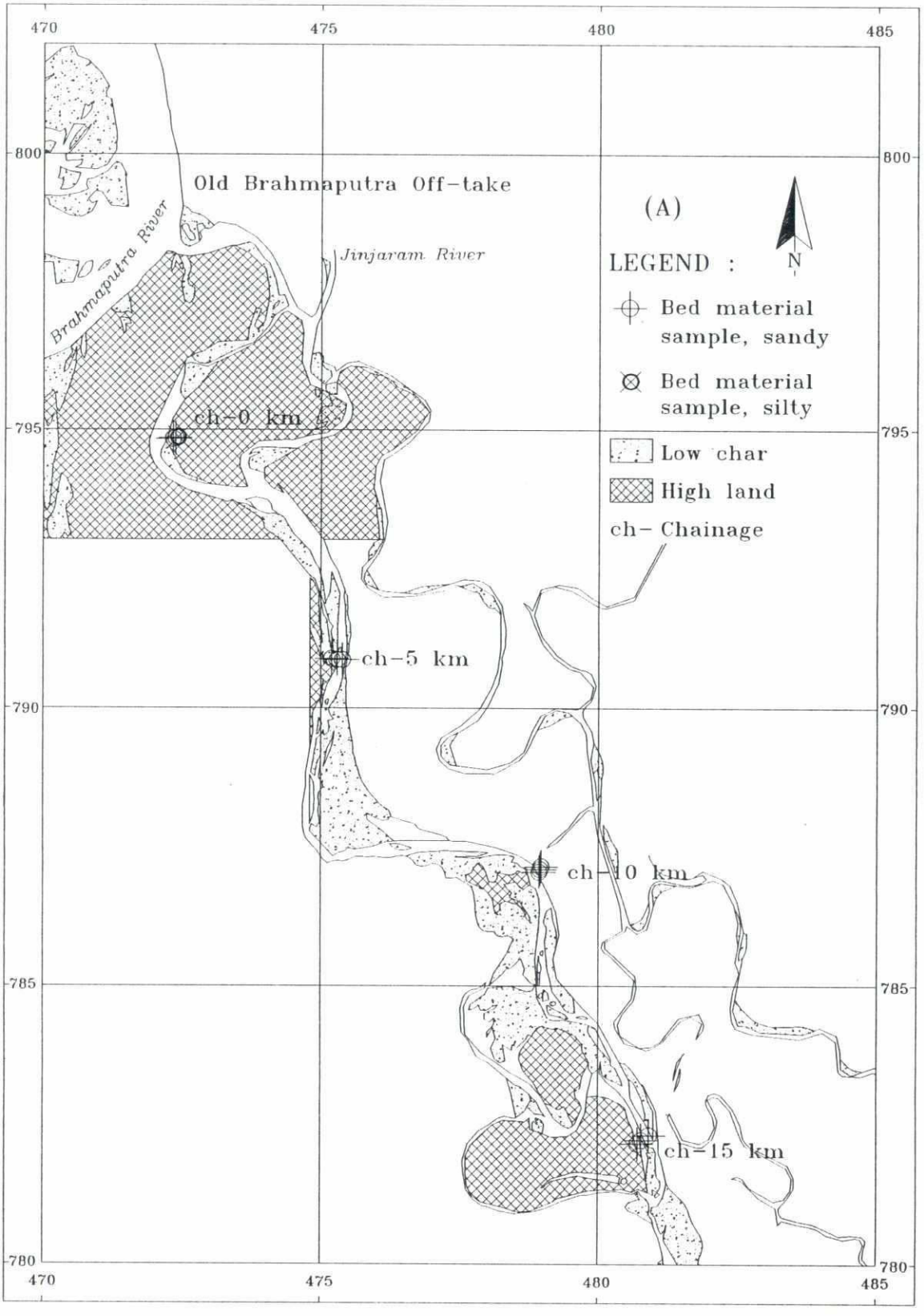
Table 3.1: Grain sizes of bed material

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-08-06	h486	Line 1-11						+				
Total number of files								1				

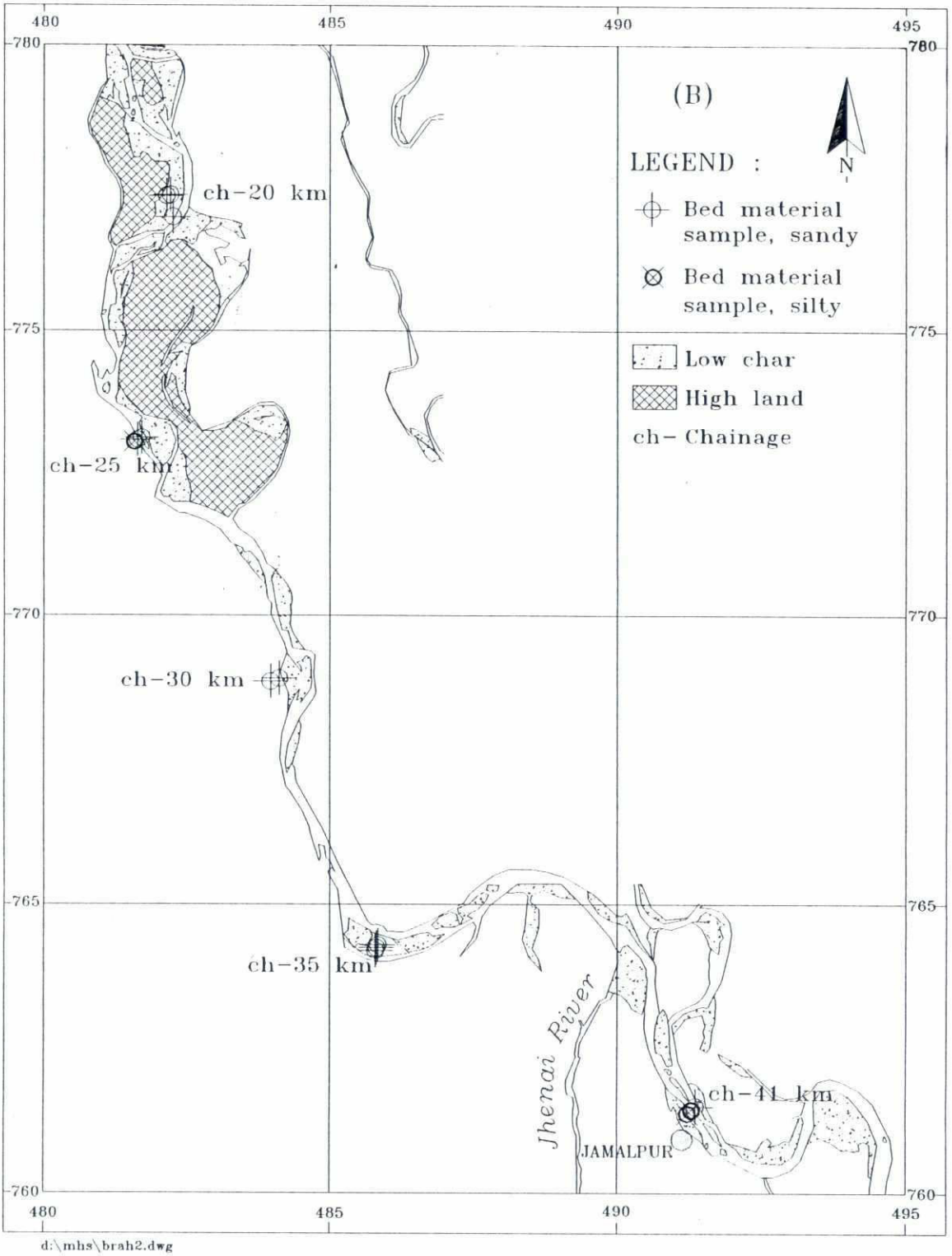
Table 4.1: PSD24 Database file description



FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9016: 09 - 20 August, 1994	
		Old Brahmaputra River, Bed material	
	Date : 15 May 1996	Location of Old Brahmaputra River (U/S to D/S)	page 1.1
	Init : kah		

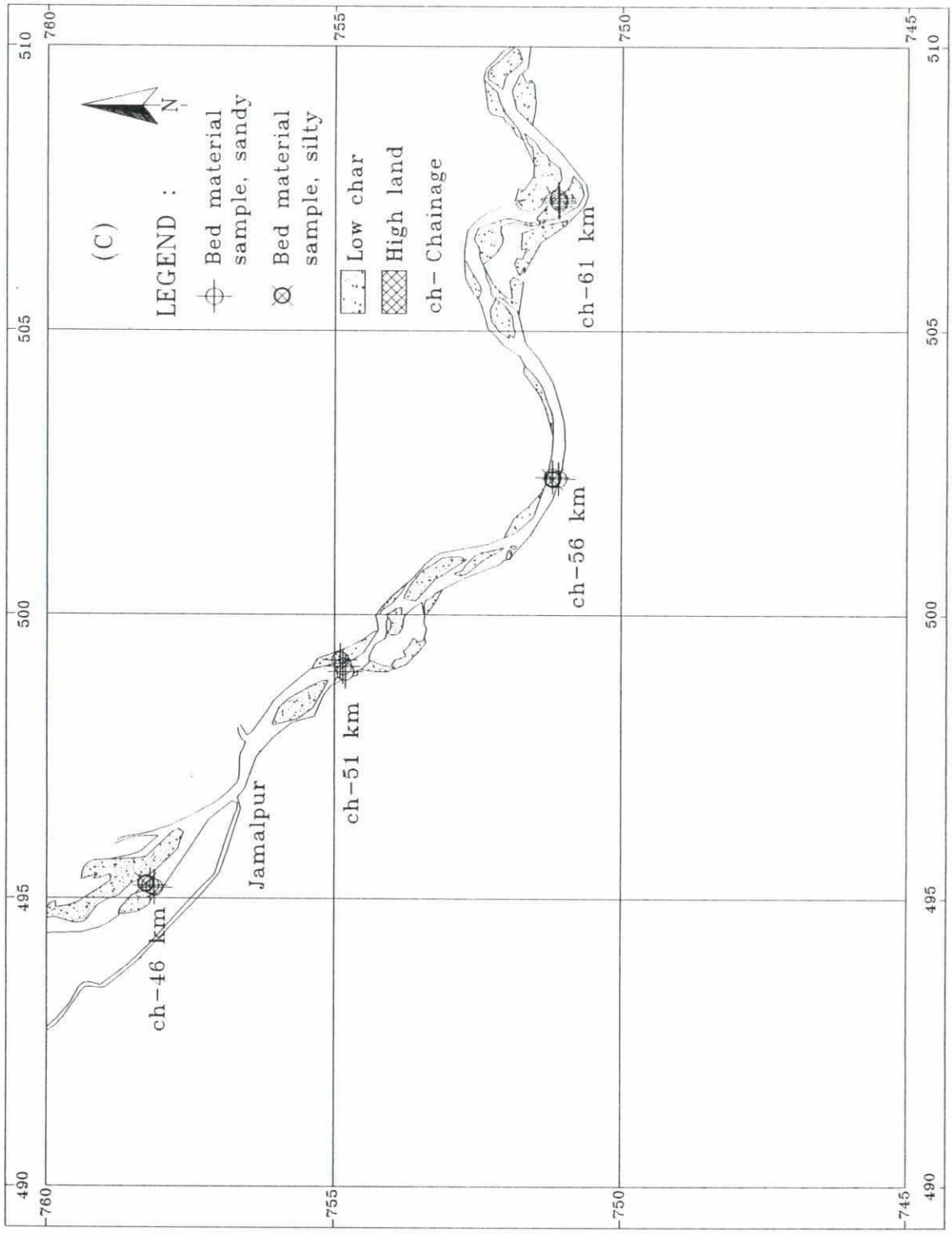


FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9016: 09 - 20 August, 1994	
	Old Brahmaputra River, Bed material	
Date : 15 May 1996 Init : kah	Position of bed material samples (block a)	page 1.2



d:\mhs\brah2.dwg

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9016: 09 - 20 August, 1994	
	Old Brahmaputra River, Bed material	
Date : 15 May 1996 Init : kah	Position of bed material samples (block b)	page 1.3



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Survey Bulletin 9016: 09 - 20 August, 1994

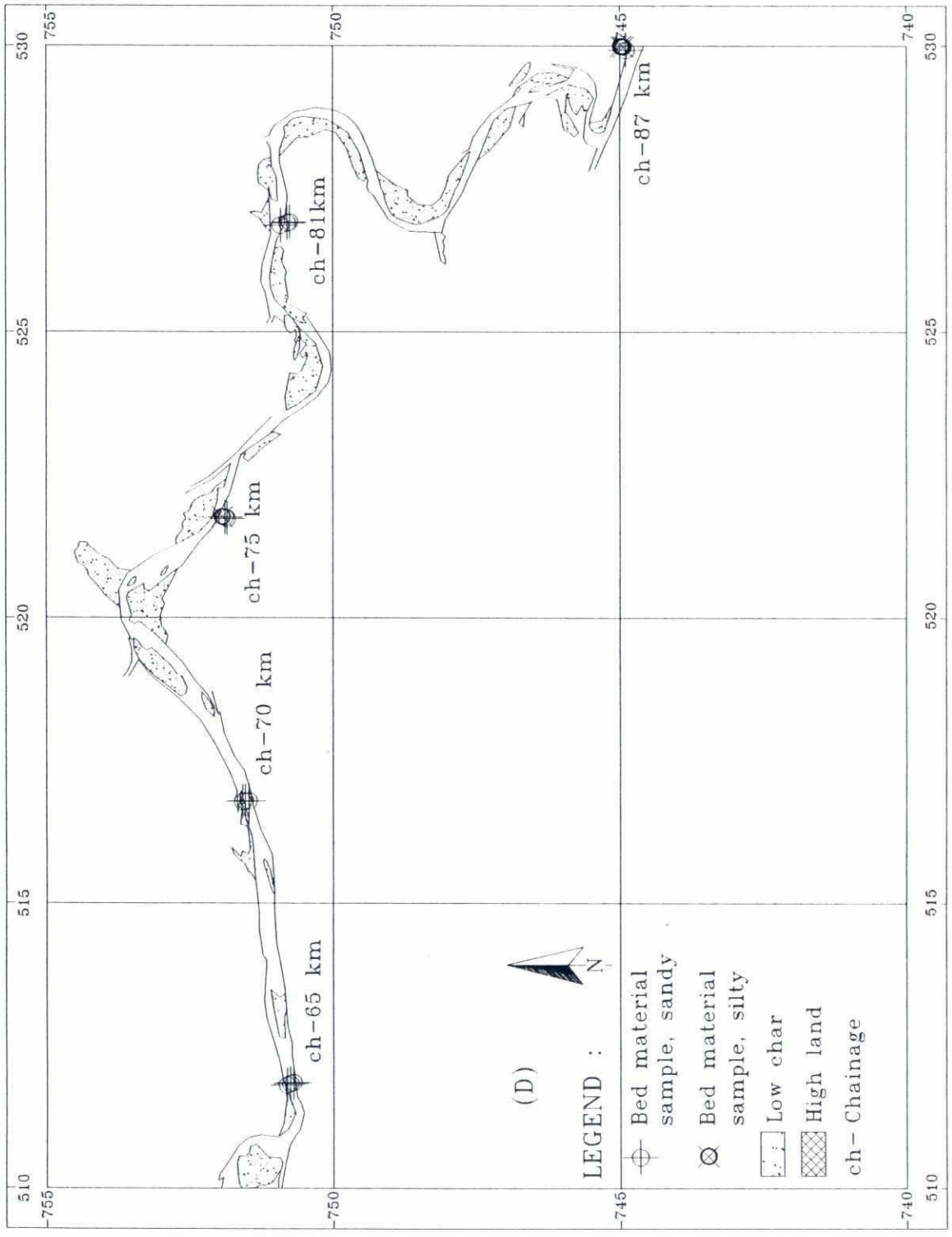
Old Brahmaputra River, Bed material

Date : 15 May 1996

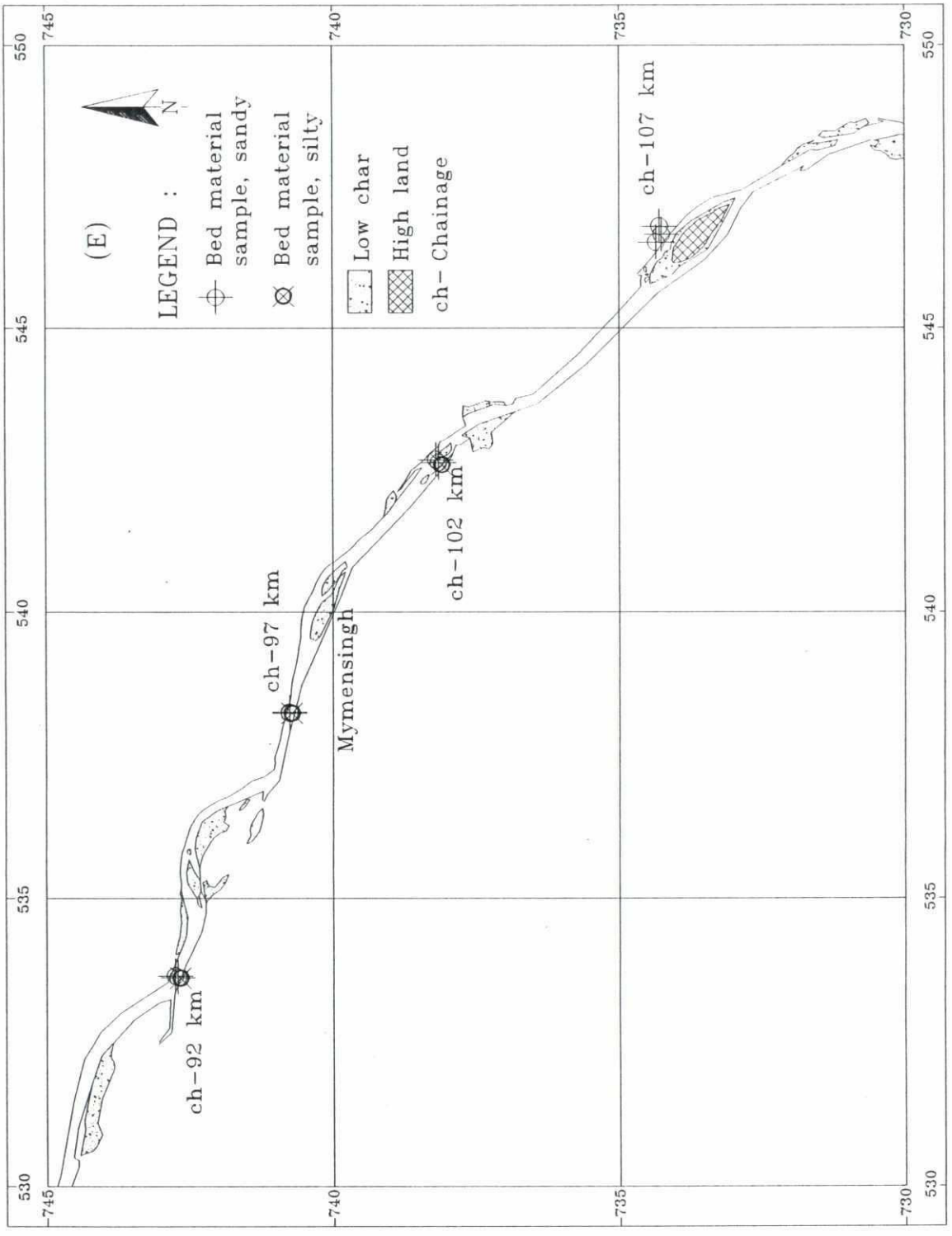
Init : kah

Position of bed material samples (block c)

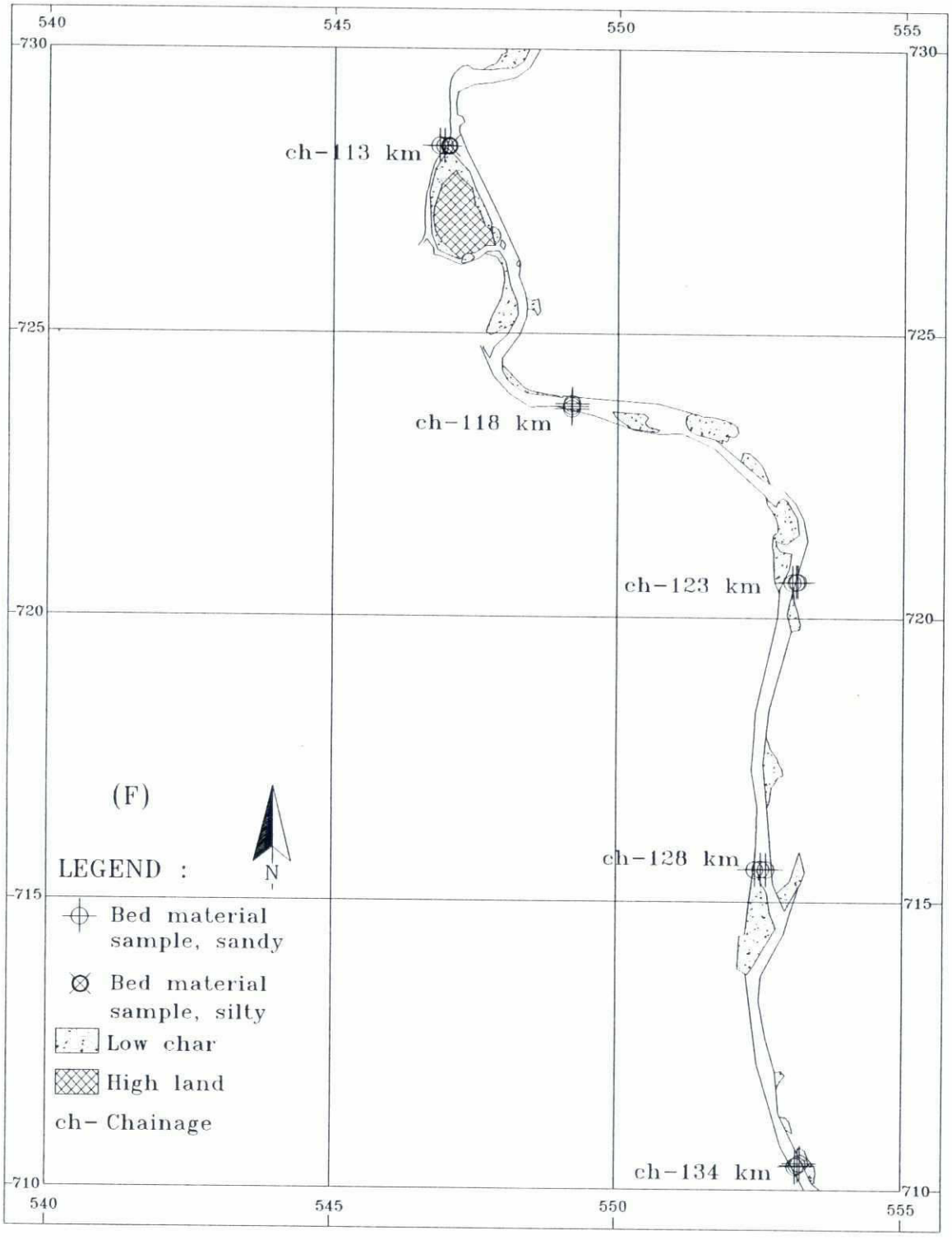
page 1.4



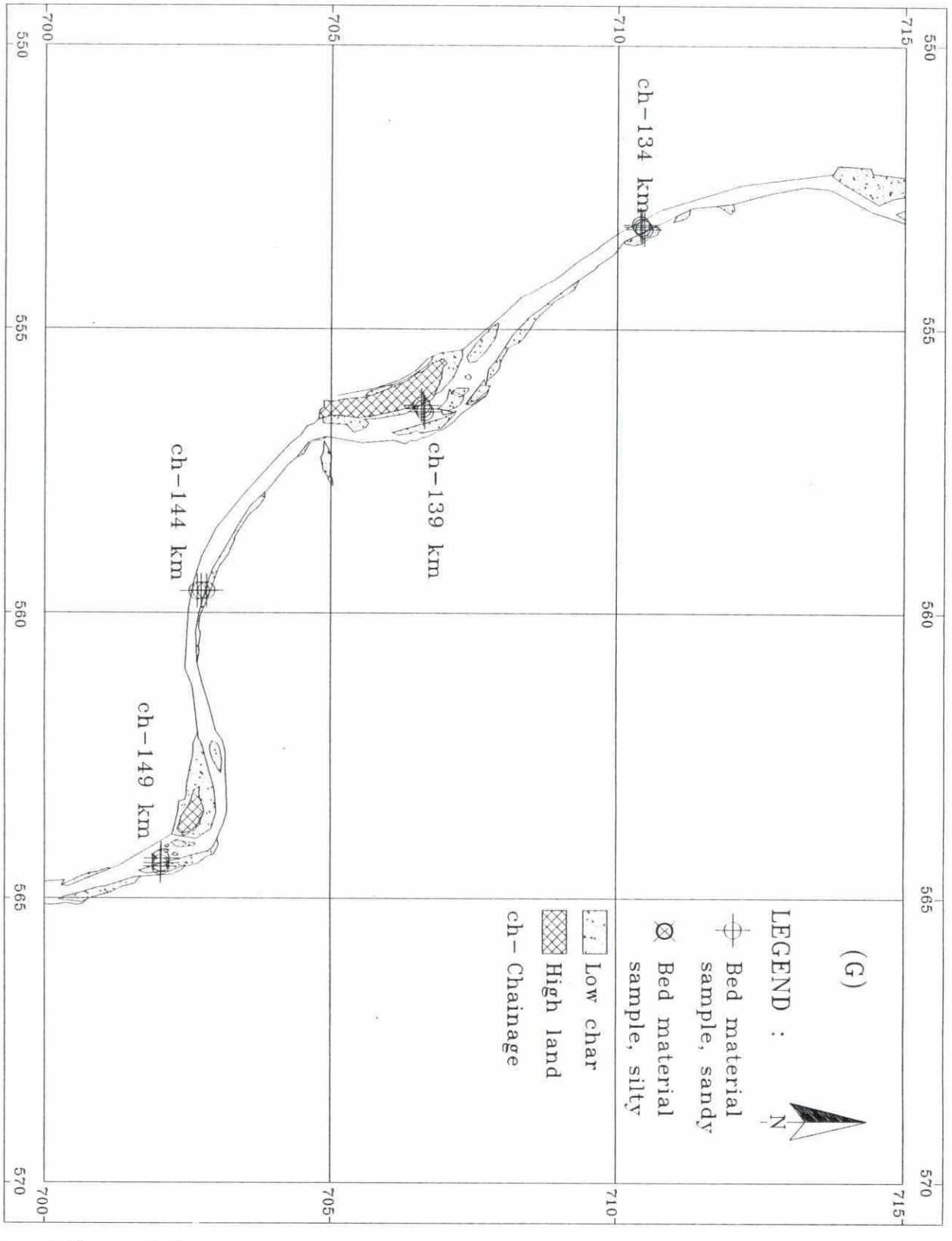
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9016: 09 - 20 August, 1994	
	Old Brahmaputra River, Bed material	
Date : 15 May 1996 Init : kah	Position of bed material samples (block d)	page 1.5



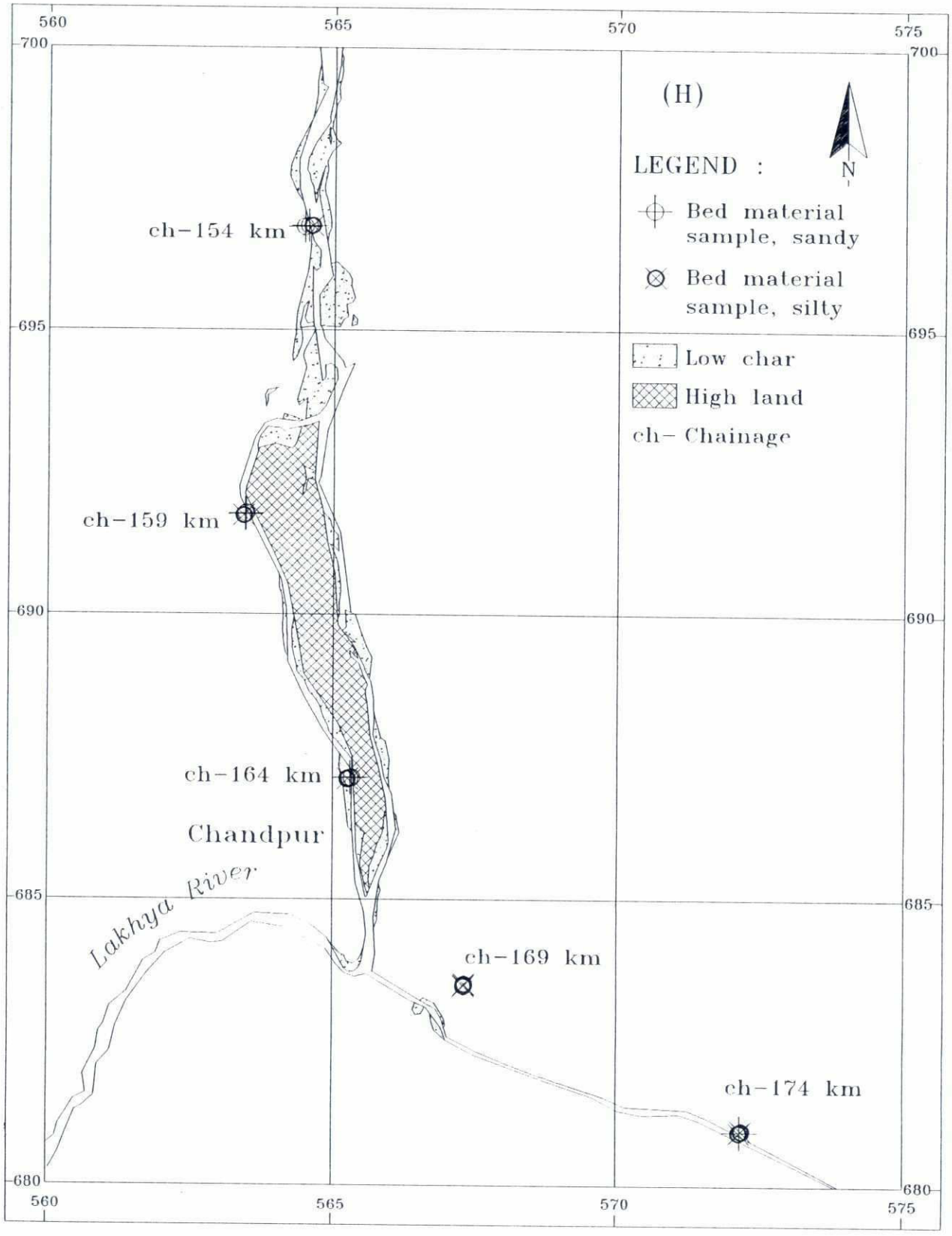
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9016: 09 - 20 August, 1994	
	Old Brahmaputra River, Bed material	
Date : 15 May 1996 Init : kah	Position of bed material samples (block e)	page 1.6



FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9016: 09 - 20 August, 1994	
		Old Brahmaputra River, Bed material	
	Date : 15 May 1996	Position of bed material samples (block f)	page 1.7
	Init : kah		



FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9016: 09 - 20 August, 1994	
		Old Brahmaputra River, Bed material	
	Date : 15 May 1996 Init : kah	Position of bed material samples (block g)	page 1.8



FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9016: 09 - 20 August, 1994	
	Old Brahmaputra River, Bed material	
Date : 15 May 1996 Init : kah	Position of bed material samples (block h)	page 1.9

Line No.	Long Profile Location	Date	Time	Position		Depth (m)	Sample No.
				Easting (m)	Northing (m)		
ZPIX001	0km(L)	10/08/94	10:40	600033	658467	?	Alu-1
ZPIX001	0km(M)	10/08/94	10:50	599849	658339	?	Alu-2
ZPIX001	0km(R)	10/08/94	10:55	599829	658265	?	Alu-3
PPIX002	5km(L)	10/08/94	12:40	596983	662393	?	Alu-4
PPIX002	5km(M)	10/08/94	12:45	596901	662379	?	Alu-5
PPIX002	5km(R)	10/08/94	12:50	596855	662333	?	Alu-6
PPIX003	10km(L)	10/08/94	13:30	593031	663127	?	Alu-7
PPIX003	10km(M)	10/08/94	13:35	593028	663083	?	Alu-8
PPIX003	10km(R)	10/08/94	13:40	593004	663016	?	Alu-9
PPIX004	15km(L)	11/08/94	09:50	588673	665684	?	Alu-10
PP1X004	15 km(M)	11/08/94	09:55	588760	665731	?	Alu-11
PPIX004	15km(R)	11/08/94	10:00	588782	665721	?	Alu-12
PP1X005	20km(L)	11/08/94	10:38	583798	669539	?	Alu-13
PP1X005	20km(M)	11/08/94	10:45	583752	669477	?	Alu-14
PP1X005	20km(R)	11/08/94	10:50	583743	669501	?	Alu-15
PPIX006	25km(L)	11/08/94	11:35	582376	674359	?	Alu-16
PPIX006	25km(M)	11/08/94	11:40	582350	674369	?	Alu-17
PPIX006	25km(R)	11/08/94	11:45	582331	674372	?	Alu-18
PPIX007	30km(L)	11/08/94	12:35	580598	679032	?	Alu-19
PPIX007	30km(M)	11/08/94	12:40	580618	679067	?	Alu-20
PP1X007	30 km(R)	11/08/94	12:45	580639	679060	?	Alu-21
PPIX008	35km(L)	11/08/94	13:50	576910	682268	?	Alu-22
PPIX008	35km(M)	11/08/94	13:55	576906	682238	?	Alu-23
PPIX008	35km(M)	11/08/94	14:00	576911	682206	?	Alu-24
PPIX009	40km(L)	12/08/94	09:25	572184	680445	?	Alu-25
PPIX009	40km(M)	12/08/94	09:30	572159	680423	?	Alu-26
PPIX009	40km(R)	12/08/94	09:35	572145	680413	?	Alu-27
PPIX010	45km(L)	12/08/94	10:03	567326	682993	?	Alu-28
PPIX010	45km(M)	12/08/94	10:08	567323	682971	?	Alu-29
PPIX010	45km(R)	12/08/94	10:12	567317	682953	?	Alu-30
PP1X011	50km(L)	12/08/94	12:30	565339	686630	?	Alu-31
PP1X011	50km(M)	12/08/94	12:40	565305	686625	?	Alu-32
PPIX011	50km(R)	12/08/94	12:55	565262	686608	?	Alu-33
PP1X012	55km(L)	12/08/94	13:15	563475	691252	?	Alu-34
PP1X012	55km(M)	12/08/94	13:25	563456	691235	?	Alu-35
PPIX012	55km(R)	12/08/94	13:32	563429	691212	?	Alu-36
PPIX013	60km(L)	12/08/94	14:18	564610	696322	?	Alu-37
PP1X013	60km(M)	12/08/94	14:25	564550	696320	?	Alu-38
PP1X013	60km(R)	12/08/94	14:30	564478	696303	?	Alu-39
PP1X014	65km(L)	12/08/94	13:35	564306	701527	?	Alu-40
PP1X014	65km(M)	12/08/94	15:45	564446	701522	?	Alu-41
PP1X014	65km(R)	12/08/94	15:50	564388	701525	?	Alu-42
PP1X015	70km(L)	12/08/94	16:15	559604	702314	?	Alu-43
PP1X015	70km(M)	12/08/94	16:25	559607	702222	?	Alu-44
PP1X015	70km(R)	12/08/94	16.35	559612	702161	?	Alu-45

Table 2.1 : Bed material by USBM-54 sampler

Short Description:
Bed material sampling in Old Brahmaputra River in order to study the variability of bed material composition during 09 -20 August 1994. Results are reported in RSP Special Report 08.

Line No.	Long Profile Location	Date	Time	Position		Depth (m)	Sample No.
				Easting (m)	Northing (m)		
PP1X016	75km(L)	13/08/94	13:20	556462	706114	?	Alu-46
PP1X016	75km(M)	13/08/94	13:30	556407	706084	?	Alu-47
PP1X016	75km(R)	13/08/94	13:35	556352	706054	?	Alu-48
PP1X017	80km(L)	13/08/94	14:10	553239	709944	?	Alu-49
PP1X017	80km(M)	13/08/94	14:20	553202	709905	?	Alu-50
PP1X017	80km(R)	13/08/94	14:30	553164	709882	?	Alu-51
PP1X018	85km(L)	13/08/94	14:55	552622	715050	?	Alu-52
PP1X018	85km(M)	13/08/94	15:00	552533	715062	?	Alu-53
PP1X018	85km(R)	13/08/94	15:05	552428	715049	?	Alu-54
PP1X019	90km(L)	13/08/94	15:40	553157	720121	?	Alu-55
PP1X019	90km(M)	13/08/94	15:45	553131	720119	?	Alu-56
PP1X019	90km(R)	13/08/94	15:50	553063	720111	?	Alu-57
PP1X020	95km(L)	15/08/94	15:05	549190	723210	?	Alu-58
PP1X020	95 km(M)	15/08/94	15:10	549202	723252	?	Alu-59
PP1X020	95km(R)	15/08/94	15:15	549193	723163	?	Alu-60
PP1X021	100 km(L)	15/08/94	15:55	547020	727783	?	Alu-61
PP1X021	100km(M)	15/08/94	16:10	546937	727780	?	Alu-62
PP1X021	100km(R)	15/08/94	16:15	546849	727783	?	Alu-63
PP1X022	105km(L)	15/08/94	16:20	546653	733740	?	Alu-64
PP1X022	105km(M)	15/08/94	16:25	546796	733778	?	Alu-65
PP1X022	105km(R)	15/08/94	16:35	546518	733835	?	Alu-66
PP1X023	110km(L)	15/08/94	16:55	542693	737678	?	Alu-67
PP1X023	110km(M)	15/08/94	17:00	542647	737631	?	Alu-68
PP1X023	110 km(R)	15/08/94	17:10	542604	737575	?	Alu-69
PP1X024	115 km(L)	16/08/94	08:25	538226	740286	?	Alu-70
PP1X024	115km(M)	16/08/94	08:30	538209	740245	?	Alu-71
PPIX024	115km(R)	16/08/94	08:42	538207	740202	?	Alu-72
PP1X025	120km(L)	16/08/94	09:35	533660	742258	?	Alu-73
PP1X025	120km(M)	16/08/94	09:40	533632	742211	?	Alu-74
PPIX025	120km(R)	16/08/94	09:52	533620	742165	?	Alu-75
PPIX026	125km(L)	16/08/94	10:52	529988	744457	?	Alu-76
PPIX026	125km(M)	16/08/94	10:58	529981	744417	?	Alu-77
PP1X026	125km(R)	16/08/94	10:55	529925	744374	?	Alu-78

Table 2.2 : Bed material by USBM-54 sampler

Line No.	Long Profile Location	Date	Time	Position		Depth (m)	Sample No.
				Easting (m)	Northing (m)		
PP1X027	130km(L)	17/08/94	09:40	526858	750402	?	Alu-79
PP1X027	130km(M)	17/08/94	09:45	526895	750283	?	Alu-80
PP1X027	130 km(R)	17/08/94	10:05	526912	750242	?	Alu-81
PP1X028	135 km(L)	17/08/94	10:38	521776	751421	?	Alu-82
PP1X028	135km(M)	17/08/94	10:45	521765	751372	?	Alu-83
PP1X028	135km(R)	17/08/94	10:50	521743	751336	?	Alu-84
PP1X029	140km(L)	17/08/94	11:50	516799	750961	?	Alu-85
PP1X029	140km(M)	17/08/94	11:55	516795	751024	?	Alu-86
PP1X029	140km(R)	17/08/94	12:05	516785	751069	?	Alu-87
PP1X030	145km(L)	17/08/94	12:58	511848	750184	?	Alu-88
PP1X030	145km(M)	17/08/94	13:05	511829	750238	?	Alu-89
PP1X030	145km(R)	17/08/94	13:10	511803	750293	?	Alu-90
PP1X031	150km(L)	17/08/94	14:15	507343	750584	?	Alu-91
PP1X031	150km(M)	17/08/94	14:20	507297	750587	?	Alu-92
PP1X031	150 km(R)	17/08/94	14:30	507262	750567	?	Alu-93
PPIX032	155km(L)	17/08/94	15:15	502409	750679	?	Alu-94
PP1X032	155km(M)	17/08/94	15:25	502447	750679	?	Alu-95
PP1X032	155km(R)	17/08/94	15:35	502415	750579	?	Alu-96
PP1X033	160km(L)	17/08/94	16:05	499198	754375	?	Alu-97
PP1X033	160km(M)	17/08/94	16:15	499087	754325	?	Alu-98
PP1X033	160km(R)	17/08/94	16:30	499000	754287	?	Alu-99
PP1X034	165 km(L)	18/08/94	08:48	495260	757761	?	Alu-100
PP1X034	165km(M)	18/08/94	08:55	495230	757681	?	Alu-101
PP1X034	165km(R)	18/08/94	09:00	495188	757608	?	Alu-102
PP1X035	170km(L)	18/08/94	10:10	491370	760988	?	Alu-103
PP1X035	170 km(M)	18/08/94	10:20	491297	760924	?	Alu-104
PP1X035	170 km(R)	18/08/94	10:30	491226	760864	?	Alu-105
PP1X038	185km(L)	18/08/94	14:05	481713	772603	?	Alu-106
PP1X038	185km(M)	18/08/94	14:15	481645	772569	?	Alu-107
PP1X038	185 km(R)	18/08/94	14:25	481589	772528	?	Alu-108
PP1X037	180 km(L)	18/08/94	14:55	484118	768385	?	Alu-109
PP1X037	180km(M)	18/08/94	15:05	484049	768336	?	Alu-110
PP1X037	180km(R)	18/08/94	15:20	483971	768330	?	Alu-111
PP1X036	175km(L)	18/08/94	15:40	485836	763764	?	Alu-112
PP1X036	175 km(M)	18/08/94	15:40	485809	763717	?	Alu-113
PP1X036	175km(R)	18/08/94	15:50	485791	763669	?	Alu-114
PP1X043	210 km(L)	19/08/94	13:08	472433	794351	?	Alu-115
PP1X043	210km(M)	19/08/94	13:15	472388	794337	?	Alu-116
PP1X043	210km(R)	19/08/94	13:25	472343	794323	?	Alu-117
PP1X042	205km(L)	19/08/94	14:10	475194	790366	?	Alu-118
PP1X042	205km(M)	19/08/94	14:15	475290	790349	?	Alu-119
PP1X042	205km(R)	19/08/94	14:20	475389	790347	?	Alu-120
PP1X041	200km(L)	19/08/94	16:20	478935	786524	?	Alu-121
PP1X041	200km(M)	19/08/94	16:25	478955	786571	?	Alu-122
PP1X041	200km(R)	19/08/94	16:30	478972	786619	?	Alu-123
PP1X040	195 km(L)	19/08/94	16:18	480713	781635	?	Alu-124
PP1X040	195km(M)	19/08/94	16:15	480780	781703	?	Alu-125
PP1X040	195km(R)	19/08/94	16:30	480917	781789	?	Alu-126
PP1X039	190km(L)	19/08/94	17:05	482267	776868	?	Alu-127
PP1X039	190km(M)	19/08/94	17:15	482224	776860	?	Alu-128
PP1X039	190km(R)	19/08/94	17:20	482156	776845	?	Alu-129

Table 2.3 : Bed material by USBM-54 sampler

Line No.	Long Profile Location	Date	Time	Depth (m)	Weight Percent <0.063(mm)	>0.063(mm)	D10 (mm)	D35 (mm)	D50 (mm)	D90 (mm)
ZPIX001	0km(L)	10/08/94	10:40	?	98.30	1.70	-	-	0.007	0.033
ZPIX001	0km(M)	10/08/94	10:50	?	97.67	2.33	-	-	0.012	0.037
ZPIX001	0km(R)	10/08/94	10:55	?	89.76	10.24	-	-	0.017	0.071
PPIX002	5km(L)	10/08/94	12:40	?	93.50	6.50	-	-	-	0.048
PPIX002	5km(M)	10/08/94	12:45	?	99.75	0.25	-	-	0.005	0.02
PPIX002	5km(R)	10/08/94	12:50	?	95.89	4.11	-	-	0.006	0.044
PPIX003	10km(L)	10/08/94	13:30	?	99.24	0.76	-	-	0.009	0.022
PPIX003	10km(M)	10/08/94	13:35	?	99.97	0.03	-	-	0.007	0.024
PPIX003	10km(R)	10/08/94	13:40	?	99.92	0.08	-	-	0.006	0.019
PPIX004	15km(L)	11/08/94	09:50	?	70.04	29.96	-	0.005	0.024	0.118
PP1X004	15 km(M)	11/08/94	09:55	?	39.03	60.97	0.009	0.016	0.087	0.211
PPIX004	15km(R)	11/08/94	10:00	?	82.95	17.05	-	0.004	0.014	0.09
PP1X005	20km(L)	11/08/94	10:38	?	0.18	99.82	0.137	0.147	0.218	0.419
PP1X005	20km(M)	11/08/94	10:45	?	1.96	98.04	0.134	0.146	0.239	0.435
PP1X005	20km(R)	11/08/94	10:50	?	1.34	98.66	0.149	0.171	0.301	0.456
PPIX006	25km(L)	11/08/94	11:35	?	38.96	61.04	0.007	0.012	0.137	0.413
PPIX006	25km(M)	11/08/94	11:40	?	26.34	73.66	0.008	0.014	0.18	0.402
PPIX006	25km(R)	11/08/94	11:45	?	90.96	9.04	-	0.005	0.015	0.059
PPIX007	30km(L)	11/08/94	12:35	?	76.49	23.51	-	0.005	0.018	0.171
PPIX007	30km(M)	11/08/94	12:40	?	76.22	23.78	-	0.005	0.021	0.2
PP1X007	30 km(R)	11/08/94	12:45	?	17.35	82.65	0.023	0.055	0.109	0.232
PPIX008	35km(L)	11/08/94	13:50	?	46.45	53.55	0.007	0.011	0.082	0.235
PPIX008	35km(M)	11/08/94	13:55	?	59.66	40.34	0.007	0.014	0.051	0.255
PPIX008	35km(M)	11/08/94	14:00	?	56.40	43.60	0.005	0.008	0.042	0.107
PPIX009	40km(L)	12/08/94	09:25	?	78.43	21.57	-	0.006	0.021	0.1
PPIX009	40km(M)	12/08/94	09:30	?	23.48	76.52	0.007	0.014	0.212	0.445
PPIX009	40km(R)	12/08/94	09:35	?	98.75	1.25	-	-	0.01	0.025
PPIX010	45km(L)	12/08/94	10:03	?	99.72	0.28	-	0.005	0.014	0.031
PPIX010	45km(M)	12/08/94	10:08	?	99.14	0.86	-	0.005	0.016	0.037
PPIX010	45km(R)	12/08/94	10:12	?	99.36	0.64	-	0.005	0.012	0.027
PP1X011	50km(L)	12/08/94	12:30	?	5.84	94.16	0.069	0.079	0.146	0.229
PP1X011	50km(M)	12/08/94	12:40	?	7.67	92.33	0.066	0.076	0.144	0.228
PPIX011	50km(R)	12/08/94	12:55	?	84.32	15.68	0.008	0.012	0.032	0.092
PP1X012	55km(L)	12/08/94	13:15	?	5.10	94.90	0.067	0.072	0.107	0.21
PP1X012	55km(M)	12/08/94	13:25	?	2.36	97.64	0.073	0.082	0.143	0.225
PPIX012	55km(R)	12/08/94	13:32	?	70.62	29.38	0.007	0.011	0.037	0.118
PPIX013	60km(L)	12/08/94	14:18	?	97.27	2.73	-	0.006	0.02	0.052
PP1X013	60km(M)	12/08/94	14:25	?	5.02	94.98	0.066	0.07	0.096	0.185
PP1X013	60km(R)	12/08/94	14:30	?	0.54	99.46	0.131	0.145	0.25	0.454
PP1X014	65km(L)	12/08/94	13:35	?	15.52	84.48	-	0.063	0.093	0.189
PP1X014	65km(M)	12/08/94	15:45	?	0.31	99.69	0.131	0.139	0.195	0.379
PP1X014	65km(R)	12/08/94	15:50	?	1.02	98.98	0.086	0.107	0.169	0.273
PP1X015	70km(L)	12/08/94	16:15	?	1.03	98.97	0.127	0.137	0.213	0.428
PP1X015	70km(M)	12/08/94	16:25	?	5.44	94.56	0.07	0.08	0.155	0.331
PP1X015	70km(R)	12/08/94	16:35	?	2.17	97.83	0.082	0.101	0.175	0.36

Table 3.1 : Grain sizes of bed material

Line No.	Long Profile Location	Date	Time	Depth (m)	Weight Percent		D10 (mm)	D35 (mm)	D50 (mm)	D90 (mm)
					<0.063(mm)	>0.063(mm)				
PP1X016	75km(L)	13/08/94	13:20	?	0.42	99.58	0.126	0.133	0.184	0.345
PP1X016	75km(M)	13/08/94	13:30	?	0.16	99.84	0.14	0.153	0.246	0.437
PP1X016	75km(R)	13/08/94	13:35	?	0.23	99.77	0.137	0.148	0.229	0.428
PP1X017	80km(L)	13/08/94	14:10	?	1.01	98.99	0.109	0.13	0.19	0.381
PP1X017	80km(M)	13/08/94	14:20	?	0.34	99.66	0.145	0.167	0.298	0.456
PP1X017	80km(R)	13/08/94	14:30	?	0.01	99.99	0.2	0.254	0.349	0.562
PP1X018	85km(L)	13/08/94	14:55	?	0.09	99.91	0.186	0.238	0.332	0.47
PP1X018	85km(M)	13/08/94	15:00	?	0.96	99.04	0.148	0.165	0.286	0.449
PP1X018	85km(R)	13/08/94	15:05	?	0.57	99.43	0.149	0.171	0.3	0.454
PP1X019	90km(L)	13/08/94	15:40	?	0.31	99.69	0.133	0.144	0.226	0.433
PP1X019	90km(M)	13/08/94	15:45	?	0.50	99.50	0.138	0.15	0.24	0.436
PP1X019	90km(R)	13/08/94	15:50	?	0.13	99.87	0.138	0.148	0.224	0.428
PP1X020	95km(L)	15/08/94	15:05	?	1.90	98.10	0.076	0.086	0.15	0.229
PP1X020	95 km(M)	15/08/94	15:10	?	32.73	67.27	0.036	0.043	0.076	0.116
PP1X020	95km(R)	15/08/94	15:15	?	2.26	97.74	0.184	0.254	0.356	0.651
PP1X021	100 km(L)	15/08/94	15:55	?	41.76	58.24	0.016	0.021	0.073	0.179
PP1X021	100km(M)	15/08/94	16:10	?	0.24	99.76	0.228	0.26	0.348	0.489
PP1X021	100km(R)	15/08/94	16:15	?	0.72	99.28	0.165	0.206	0.341	0.634
PP1X022	105km(L)	15/08/94	16:20	?	1.67	98.33	0.129	0.137	0.192	0.372
PP1X022	105km(M)	15/08/94	16:25	?	0.81	99.19	0.132	0.142	0.211	0.412
PP1X022	105km(R)	15/08/94	16:35	?	0.35	99.65	0.134	0.143	0.207	0.417
PP1X023	110km(L)	15/08/94	16:55	?	0.33	99.67	0.145	0.162	0.282	0.466
PP1X023	110km(M)	15/08/94	17:00	?	11.93	88.07	-	0.065	0.088	0.125
PP1X023	110 km(R)	15/08/94	17:10	?	84.18	15.82	0.017	0.024	0.033	0.082
PP1X024	115 km(L)	16/08/94	08:25	?	22.56	77.44	0.042	0.054	0.085	0.16
PP1X024	115km(M)	16/08/94	08:30	?	5.14	94.86	0.067	0.072	0.109	0.215
PPIX024	115km(R)	16/08/94	08:42	?	88.51	11.49	0.008	0.012	0.029	0.075
PP1X025	120km(L)	16/08/94	09:35	?	0.99	99.01	0.099	0.126	0.167	0.232
PP1X025	120km(M)	16/08/94	09:40	?	0.43	99.57	0.125	0.132	0.173	0.238
PPIX025	120km(R)	16/08/94	09:52	?	97.14	2.86	0.005	0.008	0.022	0.049
PPIX026	125km(L)	16/08/94	10:52	?	92.48	7.52	-	0.004	0.019	0.048
PPIX026	125km(M)	16/08/94	10:58	?	96.51	3.49	-	-	0.006	0.038
PP1X026	125km(R)	16/08/94	10:55	?	11.88	88.12	-	0.066	0.102	0.206

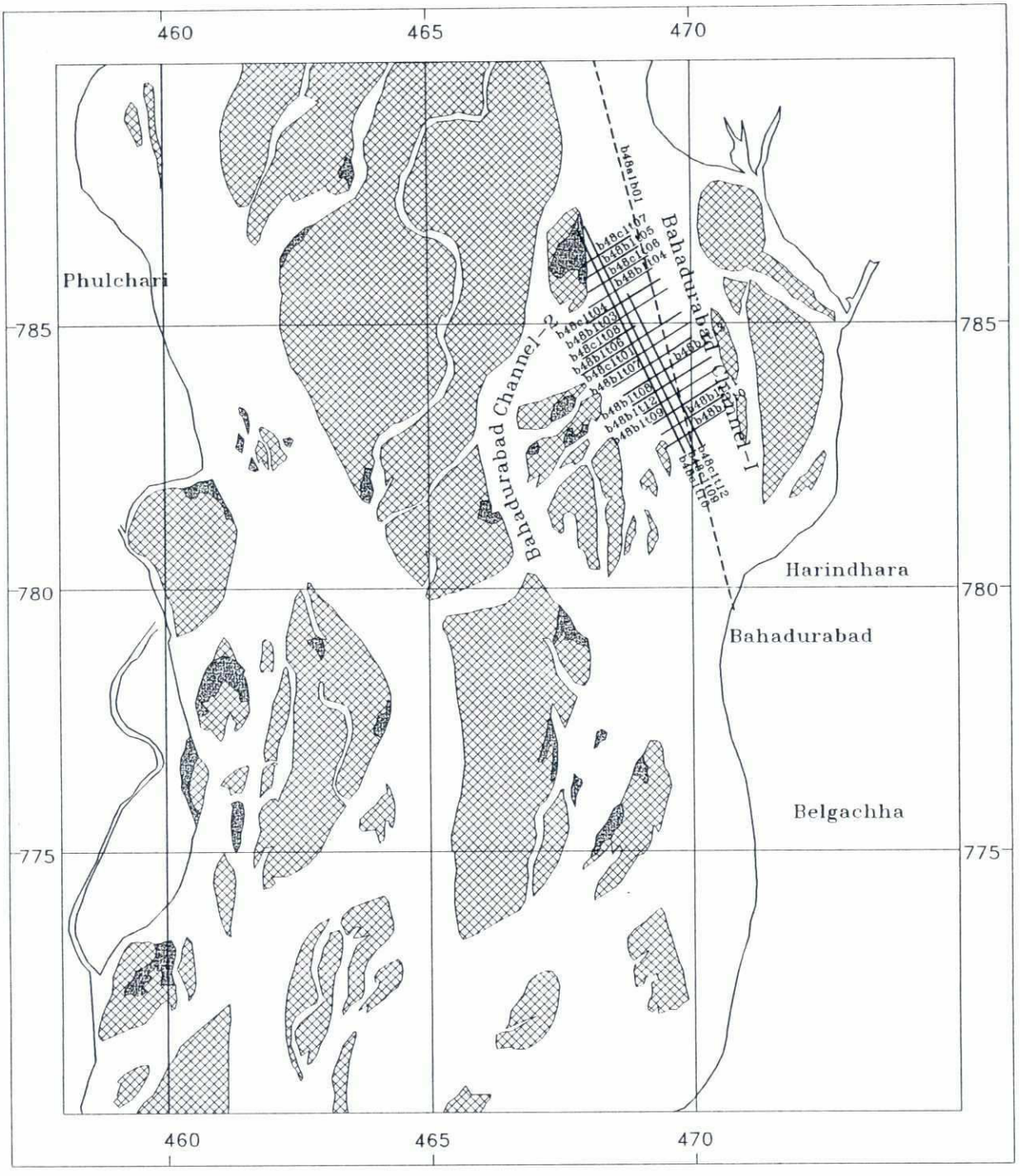
Table 3.2 : Grain sizes of bed material

Line No.	Long Profile Location	Date	Time	Depth (m)	Weight Percent		D10 (mm)	D35 (mm)	D50 (mm)	D90 (mm)
					<0.063(mm)	>0.063(mm)				
PP1X027	130km(L)	17/08/94	09:40	?	0.27	99.73	0.132	0.139	0.185	0.318
PP1X027	130km(M)	17/08/94	09:45	?	1.56	98.44	0.085	0.105	0.162	0.233
PP1X027	130 km(R)	17/08/94	10:05	?	28.81	71.19	0.022	0.034	0.112	0.236
PP1X028	135 km(L)	17/08/94	10:38	?	47.47	52.53	0.021	0.027	0.065	0.114
PP1X028	135km(M)	17/08/94	10:45	?	14.12	85.88	-	0.064	0.087	0.124
PP1X028	135km(R)	17/08/94	10:50	?	1.19	98.81	0.134	0.146	0.231	0.432
PP1X029	140km(L)	17/08/94	11:50	?	0.31	99.69	0.163	0.198	0.319	0.461
PP1X029	140km(M)	17/08/94	11:55	?	0.74	99.26	0.126	0.133	0.18	0.304
PP1X029	140km(R)	17/08/94	12:05	?	1.00	99.00	0.137	0.157	0.293	0.457
PP1X030	145km(L)	17/08/94	12:58	?	3.01	96.99	0.071	0.079	0.138	0.224
PP1X030	145km(M)	17/08/94	13:05	?	3.16	96.84	0.069	0.075	0.121	0.218
PP1X030	145km(R)	17/08/94	13:10	?	4.23	95.77	0.068	0.074	0.118	0.215
PP1X031	150km(L)	17/08/94	14:15	?	0.34	99.66	0.145	0.162	0.285	0.473
PP1X031	150km(M)	17/08/94	14:20	?	4.36	95.64	0.076	0.092	0.188	0.416
PP1X031	150 km(R)	17/08/94	14:30	?	35.66	64.34	0.028	0.035	0.106	0.254
PPIX032	155km(L)	17/08/94	15:15	?	97.58	2.42	0.008	0.012	0.025	0.046
PP1X032	155km(M)	17/08/94	15:25	?	6.19	93.81	0.065	0.068	0.088	0.118
PP1X032	155km(R)	17/08/94	15:35	?	4.12	95.88	0.067	0.072	0.107	0.215
PP1X033	160km(L)	17/08/94	16:05	?	0.32	99.68	0.157	0.184	0.315	0.476
PP1X033	160km(M)	17/08/94	16:15	?	7.45	92.55	0.072	0.097	0.183	0.39
PP1X033	160km(R)	17/08/94	16:30	?	9.19	90.81	0.064	0.07	0.119	0.244
PP1X034	165 km(L)	18/08/94	08:48	?	69.03	30.97	0.021	0.026	0.045	0.102
PP1X034	165km(M)	18/08/94	08:55	?	3.37	96.63	0.074	0.086	0.156	0.248
PP1X034	165km(R)	18/08/94	09:00	?	0.51	99.49	0.14	0.153	0.253	0.442
PP1X035	170km(L)	18/08/94	10:10	?	5.03	94.97	0.072	0.084	0.152	0.23
PP1X035	170 km(M)	18/08/94	10:20	?	96.22	3.78	0.009	0.012	0.025	0.05
PP1X035	170 km(R)	18/08/94	10:30	?	50.49	49.51	0.032	0.038	0.063	0.112
PP1X038	185km(L)	18/08/94	14:05	?	3.55	96.45	0.083	0.107	0.167	0.244
PP1X038	185km(M)	18/08/94	14:15	?	6.84	93.16	0.065	0.069	0.099	0.205
PP1X038	185 km(R)	18/08/94	14:25	?	54.03	45.97	0.027	0.034	0.059	0.109
PP1X037	180 km(L)	18/08/94	14:55	?	21.90	78.10	0.046	0.055	0.082	0.121
PP1X037	180km(M)	18/08/94	15:05	?	1.17	98.83	0.128	0.136	0.188	0.356
PP1X037	180km(R)	18/08/94	15:20	?	0.69	99.31	0.129	0.135	0.177	0.243
PP1X036	175km(L)	18/08/94	15:40	?	6.97	93.03	0.066	0.073	0.13	0.222
PP1X036	175 km(M)	18/08/94	15:40	?	21.34	78.66	0.045	0.055	0.083	0.122
PP1X036	175km(R)	18/08/94	15:50	?	1.83	98.17	0.087	0.111	0.174	0.33
PP1X043	210 km(L)	19/08/94	13:08	?	59.00	41.00	0.019	0.024	0.051	0.154
PP1X043	210km(M)	19/08/94	13:15	?	6.94	93.06	0.08	0.125	0.168	0.237
PP1X043	210km(R)	19/08/94	13:25	?	1.21	98.79	0.127	0.134	0.178	0.249
PP1X042	205km(L)	19/08/94	14:10	?	13.95	86.05	-	0.064	0.086	0.121
PP1X042	205km(M)	19/08/94	14:15	?	0.92	99.08	0.085	0.103	0.186	0.396
PP1X042	205km(R)	19/08/94	14:20	?	2.45	97.55	0.07	0.076	0.121	0.217
PP1X041	200km(L)	19/08/94	16:20	?	7.51	92.49	0.065	0.069	0.097	0.192
PP1X041	200km(M)	19/08/94	16:25	?	9.03	90.97	0.064	0.067	0.088	0.123
PP1X041	200km(R)	19/08/94	16:30	?	8.43	91.57	0.064	0.068	0.092	0.223
PP1X040	195 km(L)	19/08/94	16:18	?	11.48	88.52	0.059	0.066	0.089	0.142
PP1X040	195km(M)	19/08/94	16:15	?	12.81	87.19	-	0.065	0.089	0.15
PP1X040	195km(R)	19/08/94	16:30	?	1.28	98.72	0.128	0.135	0.178	0.247
PP1X039	190km(L)	19/08/94	17:05	?	8.87	91.13	0.065	0.076	0.15	0.239
PP1X039	190km(M)	19/08/94	17:15	?	0.67	99.33	0.127	0.134	0.178	0.249
PP1X039	190km(R)	19/08/94	17:20	?	0.41	99.59	0.133	0.14	0.187	0.318

Table 3.3 : Grain sizes of bed material

Survey date	File name	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-08-09	y489						+				
Total number of files							1				

Table 4.1: PSD24 Database file description



LEGEND:

- High land
- Low char
- Cross section
- Longitudinal sounding profile

5000m 2500m 0

Map is based on SPOT images of October 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9017: 10 - 14 August, 1994	
		Jamuna River, Bar and bed form dynamics	
	Date : 24 Apr 1996	Location map	page 1.1
	Init : kah		

Type of measurement	Method	No. of measurements in Lines									
		BT4X	BT5X	BT5X	BB1Y	BB1Y	BT5X	BT5X	BT5X	BT5X	BT5X
		016	021	022	023	024	025	026	027	029	030
Discharge	ADCP transect	-	1	1	1	1	1	1	1	1	1
	EMF transect	-	1	1	1	1	1	1	1	1	1
	Echo-Sounding	1	1	1	1	1	1	1	1	1	1
Vertical current profile	No.of verticals in channel	-	-	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-	-	-
	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

Line no	Transect file name	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)
BT5X021	B48B1T03	1924.24	13374.49	18.20	15965.04	-	-
BT5X022	B48B1T04	1423.47	12426.45	18.20	15778.17	-	-
BT5X023	B48B1T05	1188.19	12170.79	18.20	15915.64	-	-
BT5X024	B48B1T06	2236.59	14322.05	18.20	14663.43	-	-
BT5X025	B48B1T07	1778.68	12730.09	18.20	13330.30	-	-
BT5X026	B48B1T08	1752.21	13132.22	18.20	14335.29	-	-
BT5X027	B48B1T09	1521.50	12016.63	18.20	13780.60	-	-
BT5X029	B48B1T10	1338.83	10841.59	18.20	14596.16	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	10 Aug 94	18.30	FAP24
Bahadurabad	11 Aug 94	18.20	FAP24
Bahadurabad	12 Aug 94	18.10	FAP24

Table 2.3 : Water levels

Short Description :

Bifurcation flow patterns. Measurements of the flow division at a bar in order to determine secondary flow patterns. Results are reported in RSP Special Report 9.

Type of measurement	Method	No. of measurements in Lines									
		BT5X 032	BT5X 033	BT5X 034	BT5X 035	BT5X 036	BT5X 037	BT5X 038	BT5Y 038	BT5Y 039	BT5Y 040
Discharge	ADCP transect	1	1	1	1	1	1	1	1	1	1
	EMF transect	1	1	1	1	1	1	1	1	1	1
	Echo-Sounding	1	1	1	1	1	1	1	1	1	1
Vertical current profile	No.of verticals in channel	-	-	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-	-	-
	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

Line no	Transect file name	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)
BT5X030	B48B1T11	1384.20	11397.68	18.20	14447.45	-	-
BT5X032	B48B1T12	1629.09	12525.02	18.20	14455.92	-	-
BT5X033	B48B1T13	1883.90	13534.53	18.20	14227.45	-	-
BT5X034	B48C1T01	1940.03	13571.07	18.10	14373.24	-	-
BT5X036	B48C1T04	1619.83	13390.24	18.10	16663.21	-	-
BT5X037	B48C1T06	1334.11	12444.00	18.10	15470.27	-	-
BT5X038	B48C1T07	1063.18	11693.22	18.10	15001.49	-	-
BT5X035	B48C1T08	1174.77	7605.95	18.10	6880.13	-	-
BT5Y038	B48C1T09	4677.30	37329.87	18.10	7799.05	-	-
BT5Y040	B48C1T10	4679.28	43055.98	18.10	4563.04	-	-
BT5Y039	B48C1T12	3170.56	28660.82	18.10	2262.26	-	-

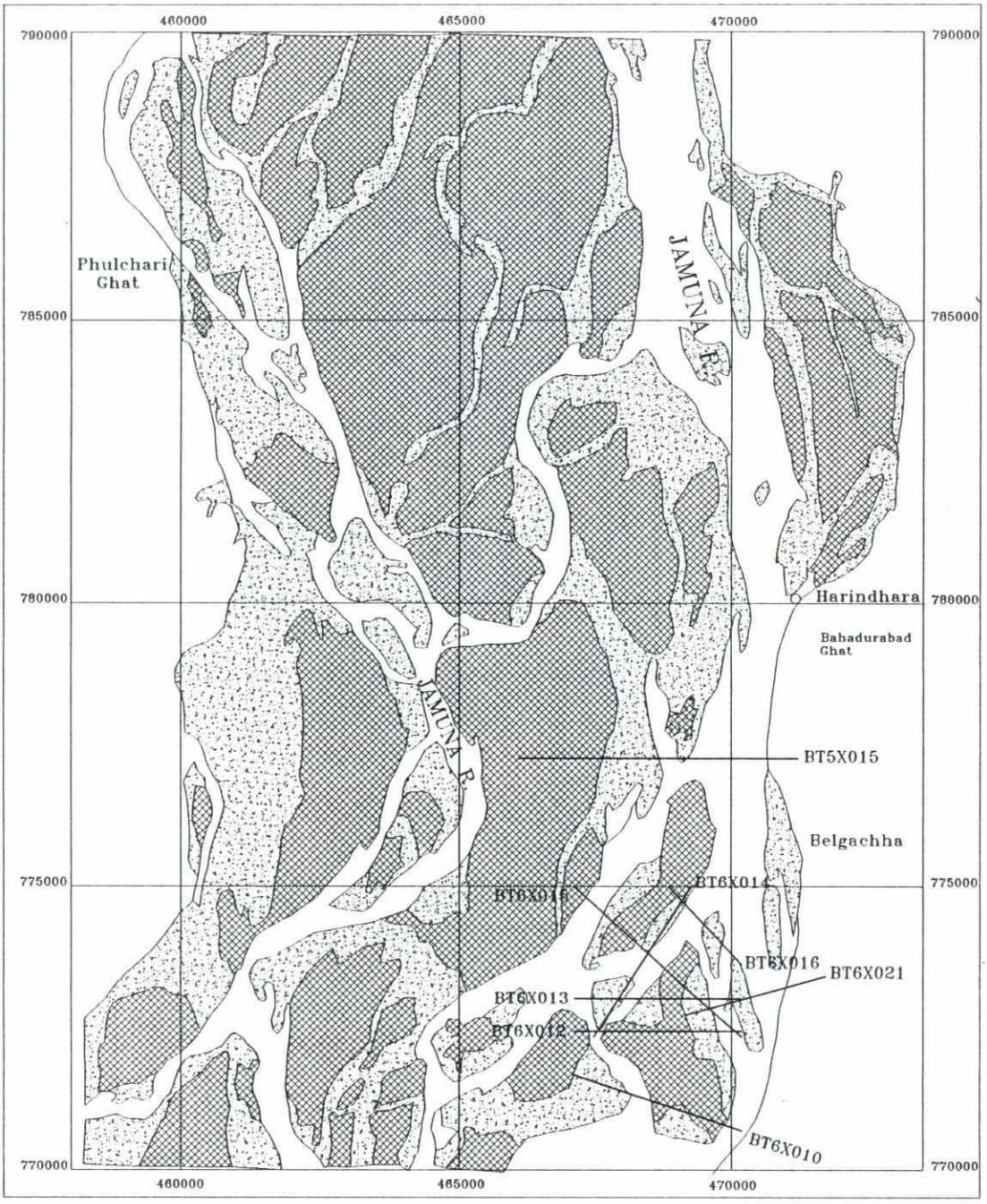
Table 2.2 : Key figures

Transect / Echosounding file name	Profile file name	Line no	Survey date	Type of data
B48A1B01 *		BT4X016	1994-08-10	Echo-sounding
B48B1T03 *		BT5X021	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T04 *		BT5X022	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T05 *		BT5X023	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T06 *		BT5X024	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T07 *		BT5X025	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T08 *		BT5X026	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T09 *		BT5X027	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T10 *		BT5X029	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T11 *		BT5X030	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T12 *		BT5X032	1994-08-11	ADCP/EMF+Echo-sounding
B48B1T13 *		BT5X033	1994-08-11	ADCP/EMF+Echo-sounding
B48C1T01 *		BT5X034	1994-08-12	ADCP/EMF+Echo-sounding
B48C1T04 *		BB1X036	1994-08-12	ADCP/EMF+Echo-sounding
B48C1T06 *		BB1X037	1994-08-12	ADCP/EMF+Echo-sounding
B48C1T07 *		BB1X038	1994-08-12	ADCP/EMF+Echo-sounding
B48C1T08 *		BB1X035	1994-08-12	ADCP/EMF+Echo-sounding
B48C1T09 *		BB1Y038	1994-08-12	Echo-sounding
B48C1T10 *		BB1Y040	1994-08-12	Echo-sounding
B48C1T12 *		BB1Y039	1994-08-12	Echo-sounding

*** : Transect / Echo sounding in PSD24 data base**

Survey Date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-08-10	B48A1B01	BT4X016										+
1994-08-11	B48B1T03	BT5X021	+	+	+							
1994-08-11	B48B1T04	BT5X022	+	+	+							
1994-08-11	B48B1T05	BT5X023	+	+	+							
1994-08-11	B48B1T06	BT5X024	+	+	+							
1994-08-11	B48B1T07	BT5X025	+	+	+							
1994-08-11	B48B1T08	BT5X026	+	+	+							
1994-08-11	B48B1T09	BT5X027	+	+	+							
1994-08-11	B48B1T10	BT5X029	+	+	+							
1994-08-11	B48B1T11	BT5X030	+	+	+							
1994-08-11	B48B1T12	BT5X032	+	+	+							
1994-08-11	B48B1T13	BT5X033	+	+	+							
1994-08-12	B48C1T01	BT5X034	+	+	+							
1994-08-12	B48C1T04	BB1X036	+	+	+							
1994-08-12	B48C1T06	BB1X037	+	+	+							
1994-08-12	B48C1T07	BB1X038	+	+	+							
1994-08-12	B48C1T08	BB1X035	+	+	+							
1994-08-12	B48C1T09	BB1Y038	+	+	+							
1994-08-12	B48C1T10	BB1Y040	+	+	+							
1994-08-12	B48C1T12	BB1Y039	+	+	+							
Total number of files			19	19	19							1

Table 4.1 PSD24 Dtabase file description



LEGEND:

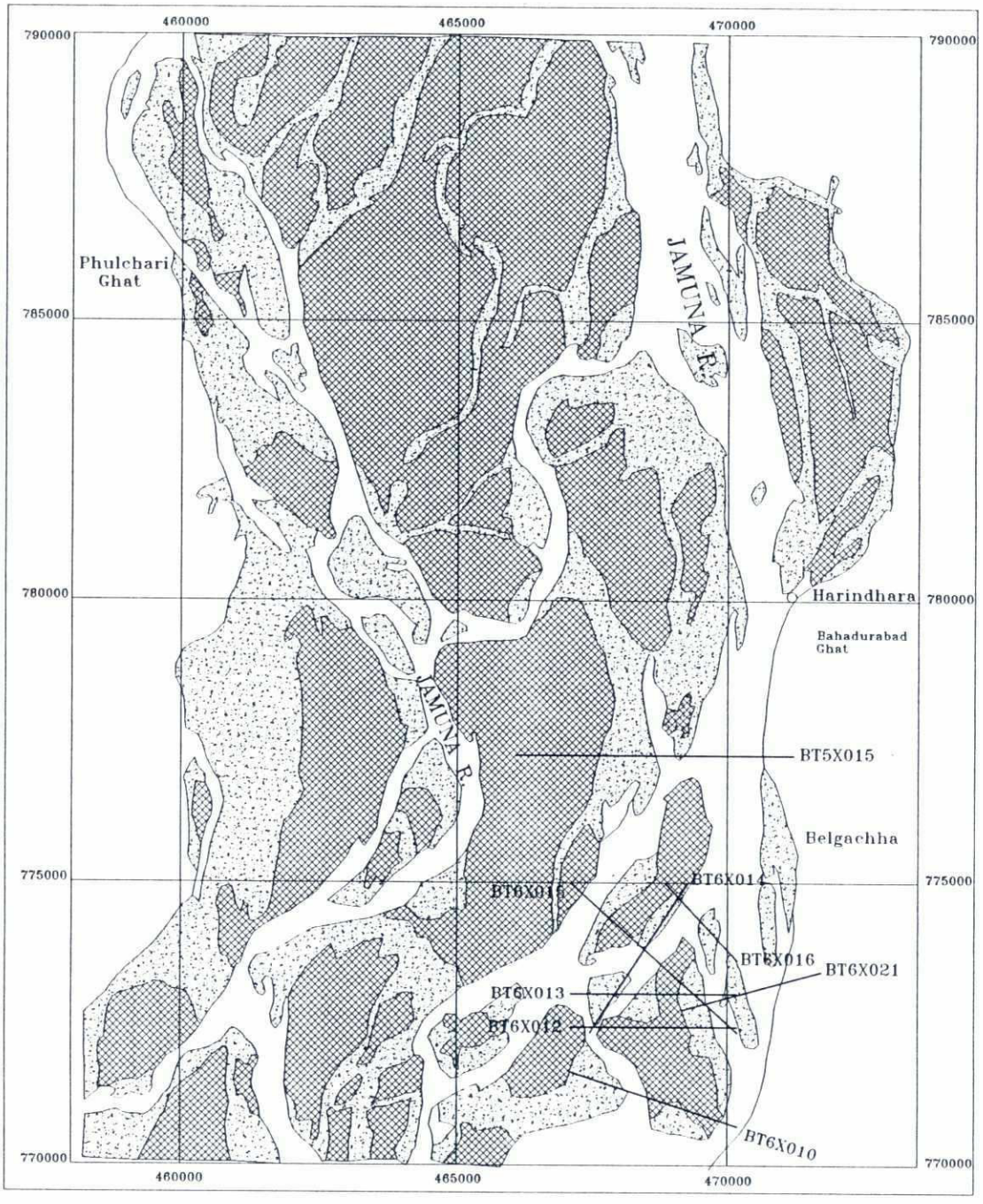
- Cross Section
- High Land
- Low Char
- FAP 24 Staff Gauge

N

2500m 0 2.5km

Map based on SPOT Image on March 1995

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9018: 14 - 18 August, 1994	
	Jamuna River, Flow and sediment transport near bars	
Date : 15 May 1996 Init : kah	Location map	page 1.1



LEGEND:

- Cross Section
- High Land
- Low Char
- FAP 24 Staff Gauge

2500m 0 2.5km

Map based on SPOT Image on March 1995

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9018: 14 - 18 August, 1994	
		Jamuna River, Flow and sediment transport near bars	
	Date : 15 May 1996	Location map	page 1.2
	Init : kah		

Type of measurement	Method	No. of measurements in Lines						
		BT6X 002	BT6X 003	BT6X 004	BT6X 005	BT6X 006	BT6X 007	BT6X 008
Discharge	ADCP transect	1	2	1	1	1	1	1
	EMF transect	1	2	1	1	1	1	1
	Echo-Sounding	1	2	1	1	1	1	1
Vertical current profile	No.of verticals in channel	-	7	-	-	-	-	-
	ADCP	-	7	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	21	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-
	Integrated bottle sampling	-	7	-	-	-	-	-
	Collapsible bag	-	-	-	-	-	-	-
Bed load	Dune tracking	-	-	-	-	-	-	-
	Helley-smith sampler	-	-	-	-	-	-	-
	Delft Bottle	-	21	-	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-	-	-	-
	Van Veen bed sampler	-	1	-	-	-	-	-

Table 2.1 : Survey programme as made

Line no	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)
BT6X002	1742.95	11928.18	18.41	14966.89	-	-
BT6X003	2061.23	12792.39	12.48	15140.16	0.00	14183.63
BT6X004	2402.24	12753.80	18.41	12808.86	-	-
BT6X005	1636.07	9583.20	18.41	10700.12	-	-
BT6X006	1485.59	8243.27	18.41	8351.70	-	-
BT6X007	1197.44	6763.29	18.41	7778.70	-	-
BT6X008	3429.60	17206.82	18.41	12476.33	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	15 Aug 94	18.24	FAP24
Bahadurabad	16 Aug 94	18.41	FAP24
Bahadurabad	17 Aug 94	18.48	FAP24
Bahadurabad	18 Aug 94	18.47	FAP24

Table 2.3 : Water levels

W A R P LIBRARY. DHAKA

Short Description :

This survey was executed in the Jamuna River left channel Roy's bar. Results are reported in Special Report 16 and Special Report 9.

Type of measurement	Method	BT6X 009	BT6X 010	BT6X 012	BT6X 013	BT6X 014	BT6X 015	BT6X 016	BT6X 021
Discharge	ADCP transect	2	1	1	2	1	3	1	3
	EMF transect	2	1	1	2	1	3	1	3
	Echo-Sounding	2	1	1	2	1	3	1	3
Vertical current profile	No.of verticals in channel	-	-	-	-	-	3	-	3
	ADCP	-	-	-	-	-	3	-	3
	S4 current meter	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	10	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-
	Collapsible bag	-	-	-	-	-	3	-	4
Bed load	Dune tracking	-	-	-	-	-	-	-	-
	Helley-smith sampler	-	-	-	-	-	-	-	-
	Delft Bottle	-	-	-	-	-	12	-	6
Bed material	US BM-54 bed sampler	-	-	-	-	-	-	-	-
	Van Veen bed sampler	-	-	-	-	-	1	-	-

Table 2.1 : Survey programme as made

Transect name	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)
BT6X009	3134.96	16143.11	18.41	12985.78	-	-
BT6X010	3059.15	13224.85	18.41	12054.12	-	-
BT6X012	1455.75	4355.79	18.41	2997.64	-	-
BT6X013	1180.50	3711.72	18.41	2823.82	-	-
BT6X014	2872.08	14760.27	18.41	1017.85	-	-
BT6X015	887.07	4268.10	18.47	4295.00	0.00	3375.86
BT6X016	2722.48	16451.59	18.41	11009.63	-	-
BT6X021	1446.85	8824.97	18.24	7300.57	0.00	6508.83

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	15 Aug 94	18.24	FAP24
Bahadurabad	16 Aug 94	18.41	FAP24
Bahadurabad	17 Aug 94	18.48	FAP24
Bahadurabad	18 Aug 94	18.47	FAP24

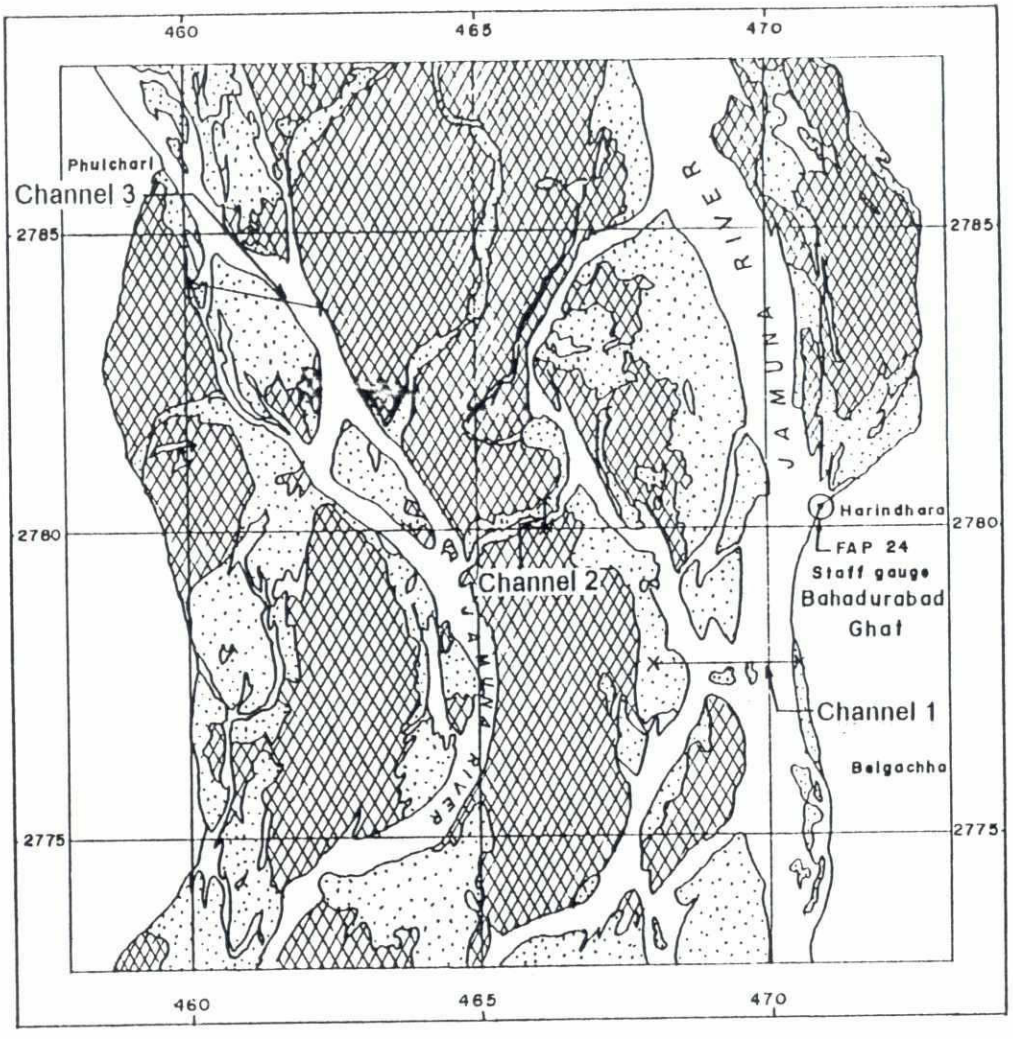
Table 2.3 : Water levels

Transect file name	Profile file name	Line no	Survey date	Type of data
B48F1T01		BT6X021	1994-08-15	ADCP/EMF+Echosounding
B48F1T02 *		BT6X021	1994-08-15	ADCP/EMF+Echosounding
	B48F1P01	BT6X021	1994-08-15	ADCP/EMF+Echosounding+Sediment
	B48F1P02	BT6X021	1994-08-15	ADCP/EMF+Echosounding+Sediment
	B48F1P03	BT6X021	1994-08-15	ADCP/EMF+Echosounding+Sediment
B48G1T01 *		BT6X010	1994-08-16	ADCP/EMF+Echosounding
B48G1T02 *		BT6X009	1994-08-16	ADCP/EMF+Echosounding
B48G1T03 *		BT6X009	1994-08-16	ADCP/EMF+Echosounding
B48G1T04 *		BT6X008	1994-08-16	ADCP/EMF+Echosounding
B48G1T05 *		BT6X012	1994-08-16	ADCP/EMF+Echosounding
B48G1T06 *		BT6X013	1994-08-16	ADCP/EMF+Echosounding
B48G1T07 *		BT6X013	1994-08-16	ADCP/EMF+Echosounding
B48G1T08 *		BT6X014	1994-08-16	ADCP/EMF+Echosounding
B48G1T09 *		BT6X016	1994-08-16	ADCP/EMF+Echosounding
B48G1T10 *		BT6X007	1994-08-16	ADCP/EMF+Echosounding
B48G1T11 *		BT6X006	1994-08-16	ADCP/EMF+Echosounding
B48G1T12 *		BT6X005	1994-08-16	ADCP/EMF+Echosounding
B48G1T13 *		BT6X004	1994-08-16	ADCP/EMF+Echosounding
B48G1T14 *		BT6X003	1994-08-16	ADCP/EMF+Echosounding
B48G1T15 *		BT6X002	1994-08-16	ADCP/EMF+Echosounding
B48G1T16 *		BT6X015	1994-08-16	ADCP/EMF+Echosounding
B48H1T01 *		BT6X003	1994-08-17	ADCP/EMF+Echosounding
	B48H1P01	BT6X003	1994-08-17	ADCP/EMF+Echosounding+Sediment
	B48H1P02	BT6X003	1994-08-17	ADCP/EMF+Echosounding+Sediment
	B48H1P03	BT6X003	1994-08-17	ADCP/EMF+Echosounding+Sediment
	B48H1P04	BT6X003	1994-08-17	ADCP/EMF+Echosounding+Sediment
	B48H1P05	BT6X003	1994-08-17	ADCP/EMF+Echosounding+Sediment
	B48H1P06	BT6X003	1994-08-17	ADCP/EMF+Echosounding+Sediment
	B48H1P07	BT6X003	1994-08-17	ADCP/EMF+Echosounding+Sediment
B48I1T01 *		BT6X015	1994-08-18	ADCP/EMF+Echosounding
B48I1T02		BT6X015	1994-08-18	ADCP/EMF+Echosounding
	B48I1P01	BT6X015	1994-08-18	ADCP/EMF+Echosounding+Sediment
	B48I1P03	BT6X015	1994-08-18	ADCP/EMF+Echosounding+Sediment
	B48I1P04	BT6X015	1994-08-18	ADCP/EMF+Echosounding+Sediment
B48I1T03		BT6X021	1994-08-18	ADCP/EMF+Echosounding

* : Transect / Echo sounding in PSD24 data base

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1995-08-15	B48F1T02	BT6X021	+	+	+	+	+		+	+		
1995-08-16	B48G1T01	BT6X010	+	+	+							
1995-08-16	B48G1T02	BT6X009	+	+	+							
1995-08-16	B48G1T03	BT6X009	+	+	+							
1995-08-16	B48G1T04	BT6X008	+	+	+							
1995-08-16	B48G1T05	BT6X012	+	+	+							
1995-08-16	B48G1T06	BT6X013	+	+	+							
1995-08-16	B48G1T07	BT6X013	+	+	+							
1995-08-16	B48G1T08	BT6X014	+	+	+							
1995-08-16	B48G1T09	BT6X016	+	+	+							
1995-08-16	B48G1T10	BT6X007	+	+	+							
1995-08-16	B48G1T11	BT6X006	+	+	+							
1995-08-16	B48G1T12	BT6X005	+	+	+							
1995-08-16	B48G1T13	BT6X004	+	+	+							
1995-08-16	B48G1T14	BT6X003	+	+	+							
1995-08-16	B48G1T15	BT6X002	+	+	+							
1995-08-16	B48G1T16	BT6X015	+	+	+							
1995-08-17	B48H1T01	BT6X003	+	+	+	+	+	+	+	+		
1995-08-18	B48I1T01	BT6X015	+	+	+	+	+	+	+	+		
Total number of files			19	19	19	3	3	2	3	3	-	-

Table 4.1: PSD24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable/law char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9019 : 18 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 03 Nov 1994	Location map	page 1.1
	Init : mzh/sjr		

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

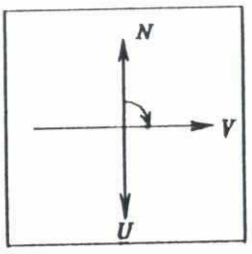
Table 2.1: Survey programme as made

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	3151	18453	18.44	20833	-	-
Channel 2	629	2903	18.44	1901	-	-
Channel 3	2713	14410	18.44	7647	-	-

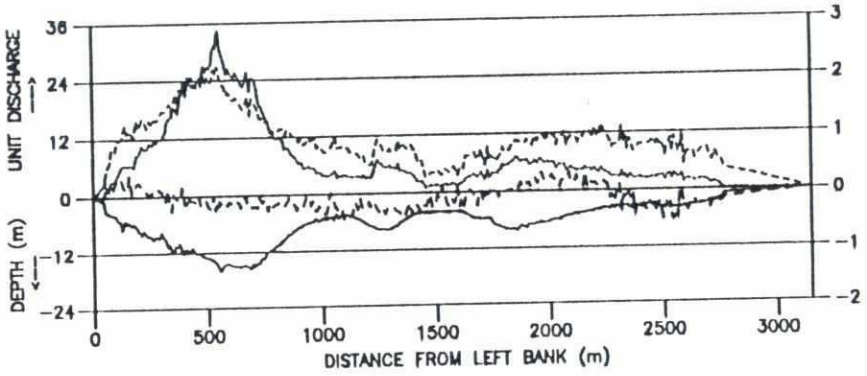
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	18 Aug 94	18.44	FAP 24
	Channel 2	18 Aug 94	18.44	FAP 24
	Channel 3	18 Aug 94	18.44	FAP 24

Table 2.3: Water-levels



TRANSECT AZIMUTH = 90°
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 (m²/s.m)
U (m/s)
V (m/s)
STAGE = 18.44 (m+PWD)
A = 18453 (m²)
Q = 20833 (m³/s)

FLOW

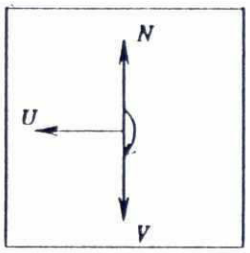
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9019 : 18 August, 1994	
	Location 1 : Jamuna River, Bahadurabad	
File : B4811T05	Date : 03 Nov 1994 Init : mzh	Horizontal distribution of flow and sediments Channel 1
		page 3.1

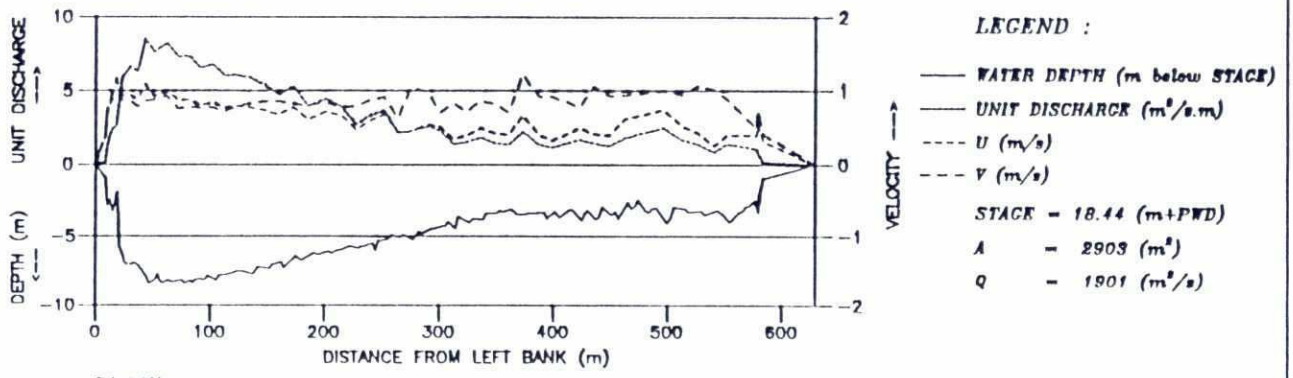


TRANSECT AZIMUTH = 180°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

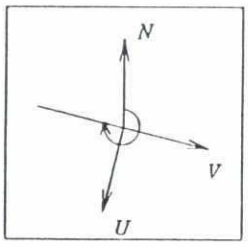
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9019 : 18 August, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B4811T07	Date : 03 Nov 1994 Init : mzh	Horizontal distribution of flow and sediments Channel 2	page 3.2

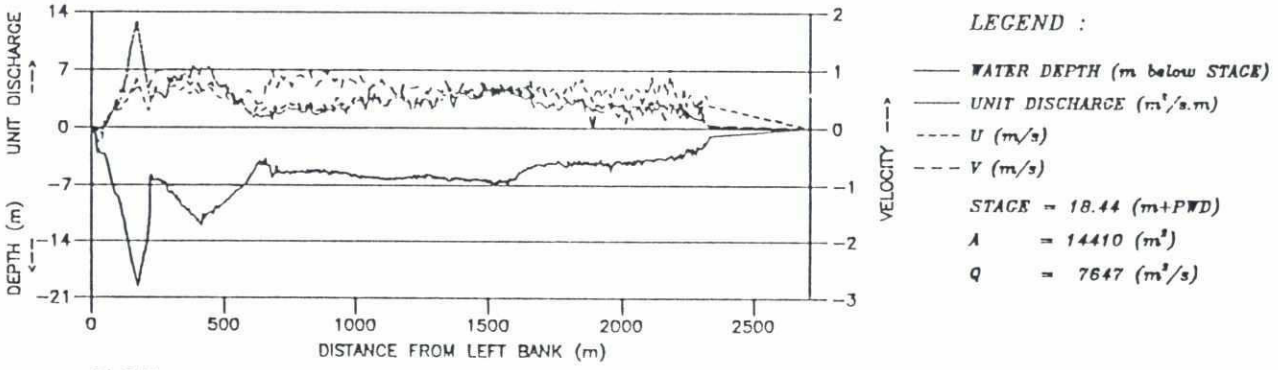


TRANSECT AZIMUTH = 284°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

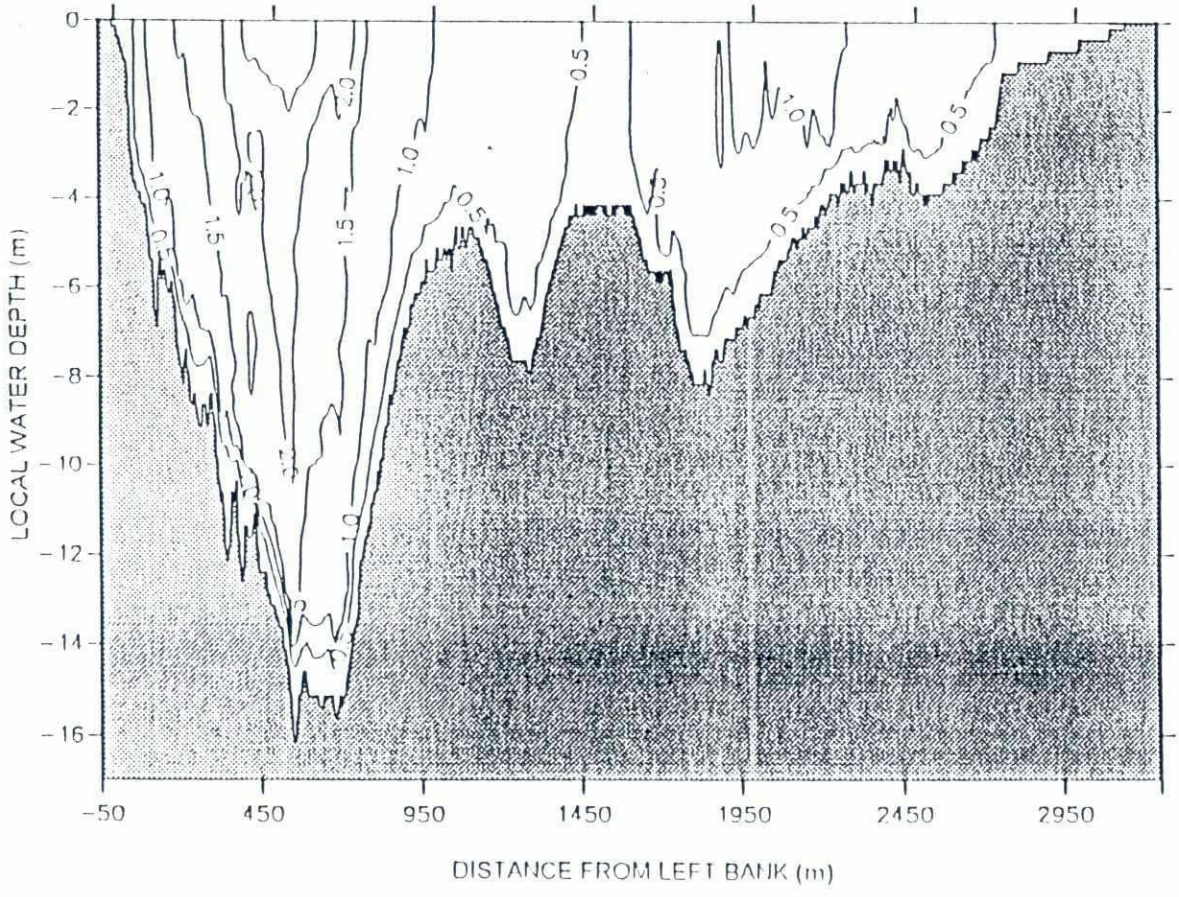
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

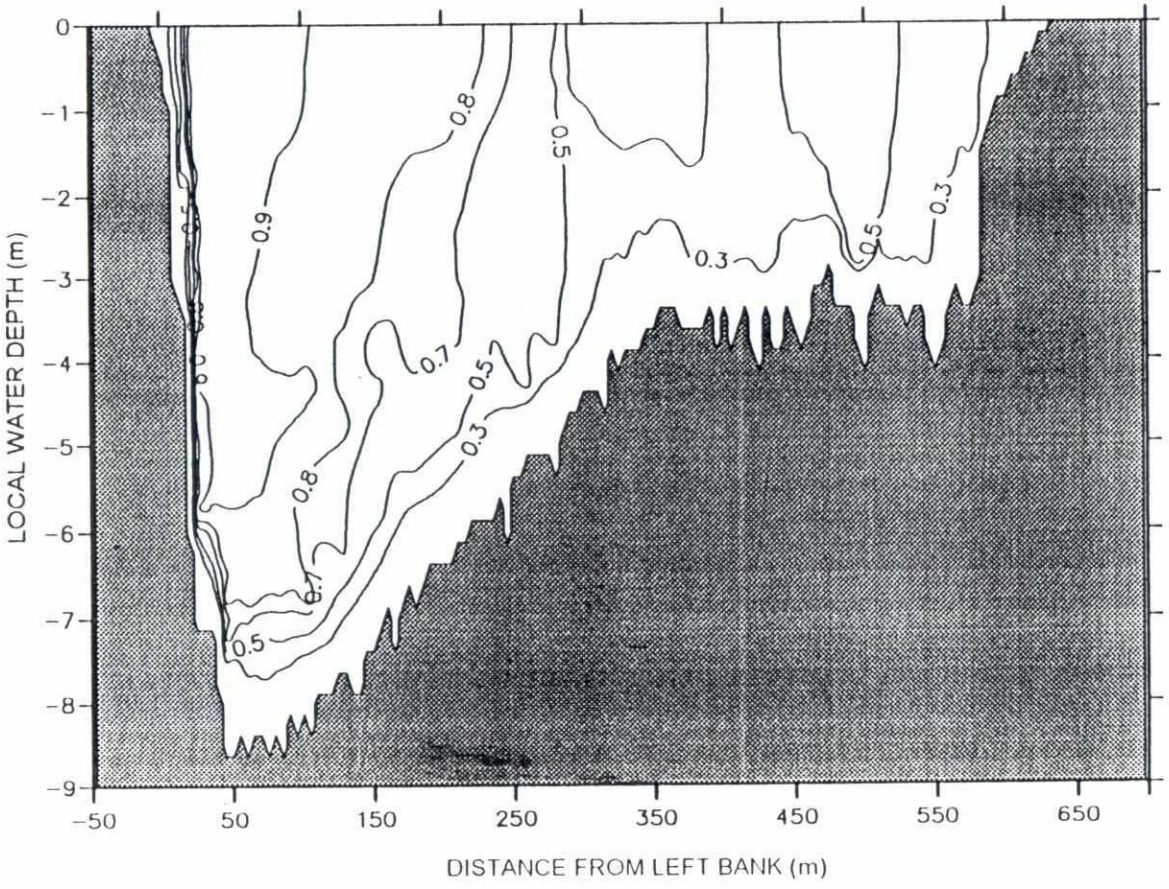
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9019 : 18 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4811T08	Date : 03 Nov 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 3	page 3.3



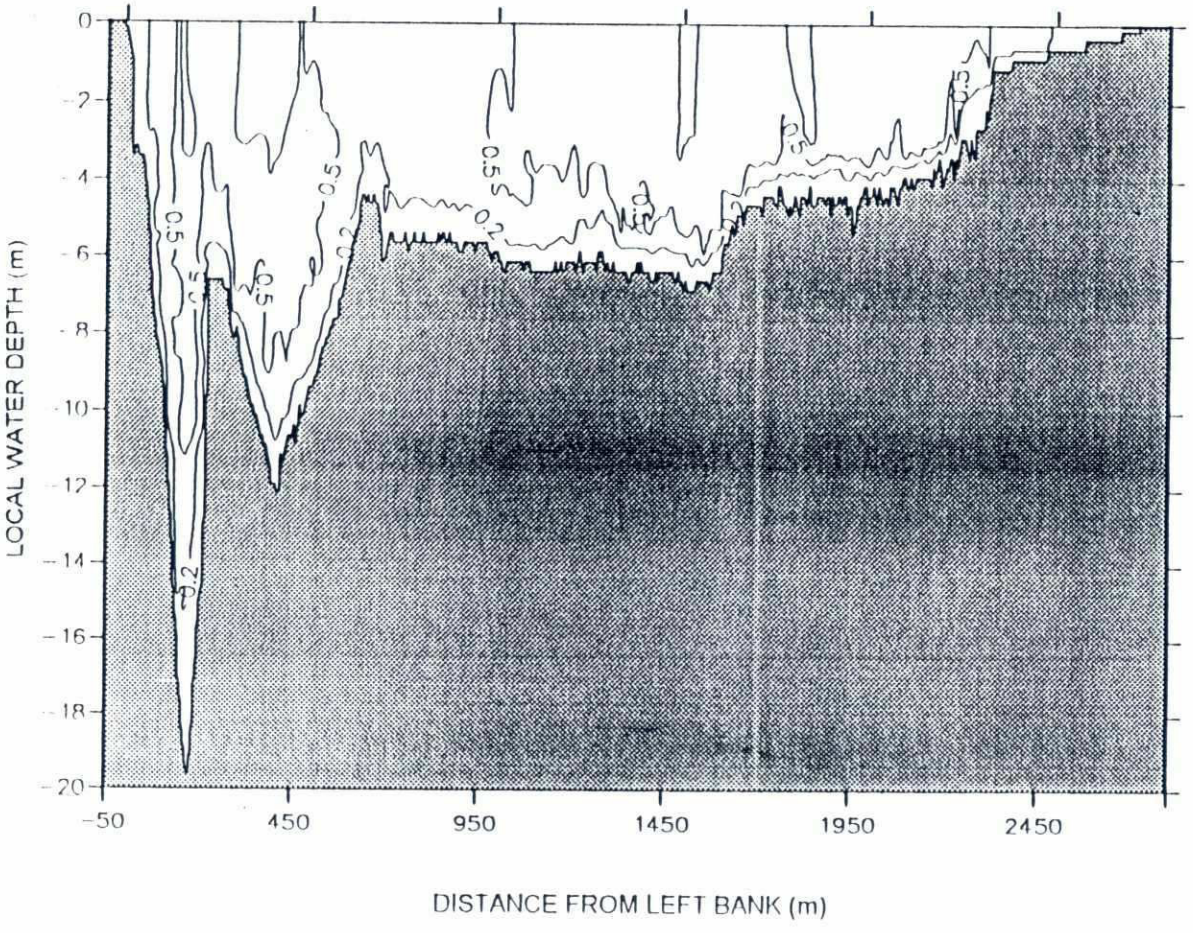
Iso-velocity contours (m/s)
Water-level : 18.44 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9019 : 18 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48I1T05	Date : 03 Nov 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh	Channel 1	4.1



Iso-velocity contours (m/s)
Water-level : 18.44 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 9019 : 18 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48I1T07	Date : 03 Nov 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh	Channel 2	4 2



Iso-velocity contours (m/s)
Water-level : 18.44 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 9019 : 18 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4811T08	Date : 03 Nov 1994 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 3	page 4.3

Andreasen settling tube							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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	D35 (mm)	D50 (mm)	D65 (mm)
Sample not collected							

Table 5.2 : Grain size of bed material

Helley - Smith							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth	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

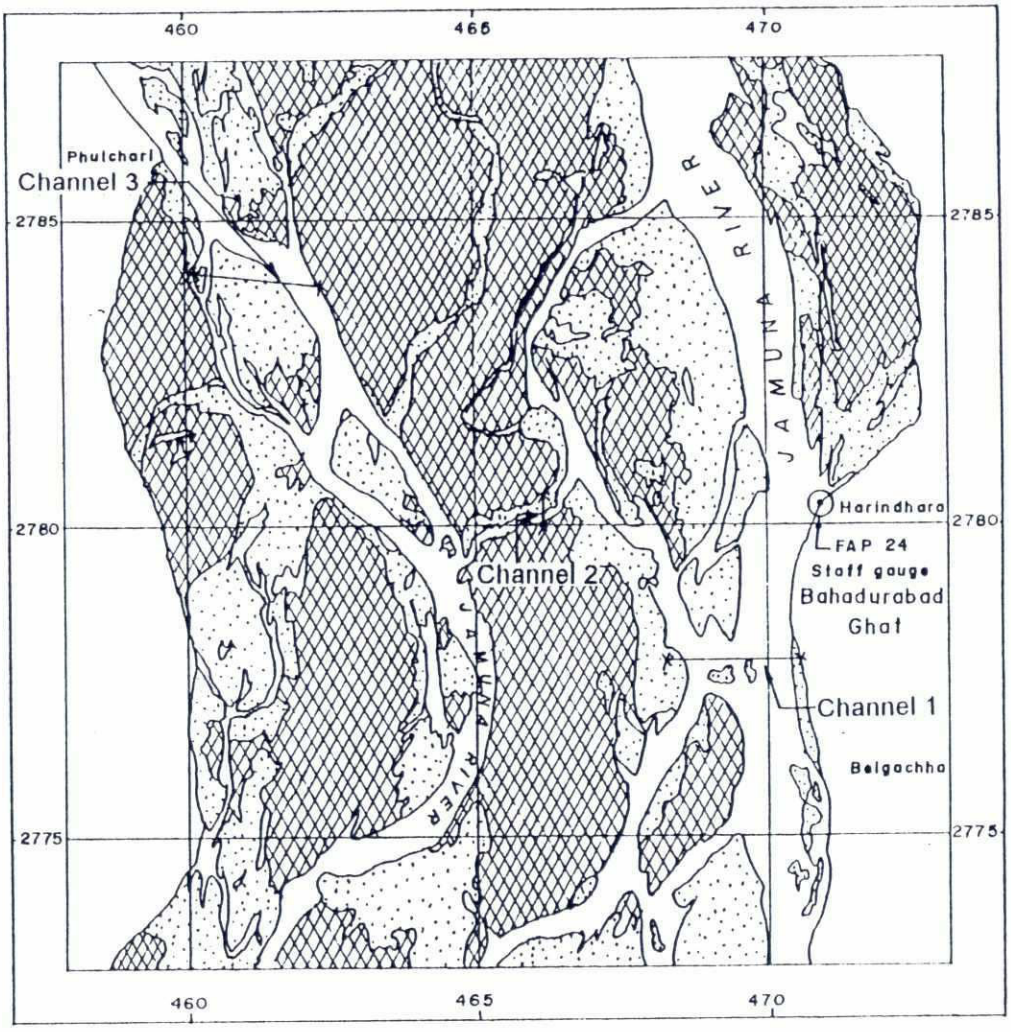
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9408181355-1717	B48I1T04
		9408181424-1449	B48I1T05 *
	2	9408181522-1528	B48I1T06
		9408181533-1537	B48I1T07 *
	3	9408181609-1628	B48I1T08 *

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	B48I1T05 .ase
ADCP/S4/EMF	2	QUATTRO	B48I1T07 .ase
ADCP/S4/EMF	3	QUATTRO	B48I1T08 .ase
Echosounder	1	QUATTRO	B48I1T05 .ech
Echosounder	2	QUATTRO	B48I1T07 .ech
Echosounder	3	QUATTRO	B48I1T08 .ech
Transect plot data	1	QUATTRO	B48I1T05 .trs
Transect plot data	2	QUATTRO	B48I1T07 .trs
Transect plot data	3	QUATTRO	B48I1T08 .trs
Iso-velocity plot data	1	MIKE 21	B48I1T05 .ct2
		MIKE 21	B48I1T05 .dt2
Iso-velocity plot data	2	MIKE 21	B48I1T07 .ct2
		MIKE 21	B48I1T07 .dt2
Iso-velocity plot data	3	MIKE 21	B48I1T08 .ct2
		MIKE 21	B48I1T08 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable/low char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities DELFT - DHI		Survey Bulletin 9022 : 30 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 06 Nov 1994	Location map	page 11
	Init : mzh/sjr		

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

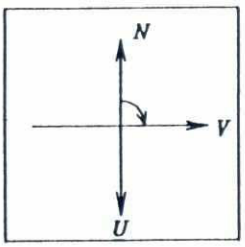
Table 2.1 Survey programme as made

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	3048	16855	18.09	17100	-	-
Channel 2	647	3089	18.09	1605	-	-
Channel 3	2688	12987	18.09	6214	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	30 Aug 94	18.09	FAP 24
	Channel 2	30 Aug 94	18.09	FAP 24
	Channel 3	30 Aug 94	18.09	FAP 24

Table 2.3: Water-levels

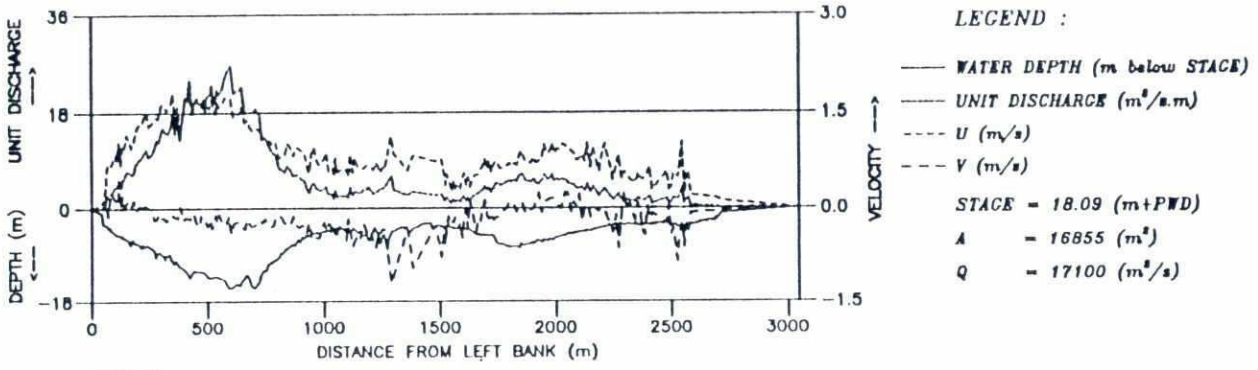


TRANSECT AZIMUTH = 90°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

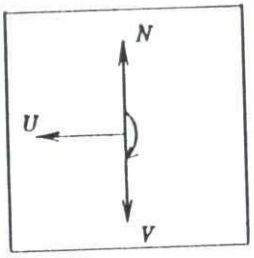
Sample not collected

SEDIMENT TRANSPORT

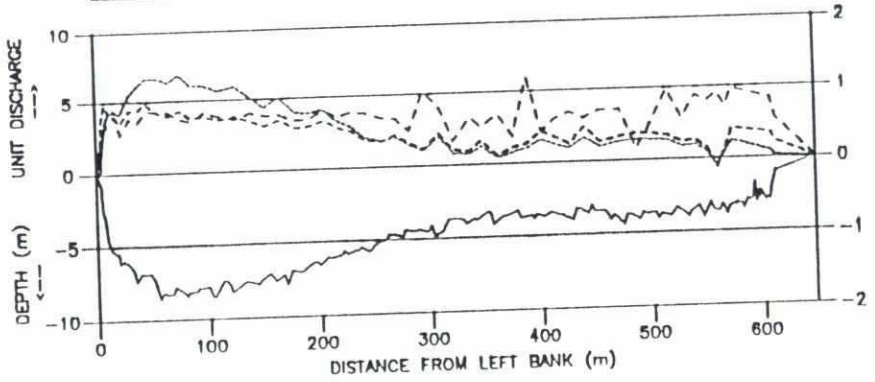
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9022 : 30 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48U1T02	Date : 06 Sep 1995 Init : mzh	Horizontal distribution of flow and sediments Channel 1	page 3.1



TRANSECT AZIMUTH = 180°
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 (m²/s.m)
---- U (m/s)
- - - V (m/s)
STACK = 18.09 (m+PWD)
A = 3089 (m²)
Q = 1605 (m³/s)

FLOW

Sample not collected

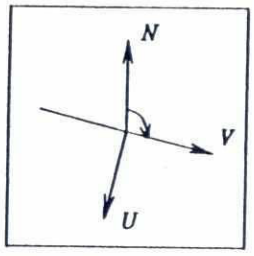
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9022 : 30 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48U1T04	Date : 06 Sep 1995 Init : mzh	Horizontal distribution of flow and sediments Channel 2	page 3.2

23a

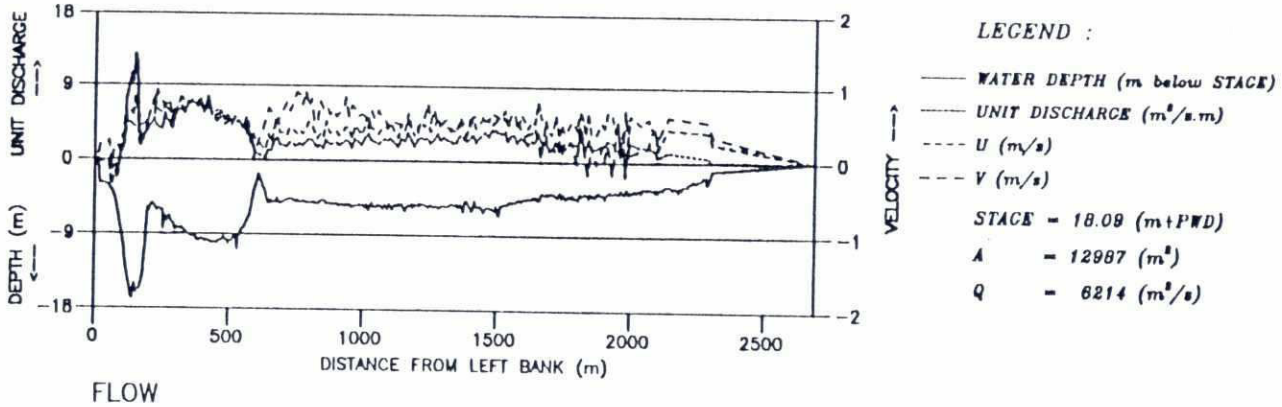


TRANSECT AZIMUTH = 104°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

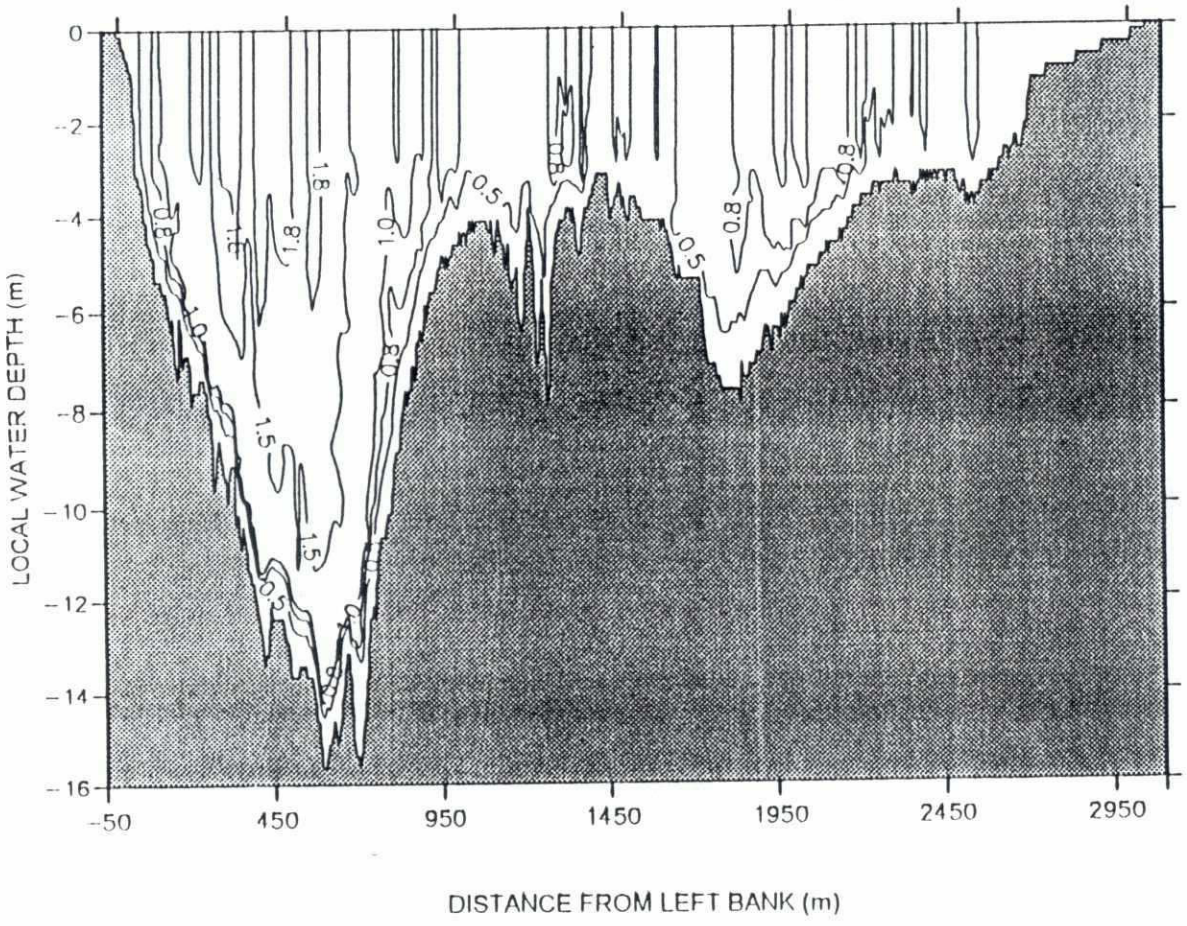
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

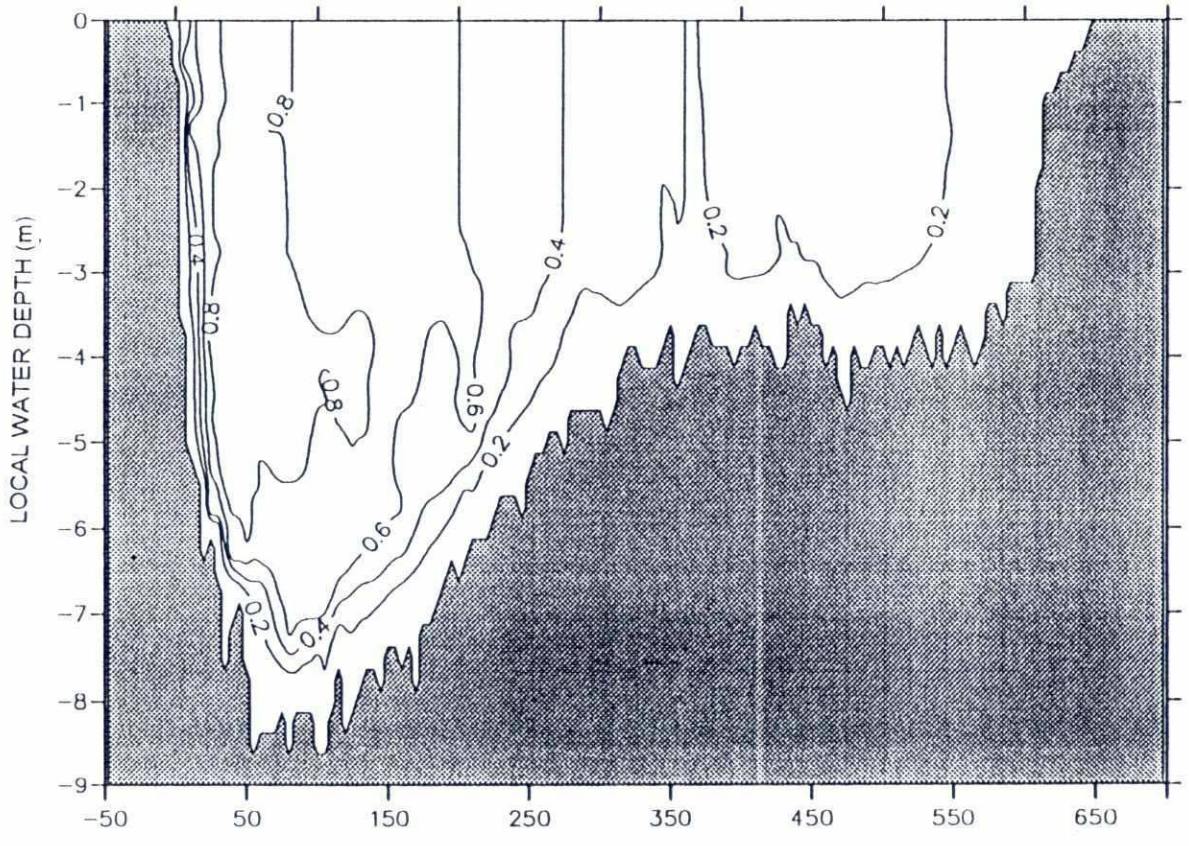
GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9022 : 30 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48U1T06	Date : 06 Sep 1995	Horizontal distribution of flow and sediments	page 33
	Init : mzh	Channel 3	



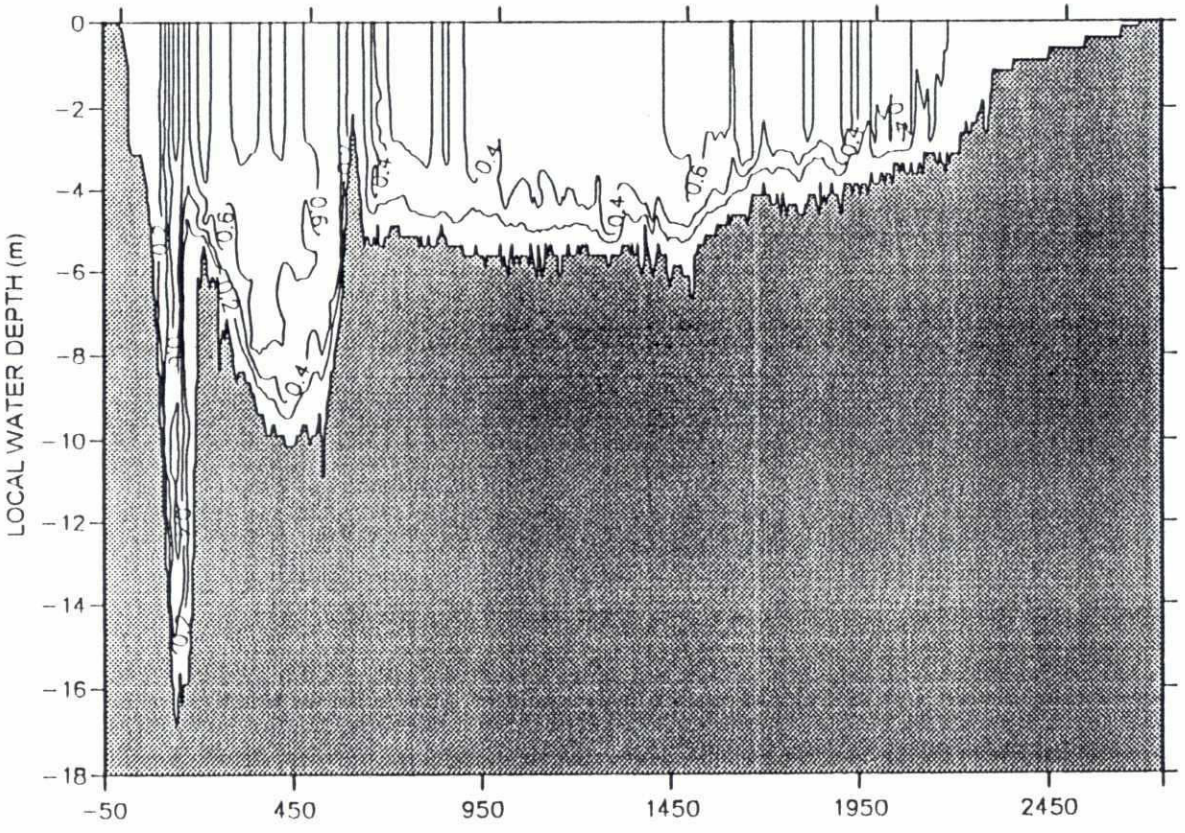
Iso-velocity contours (m/s)
Water level : 18.09 m + PWD measured at the station indicated on page 1.1

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9022 : 30 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48U1T02	Date : 06 Sep 1995	Cross-sectional distribution of flow velocity	page
	Init : mzh	Channel 1	4.1



Iso-velocity contours (m/s)
Water level : 18.09 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 9022 : 30 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48U1T04	Date : 06 Sep 1995	Cross-sectional distribution of flow velocity	page 42
	Init : mzh	Channel 2	



Iso-velocity contours (m/s)
Water level : 18.09 m + PWD measured at the station indicated on page 1.1

RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9022 : 30 August, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48U1T06	Date : 06 Sep 1995	Cross-sectional distribution of flow velocity	page
	Init : mzh	Channel 3	4.3

Andreasen settling tube

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

Table 5.2 : Grain size of bed material

Helley - Smith

Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth	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

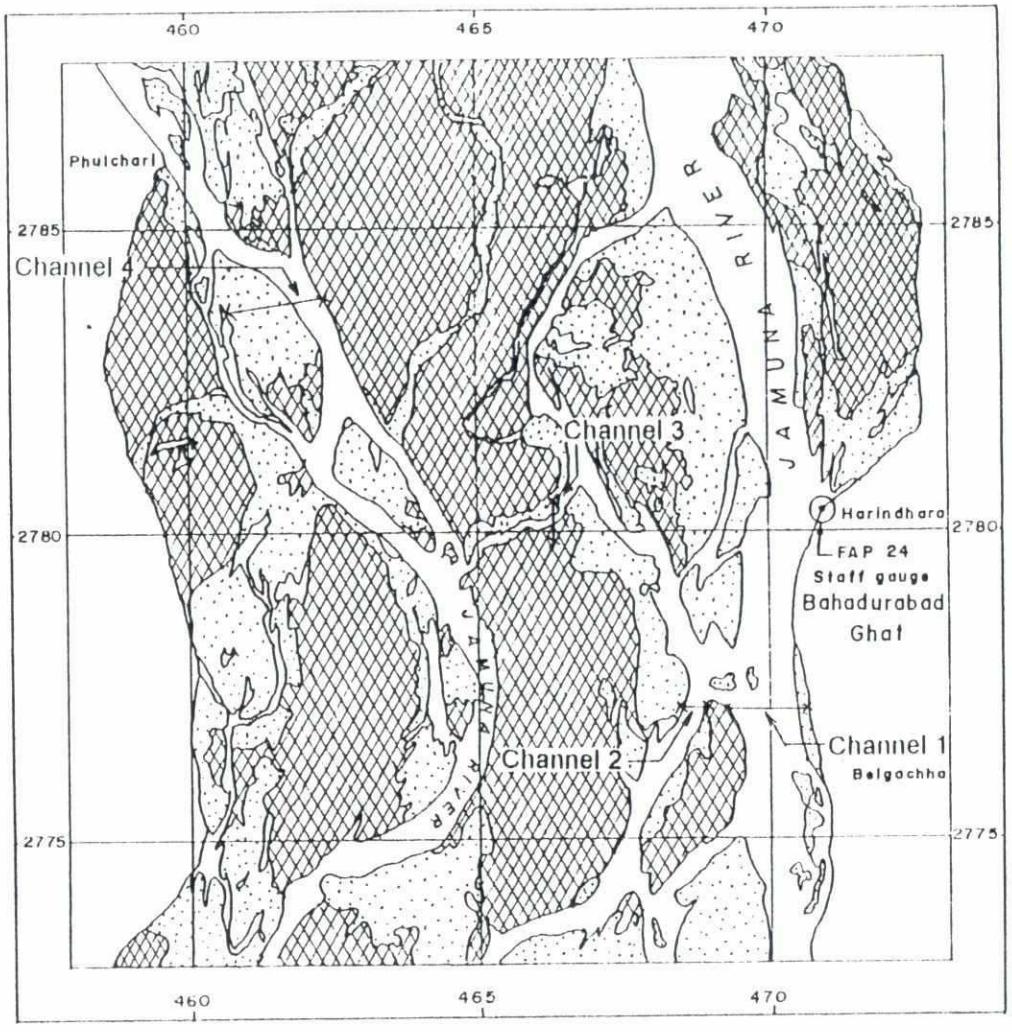
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9408301309-1331	B48U1T01
		9408301338-1402	B48U1T02 *
	2	9408301440-1446	B48U1T03
		9408301448-1454	B48U1T04 *
	3	9408301522-1540	B48U1T05
		9408301545-1604	B48U1T06 *

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	B48U1T02 .ase
ADCP/S4/EMF	2	QUATTRO	B48U1T04 .ase
ADCP/S4/EMF	3	QUATTRO	B48U1T06 .ase
Echosounder	1	QUATTRO	B48U1T02 .ech
Echosounder	2	QUATTRO	B48U1T04 .ech
Echosounder	3	QUATTRO	B48U1T06 .ech
Transect plot data	1	QUATTRO	B48U1T02 .trs
Transect plot data	2	QUATTRO	B48U1T04 .trs
Transect plot data	3	QUATTRO	B48U1T06 .trs
Iso-velocity plot data	1	MIKE 21	B48U1T02 .ct2
		MIKE 21	B48U1T02 .dt2
Iso-velocity plot data	2	MIKE 21	B48U1T04 .ct2
		MIKE 21	B48U1T04 .dt2
Iso-velocity plot data	3	MIKE 21	B48U1T06 .ct2
		MIKE 21	B48U1T06 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable/law char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plain Coordination Organization Commission of the European Communities	Survey Bulletin 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 10 Jan 1995	Location map	page 11
	Init : rnzh/sjr		

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

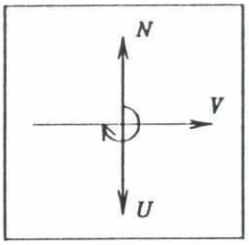
Table 2.1: Survey programme as made

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	1418	9888	17.42	10846	-	-
Channel 2	699	4060	17.42	3772	-	-
Channel 3	636	2713	17.42	1376	-	-
Channel 4	2028	7238	17.42	3733	-	-

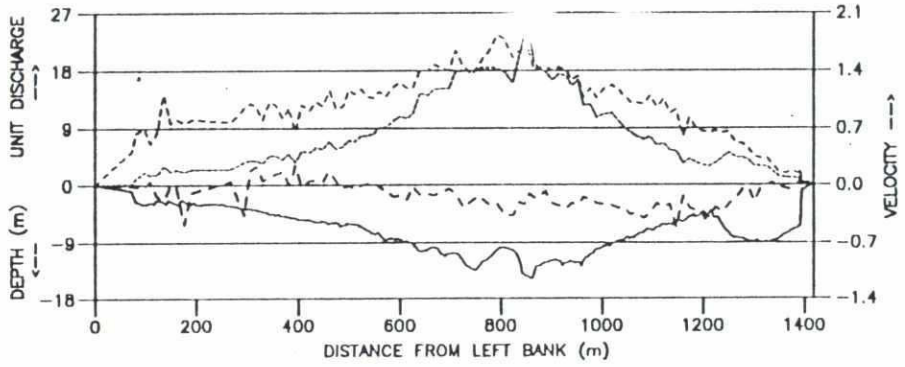
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	06 Sep 94	17.42	FAP 24
	Channel 2	06 Sep 94	17.42	FAP 24
	Channel 3	06 Sep 94	17.42	FAP 24
	Channel 4	06 Sep 94	17.42	FAP 24

Table 2.3: Water-level



TRANSECT AZIMUTH = 270°
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 (m^2/s.m)*
- *U (m/s)*
- *V (m/s)*

STAGE = 17.42 (m+PWD)
A = 9888 (m^2)
Q = 10846 (m^3/s)

FLOW

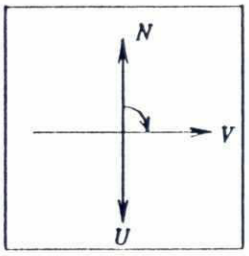
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4961T20	Date : 10 Jan 1995	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 1	3.1

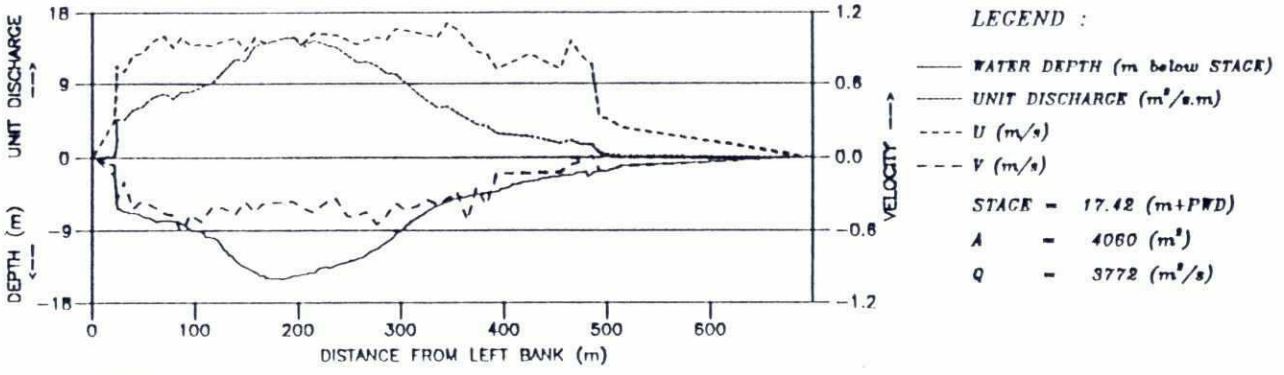


TRANSECT AZIMUTH = 90°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



LEGEND :

WATER DEPTH (m below STACE)

UNIT DISCHARGE (m²/s.m)

U (m/s)

V (m/s)

STACE = 17.42 (m+PWD)

A = 4060 (m²)

Q = 3772 (m³/s)

FLOW

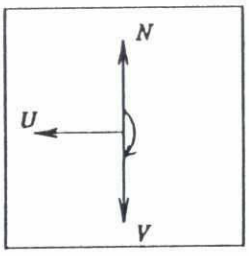
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4961T17	Date : 10 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2	page 32

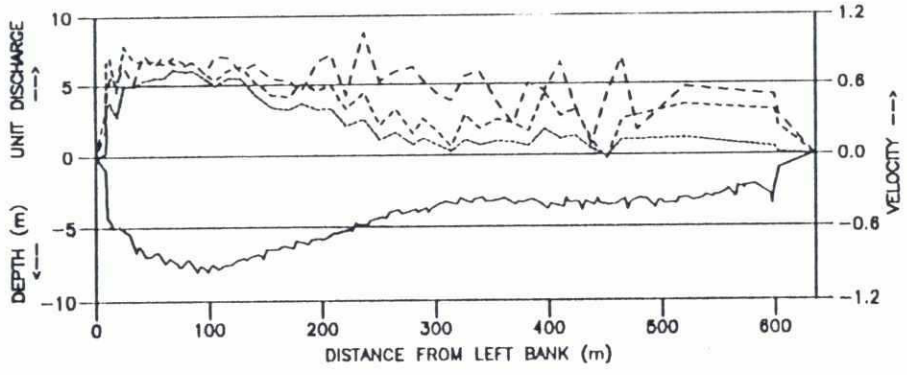


TRANSECT AZIMUTH = 180°

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 (m^2/s.m)

U (m/s)

V (m/s)

STAGE = 17.42 (m+PWD)

A = 2713 (m^2)

Q = 1378 (m^3/s)

FLOW

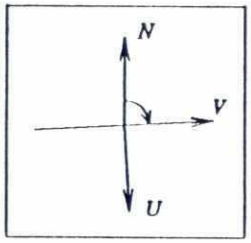
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT · DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4961T15	Date : 10 Jan 1995	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 3	33

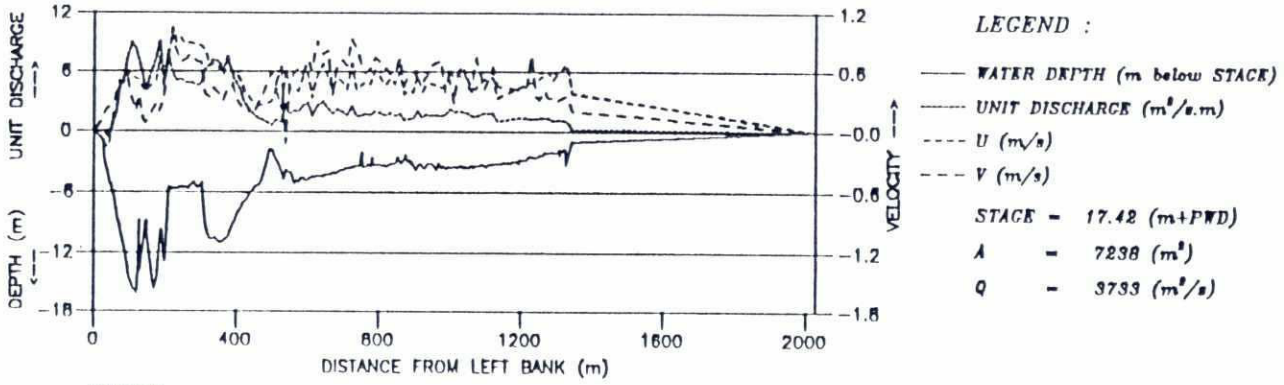


TRANSECT AZIMUTH = 87°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

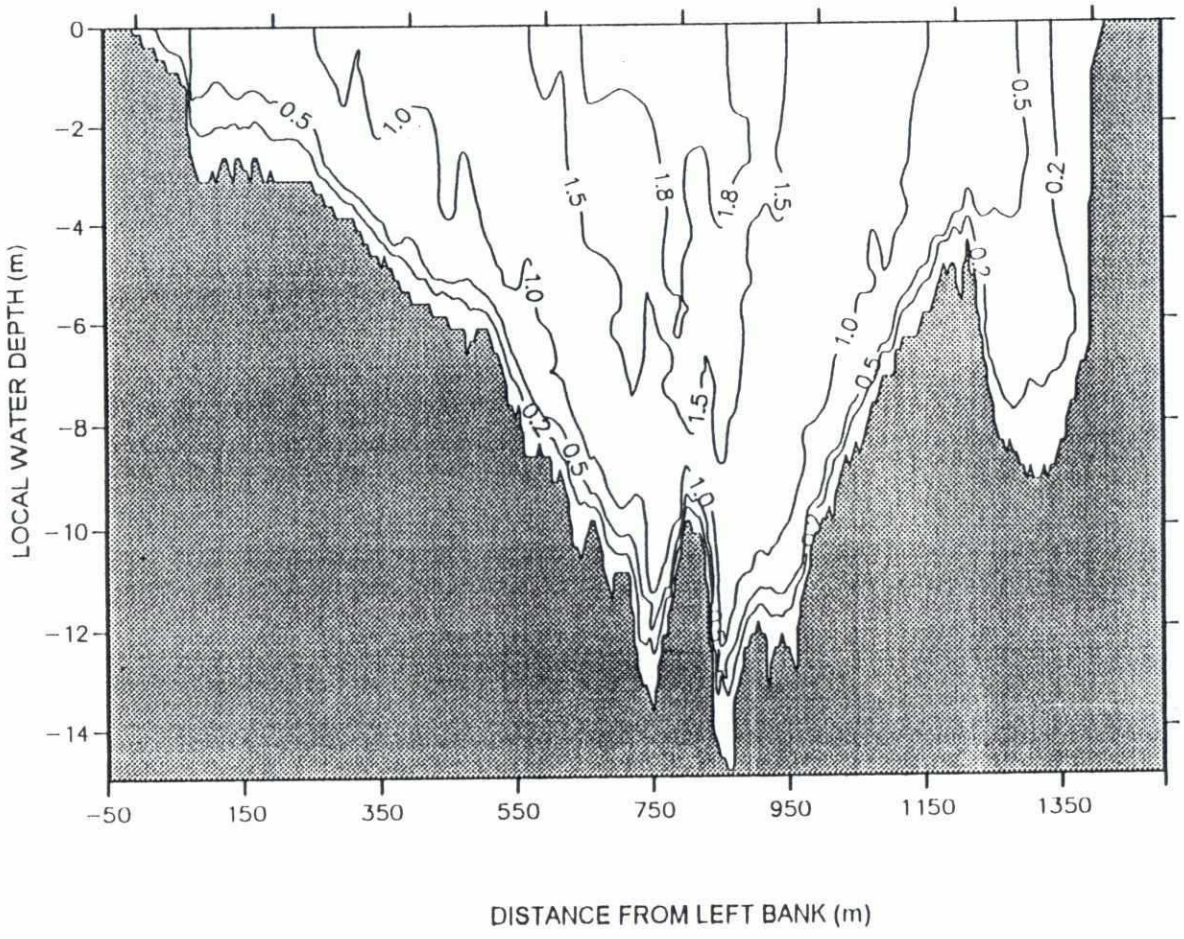
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

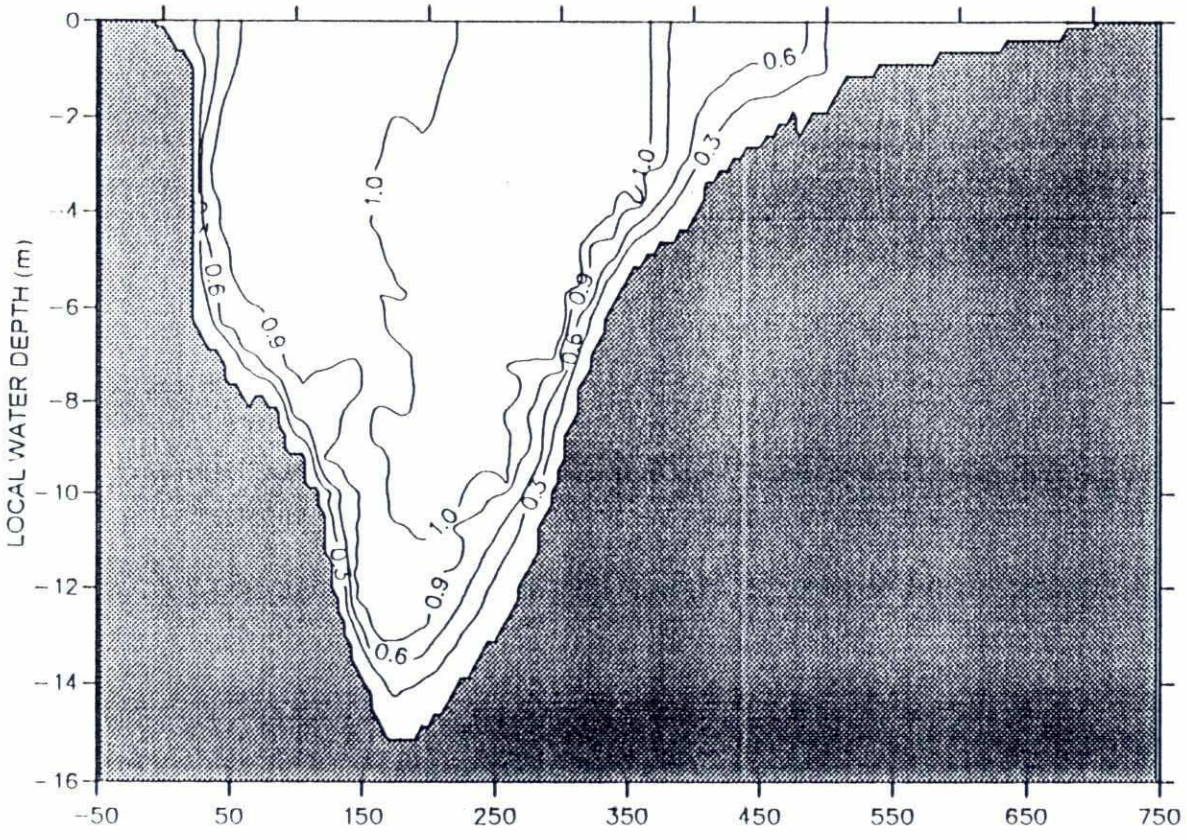
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4961T13	Date : 10 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 4	page 3.4



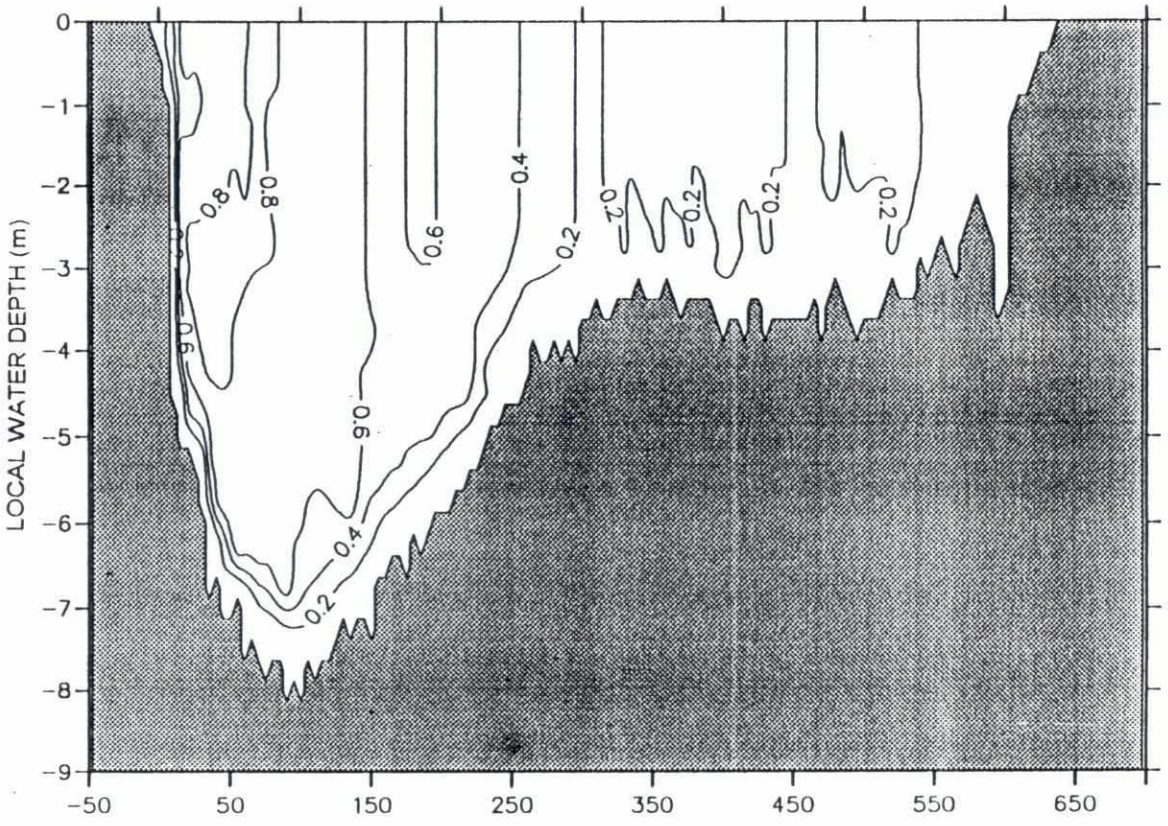
Iso-velocity contours (m/s)
Water-level : 17.42 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4961T20	Date : 10 Jan 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 41



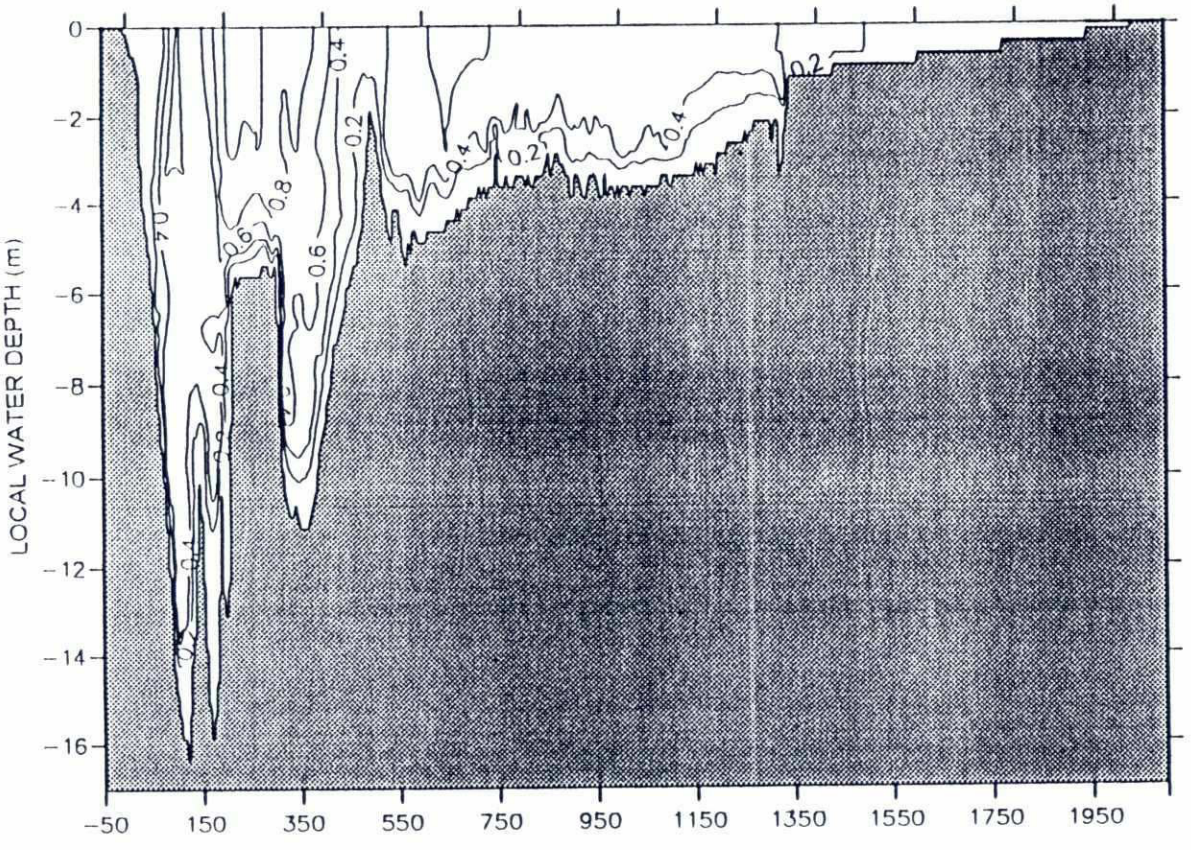
Iso-velocity contours (m/s)
Water level : 17.42 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4961T17	Date : 10 Jan 1995	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 2	4.2



Iso-velocity contours (m/s)
Water level : 17.42 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 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4961T15	Date : 10 Jan 1995	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 3	43



DISTANCE FROM LEFT BANK (m)

Iso-velocity contours (m/s)
Water level : 17.42 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 9023 : 06 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4961T13	Date : 10 Jan 1995	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 4	4.4

Andreasen settling tube

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 5.1: 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 < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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)
Sample not collected							

Table 5.3 : Grain sizes of bed load

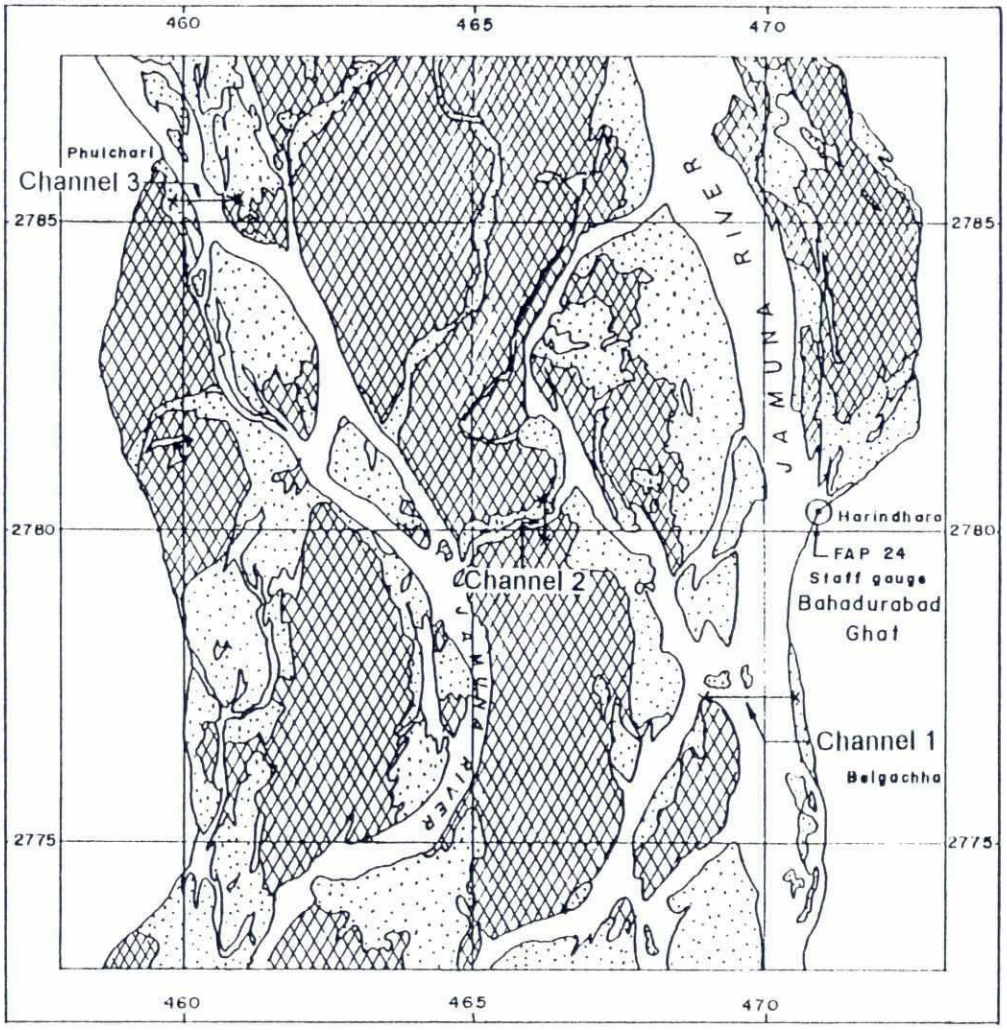
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9409061723-1732	B4961T20 *
	2	9409061645-1650	B4961T17 *
		9409061654-1658	B4961T18
	3	9409061601-1606	B4961T14
		9409061607-1612	B4961T15 *
	4	9409061528-1537	B4961T13 *

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B4961T20 .ase
ADCP/S4/EMF data	2	QUATTRO	B4961T17 .ase
ADCP/S4/EMF data	3	QUATTRO	B4961T15 .ase
ADCP/S4/EMF data	4	QUATTRO	B4961T13 .ase
Echosounder data	1	QUATTRO	B4961T20 .ech
Echosounder data	2	QUATTRO	B4961T17 .ech
Echosounder data	3	QUATTRO	B4961T15 .ech
Echosounder data	4	QUATTRO	B4961T13 .ech
Transect plot data	1	QUATTRO	B4961T20 .trs
Transect plot data	2	QUATTRO	B4961T17 .trs
Transect plot data	3	QUATTRO	B4961T15 .trs
Transect plot data	4	QUATTRO	B4961T13 .trs
Iso-velocity plot data	1	MIKE 21	B4961T20 .ct2
		MIKE 21	B4961T20 .dt2
Iso-velocity plot data	2	MIKE 21	B4961T17 .ct2
		MIKE 21	B4961T17 .dt2
Iso-velocity plot data	3	MIKE 21	B4961T15 .ct2
		MIKE 21	B4961T15 .dt2
Iso-velocity plot data	4	MIKE 21	B4961T13 .ct2
		MIKE 21	B4961T13 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable/law char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9026 : 17 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 13 Dec 1994	Location map	page 11
	Init : mzh/sjr		

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

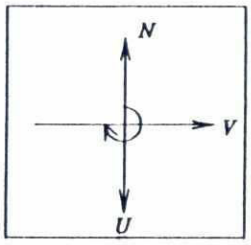
Table 2.1: Survey programme as made

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	2472	12231	17.52	13071	-	-
Channel 2	706	3363	17.52	1474	-	-
Channel 3	1329	5525	17.52	3559	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	17 Sep 94	17.52	FAP 24
	Channel 2	17 Sep 94	17.52	FAP 24
	Channel 3	17 Sep 94	17.52	FAP 24

Table 2.3: Water-levels

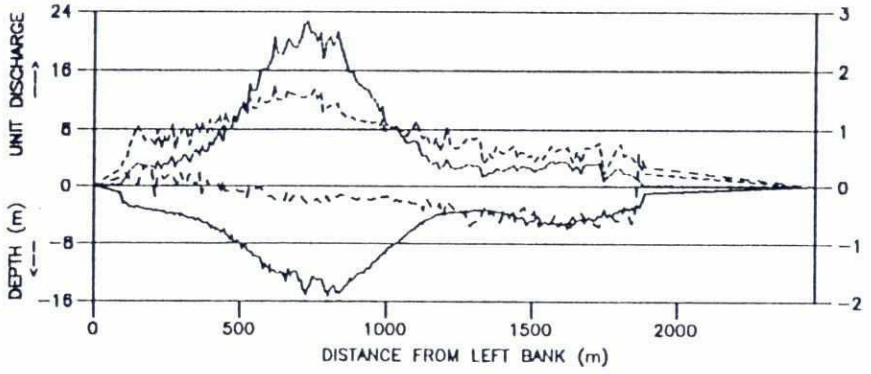


TRANSECT AZIMUTH = 270°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 17.52 (m+PWD)

A = 12231 (m²)

Q = 13071 (m³/s)

FLOW

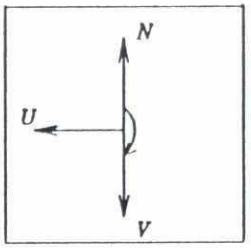
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9026 : 17 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49H1T08	Date : 13 Dec 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 1	page 31

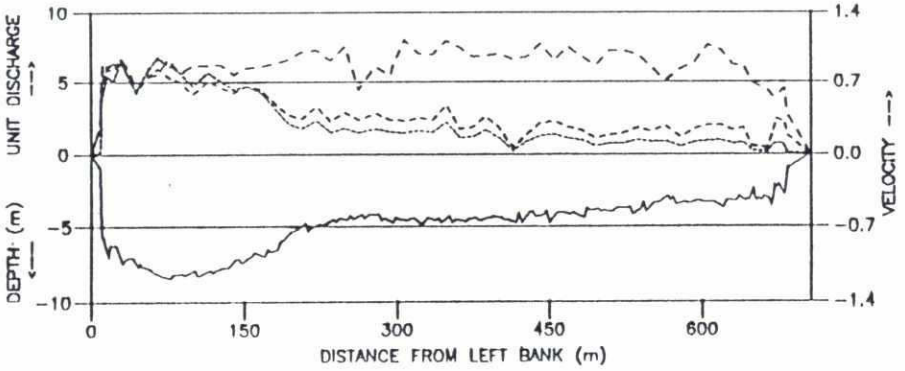


TRANSECT AZIMUTH = 180°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 17.52 (m+PWD)

A = 3363 (m²)

Q = 1474 (m³/s)

FLOW

Sample not collected

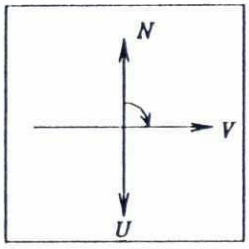
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

W.A.R.P.O. LIBRARY. DHAKA

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9026 : 17 September, 1994
		Location 1 : Jamuna River, Bahadurabad
File : B49H1T07	Date : 13 Dec 1994 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2
		page 3.2

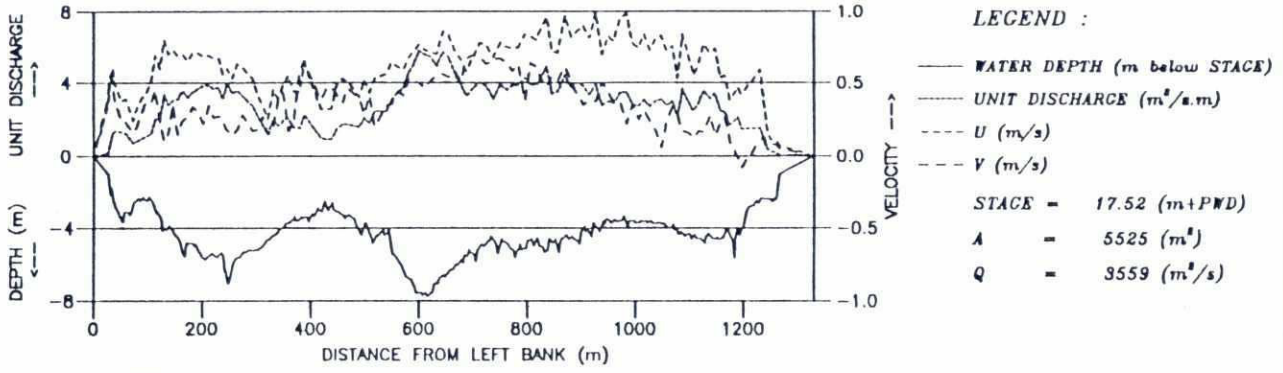


TRANSECT AZIMUTH = 90°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

Sample not collected

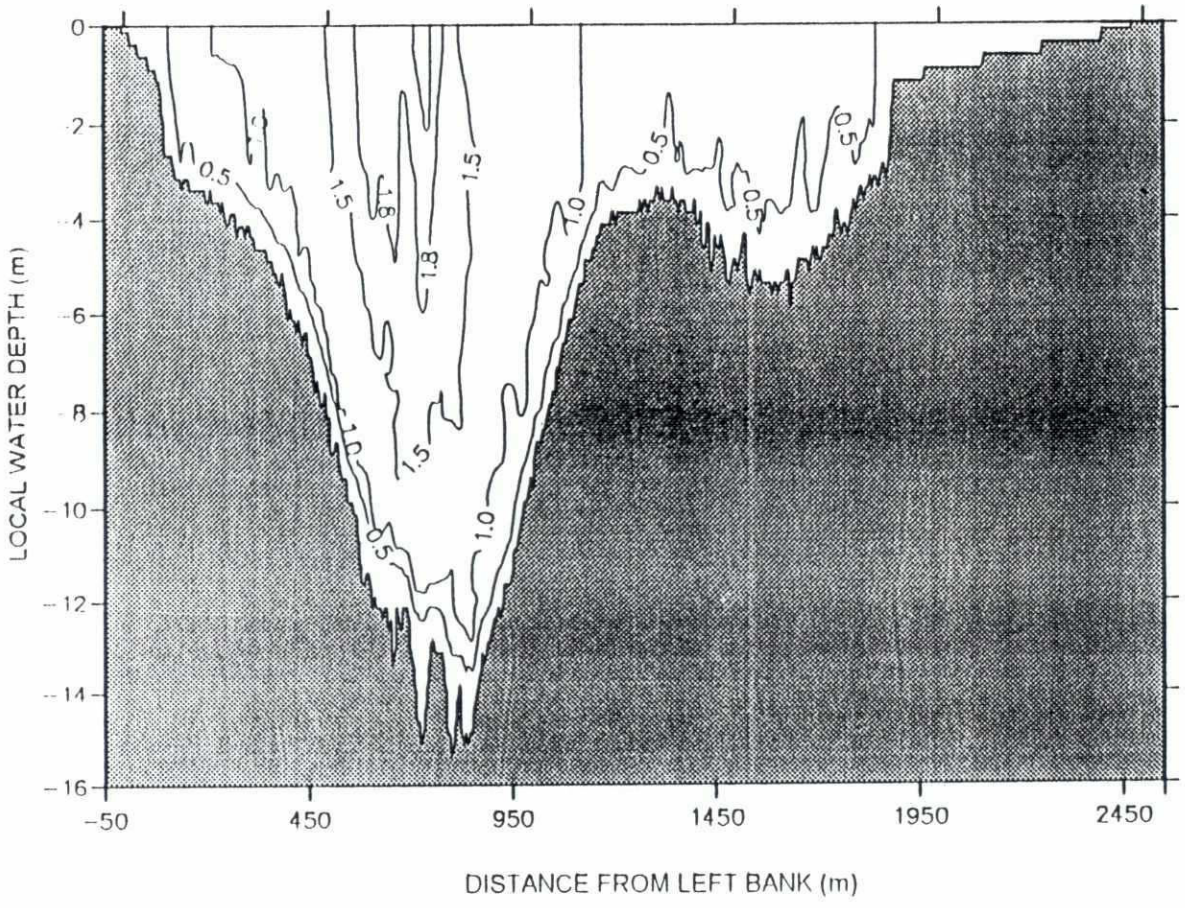
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

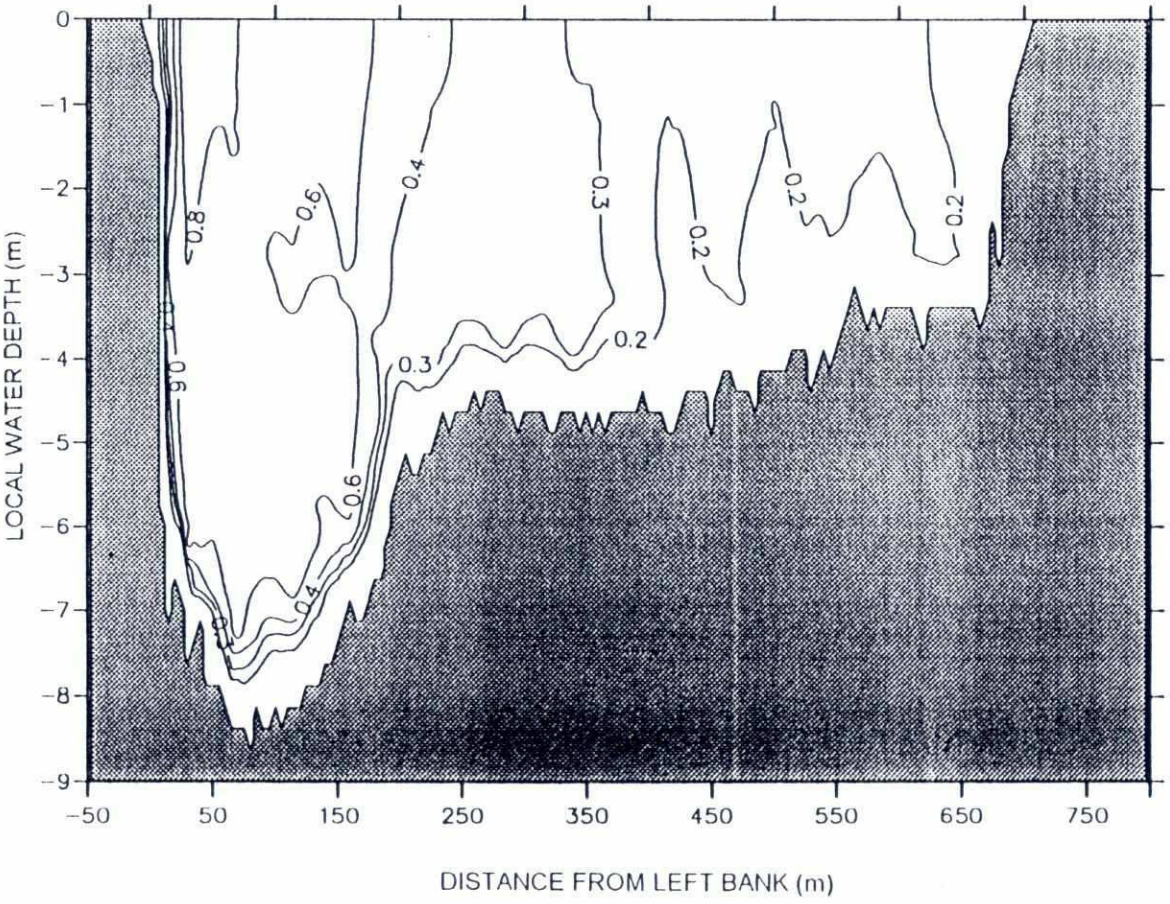
FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9026 : 17 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49H1T02	Date : 13 Dec 1994	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 3	33

PWD



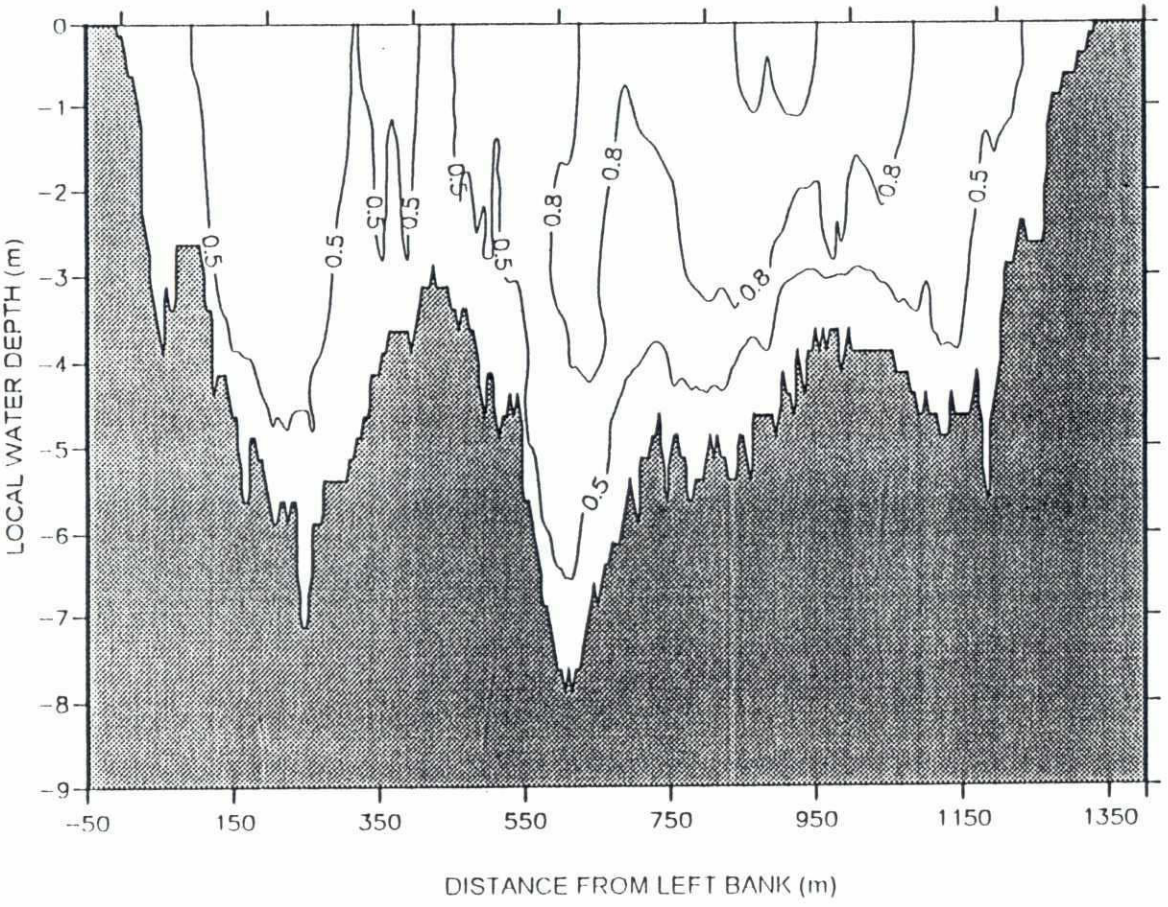
Iso-velocity contours (m/s)
Water level : 17.52 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9026 : 17 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49H1T08	Date : 13 Dec 1994 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 4.1



Iso-velocity contours (m/s)
Water level : 17.52 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 9026 : 17 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49H1T07	Date : 13 Dec 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 2	42



Iso-velocity contours (m/s)
Water level : 17.52 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 9026 : 17 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49H1T02	Date : 13 Dec 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 3	4.3

Andreasen settling tube							
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 5.1: 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 < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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)
Sample not collected							

Table 5.3 : Grain size of bed load

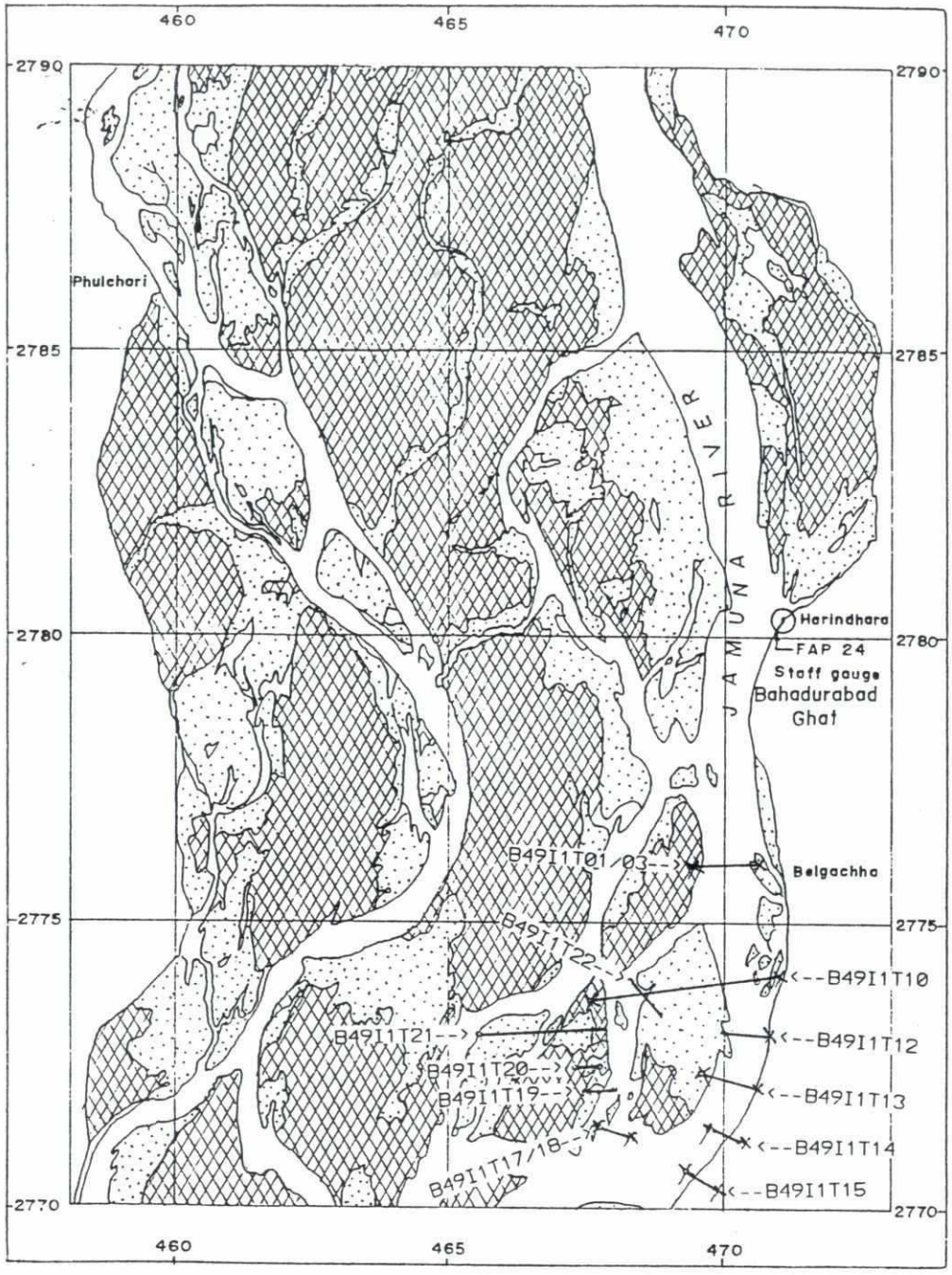
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9409171607-1625	B49H1T08 *
		9409171631-1649	B49H1T09
	2	9409171029-1035	B49H1T06
		9409171041-1046	B49H1T07 *
	3	9409170851-0903	B49H1T02 *
		9409170909-0920	B49H1T03
		9409170945-0949	B49H1T04
		9409170951-0955	B49H1T05

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B49H1T08 .ase
ADCP/S4/EMF data	2	QUATTRO	B49H1T07 .ase
ADCP/S4/EMF data	3	QUATTRO	B49H1T02 .ase
Echosounder data	1	QUATTRO	B49H1T08 .ech
Echosounder data	2	QUATTRO	B49H1T07 .ech
Echosounder data	3	QUATTRO	B49H1T02 .ech
Transect plot data	1	QUATTRO	B49H1T08 .trs
Transect plot data	2	QUATTRO	B49H1T07 .trs
Transect plot data	3	QUATTRO	B49H1T02 .trs
Iso-velocity plot data	1	MIKE 21	B49H1T08 .ct2
		MIKE 21	B49H1T08 .dt2
Iso-velocity plot data	2	MIKE 21	B49H1T07 .ct2
		MIKE 21	B49H1T07 .dt2
Iso-velocity plot data	3	MIKE 21	B49H1T02 .ct2
		MIKE 21	B49H1T02 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

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

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9026B: 18 September, 1994	
		Jamuna River, Bifurcation flow	
	Date : 17 Apr 1996	Location map	page 1.1
	Init : kah		

Type of measurement	Method	No. of measurements in Lines											
		BT6X 001	BT6X 004	BT6X 005	BT6X 006	BT6X 007	BT6X 008	BT6X 009	BT6X 010	BT6X 011	BT6X 012	BT6X 013	BT6X 015
Discharge	ADCP transect	2	1	1	1	1	1	1	2	1	1	1	1
	EMF transect	2	1	1	1	1	1	1	2	1	1	1	1
	Echo-Sounding	2	1	1	1	1	1	1	2	1	1	1	1
Vertical current profile	No.of verticals in channel	-	-	-	-	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-	-	-	-	-
	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

Line no	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)
BT6X001	1347.47	8869 96	17.51	10564.54	-	-
BT6X004	3338.97	14925.10	17.51	13418.32	-	-
BT6X005	773.23	4283.16	17.51	4662.69	-	-
BT6X006	992.21	7423.29	17.51	6769.08	-	-
BT6X007	1259.45	5915.27	17.51	7139.42	-	-
BT6X008	1256.45	5703.79	17.51	7219.87	-	-
BT6X009	1134.81	7129.82	17.51	6055.48	-	-
BT6X010	754.95	3105.71	17.51	2175.35	-	-
BT6X011	510.21	2576.42	17.51	2182.08	-	-
BT6X012	1206.42	2625.58	17.51	2085.07	-	-
BT6X013	2743.60	11482.41	17.51	7347.83	-	-
BT6X015	802.26	3823.32	17.51	3616.53	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	18 Sep 94	17.51	FAP24

Table 2.3 : Water levels

Short Description :

Bifurcation flow patterns. Measurement of the flow division at a bar in order to determine secondary flow patterns.

Transect / Echosounding file name	Profile file name	Line no	Survey date	Type of data
b49i1t01 *		BT6X001	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t03 *		BT6X001	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t10 *		BT6X004	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t12 *		BT6X005	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t13 *		BT6X006	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t14 *		BT6X007	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t15 *		BT6X008	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t16 *		BT6X009	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t17 *		BT6X010	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t18 *		BT6X010	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t19 *		BT6X011	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t20 *		BT6X012	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t21 *		BT6X013	1994-09-18	ADCP/EMF+Echo-sounding
b49i1t22 *		BT6X015	1994-09-18	ADCP/EMF+Echo-sounding

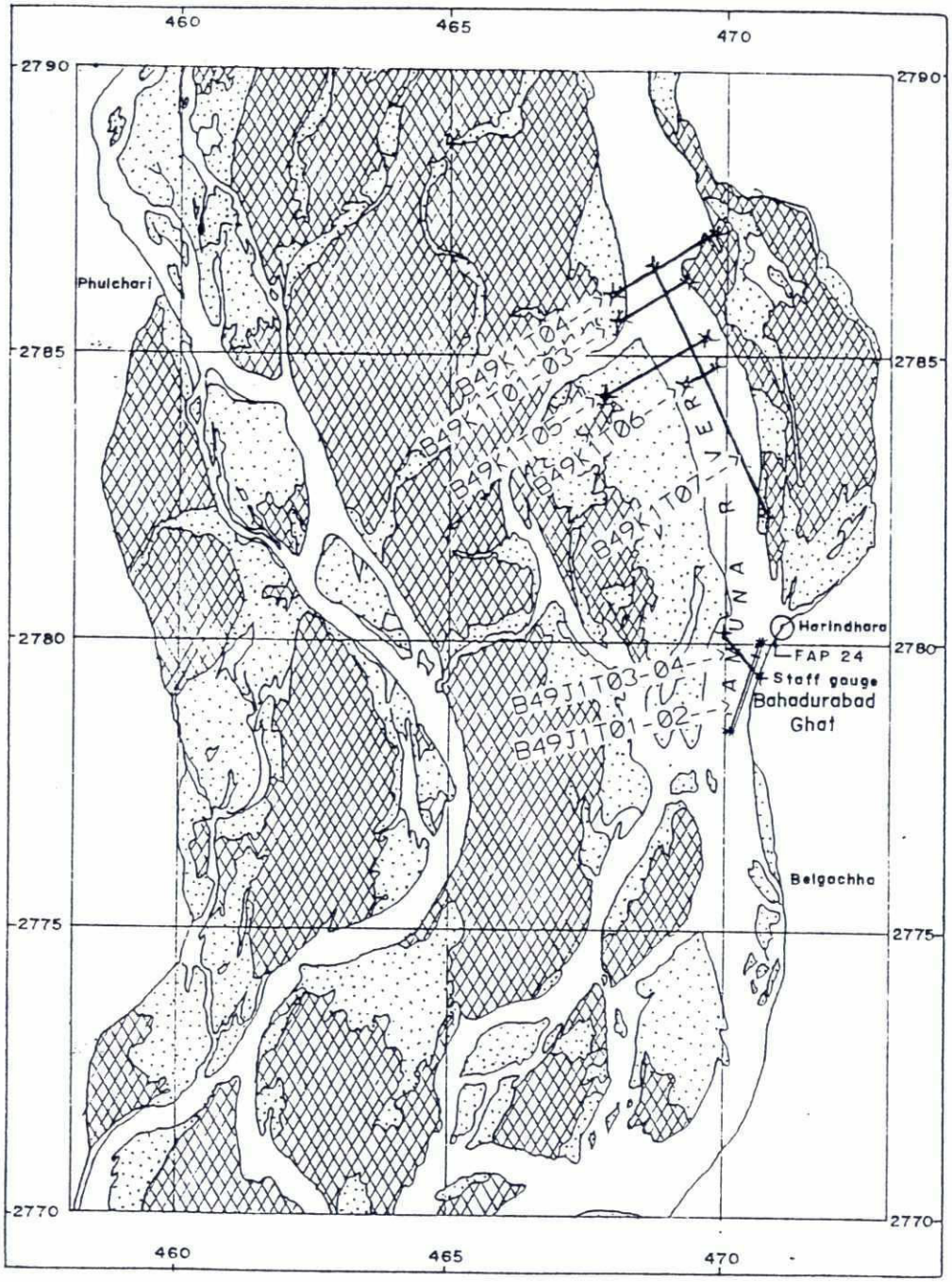
* : Transect / Echo sounding in PSD24 data base

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-09-18	b49i1t01	BT6X001	+	+	+							
1994-09-18	b49i1t03	BT6X001	+									
1994-09-18	b49i1t10	BT6X004	+	+	+							
1994-09-18	b49i1t12	BT6X005	+	+	+							
1994-09-18	b49i1t13	BT6X006	+	+	+							
1994-09-18	b49i1t14	BT6X007	+	+	+							
1994-09-18	b49i1t15	BT6X008	+	+	+							
1994-09-18	b49i1t16	BT6X009	+	+	+							
1994-09-18	b49i1t17	BT6X010	+	+	+							
1994-09-18	b49i1t18	BT6X010	+	+	+							
1994-09-18	b49i1t19	BT6X011	+	+	+							
1994-09-18	b49i1t20	BT6X012	+	+	+							
1994-09-18	b49i1t21	BT6X013	+	+	+							
1994-09-18	b49i1t22	BT6X015	+									
Total number of files			14	12	12							

Table 4.1: PSD24 Database file description

Roy's Bar, 18 September 1994

Transect Name	Line no	Start East. (m)	Start North. (m)	End East. (m)	End North. (m)
B49I1T01	BT6X001	469570.1	775898.1	470737.7	776050.2
B49I1T03	BT6X001	470714.5	776043.0	469570.4	775908.4
B49I1T10	BT6X004	467857.4	773537.3	471145.0	774054.1
B49I1T12	BT6X005	470234.9	772982.0	470997.9	773000.6
B49I1T13	BT6X006	470752.6	772054.9	469824.5	772267.8
B49I1T14	BT6X007	470028.4	771309.9	470605.6	771012.2
B49I1T15	BT6X008	470072.7	770150.7	469567.8	770554.4
B49I1T16	BT6X009	469446.4	769430.5	468506.7	770030.3
B49I1T17	BT6X010	468513.4	771091.5	467931.9	771291.4
B49I1T18	BT6X010	467932.4	771285.8	468554.9	771082.2
B49I1T19	BT6X011	467917.2	771994.4	467427.0	771997.2
B49I1T20	BT6X012	467274.5	772388.5	467660.8	772398.3
B49I1T21	BT6X013	465521.1	773000.8	467844.7	773004.7
B49I1T22	BT6X015	468286.0	773835.0	468865.9	773325.0



LEGEND:

- Cross section / Longitudinal ADCP line
- High land
- Unstable / low char
- FAP 24 staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities DELFT - DHI		Survey Bulletin 9026C: 19 - 20 September, 1994	
		Jamuna River, Flow and sediment transport near bars	
	Date : 24 Apr 1996	Location map	page 1.1
	Init : kah		

Type of measurement	Method	No. of measurements in Lines							
		BB1Y 044	BB1Y 045	BB1Y 052	BB1Y 053	BT5X 037	BT5X 038	BT5X 035	BT5X 034
Discharge	ADCP transect	1	1	1	2	3	1	3	1
	EMF transect	1	1	1	2	3	1	3	1
	Echo-Sounding	1	1	1	2	3	1	3	1
Vertical current profile	No.of verticals in channel	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-
	Andreasen settling tube	5	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-
	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

Line no	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)
BB1Y045	1699.89	18901.72	17.51	8221.78	-	-
BB1Y044	1701.11	18317.27	17.51	8352.11	-	-
BB1Y052	982.77	9350.02	17.51	12407.61	-	-
BB1Y053	848.33	9009.71	17.51	11751.35	-	-
BT5X037	1520.32	13978.01	17.60	11356.15	-	-
BT5X038	2433.06	17259.04	17.60	17567.17	-	-
BT5X035	2063.93	13933.79	17.60	14342.35	-	-
BT5X034	625.74	5438.79	17.60	7374.96	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	19 Sep 94	17.51	FAP24
Bahadurabad	20 Sep 94	17.60	FAP24

Table 2.3 : Water levels

Short Description :
Seasonal variation of bed forms/bar topography. Meaurements around Jim's bar of bed forms, flow and (a few) suspended sediment measurement. Longitudinal profile of bed levels between Sirajganj and Aricha. Also, over-bar measurements of flow and bed levels. Measurements were made on 19 -20 September 1994. Results are reported in RSP Special Report 9.

Transect / Echosounding file name	Profile file name	Line no	Survey date	Type of data
B49J1T01 *		BB1Y045	1994-09-19	ADCP/EMF+Echo-sounding
B49J1T02 *		BB1Y044	1994-09-19	ADCP/EMF+Echo-sounding
B49J1T03 *		BB1Y052	1994-09-19	ADCP/EMF+Echo-sounding
B49J1T04 *		BB1Y053	1994-09-19	ADCP/EMF+Echo-sounding
	B49J1P01	BB1Y044	1994-09-19	ADCP/EMF+Echo-sounding+Sediment
B49K1T01 *		BT5X037	1994-09-20	ADCP/EMF+Echo-sounding
B49K1T02 *		BT5X037	1994-09-20	ADCP/EMF+Echo-sounding
B49K1T03 *		BT5X037	1994-09-20	ADCP/EMF+Echo-sounding
B49K1T04 *		BT5X038	1994-09-20	ADCP/EMF+Echo-sounding
B49K1T05 *		BT5X035	1994-09-20	ADCP/EMF+Echo-sounding
B49K1T06 *		BT5X034	1994-09-20	ADCP/EMF+Echo-sounding
B49K1T07 *		BB1Y053	1994-09-20	ADCP/EMF+Echo-sounding

* : Transect / Echo sounding in PSD24 data base

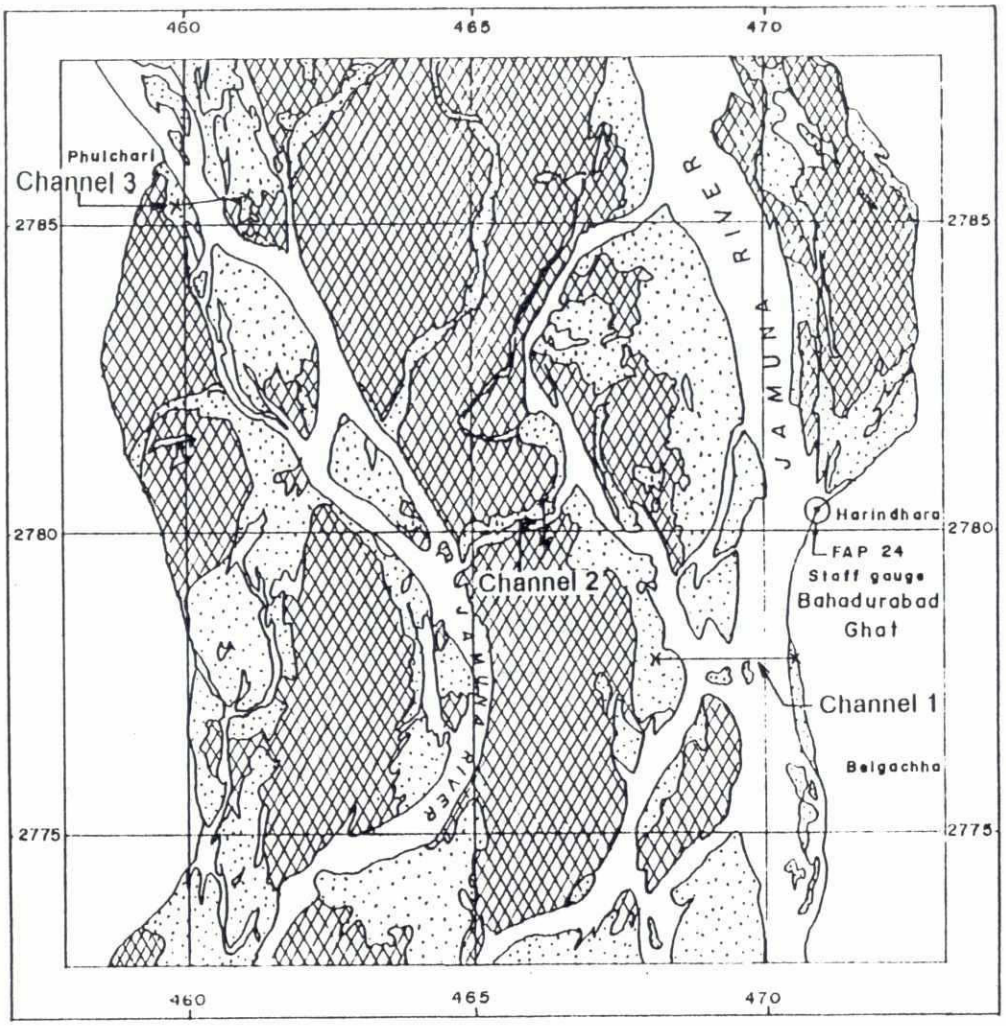
Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-09-19	B49J1T01	BB1Y045	+	+	+							
1994-09-19	B49J1T02	BB1Y044	+	+	+					+		
1994-09-19	B49J1T03	BB1Y052	+	+	+							
1994-09-19	B49J1T04	BB1Y053	+	+	+							
1994-09-20	B49K1T01	BT5X037	+	+	+							
1994-09-20	B49K1T02	BT5X037	+	+	+							
1994-09-20	B49K1T03	BT5X037	+	+	+							
1994-09-20	B49K1T04	BT5X038	+	+	+							
1994-09-20	B49K1T05	BT5X035	+	+	+							
1994-09-20	B49K1T06	BT5X034	+	+	+							
1994-09-20	B49K1T07	BB1Y053	+	+	+							
Total number of files			11	11	11					1		

Table 4.1: PSD24 Database file description

PDF

Roy's Bar, 19-20 September 1994

Transect Name	Line no	Start East. (m)	Start North. (m)	End East. (m)	End North. (m)
b49j1t01	BB1Y045	470091.2	778512.9	470786.5	780061.9
b49j1t02.	BB1Y044	470045.3	778538.2	470742.9	780087.5
b49j1t03	BB1Y052	470027.5	780126	470917.4	779735.6
b49j1t04	BB1Y053	470899.9	779708.3	470147.3	780051.9
b49k1t01	BT5X037	468021.6	785549	469291.6	786345.9
b49k1t02	BT5X037	469238	786329.2	469036.9	786187.3
b49k1t03	BT5X037	469296.8	786346.2	468021.4	785559.3
b49k1t04	BT5X038	467964.1	786105.2	469756.8	787223.8
b49k1t05	BT5X035	467816.2	784252.5	469560.9	785351.4
b49k1t06	BT5X034	469806.7	784882.1	469269.7	784564.8
b49k1t07	BB1Y053	470735	782217.8	468663.2	786604



LEGEND:

- Cross section
- Highland
- Unstable/law char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9027 : 28 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 28 Dec 1994	Location map	page 11
	Init : mzh/sjr		

Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	2	2	4	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No.of verticals in channel	-	-	-	-
	ADCP	-	-	-	-
	S4 current meter	-	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	-	-	-	-
	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

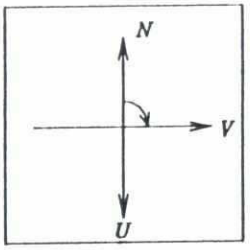
Channel	Width (m)	Area (m^2)	Stage h (m+PWD)	Discharge Q (m^3/s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	2898	16050	17.62	16354	-	-
Channel 2	720	3840	17.62	1627	-	-
Channel 3	1344	5666	17.62	3482	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	28 Sep 94	17.62	FAP 24
	Channel 2	28 Sep 94	17.62	FAP 24
	Channel 3	28 Sep 94	17.62	FAP 24

Table 2.3: Water-levels

206

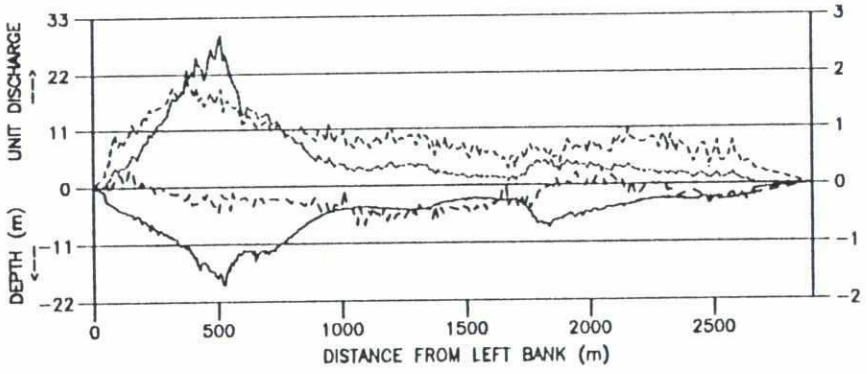


TRANSECT AZIMUTH = 90°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



LEGEND :

WATER DEPTH (m below STACE)

UNIT DISCHARGE (m²/s.m)

U (m/s)

V (m/s)

STACE = 17.62 (m+PWD)

A = 16050 (m²)

Q = 16354 (m³/s)

FLOW

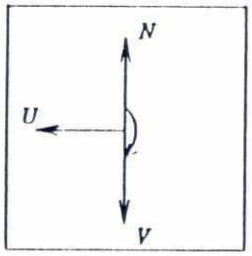
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9027 : 28 September , 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49S1T12	Date : 28 Dec 1994	Horizontal distribution of flow and sediments	page
	Init : mzh	Channel 1	31

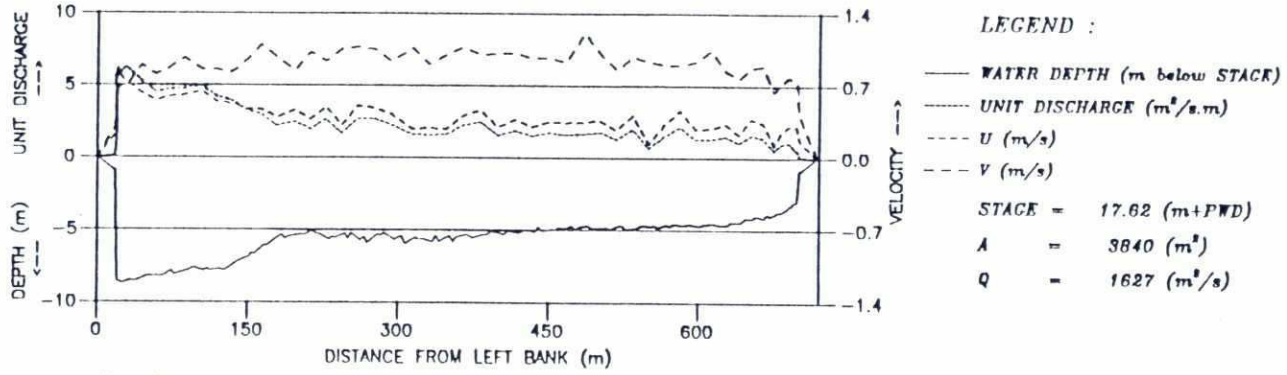


TRANSECT AZIMUTH = 180°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

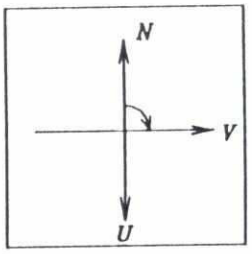
Sample not collected

SEDIMENT TRANSPORT

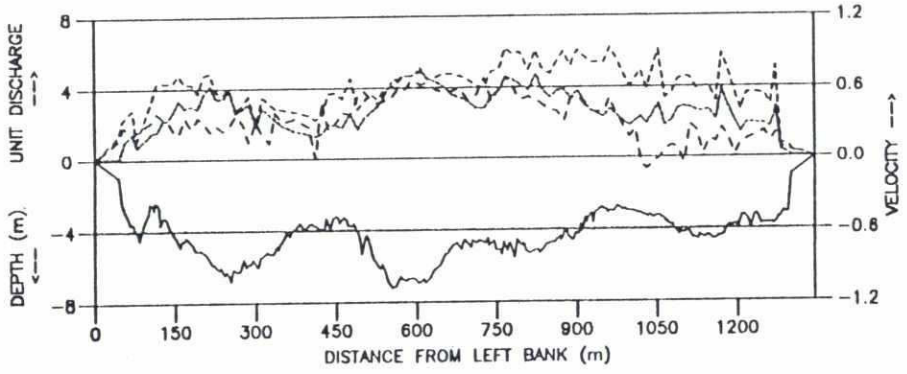
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9027 : 28 September , 1994 Location 1 : Jamuna River, Bahadurabad	
File B49S1T08	Date 28 Dec 1994 Init mzh	Horizontal distribution of flow and sediments Channel 2	page 3.2



TRANSECT AZIMUTH = 90°
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 (m²/s.m)
U (m/s)
V (m/s)
STAGE = 17.62 (m+PWD)
A = 5666 (m²)
Q = 3482 (m³/s)

FLOW

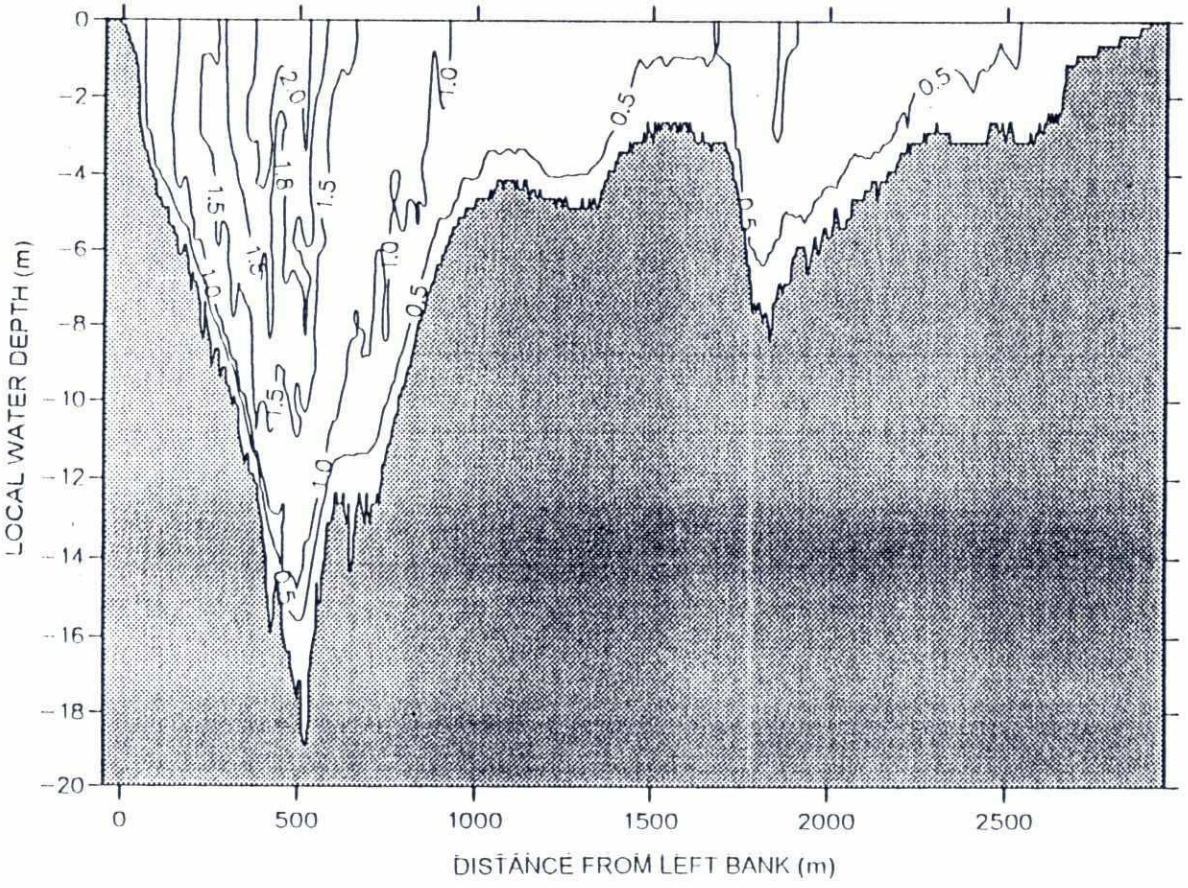
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

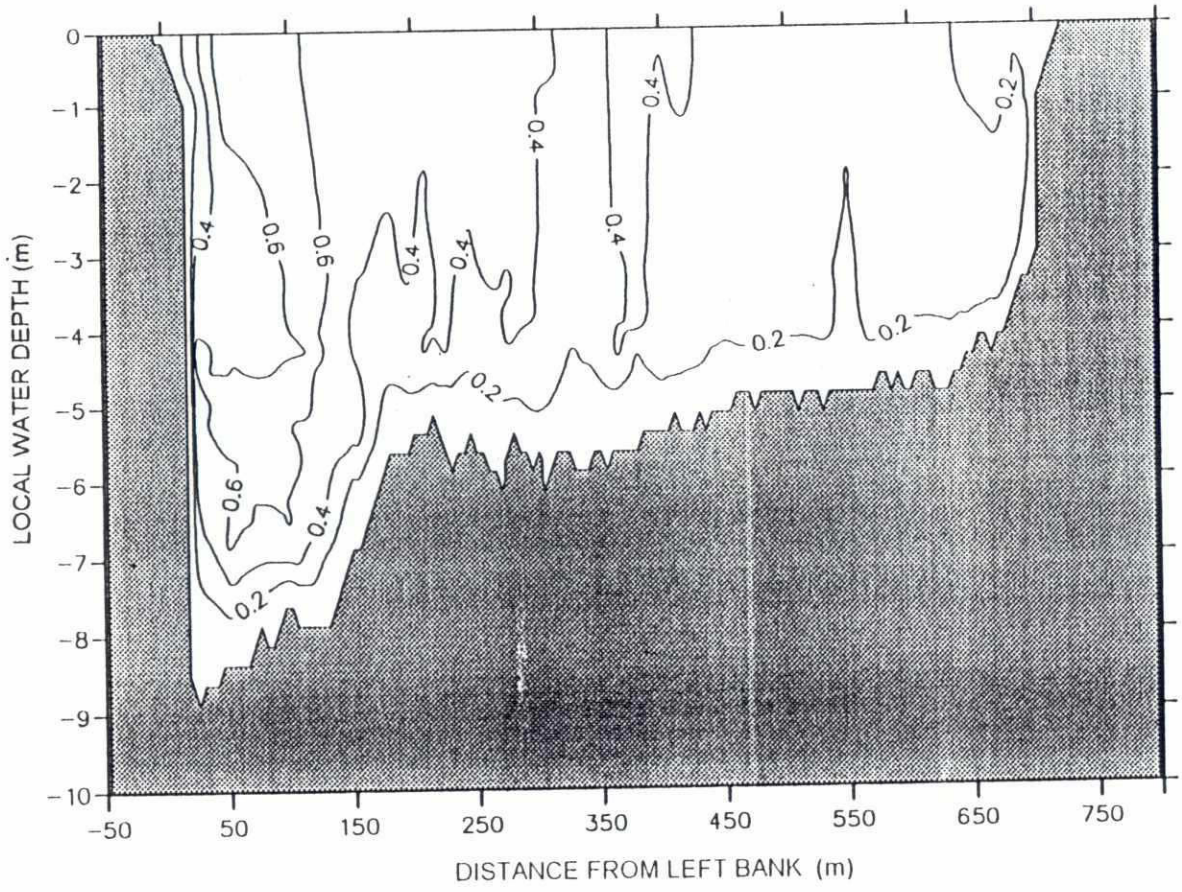
GRAIN SIZE

FAP 24 DELFT · DHI — RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities		Survey Bulletin 9027 : 28 September , 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49S1T03	Date : 28 Dec 1994	Horizontal distribution of flow and sediments	page
	Init : mzh	Channel 3	33



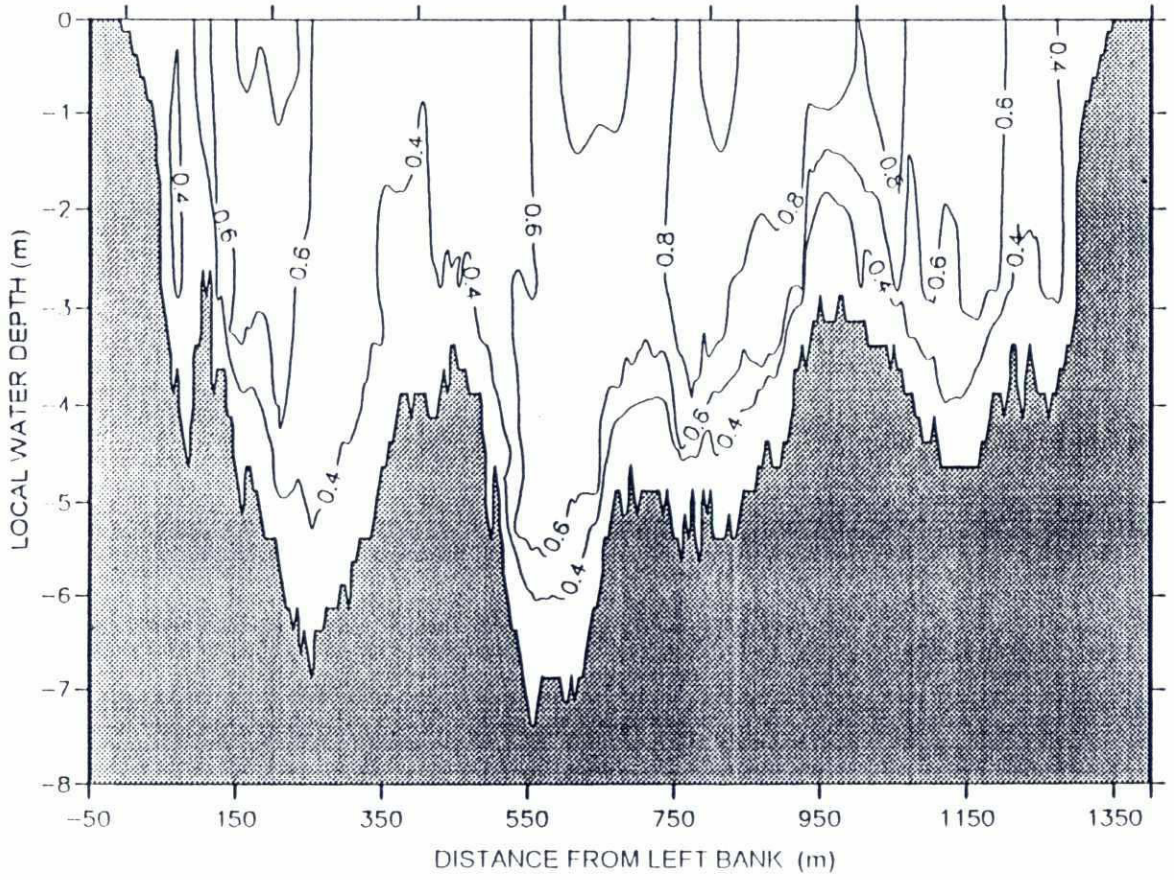
Iso-velocity contours (m/s)
Water level : 17.62 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plain Coordination Organization Commission of the European Communities		Survey Bulletin 9027 : 28 September , 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49S1T12	Date : 28 Dec 1994 Init : mzh	Cross-sectional distribution of flow velocity Channel 1	page 4.1



Iso-velocity contours (m/s)
Water level : 17.62 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 9027 : 28 September , 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49S1T08	Date : 28 Dec 1994 Init : mzh	Cross-sectional distribution of flow velocity Channel 2	page 4.2



Iso-velocity contours (m/s)
Water level : 17.62 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 9027 : 28 September , 1994	
		Location 1 : Jamuna River, Bahadurabad	
File B49S1T03	Date 28 Dec 1994	Cross-sectional distribution of flow velocity	page 43
	Init mzh	Channel 3	

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

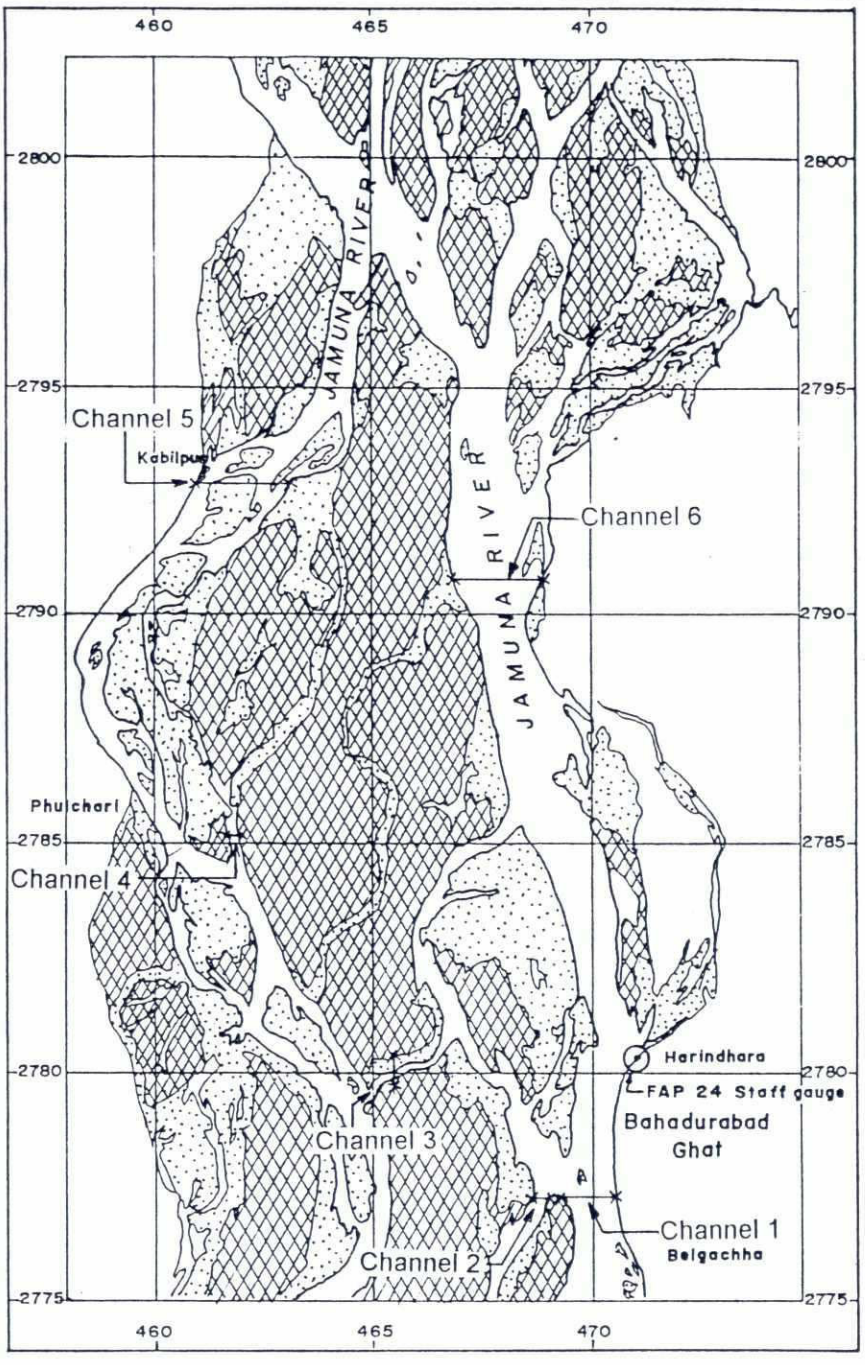
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9409281445-1503	B49S1T11
		9409281513-1534	B49S1T12 *
	2	9409281309-1316	B49S1T07
		9409281321-1325	B49S1T08 *
	3	9409281104-1113	B49S1T03 *
		9409281115-1126	B49S1T04
		9409281150-1153	B49S1T05
		9409281155-1158	B49S1T06

Table 6.1: ADCP & EMF transects

* : transect in PSD 24 data base and presented in Sections 3 and 6

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B49S1T12.ase
ADCP/S4/EMF data	2	QUATTRO	B49S1T08.ase
ADCP/S4/EMF data	3	QUATTRO	B49S1T03.ase
Echosounder data	1	QUATTRO	B49S1T12.ech
Echosounder data	2	QUATTRO	B49S1T08.ech
Echosounder data	3	QUATTRO	B49S1T03.ech
Transect plot data	1	QUATTRO	B49S1T12.trs
Transect plot data	2	QUATTRO	B49S1T08.trs
Transect plot data	3	QUATTRO	B49S1T03.trs
Iso-velocity plot data	1	MIKE 21	B49S1T12.ct2
		MIKE 21	B49S1T12.dt2
Iso-velocity plot data	2	MIKE 21	B49S1T08.ct2
		MIKE 21	B49S1T08.dt2
Iso-velocity plot data	3	MIKE 21	B49S1T03.ct2
		MIKE 21	B49S1T03.dt2

Table 7.1 PSD 24 Database file description



LEGEND :

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

N

5000 m 2500 m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 31 Dec 1994	Location map	page 1.1
	Init : mzh/sjr		

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

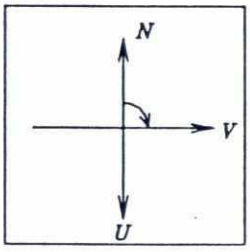
Table 2.1: Survey programme as made

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	1405	9577	17.33	10698	-	-
Channel 2	725	4071	17.33	3595	-	-
Channel 3	711	3659	17.33	1368	-	-
Channel 4	401	1942	17.33	1510	-	-
Channel 5	1947	11273	17.49	4416	-	-
Channel 6	2417	14955	17.49	16457	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	30 Sep 94	17.33	FAP 24
	Channel 2	30 Sep 94	17.33	FAP 24
	Channel 3	30 Sep 94	17.33	FAP 24
	Channel 4	30 Sep 94	17.33	FAP 24
	Channel 5	29 Sep 94	17.49	FAP 24
	Channel 6	29 Sep 94	17.49	FAP 24

Table 2.3: Water-levels

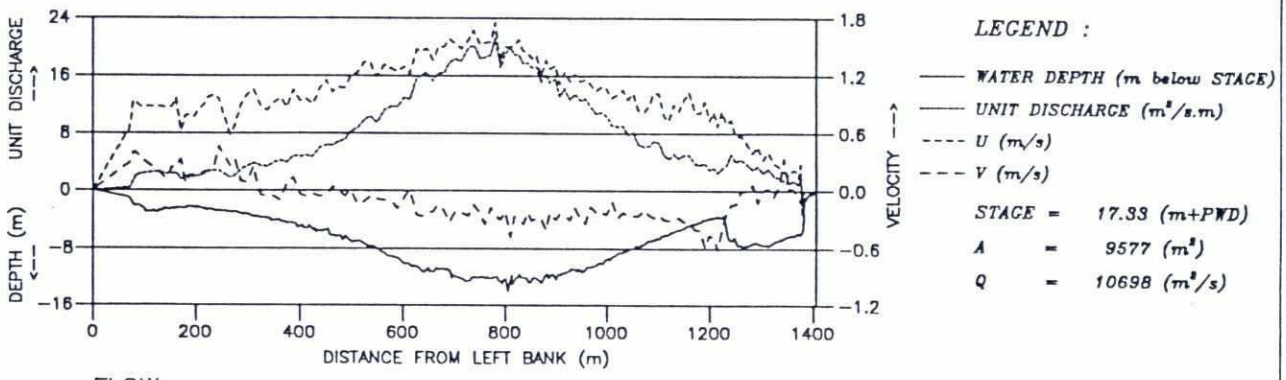


TRANSECT AZIMUTH = 90°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

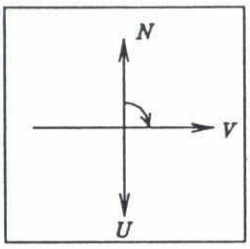
Sample not collected

SEDIMENT TRANSPORT

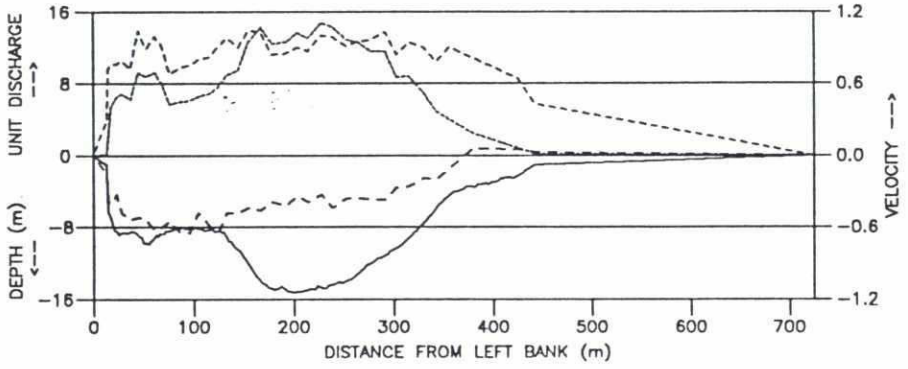
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49U1T05	Date : 31 Dec 1994	Horizontal distribution of flow and sediments	page
	Init : mzh	Channel 1	3.1



TRANSECT AZIMUTH = 90°
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 (m^2/s.m)
U (m/s)
V (m/s)

STAGE = 17.33 (m+PWD)
A = 4071 (m^2)
Q = 3595 (m^2/s)

FLOW

Sample not collected

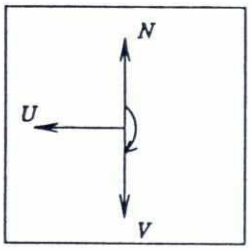
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9028 : 29 - 30 September, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B49U1T03	Date : 31 Dec 1994 Init : mzh	Horizontal distribution of flow and sediments Channel 2	page 3.2

222

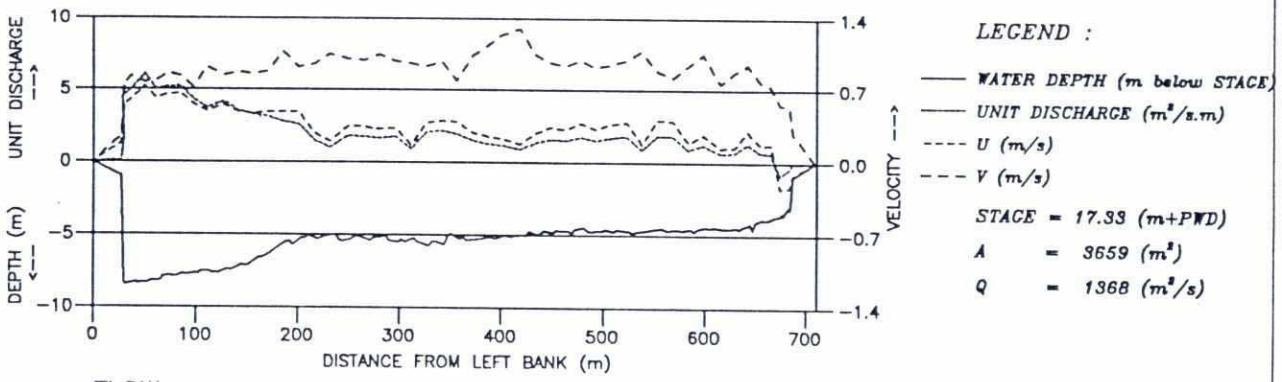


TRANSECT AZIMUTH = 180°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

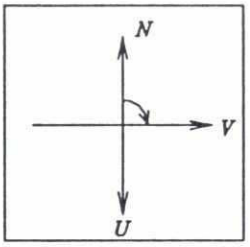
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49U1T02	Date : 31 Dec 1994	Horizontal distribution of flow and sediments	page
	Init : mzh	Channel 3	3.3

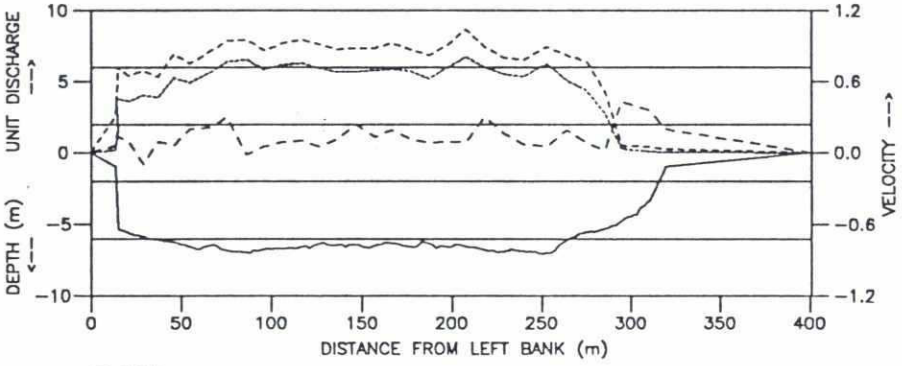


TRANSECT AZIMUTH = 90°

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 (m^2/s.m)

U (m/s)

V (m/s)

STAGE = 17.33 (m+PWD)

A = 1942 (m^2)

Q = 1510 (m^3/s)

FLOW

Sample not collected

SEDIMENT TRANSPORT

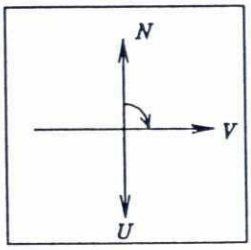
Sample not collected

GRAIN SIZE

W A R P O
LIBRARY.
DHAKA

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49U1T08	Date : 31 Dec 1994 Init : mzh	Horizontal distribution of flow and sediments Channel 4	page 3.4

P26

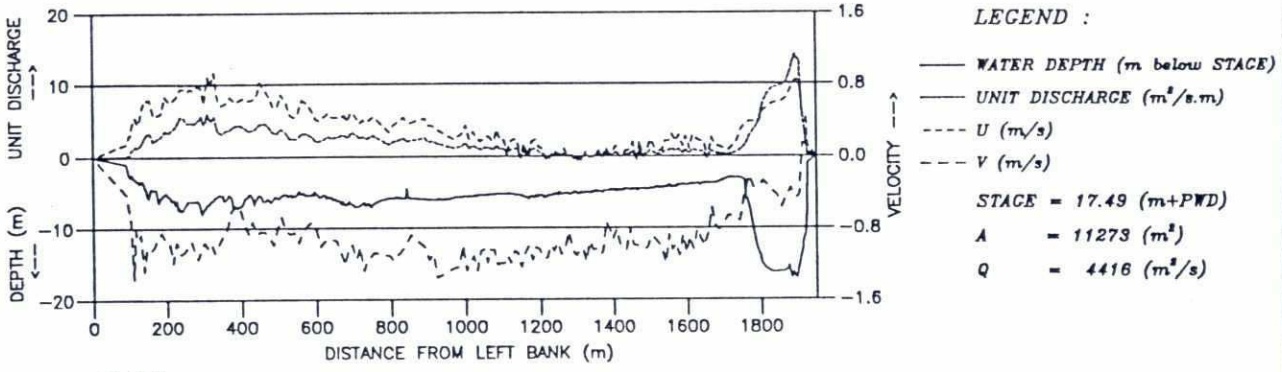


TRANSECT AZIMUTH = 90°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

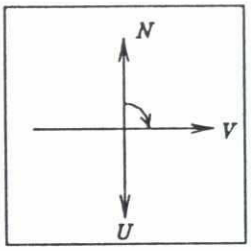
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49T1T06	Date : 31 Dec 1994	Horizontal distribution of flow and sediments	page
	Init : mzh	Channel 5	3.5

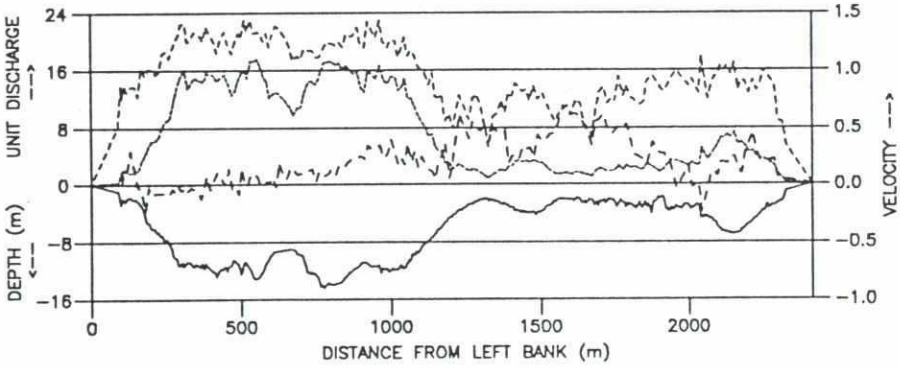


TRANSECT AZIMUTH = 90°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 17.49 (m+PWD)

A = 14955 (m²)

Q = 16457 (m³/s)

FLOW

Sample not collected

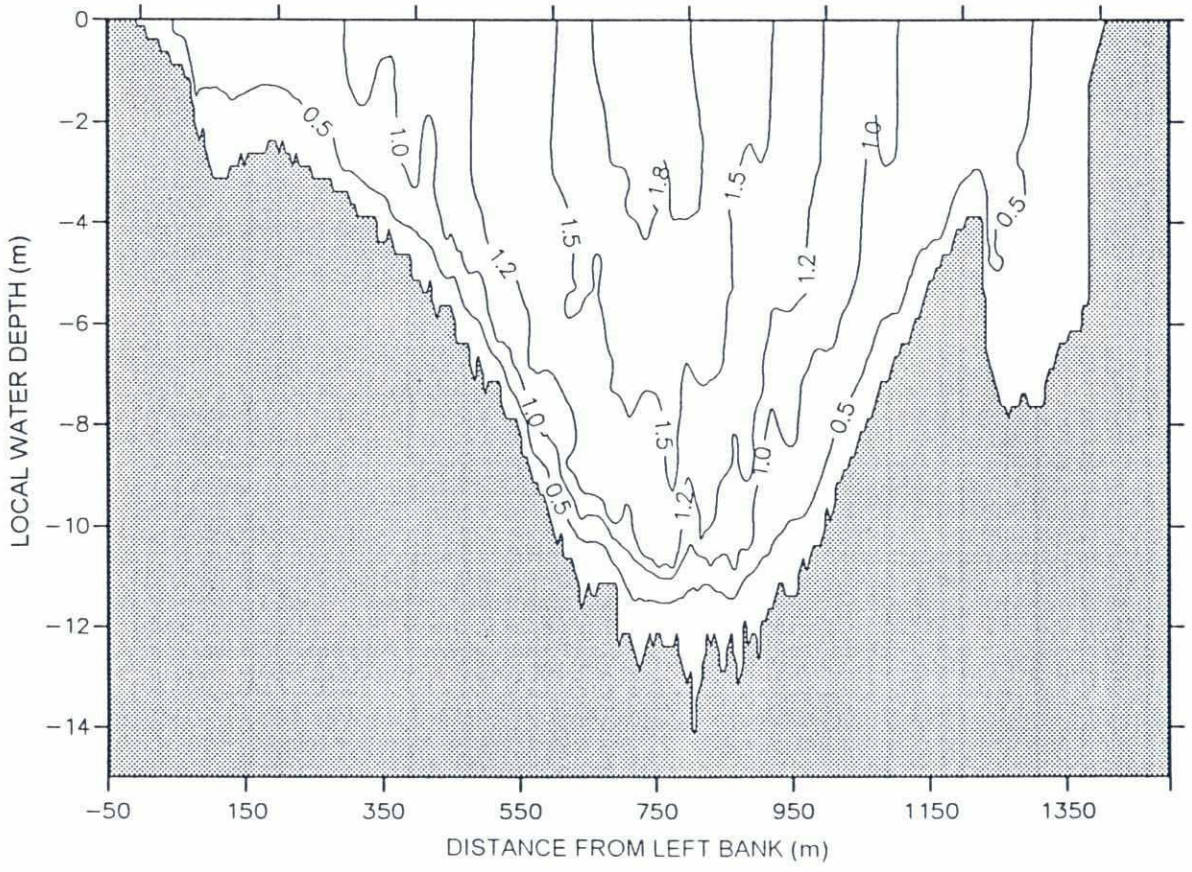
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

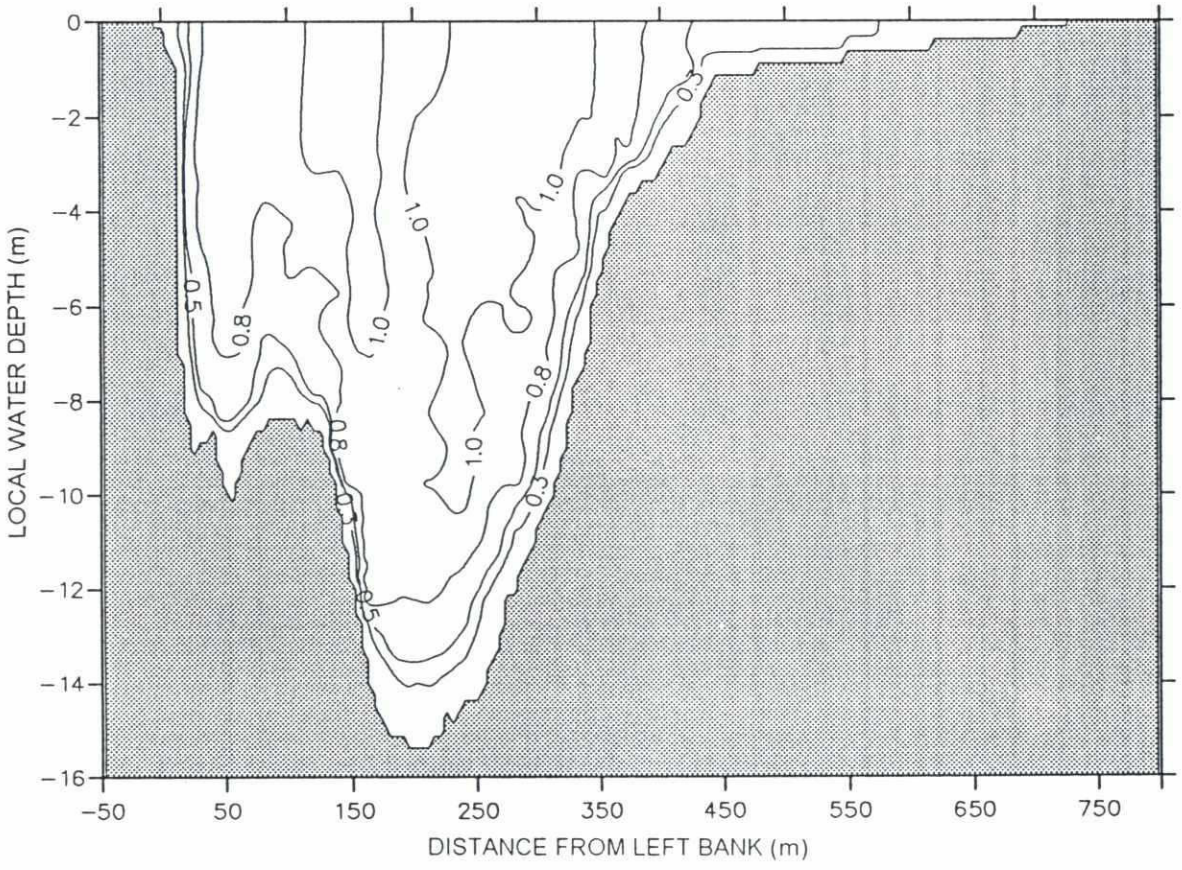
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49T1T01	Date : 31 Dec 1994 Init : mzh	Horizontal distribution of flow and sediments Channel 6	page 3.6

22 8



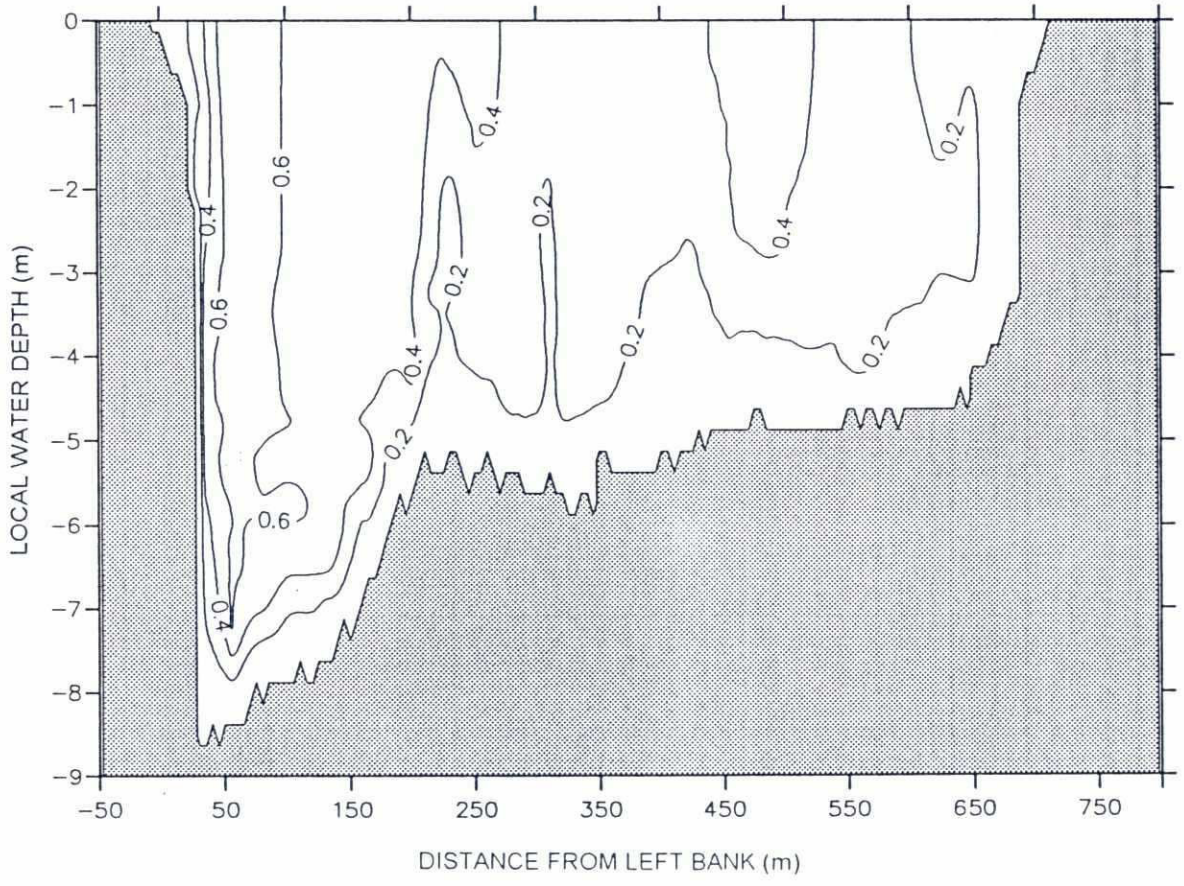
Iso-velocity contours (m/s)
Water level : 17.33 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49U1T05	Date : 31 Dec 1994 Init : mzh	Cross-sectional distribution of flow velocity Channel 1	page 4.1



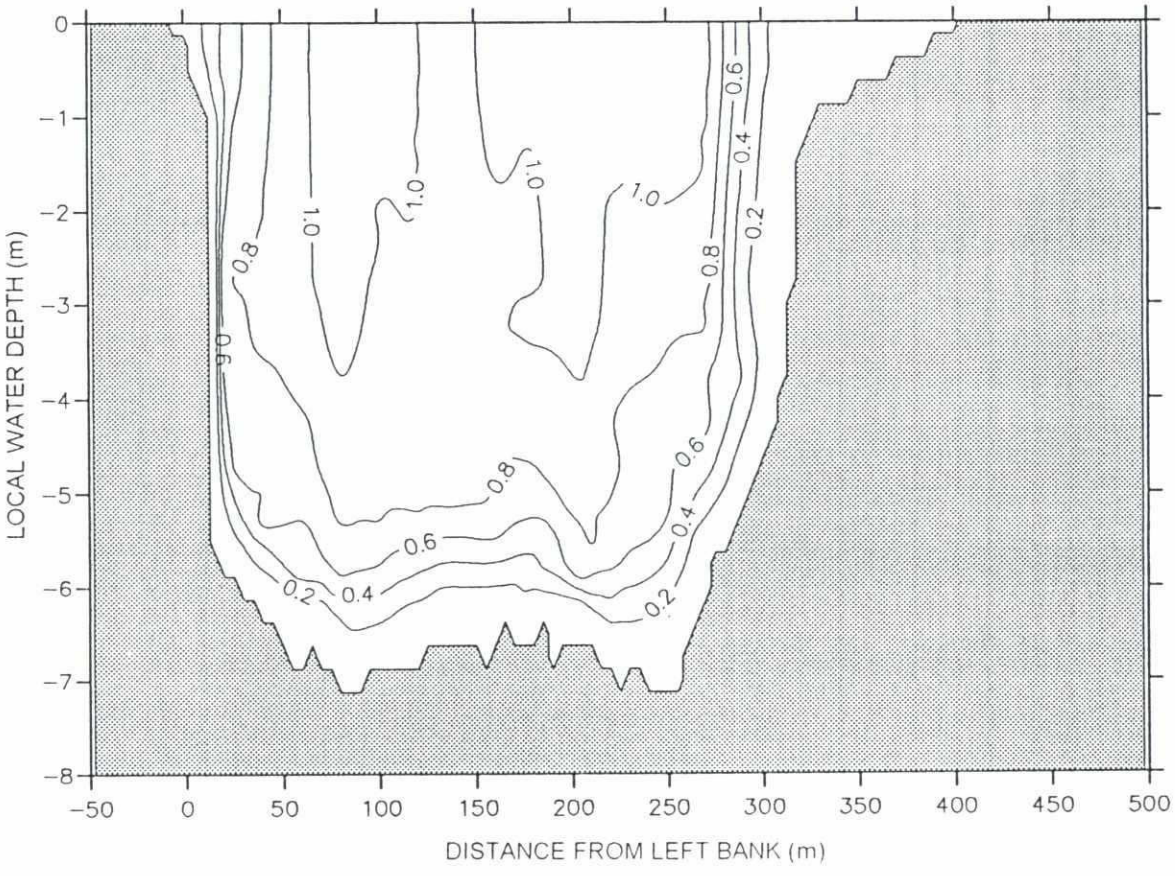
Iso-velocity contours (m/s)
Water level : 17.33 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49U1T03	Date : 31 Dec 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh	Channel 2	4.2



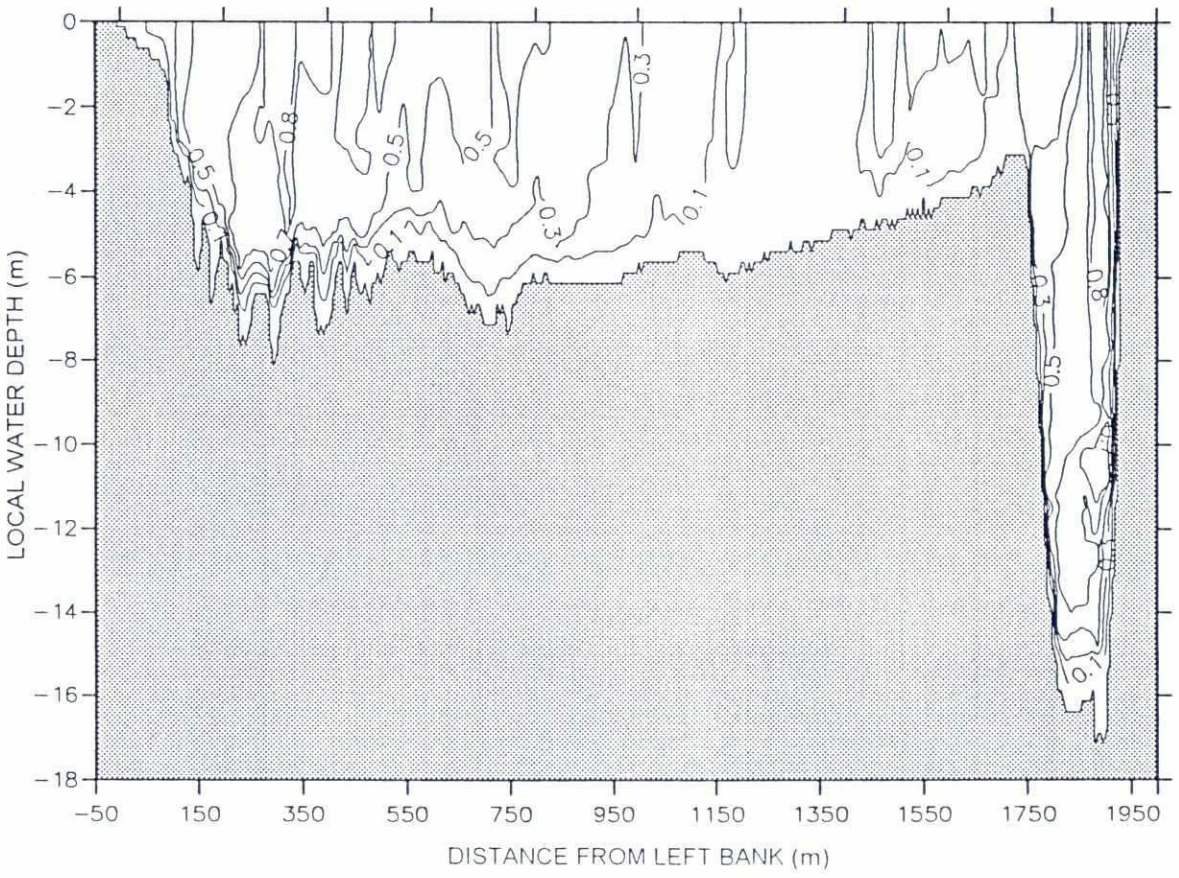
Iso-velocity contours (m/s)
Water level : 17.33 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49U1T02	Date : 31 Dec 1994 Init : mzh	Cross-sectional distribution of flow velocity Channel 3	page 4.3



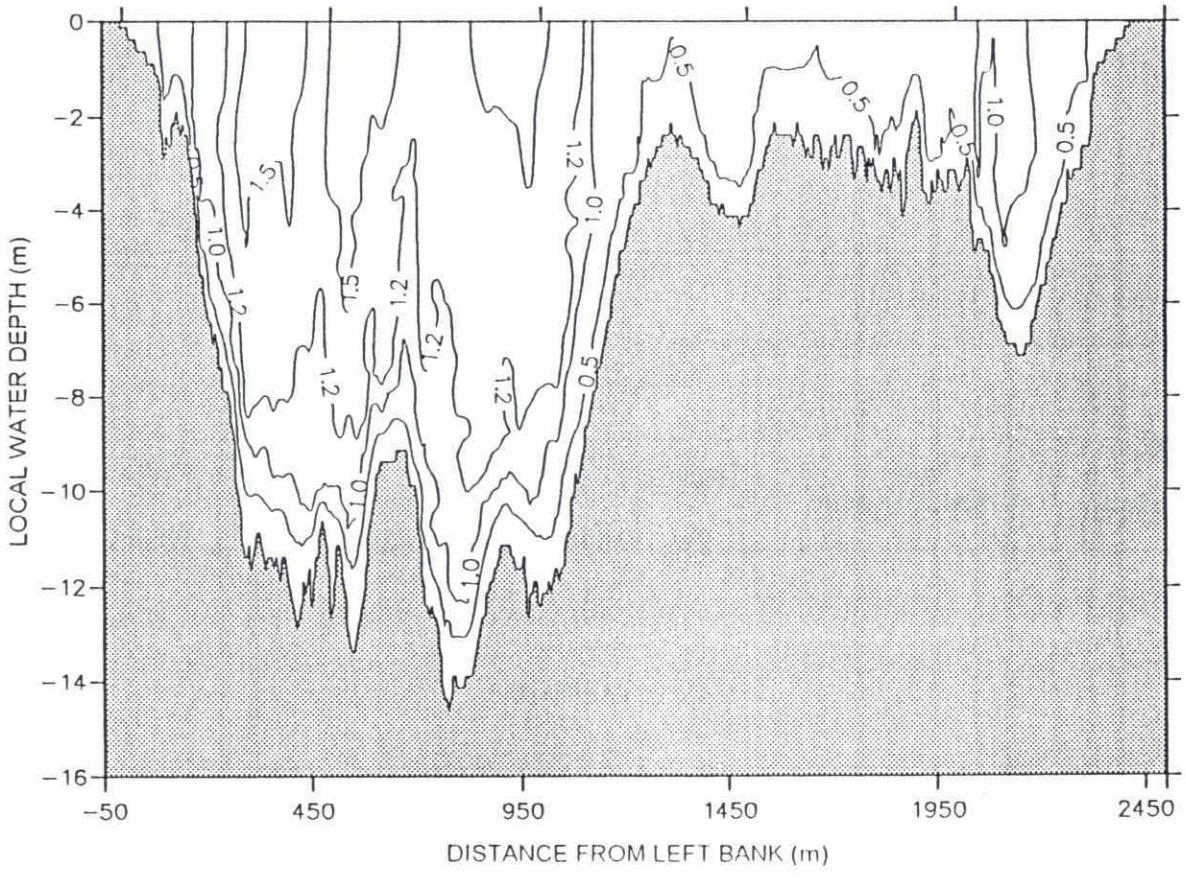
Iso-velocity contours (m/s)
Water level : 17.33 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49U1T08	Date : 31 Dec 1994 Init : mzh	Cross-sectional distribution of flow velocity Channel 4	page 4.4



Iso-velocity contours (m/s)
Water level : 17.49 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 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49T1T06	Date : 31 Dec 1994 Init : mzh	Cross-sectional distribution of flow velocity Channel 5	page 4.5



Iso-velocity contours (m/s)
Water level : 17.49 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 9028 : 29 - 30 September, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B49T1T01	Date : 31 Dec 1994	Cross-sectional distribution of flow velocity	page
	Init : mzh	Channel 6	4.6

Andreasen settling tube							
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth (m)	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 (m)	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)
Sample not collected							

Table 5.3 : Grain sizes of bed load

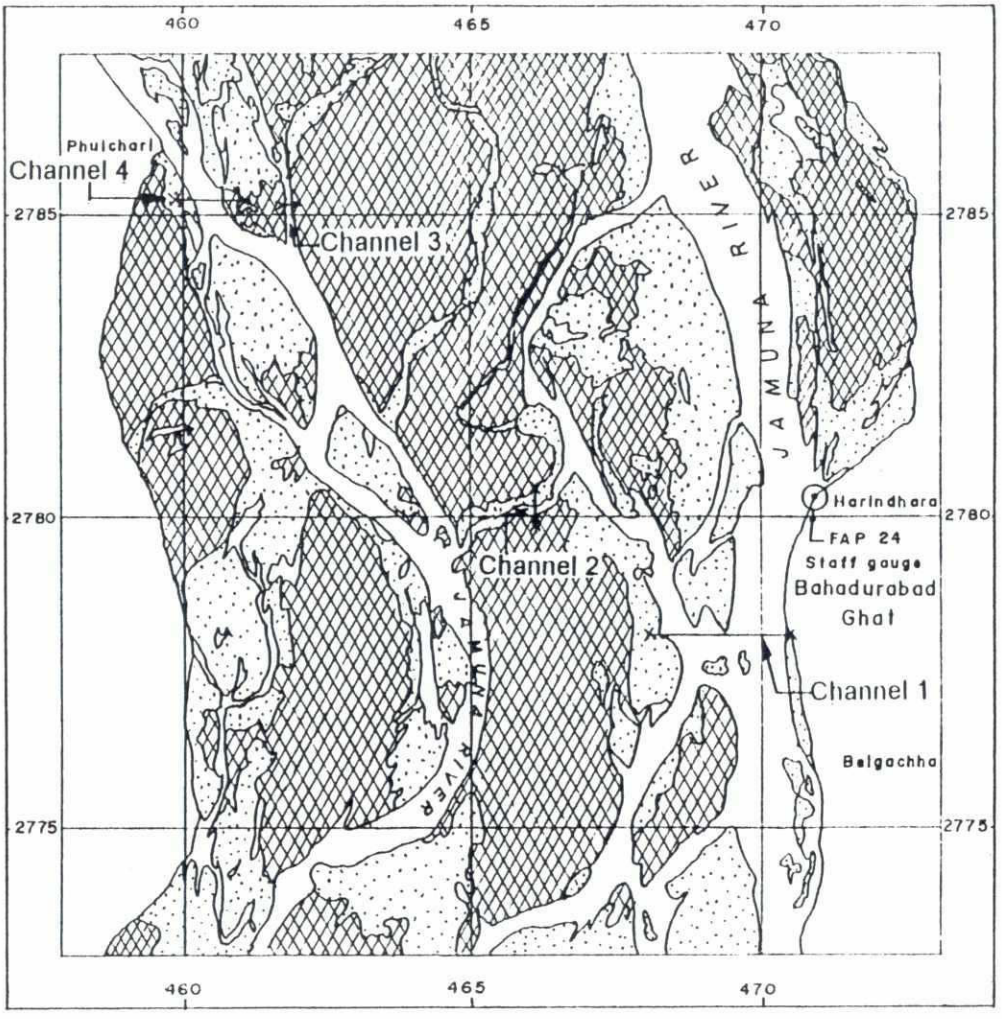
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9409291206-1217 9409291221-1230	B49U1T05 * B49U1T06
	2	9409291141-1144 9409291151-1154	B49U1T03 * B49U1T04
	3	9409291009-1016 9409291021-1025	B49U1T01 B49U1T02 *
	4	9409291412-1415 9409291419-1422 9409291442-1452 9409291456-1504	B49U1T07 B49U1T08 * B49U1T09 B49U1T10
	5	9409301318-1326 9409301333-1349	B49T1T05 B49T1T06 *
	6	9409300919-0936 9409300942-0959	B49T1T01 * B49T1T02

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B49U1T05 .ase
ADCP/S4/EMF data	2	QUATTRO	B49U1T03 .ase
ADCP/S4/EMF data	3	QUATTRO	B49U1T02 .ase
ADCP/S4/EMF data	4	QUATTRO	B49U1T08 .ase
ADCP/S4/EMF data	5	QUATTRO	B49T1T06 .ase
ADCP/S4/EMF data	6	QUATTRO	B49T1T01 .ase
Echosounder data	1	QUATTRO	B49U1T05 .ech
Echosounder data	2	QUATTRO	B49U1T03 .ech
Echosounder data	3	QUATTRO	B49U1T02 .ech
Echosounder data	4	QUATTRO	B49U1T08 .ech
Echosounder data	5	QUATTRO	B49T1T06 .ech
Echosounder data	6	QUATTRO	B49T1T01 .ech
Transect plot data	1	QUATTRO	B49U1T05 .trs
Transect plot data	2	QUATTRO	B49U1T03 .trs
Transect plot data	3	QUATTRO	B49U1T02 .trs
Transect plot data	4	QUATTRO	B49U1T08 .trs
Transect plot data	5	QUATTRO	B49T1T06 .trs
Transect plot data	6	QUATTRO	B49T1T01 .trs
Iso-velocity plot data	1	MIKE 21	B49U1T05 .ct2
		MIKE 21	B49U1T05 .dt2
Iso-velocity plot data	2	MIKE 21	B49U1T03 .ct2
		MIKE 21	B49U1T03 .dt2
Iso-velocity plot data	3	MIKE 21	B49U1T02 .ct2
		MIKE 21	B49U1T02 .dt2
Iso-velocity plot data	4	MIKE 21	B49U1T08 .ct2
		MIKE 21	B49U1T08 .dt2
Iso-velocity plot data	5	MIKE 21	B49T1T06 .ct2
		MIKE 21	B49T1T06 .dt2
Iso-velocity plot data	6	MIKE 21	B49T1T01 .ct2
		MIKE 21	B49T1T01 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

- Cross section
- Highland
- Unstable/low char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

W A R P O
LIBRARY.
DHAKA

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9032 : 17 October, 1994
		Location 1 : Jamuna River, Bahadurabad
	Date : 10 Jan 1995 Init : mzh/sjr	Location map page 11

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

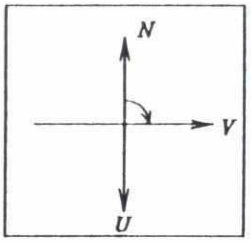
Table 2.1: Survey programme as made

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	2874	15111	17.24	14979	-	-
Channel 2	782	4255	17.24	1563	-	-
Channel 3	396	1896	17.24	1578	-	-
Channel 4	1294	5268	17.24	2925	-	-

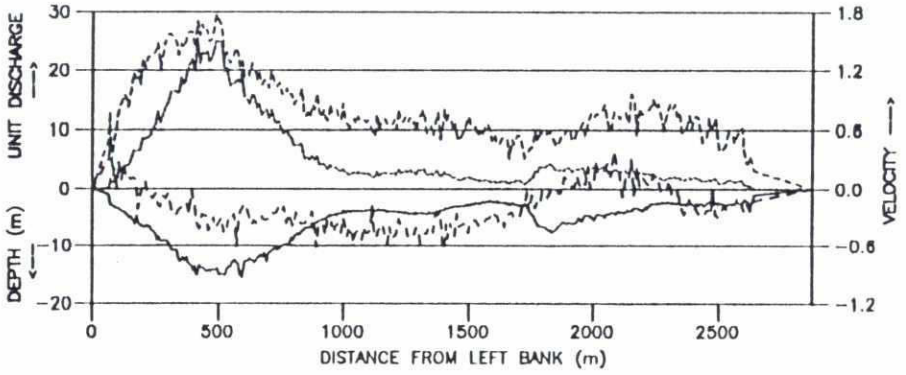
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	17 Oct 94	17.24	FAP 24
	Channel 2	17 Oct 94	17.24	FAP 24
	Channel 3	17 Oct 94	17.24	FAP 24
	Channel 4	17 Oct 94	17.24	FAP 24

Table 2.3: Water-levels



TRANSECT AZIMUTH = 90°
U – VELOCITY NORMAL TO TRANSECT (m/s)
V – VELOCITY PARALLEL TO TRANSECT (m/s)
N – MAGNETIC NORTH



FLOW

Sample not collected

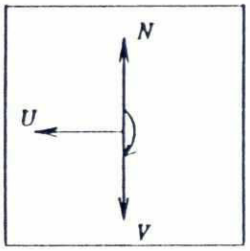
SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9032 : 17 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AH1T08	Date : 10 Jan 1995	Horizontal distribution of flow and sediments	page 31
	Init : mzh/sjr	Channel 1	

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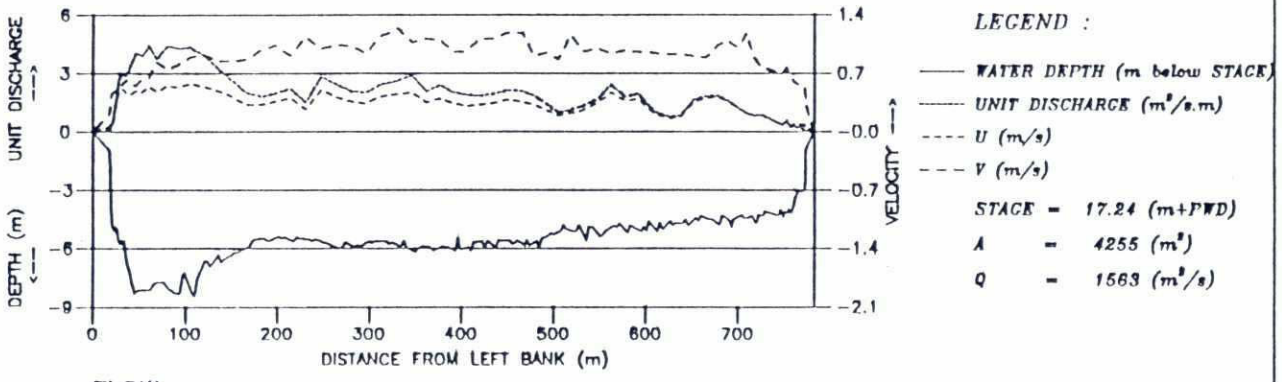


TRANSECT AZIMUTH = 180°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

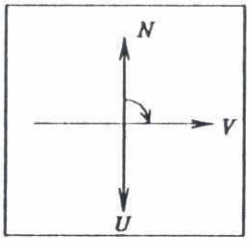
Sample not collected

SEDIMENT TRANSPORT

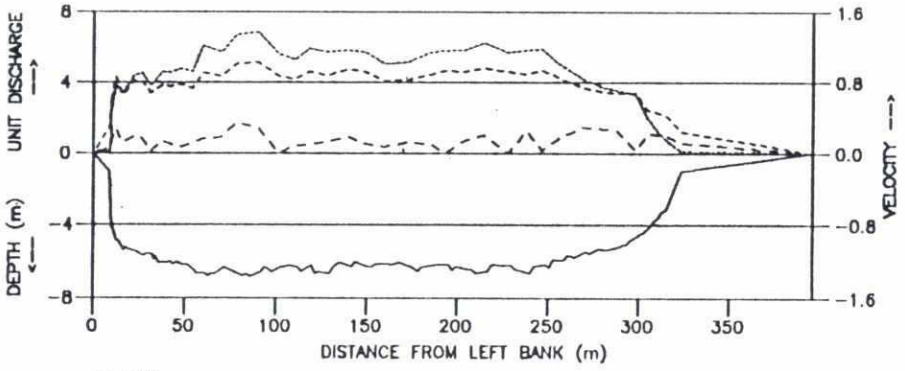
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9032 : 17 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AH1T06	Date : 10 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2	page 3.2



TRANSECT AZIMUTH = 90°
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 (m²/s.m)
U (m/s)
V (m/s)

STAGE = 17.24 (m+PWD)
A = 1898 (m²)
Q = 1578 (m³/s)

FLOW

Sample not collected

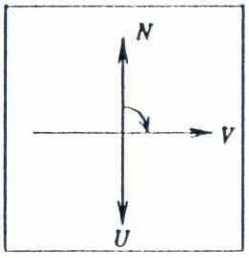
SEDIMENT TRANSPORT

Sample not collected

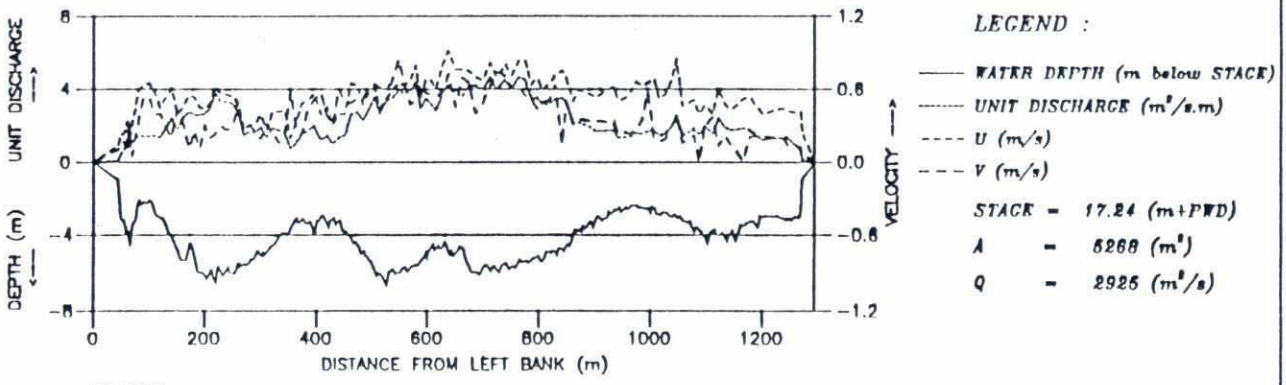
GRAIN SIZE

FAP 24 DELFT · DHI — RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities		Survey Bulletin 9032 : 17 October, 1994
		Location 1 : Jamuna River, Bahadurabad
File : B4AH1T04	Date : 10 Jan 1995	Horizontal distribution of flow and sediments
	Init : mzh/sjr	Channel 3
		page 33

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TRANSECT AZIMUTH = 90°
U - VELOCITY NORMAL TO TRANSECT (m/s)
V - VELOCITY PARALLEL TO TRANSECT (m/s)
N - MAGNETIC NORTH



FLOW

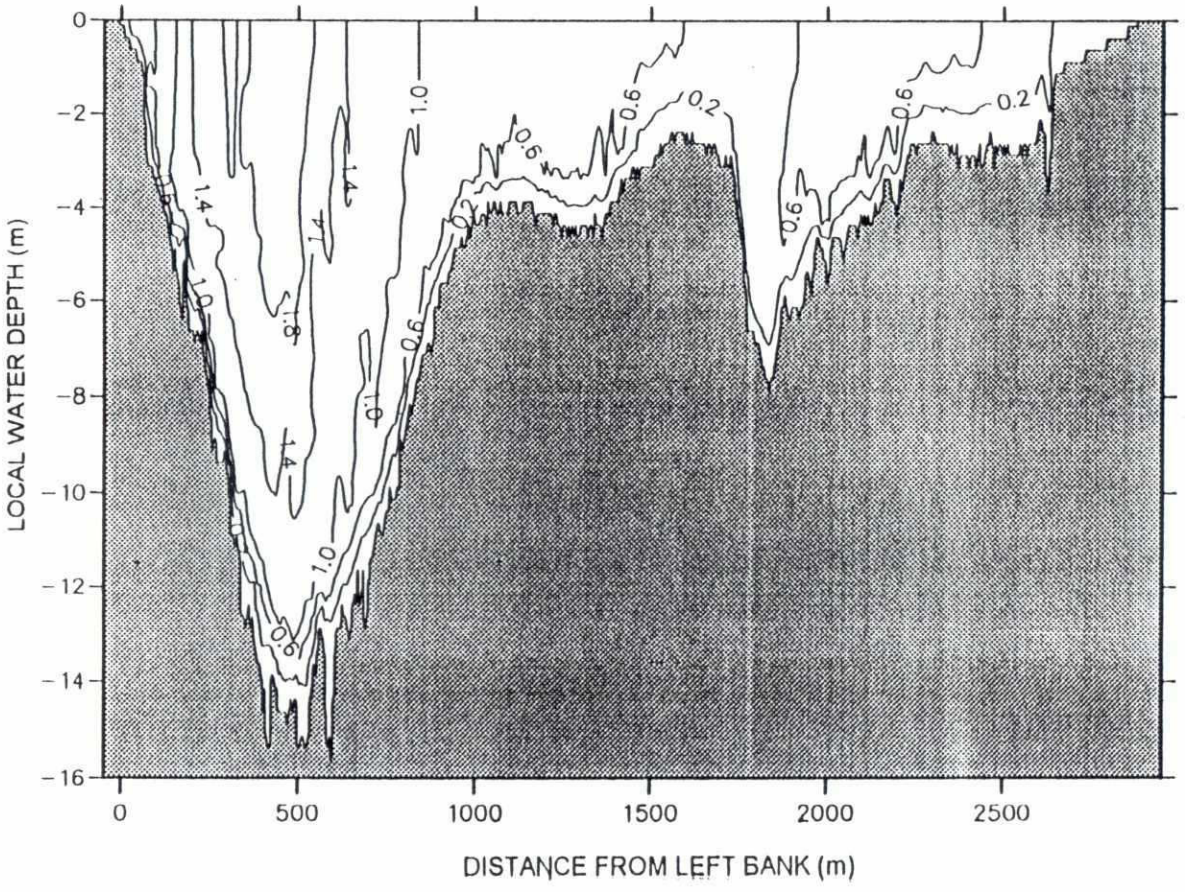
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

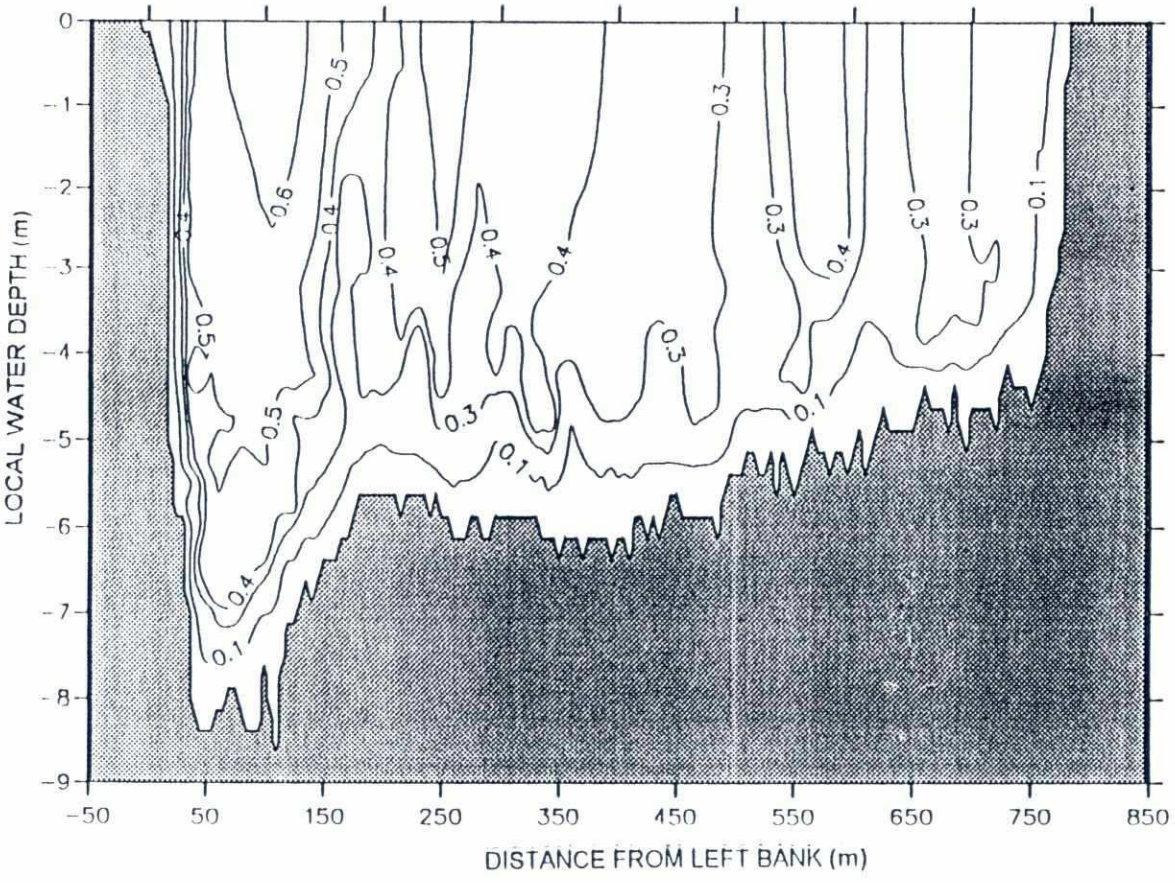
FAP 24 DELFT HYDRAULICS DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9032 : 17 October, 1994	
	Location 1 : Jamuna River, Bahadurabad	
File : B4AH1T02	Date : 10 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 4
		page 3.4



Iso-velocity contours (m/s)
Water-level : 17.24 m + PWD measured at the station indicated on Page 1.1

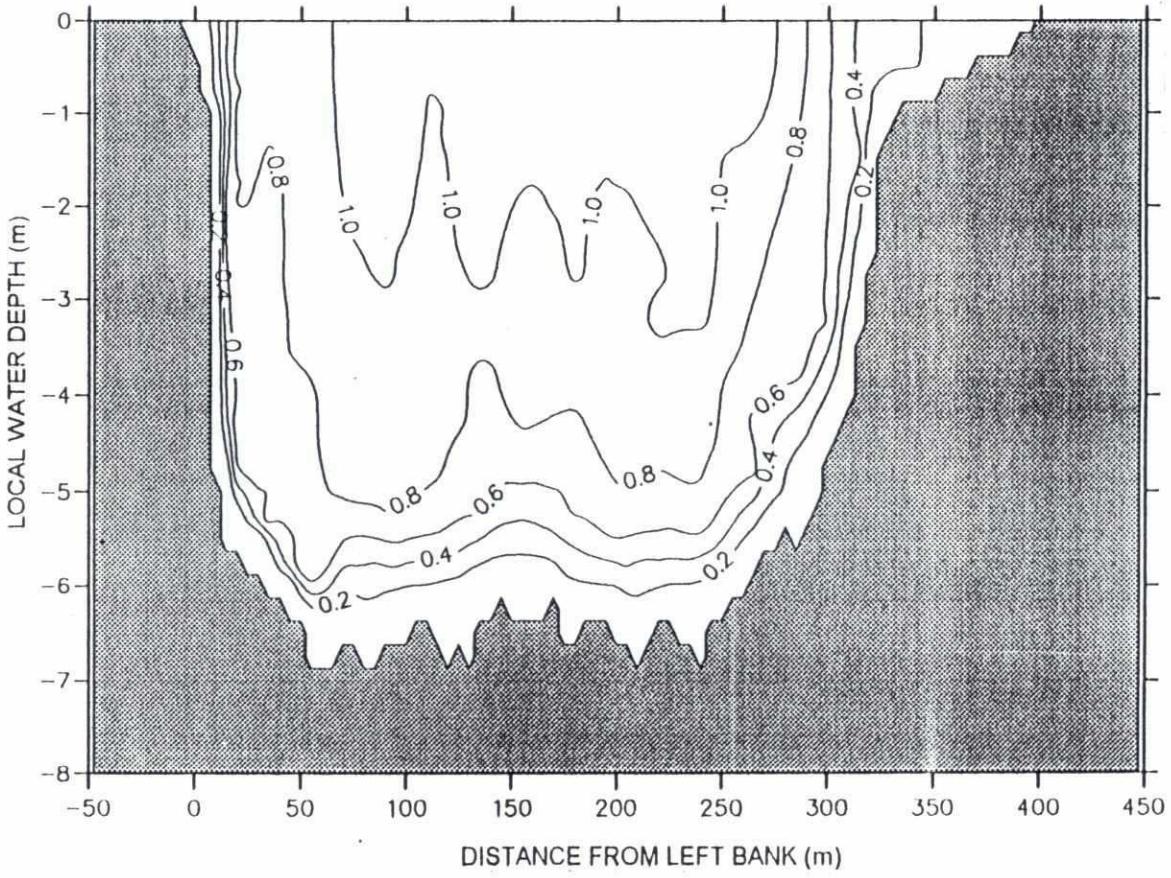
FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9032 : 17 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AH1T08	Date : 10 Jan 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 4.1

P82



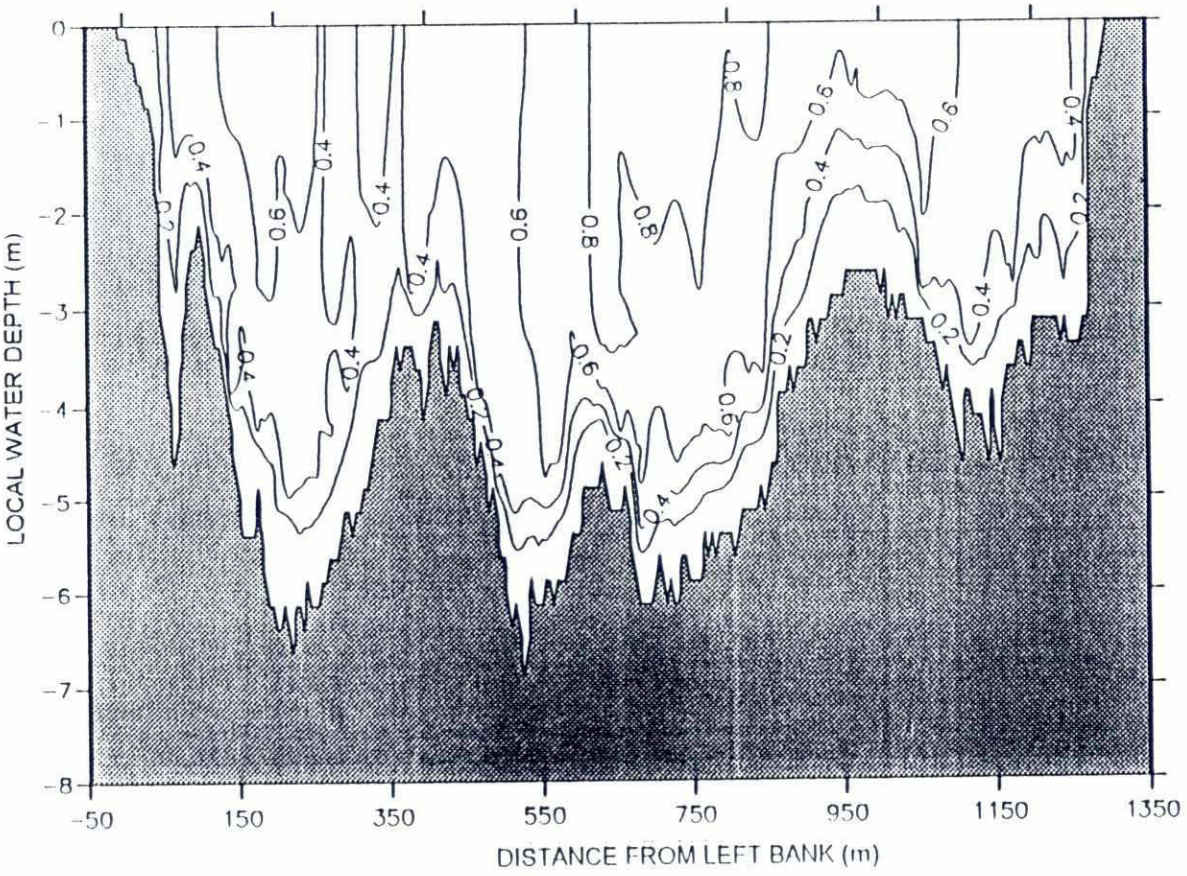
Iso-velocity contours (m/s)
Water level : 17.42 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9032 : 17 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AH1T06	Date : 10 Jan 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 2	page 42



Iso-velocity contours (m/s)
Water level : 17.42 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 9032 : 17 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AH1T04	Date : 10 Jan 1995	Cross-sectional distribution of flow velocity	page 43
	Init : mzh/sjr	Channel 3	



Iso-velocity contours (m/s)
Water level : 17.42 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 9032 : 17 October, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B4AH1T02	Date : 10 Jan 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 4	page 4.4

Andreasen settling tube

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 5.1: 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 < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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)
Sample not collected							

Table 5.3 : Grain sizes of bed load

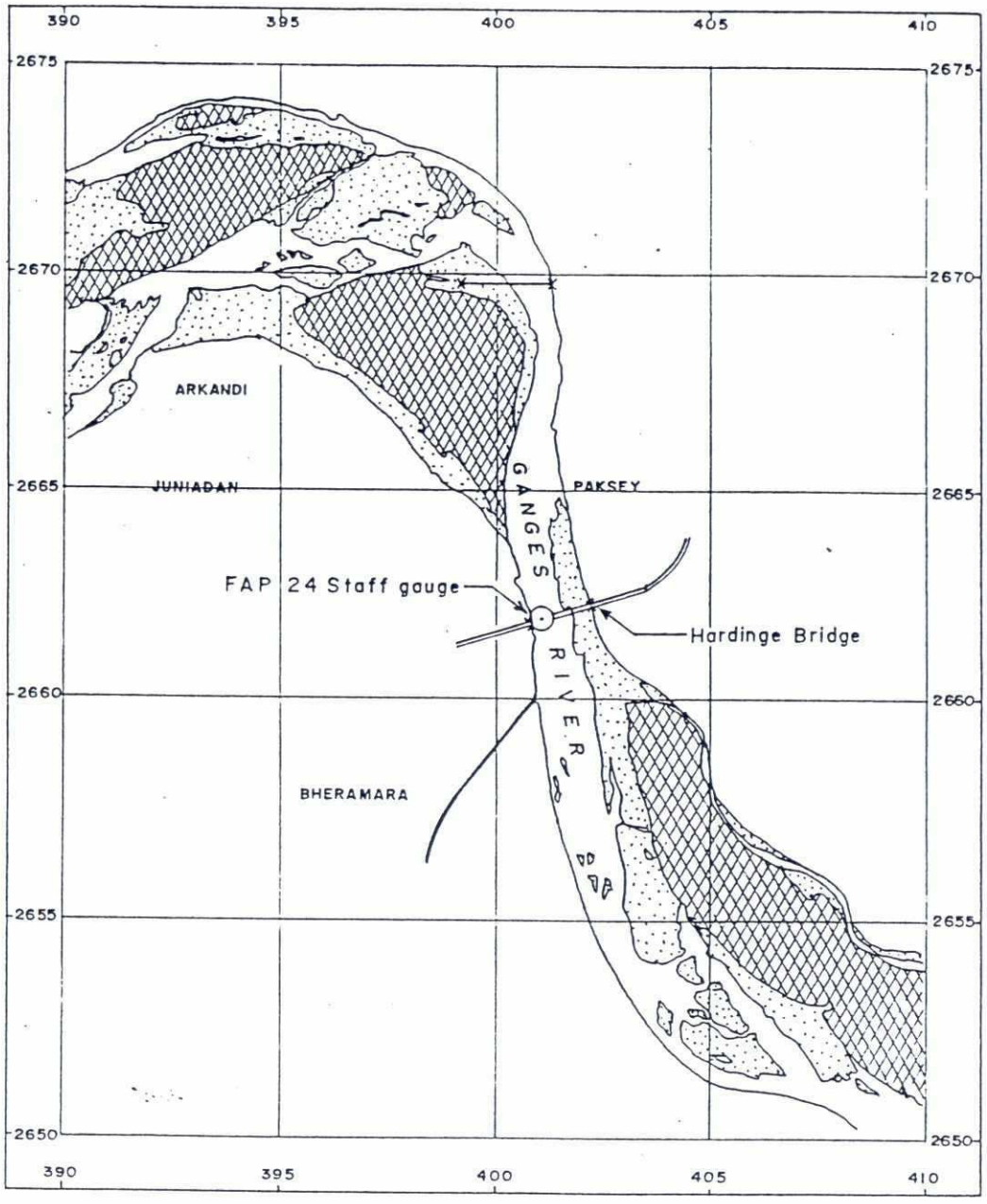
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9410171541-1600	B4AH1T07
		9410171604-1628	B4AH1T08 *
	2	9410171427-1433	B4AH1T05
		9410171436-1441	B4AH1T06 *
	3	9410171344-1348	B4AH1T03
		9410171353-1356	B4AH1T04 *
	4	9410171219-1230	B4AH1T01
		9410171234-1244	B4AH1T02 *

Table 6.1: ADCP & EMF transects

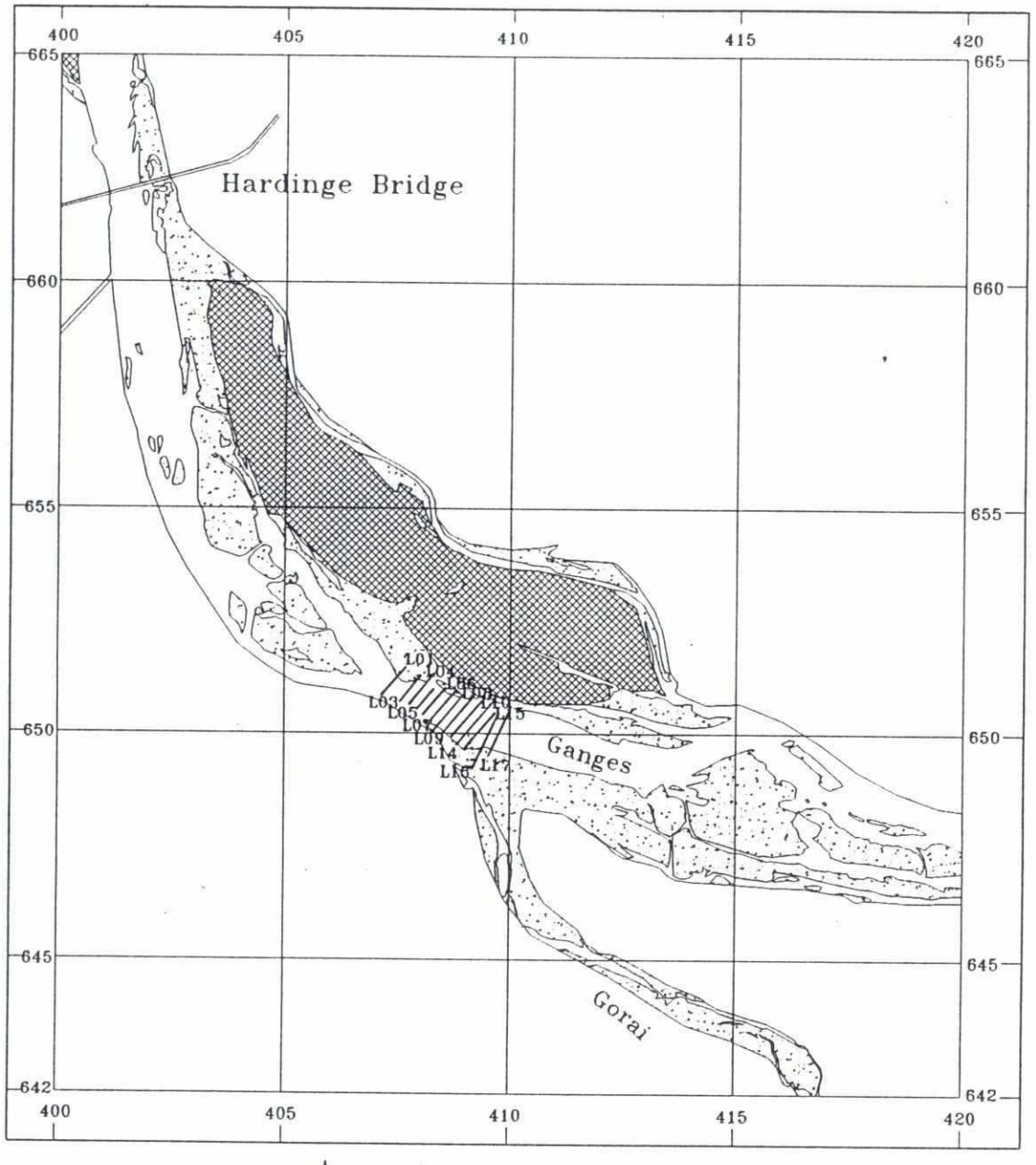
* : transect in PSD 24 data base and presented in Sections 3 and 4

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B4AH1T08 .ase
ADCP/S4/EMF data	2	QUATTRO	B4AH1T06 .ase
ADCP/S4/EMF data	3	QUATTRO	B4AH1T04 .ase
ADCP/S4/EMF data	4	QUATTRO	B4AH1T02 .ase
Echosounder data	1	QUATTRO	B4AH1T08 .ech
Echosounder data	2	QUATTRO	B4AH1T06 .ech
Echosounder data	3	QUATTRO	B4AH1T04 .ech
Echosounder data	4	QUATTRO	B4AH1T02 .ech
Transect plot data	1	QUATTRO	B4AH1T08 .trs
Transect plot data	2	QUATTRO	B4AH1T06 .trs
Transect plot data	3	QUATTRO	B4AH1T04 .trs
Transect plot data	4	QUATTRO	B4AH1T02 .trs
Iso-velocity plot data	1	MIKE 21	B4AH1T08 .ct2
		MIKE 21	B4AH1T08 .dt2
Iso-velocity plot data	2	MIKE 21	B4AH1T06 .ct2
		MIKE 21	B4AH1T06 .dt2
Iso-velocity plot data	3	MIKE 21	B4AH1T04 .ct2
		MIKE 21	B4AH1T04 .dt2
Iso-velocity plot data	4	MIKE 21	B4AH1T02 .ct2
		MIKE 21	B4AH1T02 .dt2

Table 7.1 PSD 24 Database file description



FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commissio.. of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
	Ganges River, Upstream of Hardinge Bridge	
Date : 01 Aug 1995 Init : cas/kah	Location map	page 1.1



LEGEND :

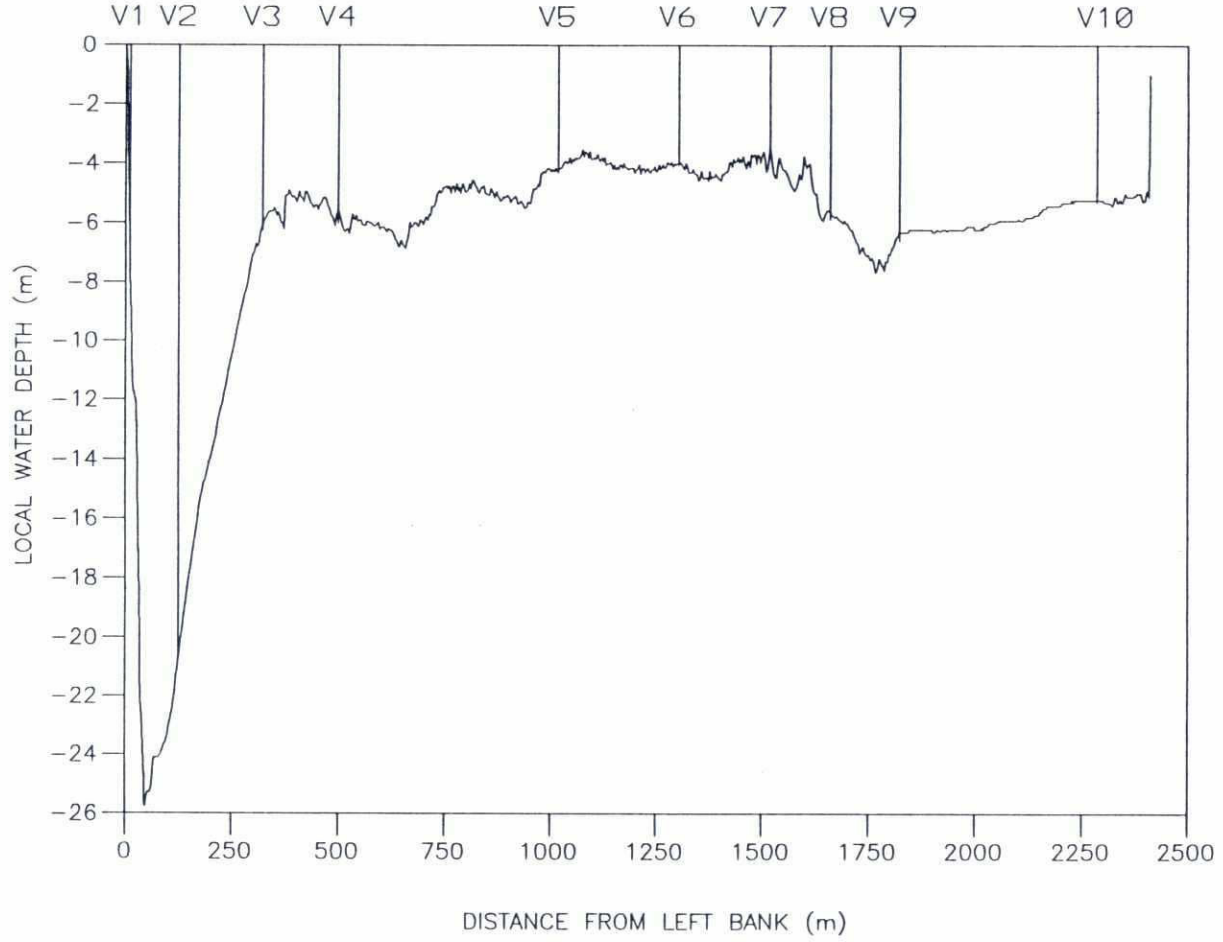
- Cross Section
- High land
- Unstable/low char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
	Date : 01 Aug 1995	Location map	page 1.2
	Init : cas/kah		



Water-level : 10.26 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 9033: 19 - 21 October, 1994**	
		Ganges River, Upstream of Hardinge Bridge	
File : H4AJ3T09	Date : 01 Aug 1995	**Cross-sections and measured verticals**	page
	Init : cas/kah	**Channel 1**	1.3

Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	1	-	-	-
	EMF transect	1	-	-	-
	Echo-Sounding	1	-	-	-
Vertical current profile	No.of verticals in channel	10	-	-	-
	ADCP	10	-	-	-
	S4 current meter	0	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	0	-	-	-
	Andreasen settling tube	0	-	-	-
	MEX turbidity meter	0	-	-	-
	Integrated bottle sampling	10	-	-	-
	Collapsible bag	0	-	-	-
Bed load	Dune tracking	0	-	-	-
	Helley-smith sampler	17	-	-	-
	Delft Bottle	0	-	-	-
Bed material	US BM-54 bed sampler	0	-	-	-
	Van Veen bed sampler	3	-	-	-

Table 2.1: Survey programme as made

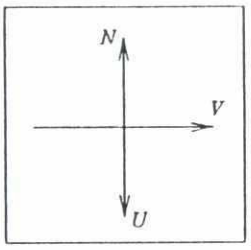
	Width (m)	Area (m^2)	Stage h (m+PWD)	Discharge Q (m^3/s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	2428	15843	10.26	7754	0	3586

Table 2.2: Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)
Hardinge Bridge	1995-07-11	10.26

Short Description:
Effect of a constriction on the sediment transport and discharge rating curves. Measurements at a cross-section at the upstrea end of the Ganges bathymetric survey area.

File name	Width	Area	Water level (Daily average) (Talbaria) (m+PWD)	Date	Types of measurements		
					ADCP	EMF	Echo-Sounder
H4AL3T01	878	8132	9.25	1994-10-21	1	1	1
H4AL3T03	786	15774	9.25	1994-10-21	1	1	1
H4AL3T04	764	12625	9.25	1994-10-21	1	1	1
H4AL3T05	616	10334	9.25	1994-10-21	1	1	1
H4AL3T06	769	10770	9.25	1994-10-21	1	1	1
H4AL3T07	899	11297	9.25	1994-10-21	1	1	1
H4AL3T08	972	10282	9.25	1994-10-21	1	1	1
H4AL3T09	1075	9775	9.25	1994-10-21	1	1	1
H4AL3T10	1095	9634	9.25	1994-10-21	1	1	1
H4AL3T14	1394	10810	9.25	1994-10-21	1	1	1
H4AL3T15	1136	7967	9.25	1994-10-21	1	1	1
H4AL3T16	1412	7924	9.25	1994-10-21	1	1	1
H4AL3T17	1181	9680	9.25	1994-10-21	1	1	1

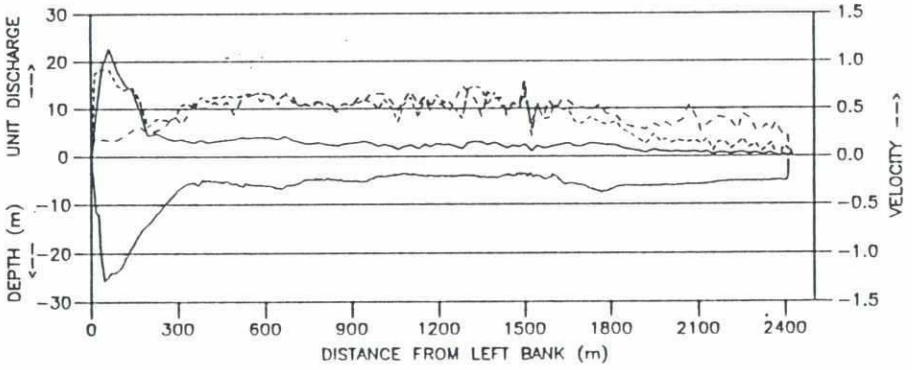


TRANSECT AZIMUTH = 90°

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 (m²/s/m)

U – (m/s)

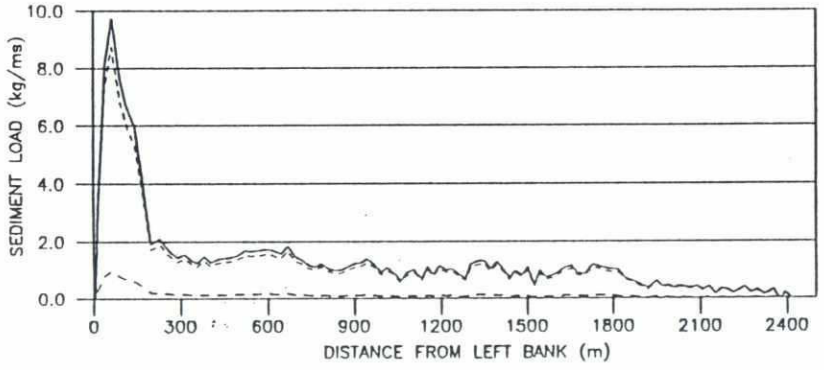
V – (m/s)

STAGE = 10.26 (m+PWD)

A = 15842 (m²)

Q = 7754 (m³/s)

FLOW



LEGEND :

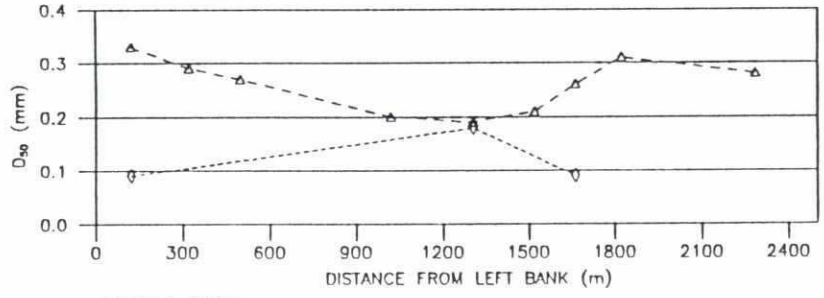
S_{TOTAL} 3380.97 (kg/s)

$S_{WASH\ LOAD}$ 3038.00 (kg/s)

$S_{SUSP.\ BED}$ 342.97 (kg/s)

$S_{BED\ LOAD}$ 0.00 (kg/s)

SEDIMENT TRANSPORT



LEGEND :

$D_{50\ SUSP.}$ (mm)

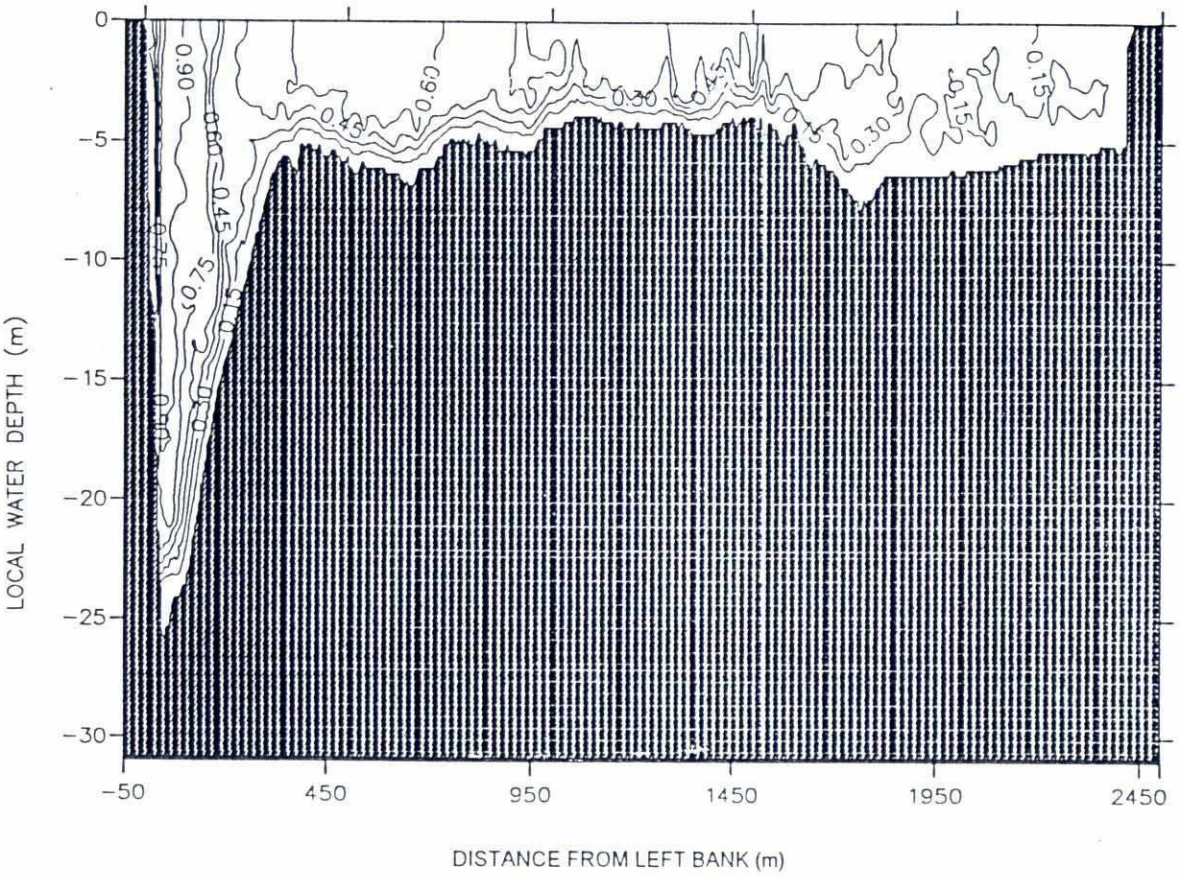
$D_{50\ BED\ LOAD}$ (mm)

$D_{50\ BED\ MAT.}$ (mm)

GRAIN SIZE

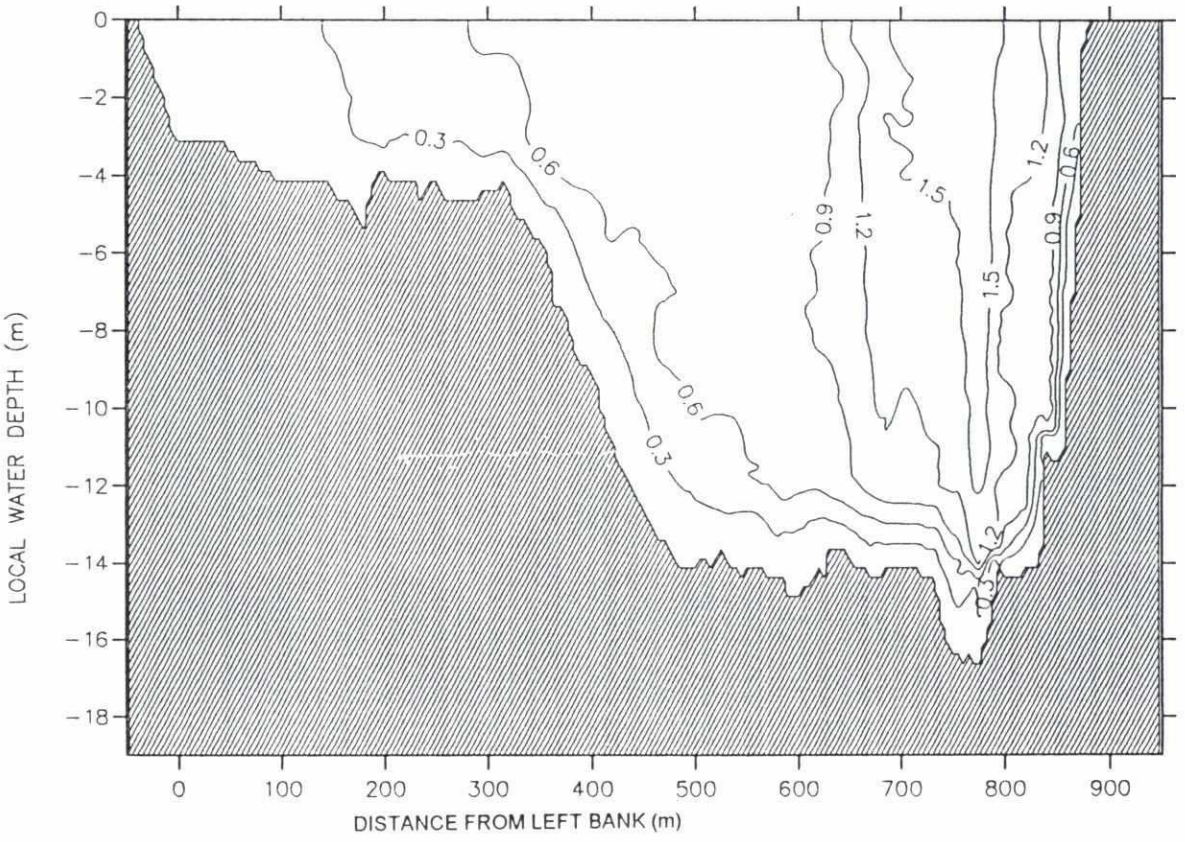
FAP 24 DELFT - DHI; RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities		Survey Bulletin 9033: 19 - 21 October, 1994	
		Ganges River, Upstream of Hardinge Bridge	
File : H4AJ3T09	Date : 01 Aug 1995	Horizontal distribution of flow and sediments	page
	Init : cas/kah	Channel 1	3.1

PAG



Iso-velocity contours (m/s)
Water-level : 10.26 m + PWD measured at the station indicated on page 1.1

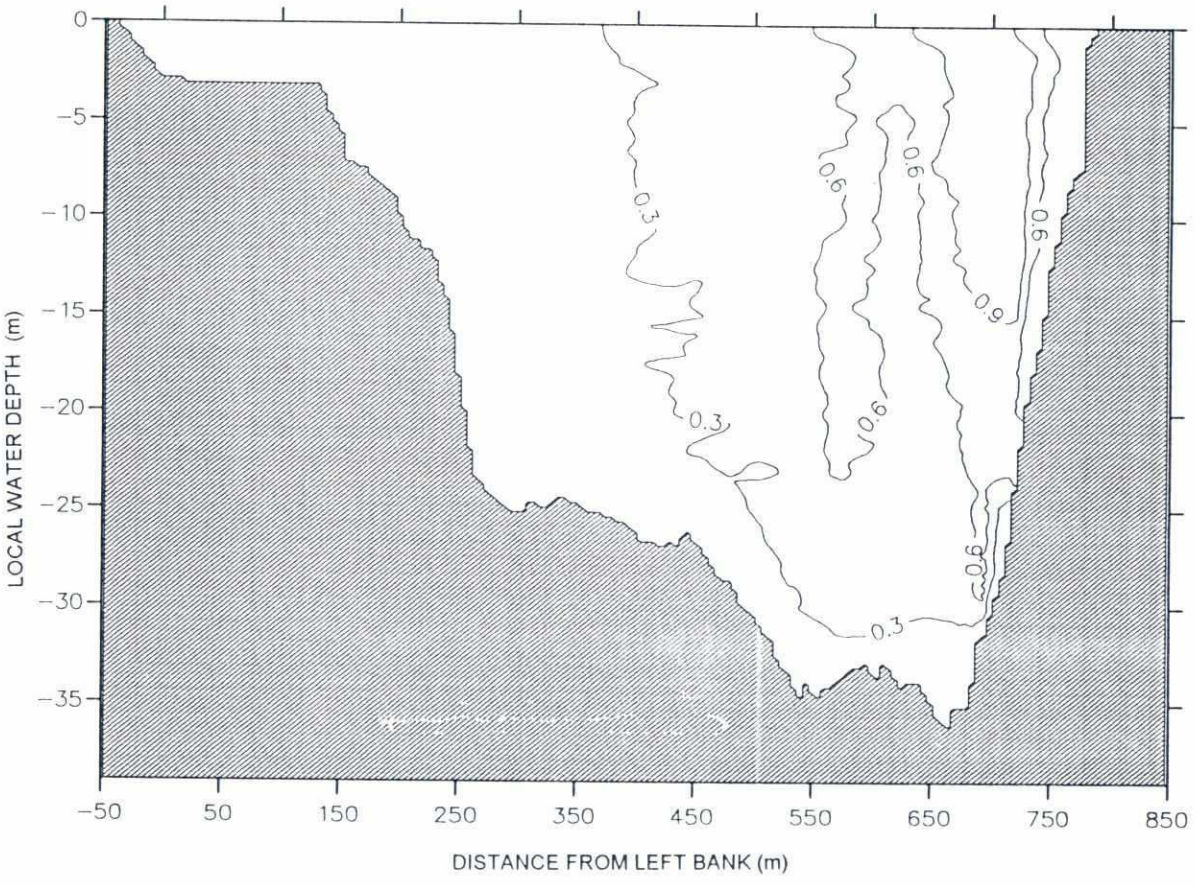
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9033: 19 October, 1994 Ganges River, Upstream of Hardinge Bridge	
File : H4AJ3T09	Date : 01 Aug 1995 Init : cas	Cross-sectional distribution of flow velocity Channel 1	page 4.1



Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

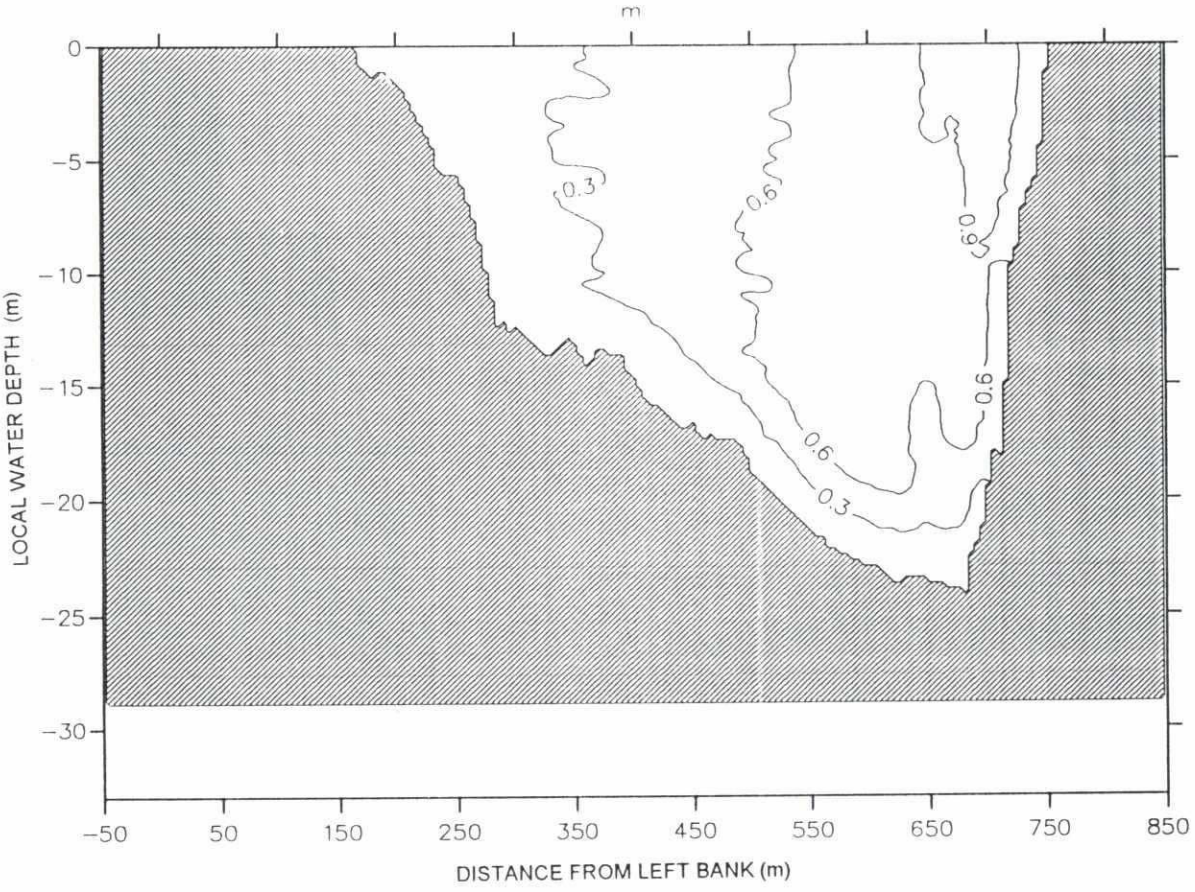
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T01	Date : 01 Aug 1995 Init : cas/kah	Cross-sectional distribution of flow velocity	page 4.2

2 of 4



Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

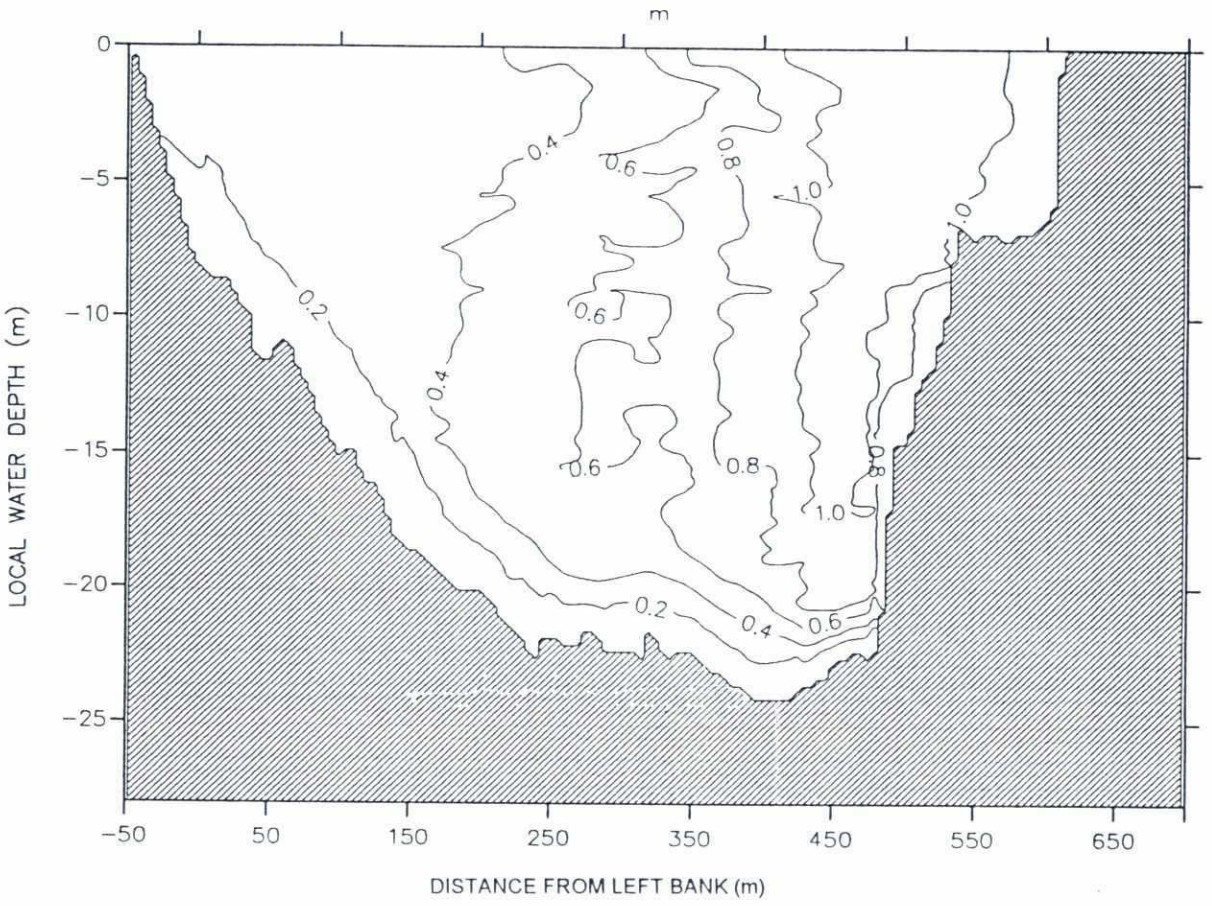
FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T03	Date : 01 Aug 1995	Cross-sectional distribution of flow velocity	page 4.3
	Init : cas/kah		



Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

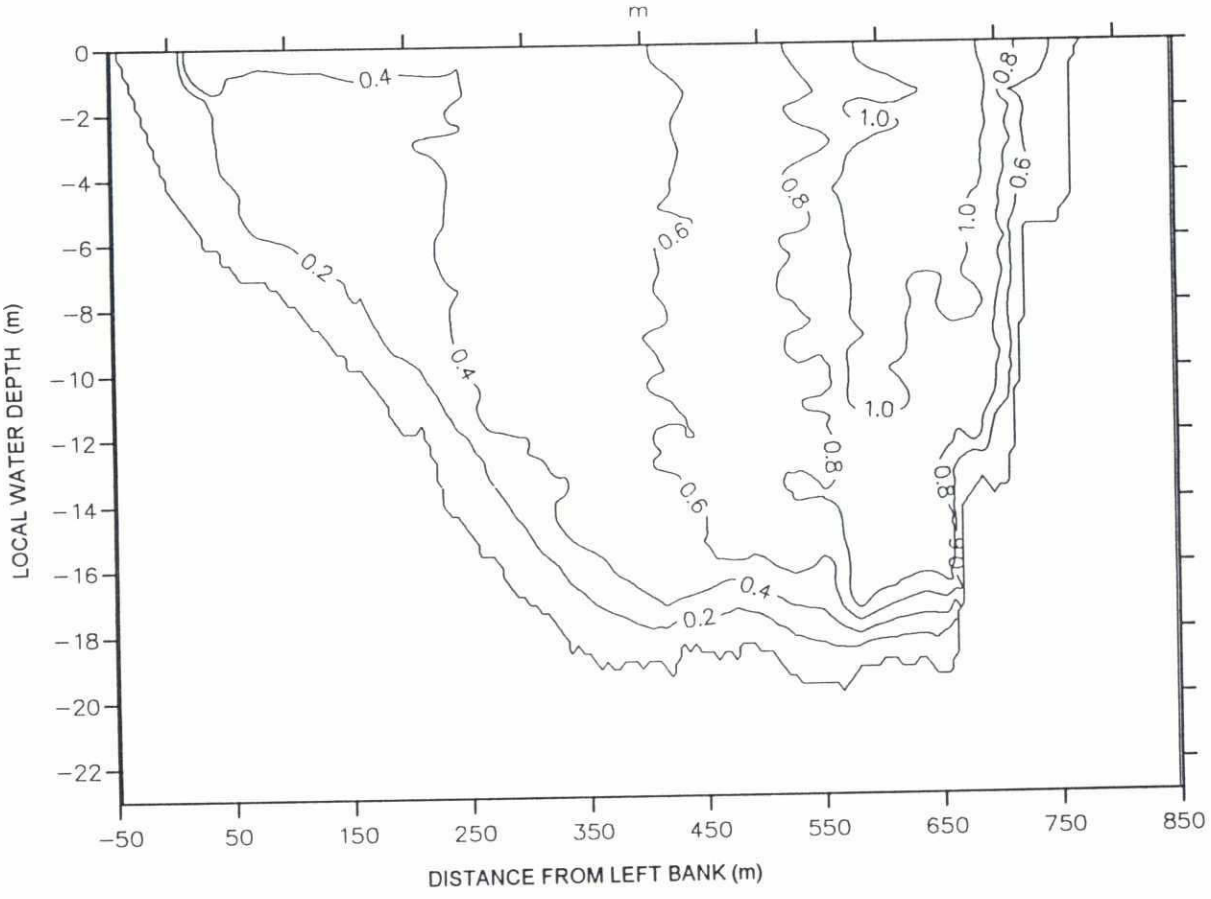
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9033: 19 - 21 October, 1994 Gorai Offtake	
File : H4AL3T04	Date : 01 Aug 1995 Init : cas/kah	Cross-sectional distribution of flow velocity	page 4.4

P9



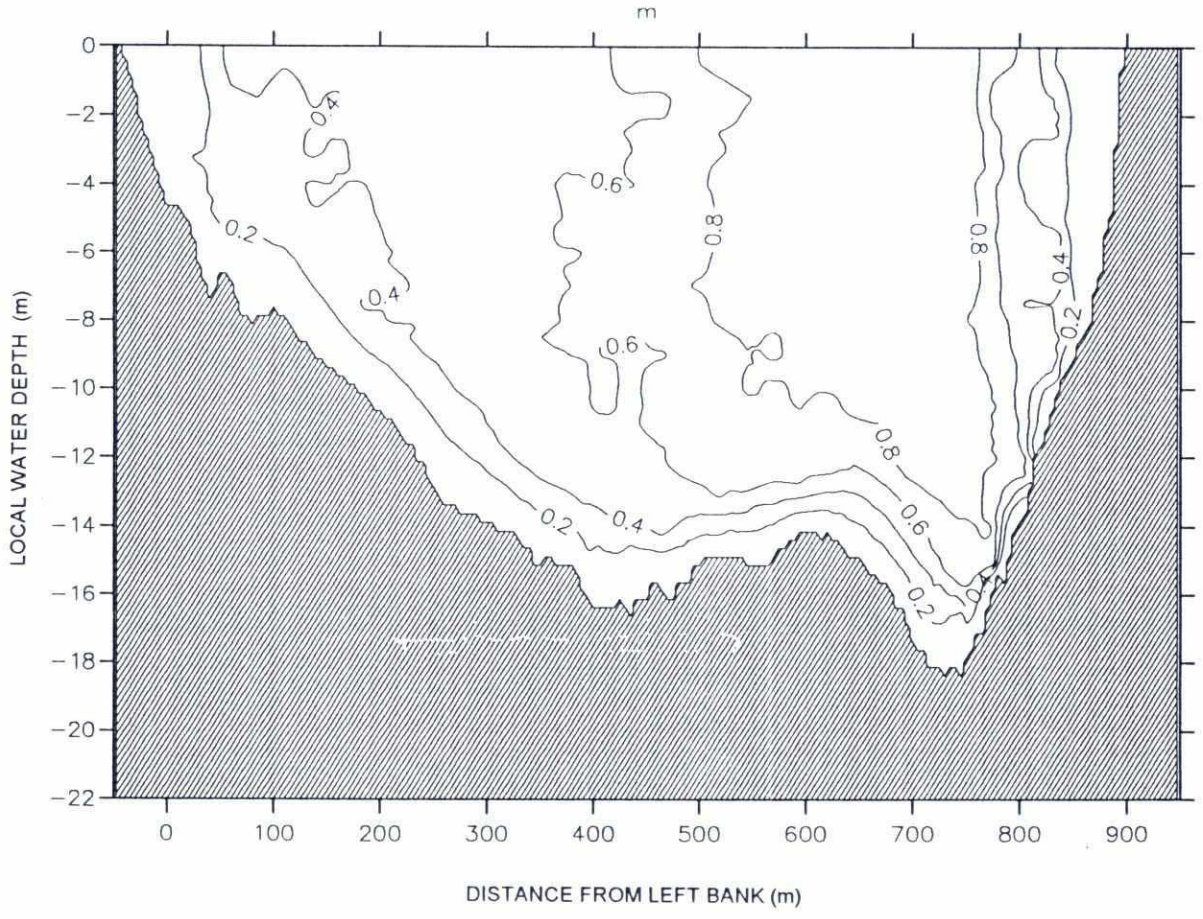
Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T05	Date : 01 Aug 1995	Cross-sectional distribution of flow velocity	page 4.5
	Init : cas/kah		



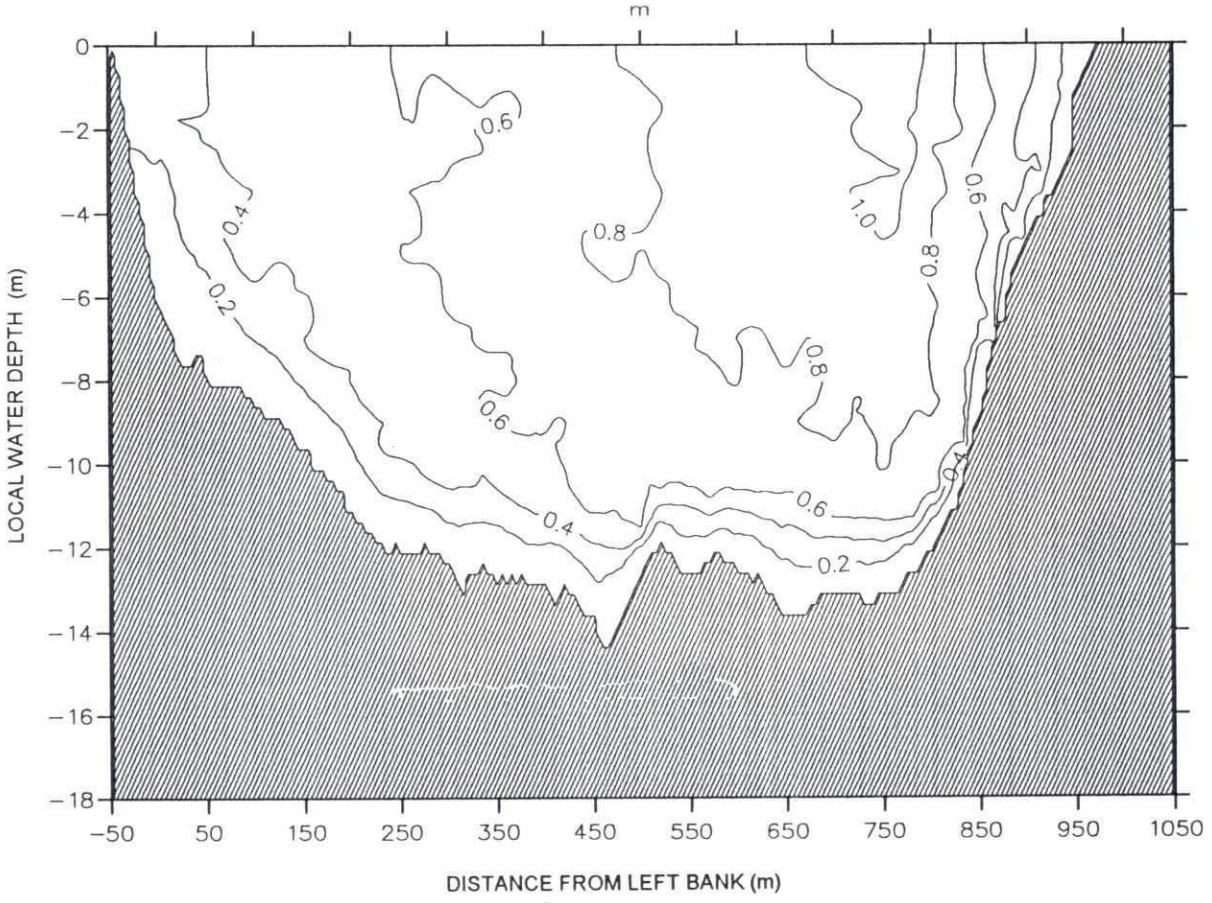
Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T06	Date : 01 Aug 1995 Init : cas/kah	Cross-sectional distribution of flow velocity	page 4.6



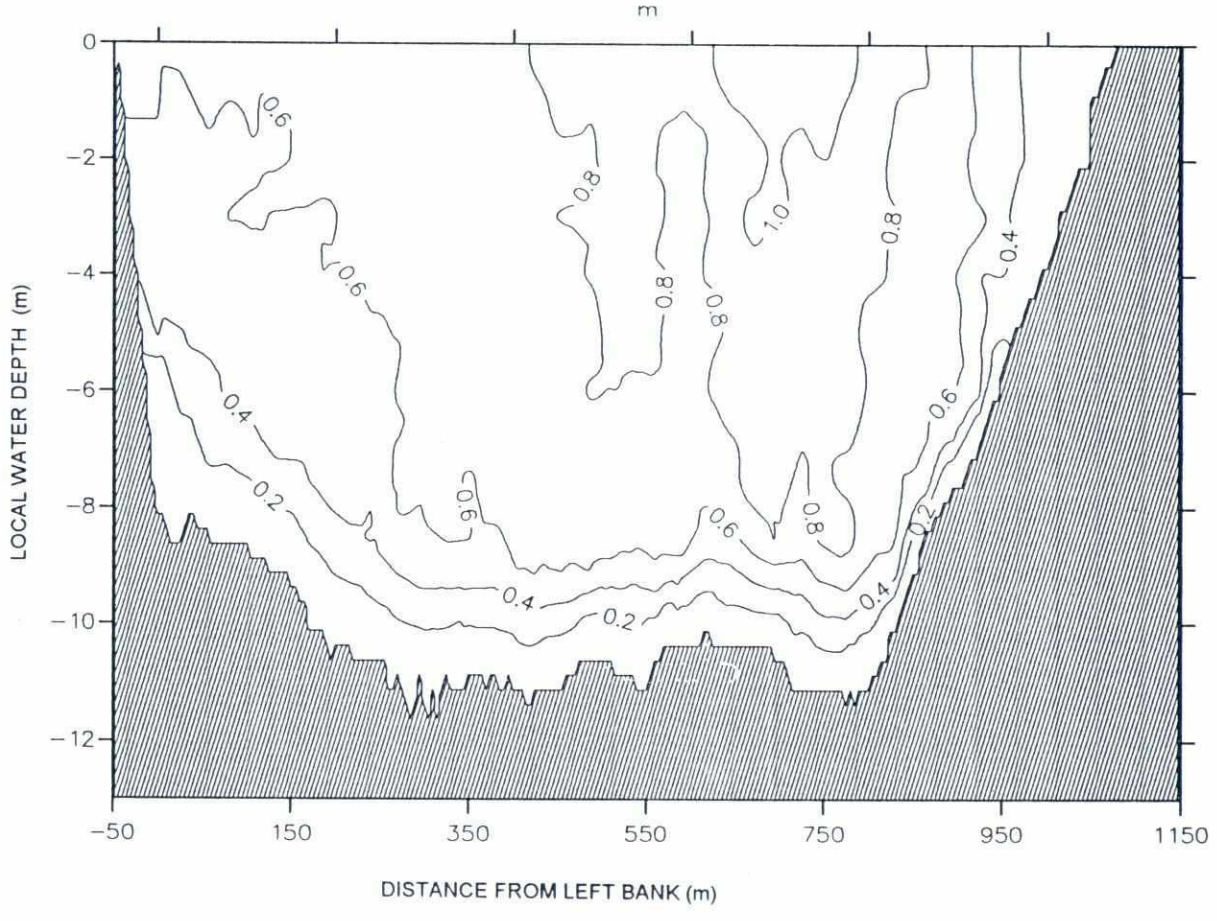
Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T07	Date : 01 Aug 1995	Cross-sectional distribution of flow velocity	page 4.7
	Init : cas/kah		



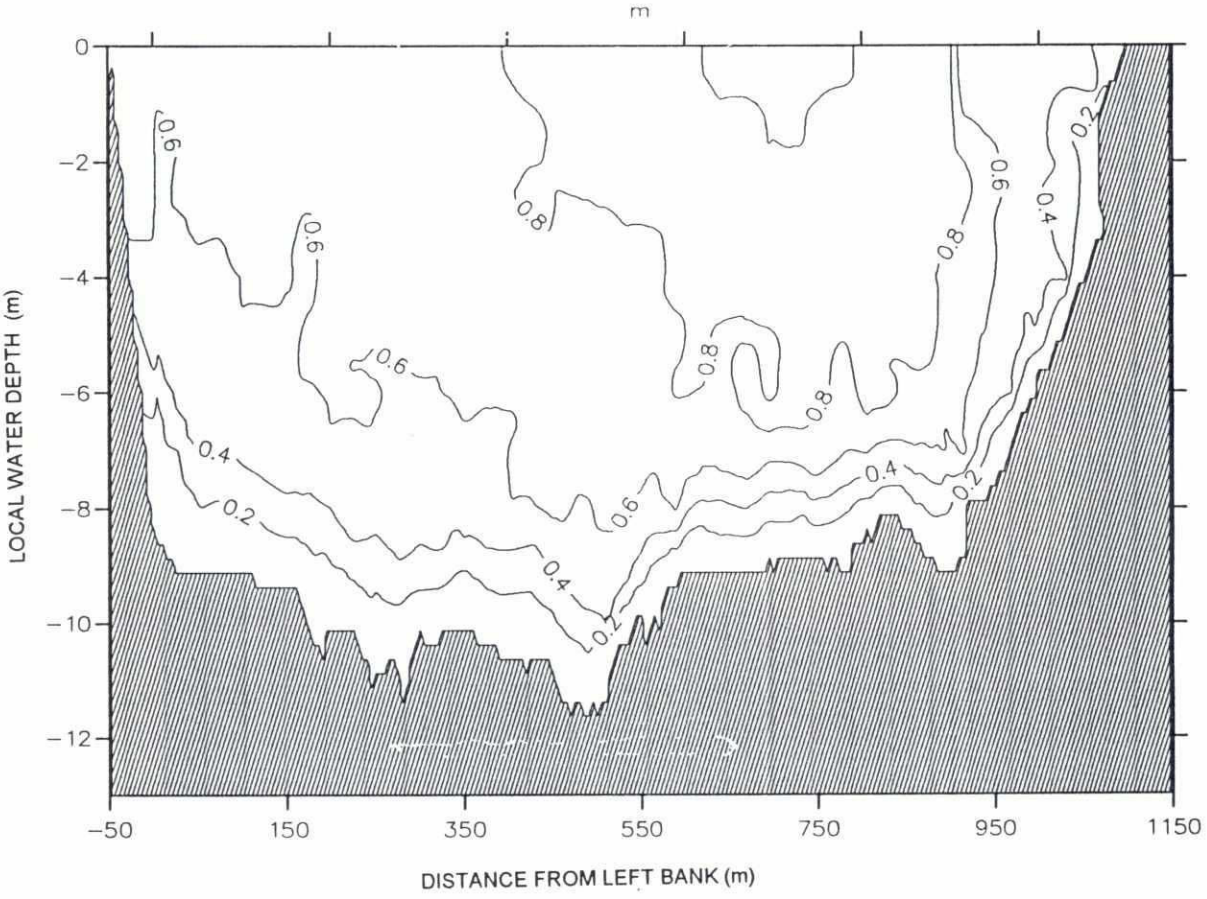
Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T08	Date : 01 Aug 1995 Init : cas/kah	Cross-sectional distribution of flow velocity	page 4.8



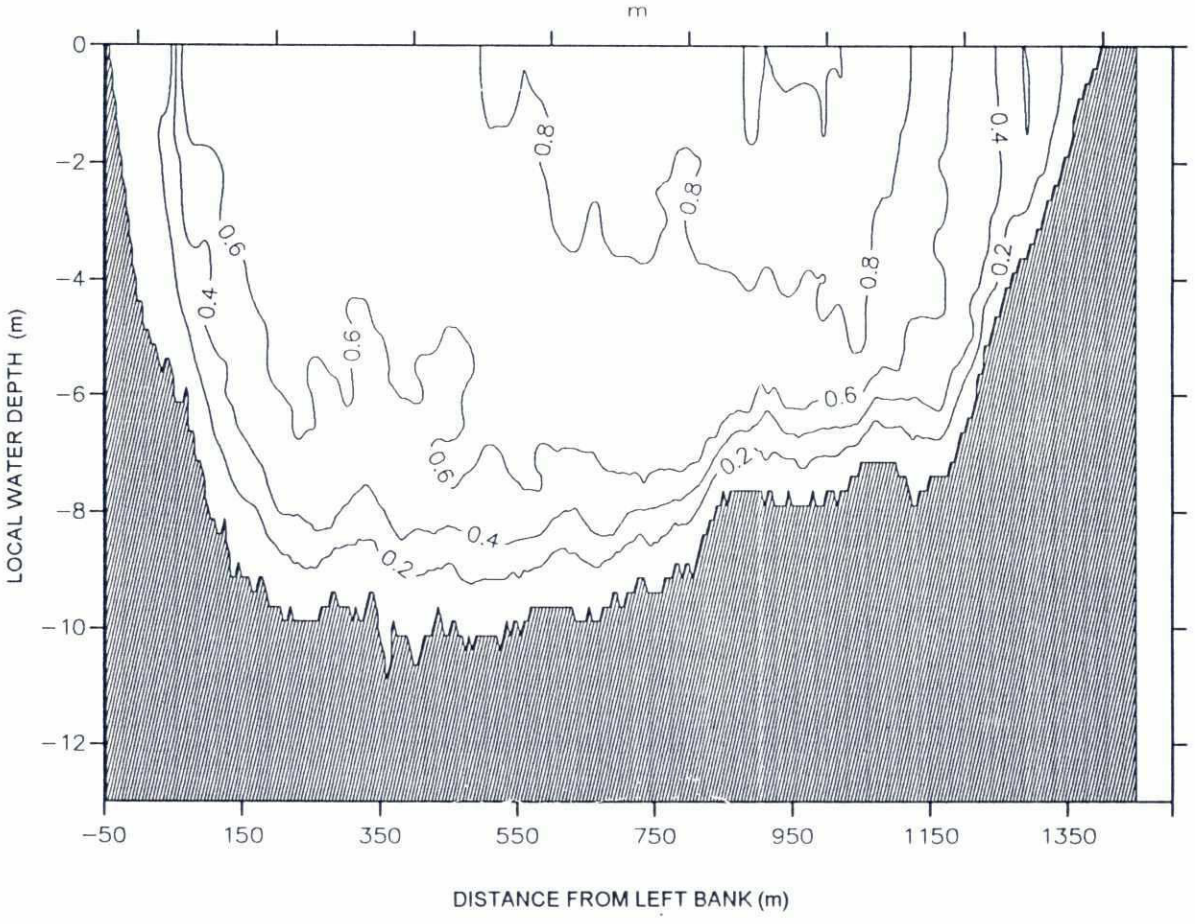
Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T09	Date : 01 Aug 1995	Cross-sectional distribution of flow velocity	page 4.9
	Init : cas/kah		



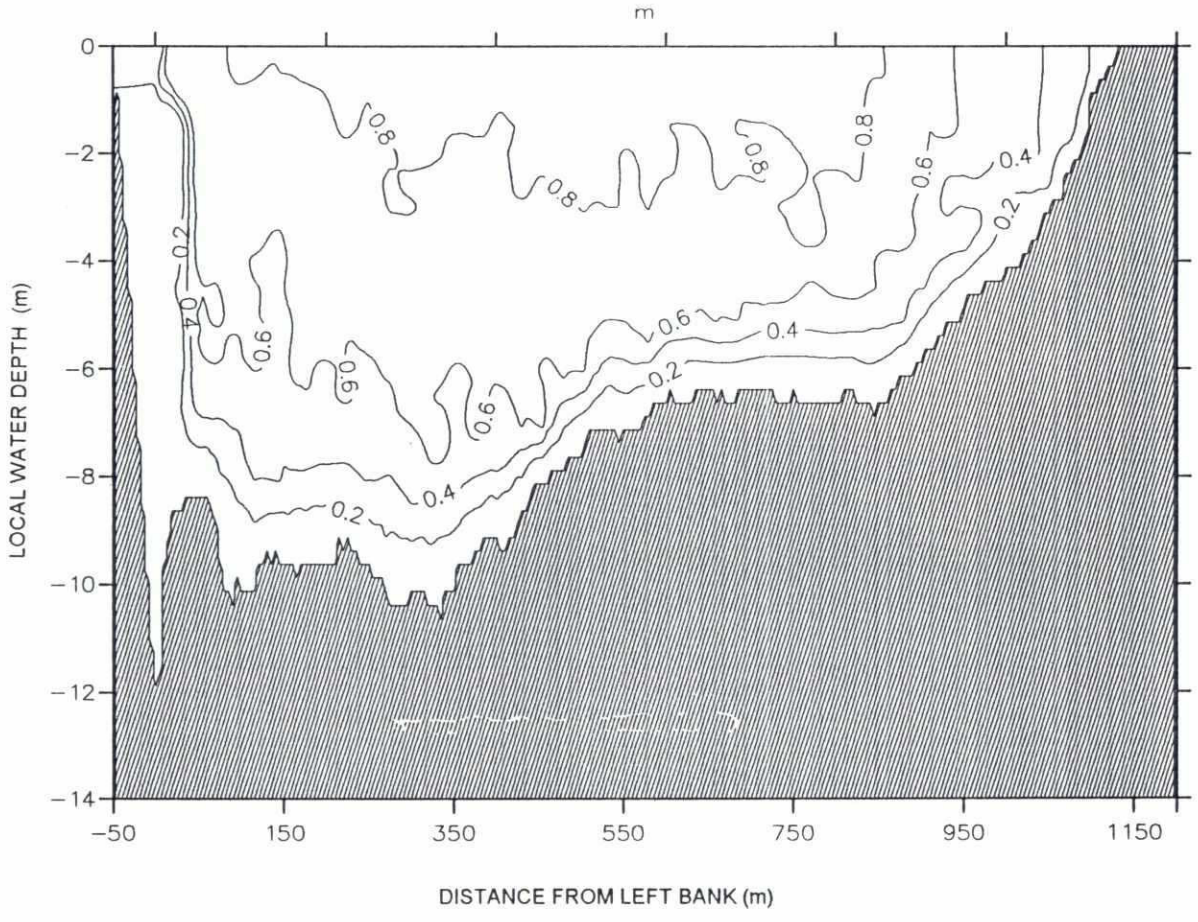
Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T10	Date : 01 Aug 1995	Cross-sectional distribution of flow velocity	page 4.10
	Init : cas/kah		



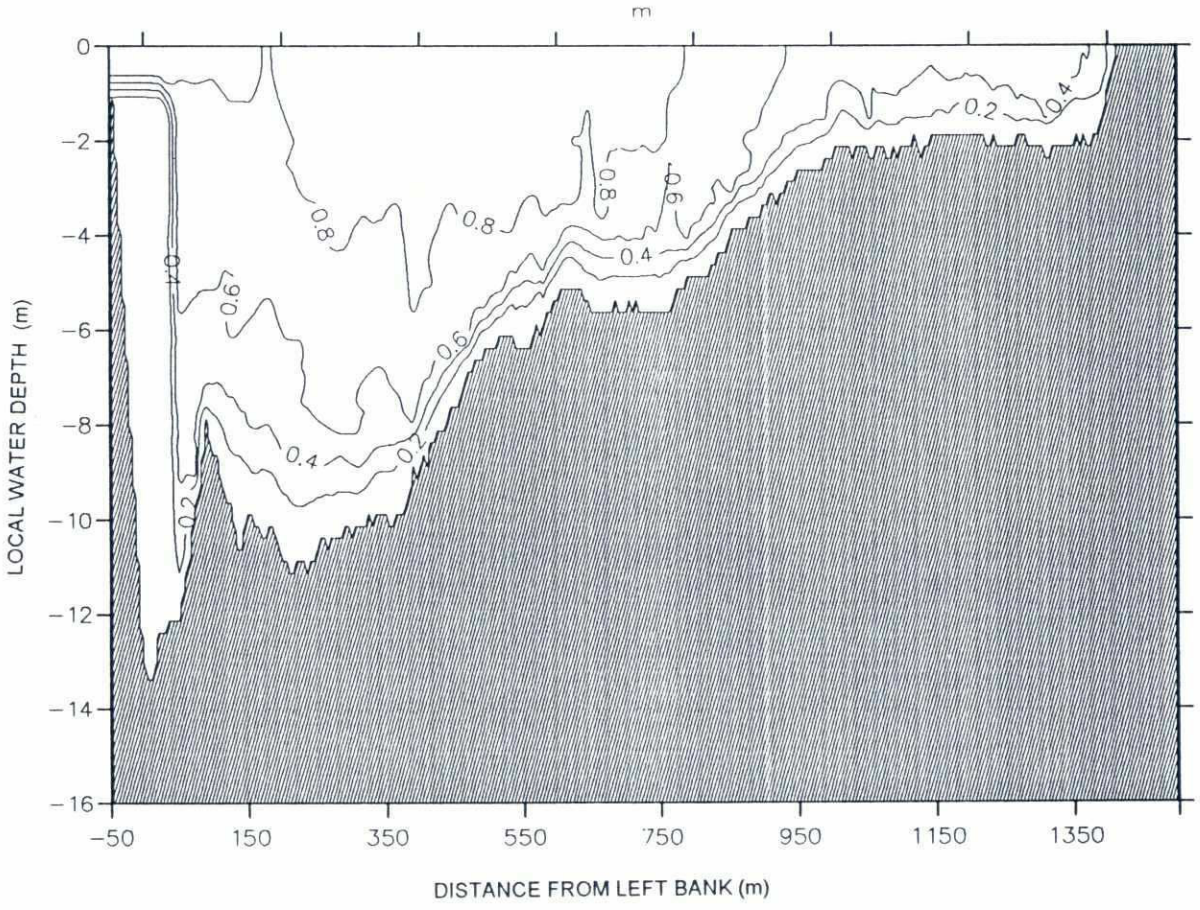
Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T14	Date : 01 Aug 1995	Cross-sectional distribution of flow velocity	page 4.11
	Init : cas/kah		



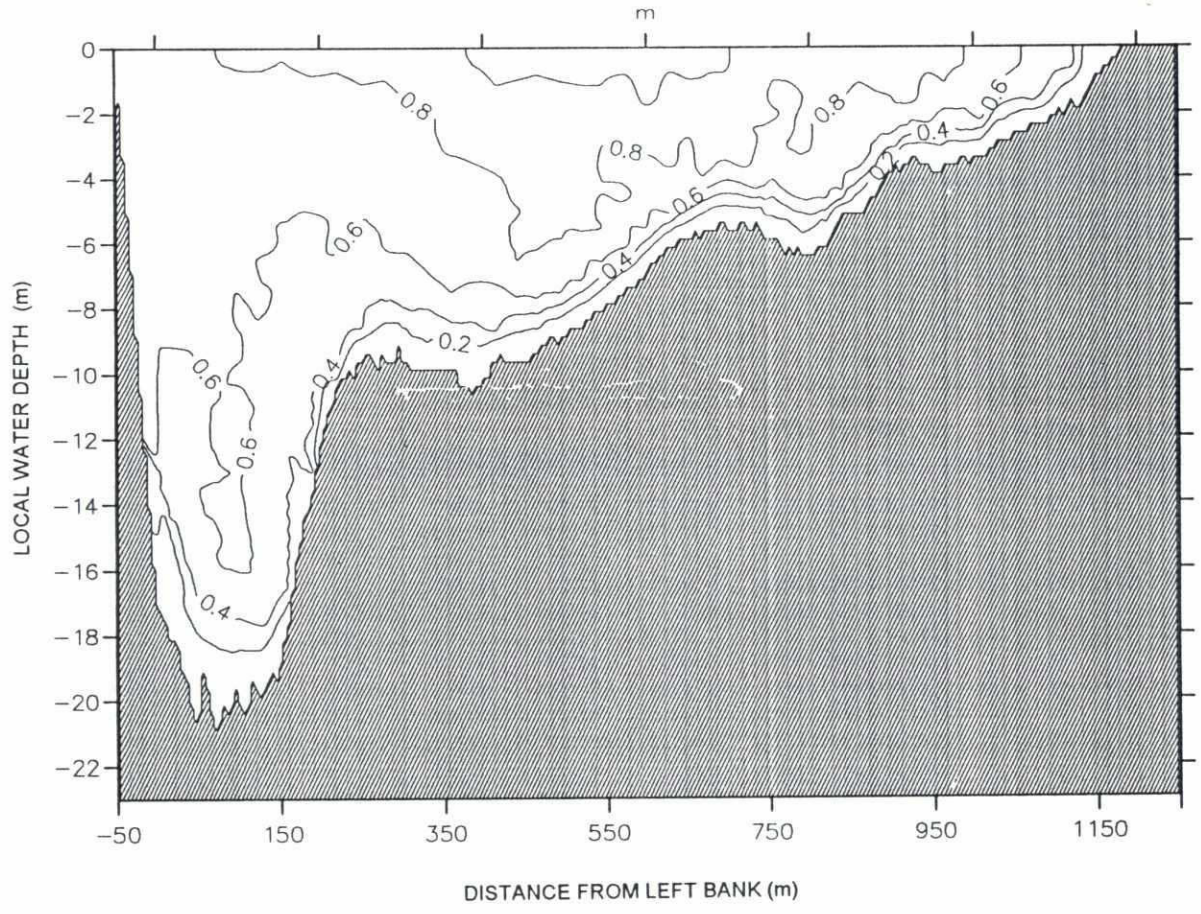
Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9033: 19 - 21 October, 1994	
		Gorai Offtake	
File : H4AL3T15	Date : 01 Aug 1995	Cross-sectional distribution of flow velocity	page 4.12
	Init : cas/kah		



Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9033: 19 - 21 October, 1994 Gorai Offtake	
File : H4AL3T16	Date : 01 Aug 1995 Init : cas/kah	Cross-sectional distribution of flow velocity	page 4.13



Iso-velocity contours (m/s)
Water-level : 9.25 m + PWD measured at the station indicated on page 1.2

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9033: 19 - 21 October, 1994 Gorai Offtake	
File : H4AL3T17	Date : 01 Aug 1995 Init : cas/kah	Cross-sectional distribution of flow velocity	page 4.14

Andreasen settling tube

Channel	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm	Weight percent > 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)

van Veen bed samples

Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm	Weight percent > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
1	2	9410191116-1209	20.7	16.087	83.913	0.054	0.075	0.139
	6	9410191344-1428	5.6	0.268	99.732	0.132	0.159	0.239
	8	9410191224-1244	5.6	8.844	91.156	0.064	0.078	0.124

Table 5.2 : Grain size of bed material

Helley - Smith

Channel	Vertical	Time (YYMMDDHHMM)	Depth (m)	Weight percent < 0.06 mm	Weight percent > 0.06 mm	D35 (mm)	D50 (mm)	D65 (mm)
1	2	9410191116-1209	20.75	0.129	99.871	0.311	0.358	0.412
	2	9410191116-1209	20.75	4.182	95.818	0.254	0.305	0.366
	3	9410191545-1558	6.25	5.095	94.905	0.225	0.284	0.343
	3	9410191545-1558	6.25	8.026	91.974	0.227	0.288	0.345
	4	9410191510-1532	6.01	0.738	99.262	0.223	0.276	0.331
	4	9410191510-1532	6.01	0.849	99.151	0.213	0.267	0.323
	5	9410191440-1456	4.30	0.559	99.441	0.172	0.199	0.231
	5	9410191440-1456	4.30	0.373	99.627	0.170	0.195	0.224
	6	9410191344-1428	4.04	0.501	99.499	0.165	0.188	0.214
	6	9410191344-1428	4.04	0.485	99.515	0.164	0.185	0.210
	7	9410191404-1429	3.65	3.095	96.905	0.162	0.192	0.227
	7	9410191404-1429	3.65	1.519	98.481	0.184	0.233	0.297
	8	9410191224-1244	5.86	5.810	94.190	0.198	0.274	0.339
	8	9410191224-1244	5.86	8.061	91.939	0.154	0.251	0.318
	9	9410191153-1220	6.57	3.164	96.836	0.277	0.324	0.378
	9	9410191153-1220	6.57	2.660	97.340	0.248	0.299	0.359
	10	9410191119-1135	5.27	0.248	99.752	0.231	0.283	0.337

Table 5.3 : Grain sizes of bed load

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9412150910-0919	H4AJ3T09 *

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)	no data available						

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	2 6 8	6 3 3	9412151341-1432	401246 400069 399712	669599 669598 669600	23.20 4.20 6.00

Table 6.3: Suspended sediment - point sampled

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	H4AJ3T09 .ase
Echosounder data	1	QUATTRO	H4AJ3T09 .ech
Sediment transport data	1	QUATTRO	H4AJ3T09 .sed
Bed load sed. analysis	1	QUATTRO	H4AJ3T09 .bdl
Sus. sed. conc. analysis	1	QUATTRO	H4AJ3T09 .ssc
Transect plot data	1	QUATTRO	H4AJ3T09 .trs
Iso-velocity plot data	1	MIKE 21	H4AJ3T09 .ct2 H4AJ3T09 .dt2

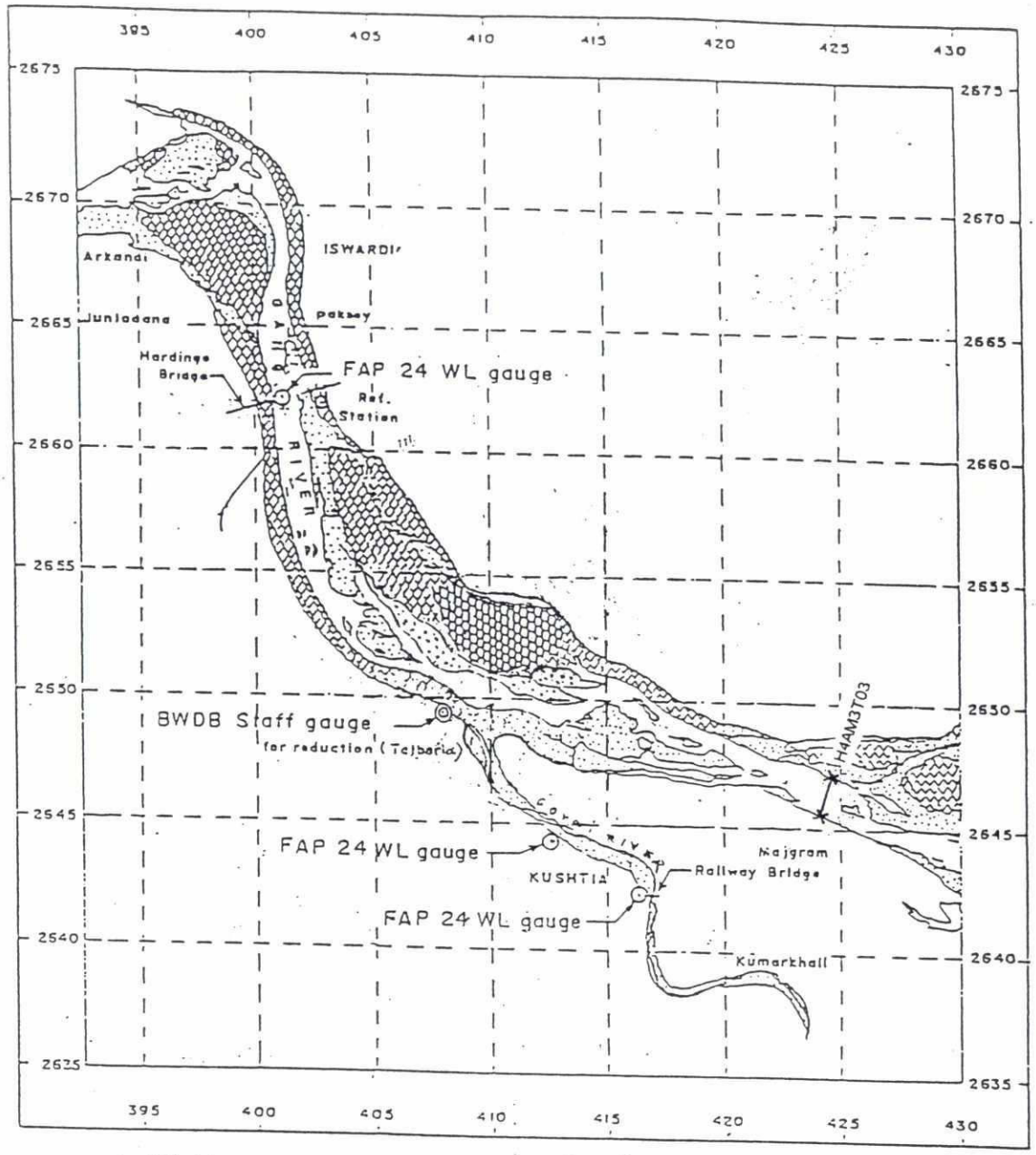
Table 7.1 PSD 24 Database file description

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	H4AL3T01 .ase
Echosounder data	1	QUATTRO	H4AL3T01 .ech
Transect plot data	1	QUATTRO	H4AL3T01 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T01 .ct2
			H4AL3T01 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T03 .ase
Echosounder data	1	QUATTRO	H4AL3T03 .ech
Transect plot data	1	QUATTRO	H4AL3T03 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T03 .ct2
			H4AL3T03 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T04 .ase
Echosounder data	1	QUATTRO	H4AL3T04 .ech
Transect plot data	1	QUATTRO	H4AL3T04 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T04 .ct2
			H4AL3T04 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T05 .ase
Echosounder data	1	QUATTRO	H4AL3T05 .ech
Transect plot data	1	QUATTRO	H4AL3T05 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T05 .ct2
			H4AL3T05 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T06 .ase
Echosounder data	1	QUATTRO	H4AL3T06 .ech
Transect plot data	1	QUATTRO	H4AL3T06 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T06 .ct2
			H4AL3T06 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T07 .ase
Echosounder data	1	QUATTRO	H4AL3T07 .ech
Transect plot data	1	QUATTRO	H4AL3T07 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T07 .ct2
			H4AL3T07 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T08 .ase
Echosounder data	1	QUATTRO	H4AL3T08 .ech
Transect plot data	1	QUATTRO	H4AL3T08 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T08 .ct2
			H4AL3T08 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T09 .ase
Echosounder data	1	QUATTRO	H4AL3T09 .ech
Transect plot data	1	QUATTRO	H4AL3T09 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T09 .ct2
			H4AL3T09 .dt2

Table 7.1 PSD 24 Database file description

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	H4AL3T10 .ase
Echosounder data	1	QUATTRO	H4AL3T10 .ech
Transect plot data	1	QUATTRO	H4AL3T10 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T10 .ct2
			H4AL3T10 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T14 .ase
Echosounder data	1	QUATTRO	H4AL3T14 .ech
Transect plot data	1	QUATTRO	H4AL3T14 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T14 .ct2
			H4AL3T14 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T15 .ase
Echosounder data	1	QUATTRO	H4AL3T15 .ech
Transect plot data	1	QUATTRO	H4AL3T15 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T15 .ct2
			H4AL3T15 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T16 .ase
Echosounder data	1	QUATTRO	H4AL3T16 .ech
Transect plot data	1	QUATTRO	H4AL3T16 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T16 .ct2
			H4AL3T16 .dt2
ADCP/S4/EMF data	1	QUATTRO	H4AL3T17 .ase
Echosounder data	1	QUATTRO	H4AL3T17 .ech
Transect plot data	1	QUATTRO	H4AL3T17 .trs
Iso-velocity plot data	1	MIKE 21	H4AL3T17 .ct2
			H4AL3T17 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

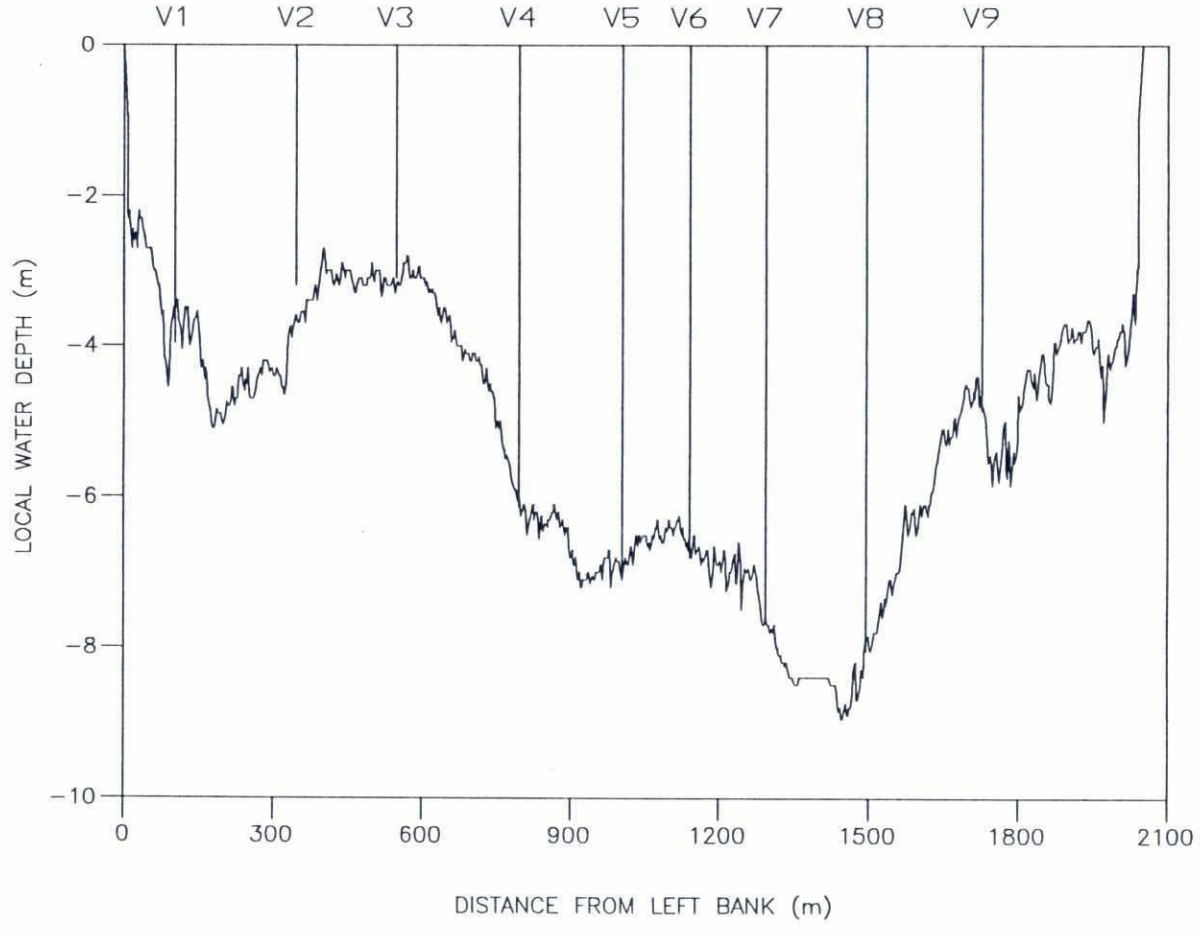
- High land
- Unstable / low char
- Cross section
- FAP 24 WL gauge
- BWDB Staff gauge

N

5000m 0

Map is based on satellite images of March 1995

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plain Coordination Organisation Commission of the European Communities	Survey Bulletin 9034: 22 October, 1994	
	Flow and sediment measurements	
	Date : 30 Aug 1995 Init : kah	Location map
		page 1.1



Water level : 9.80 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 9034: 22 October, 1994 Flow and sediment measurements	
File : H4AM3T03	Date : 30 Aug 1995 Init : kah	Cross-sections and measured verticals Channel 1	page 1.2

Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	4	-	-	-
	EMF transect	4	-	-	-
	Echo-Sounding	4	-	-	-
Vertical current profile	No.of verticals in channel	9	-	-	-
	ADCP	9	-	-	-
	S4 current meter	1	-	-	-
	Ott current meter	0	-	-	-
Vertical sediment profile	Pump bottle sampling	6	-	-	-
	Andreasen settling tube	0	-	-	-
	MEX turbidity meter	0	-	-	-
	Integrated bottle sampling	9	-	-	-
	Collapsible bag	0	-	-	-
Bed load	Dune tracking	0	-	-	-
	Helley-smith sampler	16	-	-	-
	Delft Bottle	0	-	-	-
Bed material	US BM-54 bed sampler	0	-	-	-
	Van Veen bed sampler	0	-	-	-

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	2049.21	10809.05	9.80	6682.59	19	2724

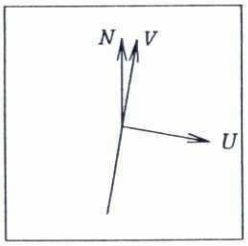
Table 2.2: Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)
Hardinge Bridge	1994-10-22	9.80

Short Description:

Sediment transport and discharge at the downstream boundary of the Ganges bathymetric survey area, and near Gorai mouth.

29a

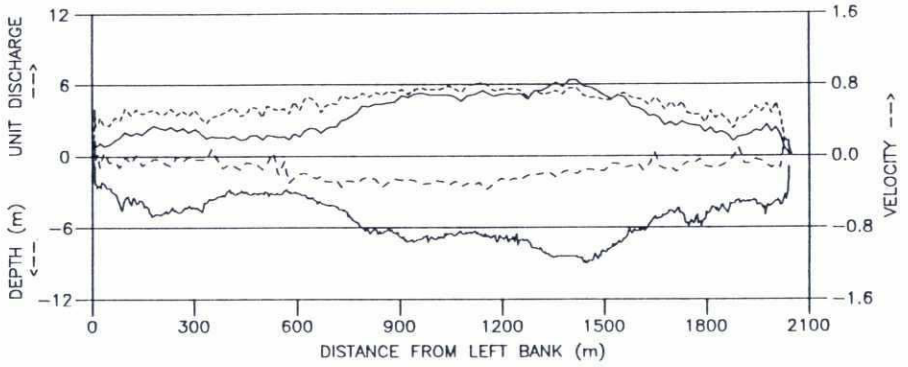


TRANSECT AZIMUTH = 10°

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 ($m^2/s/m$)

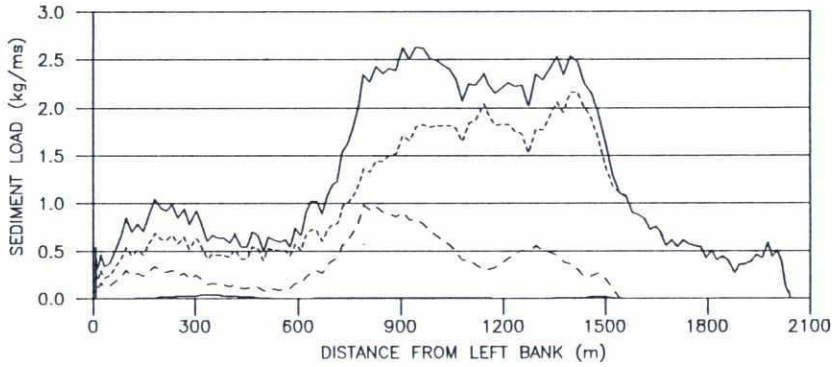
U – (m/s)

V – (m/s)

STAGE = 9.80 (m+PWD)

A = 10809 (m^2)

Q = 6682 (m^3/s)



SEDIMENT TRANSPORT

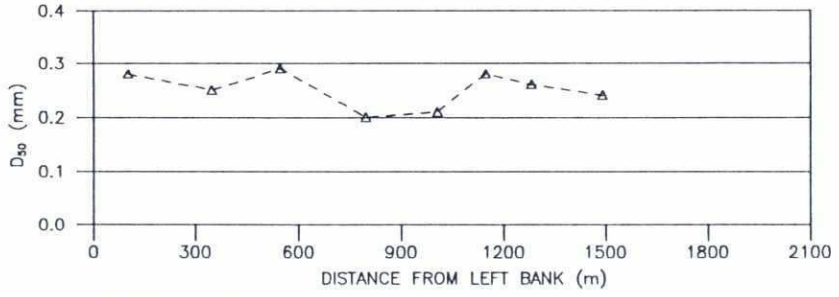
LEGEND :

S_{TOTAL} 2708.69 (kg/s)

$S_{WASH\ LOAD}$ 2074.39 (kg/s)

$S_{SUSP.\ BED}$ 615.31 (kg/s)

$S_{BED\ LOAD}$ 18.99 (kg/s)



GRAIN SIZE

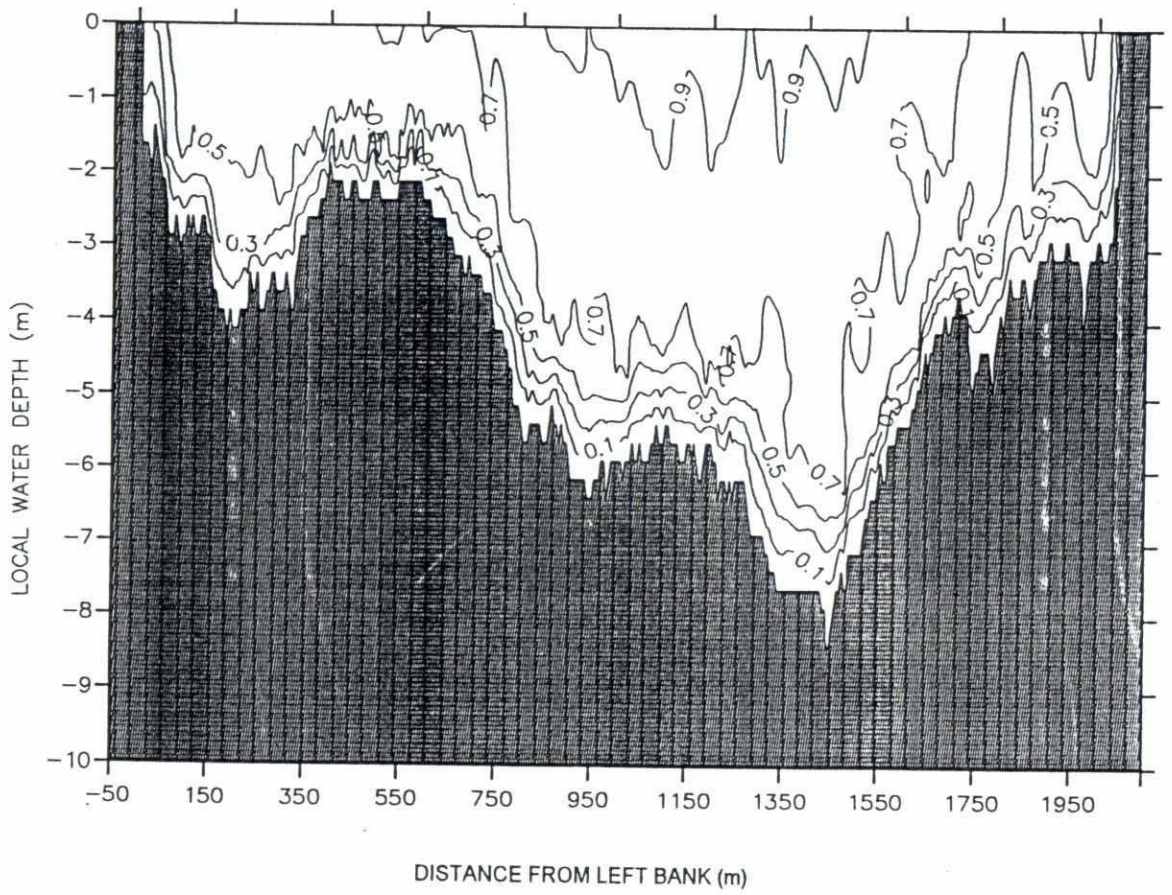
LEGEND :

$D_{50\ SUSP.}$ (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 9034: 22 October, 1994** **Flow and sediment measurements**	
File : H4AM3T03	Date : 30 Aug 1995 Init : kah	**Horizontal distribution of flow and sediments** **Channel 1**	page 3.1



Iso-velocity contours (m/s)
Water-level : 9.80 m + PWD measured at the station

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9034: 22 October, 1994 Flow and sediment measurements	
File : H4AM3T03	Date : 30 Aug 1995 Init : kah	Cross-sectional distribution of flow velocity Channel 1	page 4.1

299

Andreasen settling tube

Channel	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm	Weight percent > 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)

van Veen bed samples

Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm	Weight percent > 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	Weight percent > 0.06 mm	D35 (mm)	D50 (mm)	D65 (mm)
1	1	9410220930-0950	3.96	0.086	99.914	0.215	0.268	0.324
	1	9410220930-0950	3.96	0.106	99.894	0.239	0.288	0.341
	2	9410221000-1015	3.20	0.122	99.878	0.239	0.287	0.339
	2	9410221000-1015	3.20	0.171	99.829	0.185	0.220	0.268
	3	9410221025-1053	3.10	0.159	99.841	0.238	0.287	0.339
	3	9410221025-1053	3.10	0.351	99.649	0.252	0.295	0.347
	4	9410221102-1118	6.12	0.069	99.931	0.171	0.197	0.226
	4	9410221102-1118	6.12	0.085	99.915	0.170	0.195	0.224
	5	9410221142-1202	7.06	0.110	99.890	0.177	0.207	0.242
	5	9410221102-1118	7.06	0.235	99.765	0.176	0.206	0.242
	6	9410221142-1202	6.80	0.070	99.930	0.260	0.304	0.355
	6	9410221142-1202	6.80	1.259	98.741	0.209	0.266	0.325
	7	9410221206-1220	7.67	1.762	98.238	0.204	0.271	0.331
	7	9410221206-1220	7.67	4.565	95.435	0.184	0.255	0.316
	8	9410221206-1320	8.05	0.026	99.974	0.199	0.244	0.302
	8	9410221206-1320	8.05	0.015	99.985	0.195	0.236	0.293

Table 5.3 : Grain sizes of bed load

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9410220836-0851 9410220855-0909 9410221259-1315 9410221317-1340	H4AM3T01 H4AM3T02 H4AM3T03 * H4AM3T04

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	9410220930-0950	424285	646618	3.96	H4AM3P01 *
			2	9410221000-1015	424244	646378	3.20	H4AM3P02 *
			3	9410221025-1053	424210	646180	3.10	H4AM3P03 *
			4	9410221102-1118	424162	645937	6.12	H4AM3P04 *
			5	9410221142-1202	424127	645730	7.06	H4AM3P05 *
			6	9410221206-1220	424112	645595	6.80	H4AM2P01 **
			7	9410221206-1320	424079	645446	7.67	H4AM3P07 *
			8	9410221239-1446	424046	645247	8.05	H4AM3P08 *
			9	9410221248-1258	424003	645019	4.85	H4AM3P09 *

Table 6.2: Vertical profiles

* S4 & 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	6	6	9410221206-1220	424112	645595	6.80

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	9410220930-0950	424285	646618	3.96
		2	1	9410221000-1015	424244	646378	3.20
		3	1	9410221025-1053	424210	646180	3.10
		4	1	9410221102-1118	424162	645937	6.12
		5	1	9410221142-1202	424127	645730	7.06
		6	1	9410221206-1220	424112	645595	6.80
		7	1	9410221206-1320	424079	645446	7.67
		8	1	9410221239-1446	424046	645247	8.05
		9	1	9410221248-1258	424003	645019	4.85

Table 6.4: Suspended sediment - depth integrated

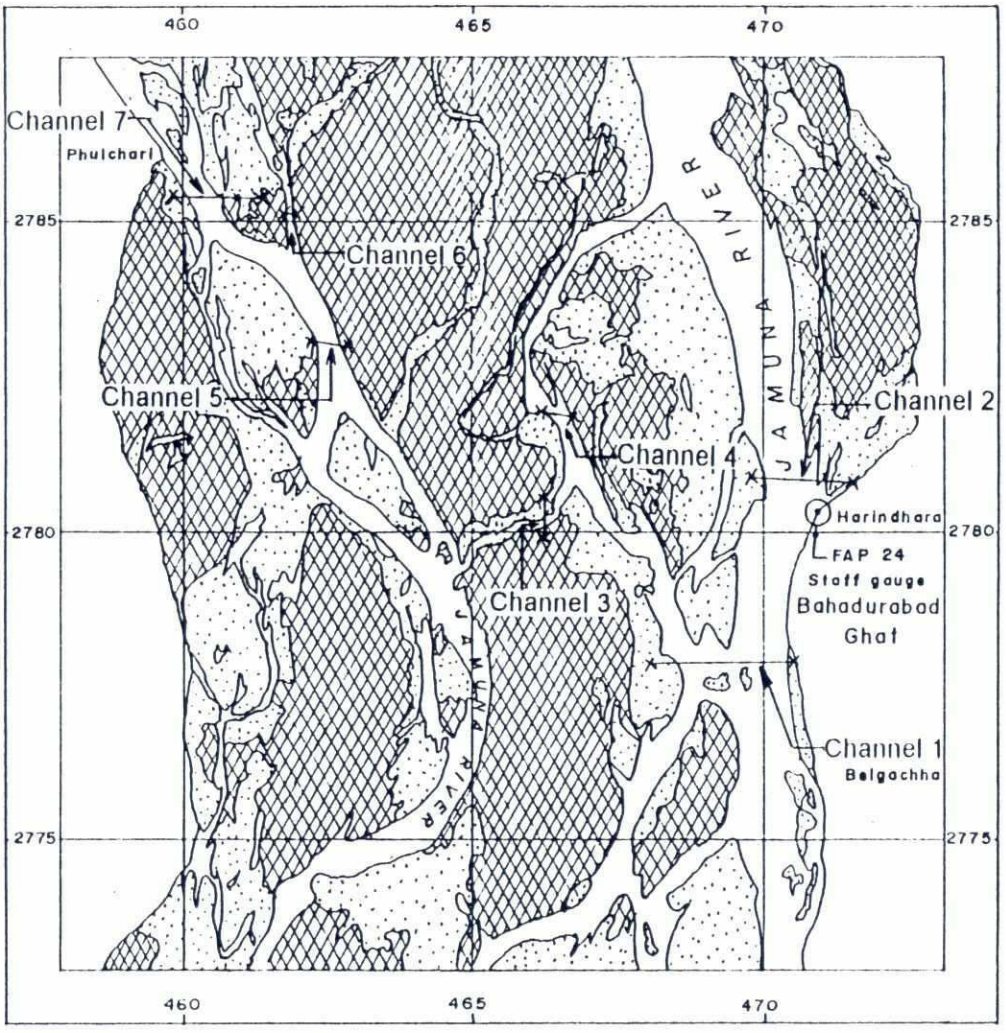
Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
Helley-Smith Sample	1	1	9410220930-0950	424286	646620	3.96	A2007
		1	9410221000-1015	424286	646620	3.96	A2209
		2	9410221025-1053	424244	646378	3.20	A110
		2	9410221102-1118	424244	646378	3.20	A1920
		3	9410221142-1202	424210	646180	3.10	A2177
		3	9410221206-1220	424210	646180	3.10	A2005
		4	9410221206-1320	424162	645937	6.12	A2172
		4	9410221239-1446	424162	645937	6.12	A2012
		5	9410221248-1258	424127	645730	7.06	A2208
		5	9410220930-0950	424127	645730	7.06	A2174
		6	9410221000-1015	424112	645595	6.80	A1929
		6	9410221025-1053	424112	645595	6.80	A1374
		7	9410221102-1118	424080	645448	7.67	A1905
		7	9410221142-1202	424080	645448	7.67	A1864
		8	9410221206-1220	424047	645250	8.05	A1875
		8	9410221206-1320	424047	645250	8.05	A3026

Table 6.5: Bed load

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	H4AM3T03 .ase
Echosounder data	1	QUATTRO	H4AM3T03 .ech
Sediment transport data	1	QUATTRO	H4AM3T03 .sed
Bed load sed. analysis	1	QUATTRO	H4AM3T03 .bdl
Sus. sed. conc. analysis	1	QUATTRO	H4AM3T03 .ssc
Transect plot data	1	QUATTRO	H4AM3T03 .trs
Iso-velocity plot data	1	MIKE 21	H4AM3T03 .ct2 H4AM3T03 .dt2

Table 7.1 PSD 24 Database file description

W A R. P. O.
LIBRARY.
DHAKA



LEGEND:

- Cross section
- Highland
- Unstable/low char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9035 : 23 October, 1994	
	Location 1 : Jamuna River, Bahadurabad	
Date : 12 Jan 1995 Init : mzh/sjr	Location map	page 1.1

Type of measurement	Method	No. of measurements in channel						
		1	2	3	4	5	6	7
Discharge	ADCP transect	2	2	2	2	2	2	2
	EMF transect	-	-	-	-	-	-	-
	Echo-Sounding	-	-	-	-	-	-	-
Vertical current profile	No.of verticals in channel	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-
	Collapsible bag	-	-	-	-	-	-	-
Bed load	Dune tracking	-	-	-	-	-	-	-
	Helley-Smith sampler	-	-	-	-	-	-	-
	Delft Bottle	-	-	-	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-	-	-	-
	Van Veen bed sampler	-	-	-	-	-	-	-

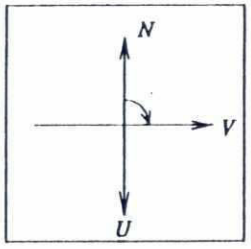
Table 2.1: Survey programme as made

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	2645	13172	16.61	12205	-	-
Channel 2	1042	8914	16.61	10118	-	-
Channel 3	790	3872	16.61	1187	-	-
Channel 4	386	1789	16.61	1575	-	-
Channel 5	922	4918	16.61	2527	-	-
Channel 6	353	1631	16.61	1134	-	-
Channel 7	1282	4453	16.61	2129	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	23 Oct 94	16.61	FAP 24
	Channel 2	23 Oct 94	16.61	FAP 24
	Channel 3	23 Oct 94	16.61	FAP 24
	Channel 4	23 Oct 94	16.61	FAP 24
	Channel 5	23 Oct 94	16.61	FAP 24
	Channel 6	23 Oct 94	16.61	FAP 24
	Channel 7	23 Oct 94	16.61	FAP 24

Table 2.3: Water-levels

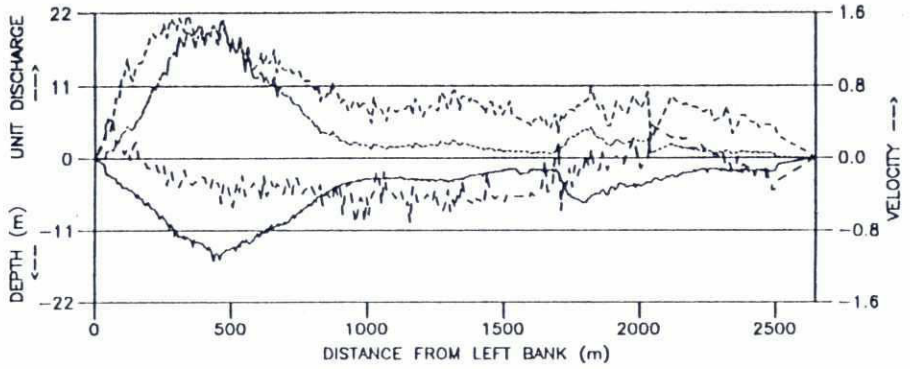


TRANSECT AZIMUTH = 90°

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 (m^2/s.m)

U (m/s)

V (m/s)

STAGE = 16.61 (m+PWD)

A = 13172 (m^2)

Q = 12205 (m^3/s)

FLOW

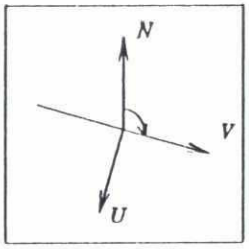
Sample not collected

SEDIMENT TRANSPORT

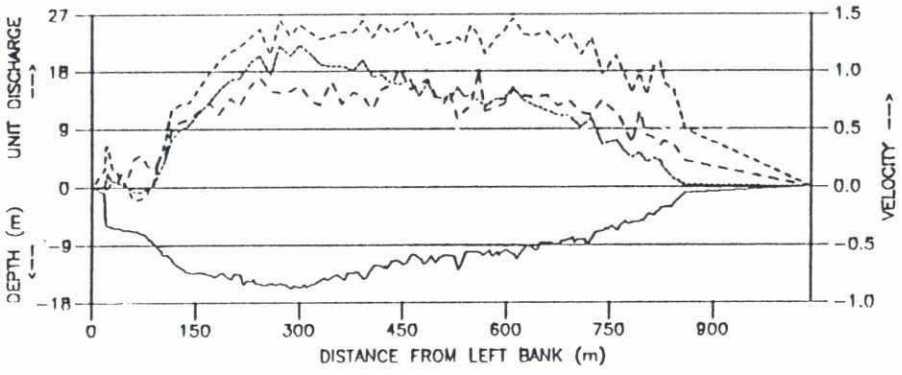
Sample not collected

GRAIN SIZE

FAP 24 DELFT · DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T16	Date : 12 Jan 1995	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 1	31



TRANSECT AZIMUTH = 106°
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 (m²/s.m)
U (m/s)
V (m/s)
STAGE = 16.61 (m+PWD)
A = 8914 (m²)
Q = 10118 (m³/s)

FLOW

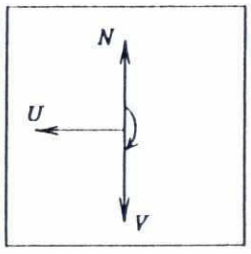
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T02	Date : 12 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2	page 3.2

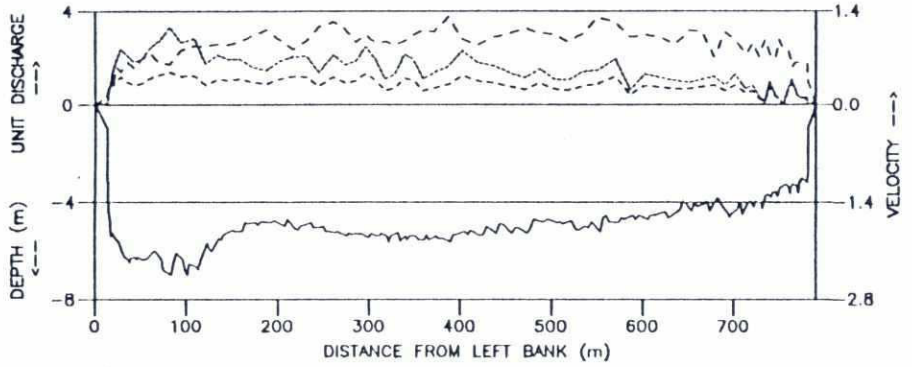


TRANSECT AZIMUTH = 180°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 16.61 (m+PWD)

A = 3872 (m²)

Q = 1187 (m³/s)

FLOW

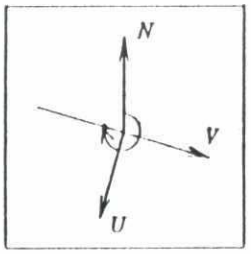
Sample not collected

SEDIMENT TRANSPORT

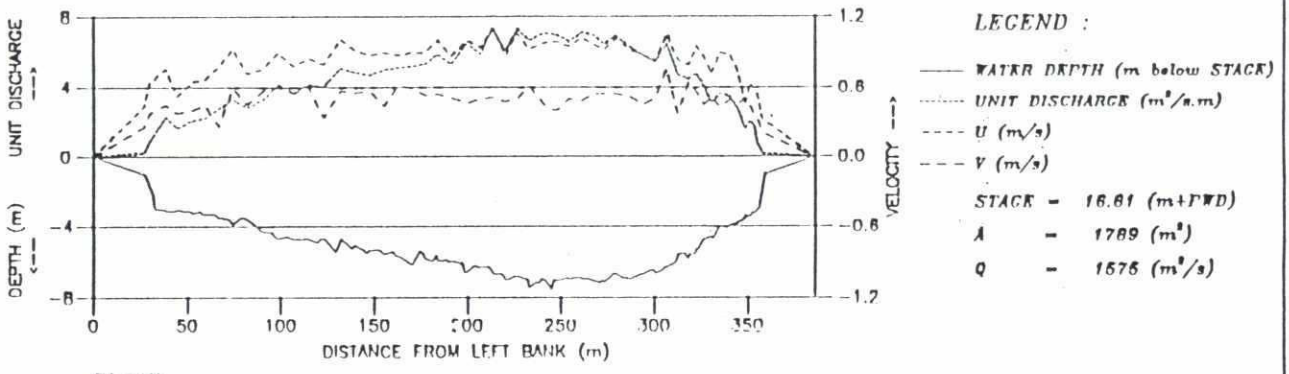
Sample not collected

GRAIN SIZE

FAP 24 DELFT · DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T14	Date : 12 Jan 1995	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 3	33



TRANSECT AZIMUTH = 286°
U - VELOCITY NORMAL TO TRANSECT (m/s)
V - VELOCITY PARALLEL TO TRANSECT (m/s)
N - MAGNETIC NORTH



FLOW

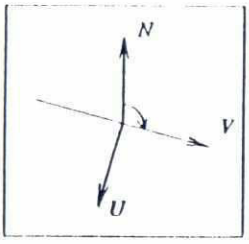
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Flow Coordination Organization Commission of the European Communities		Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T04	Date : 12 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 4	page 34

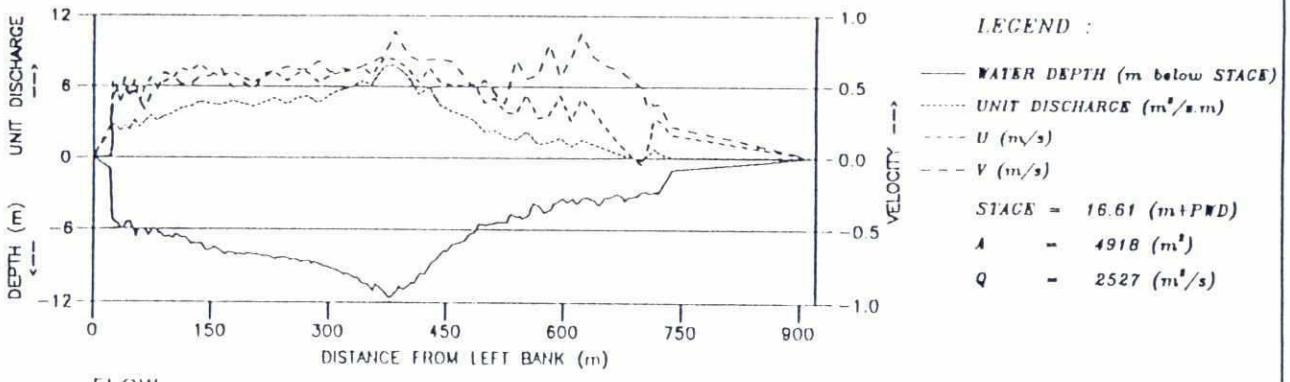


TRANSECT AZIMUTH = 106°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 16.61 (m+PWD)

A = 4918 (m²)

Q = 2527 (m³/s)

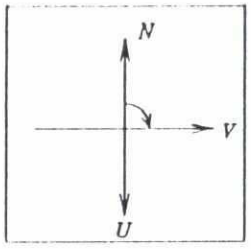
FLOW

Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

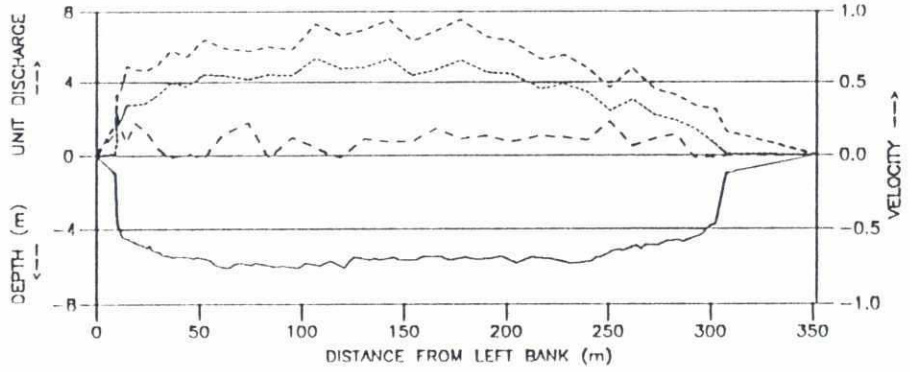


TRANSECT AZIMUTH = 90°

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 (m^2/s.m)

U (m/s)

V (m/s)

STAGE = 16.61 (m+PWD)

A = 1631 (m^2)

Q = 1134 (m^3/s)

FLOW

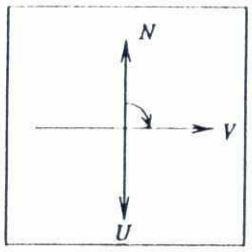
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File B4AN1T10	Date 12 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 6	page 36

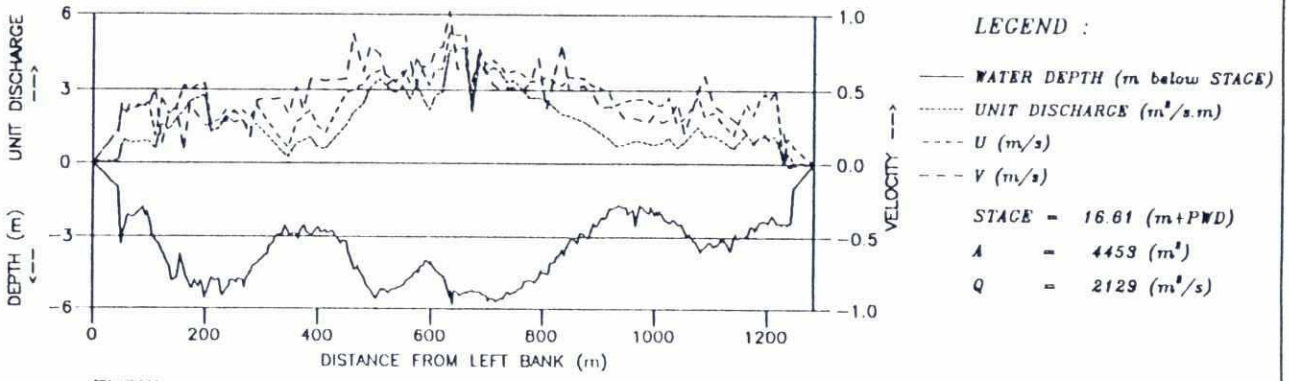


TRANSECT AZIMUTH = 90°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

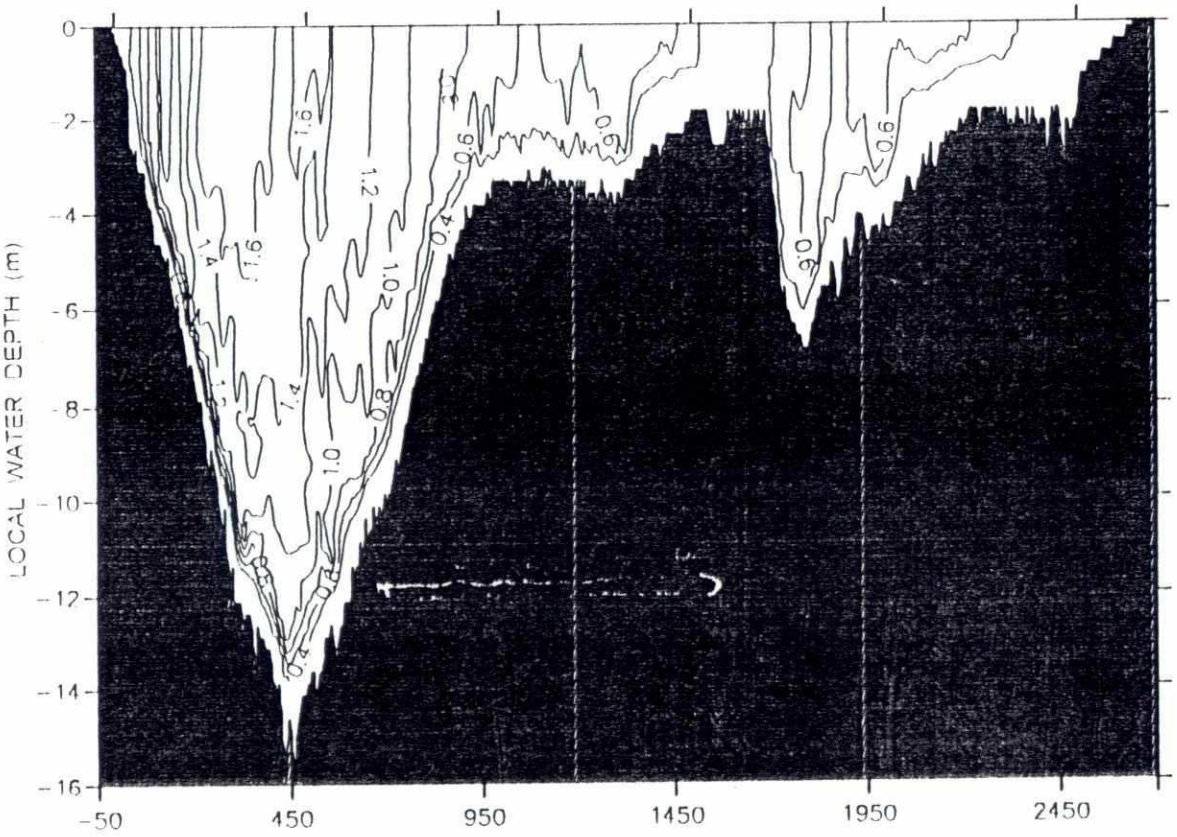
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

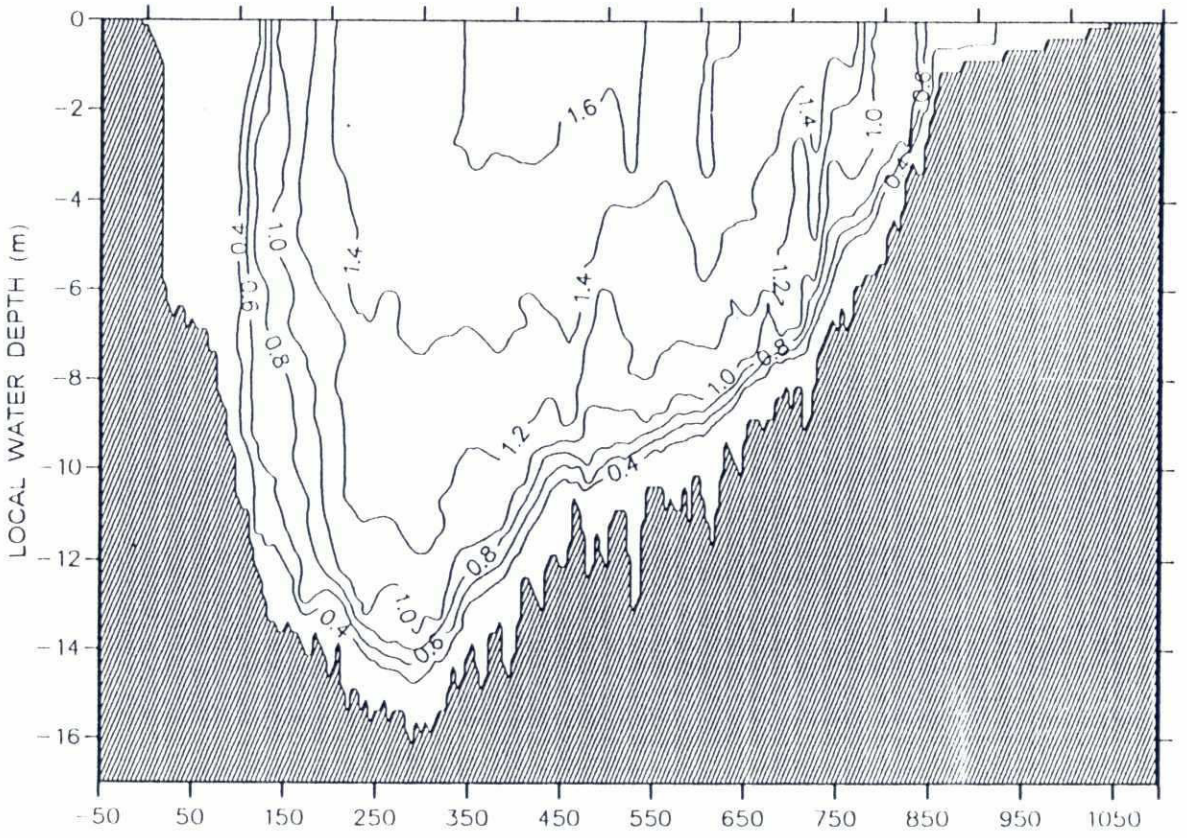
GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File B4AN1T12	Date : 12 Jan 1995 Init mzh/sjr	Horizontal distribution of flow and sediments Channel 7	page 37



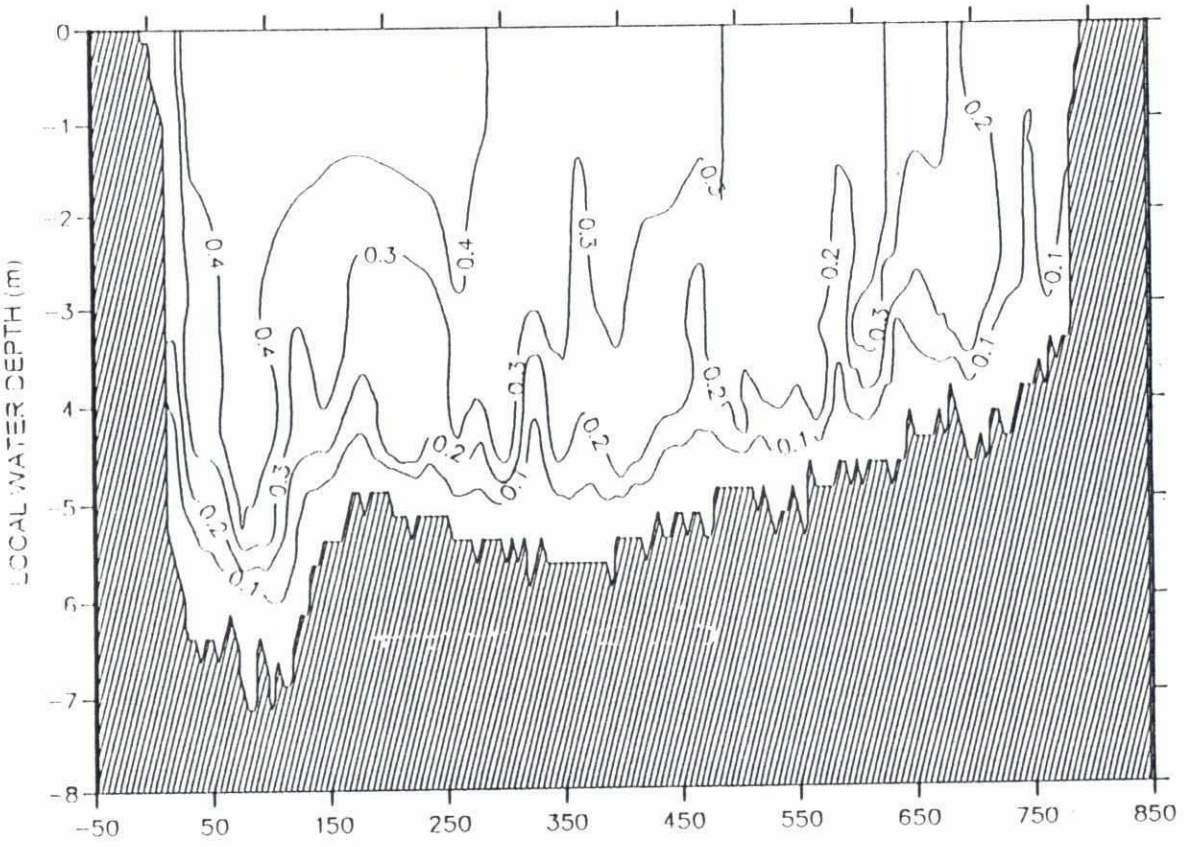
Iso-velocity contours (m/s)
Water level : 16.61 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T16	Date : 06 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 4.1



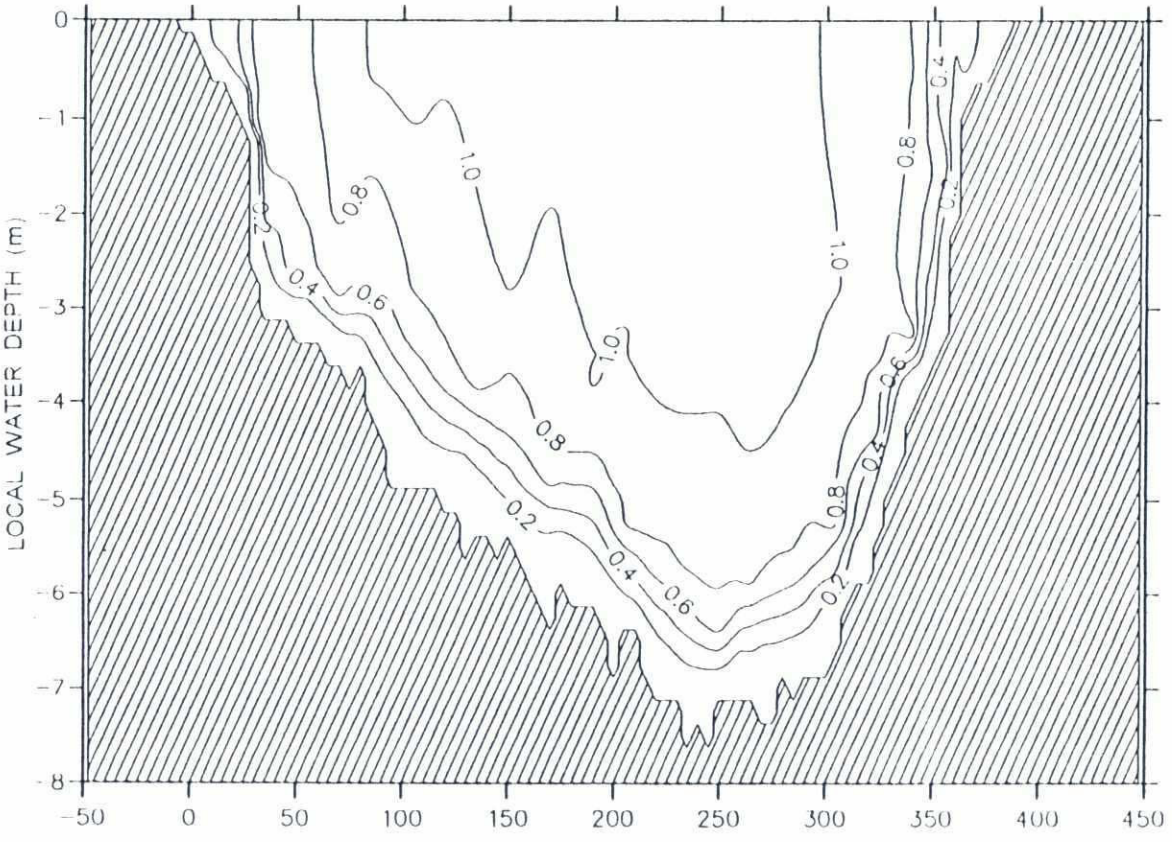
Iso-velocity contours (m/s)
Water level : 16.61 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T02	Date : 06 Sep 1995	Cross-sectional distribution of flow velocity	page 42
	Init : mzh/sjr	Channel 2	



Iso-velocity contours (m/s)
Water level : 16.61 m + PWD measured at the station indicated on Page 1.1

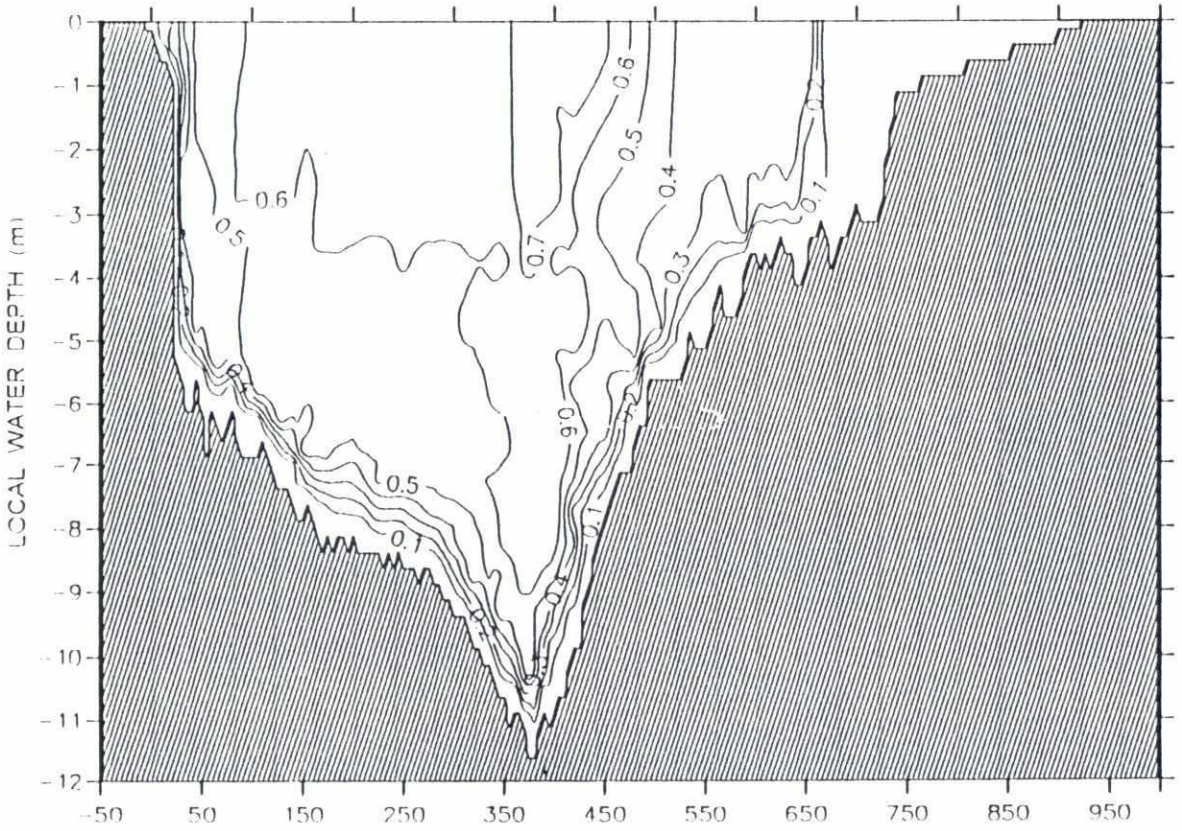
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T14	Date : 06 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 3	page 4.3



DISTANCE FROM LEFT BANK (m)

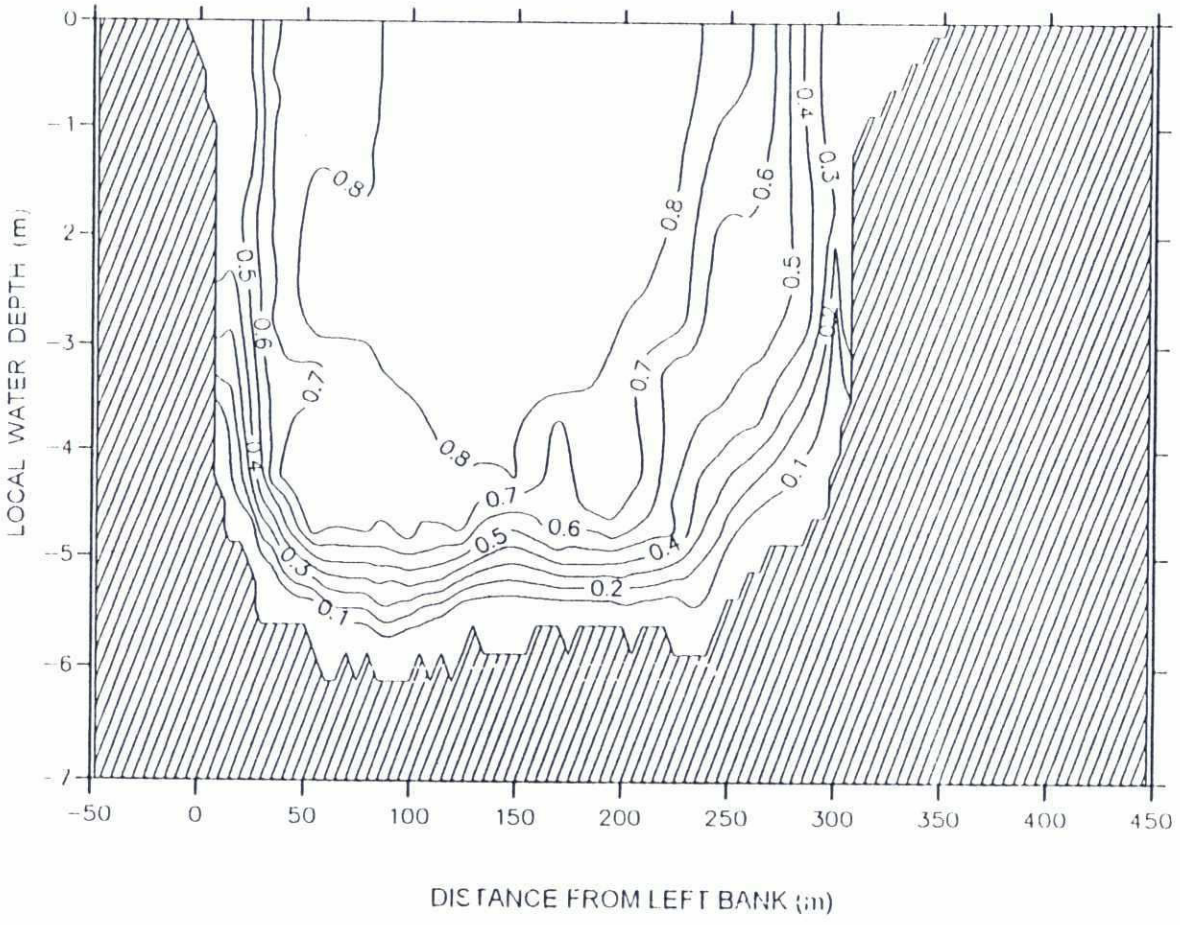
Iso-velocity contours (m/s)
Water level : 16.61 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9035 : 23 October, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T04	Date : 06 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 4	page 4 4



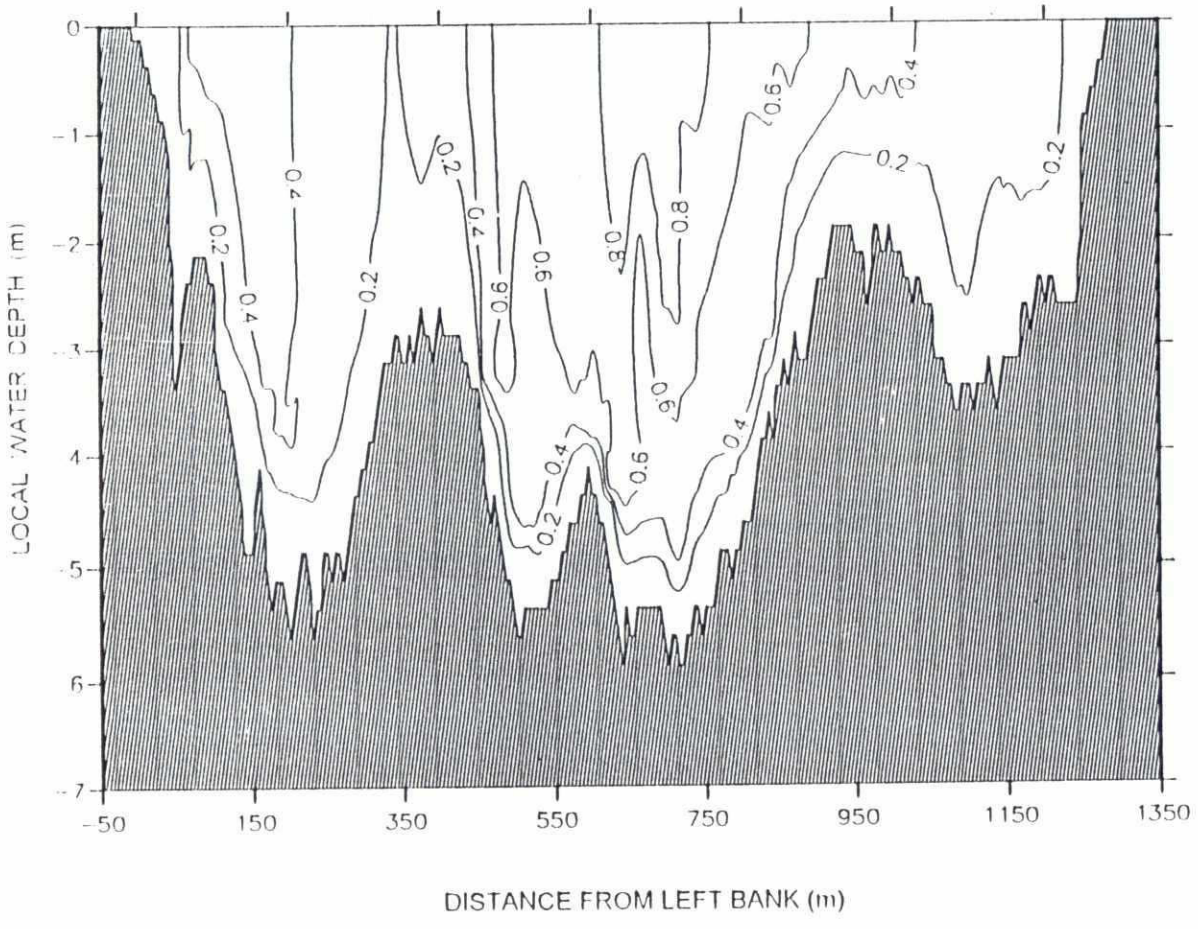
Iso-velocity contours (m/s)
Water level : 16.61 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9035 : 23 October, 1994 Location 1 : Jamuna River, Bahadurabad	
File B4AN1T07	Date : 06 Sep 1995 Init mzh/sjr	Cross-sectional distribution of flow velocity Channel 5	page 4.5



Iso-velocity contours (m/s)
Water level : 16.61 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 9035 : 23 October, 1994 Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T10	Date : 06 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 6	page 46



Iso-velocity contours (m/s)
Water level : 16.61 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 9035 : 23 October, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4AN1T12	Date : 06 Sep 1995	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 7	4.7

Andreasen settling tube

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

Table 5.2 : Grain size of bed material

Helley - Smith

Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth	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

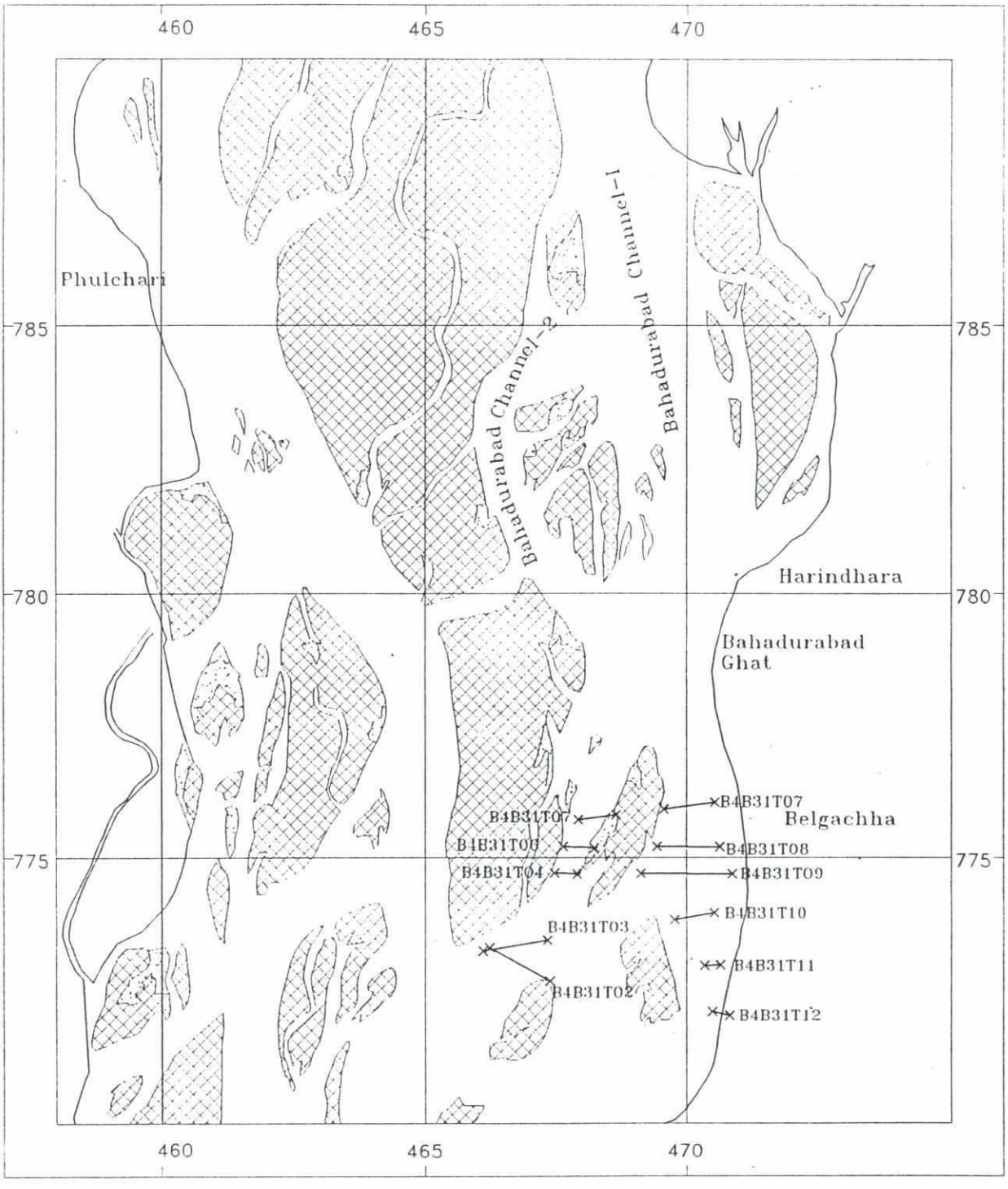
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9410231628-1645	B4AN1T15
		9410231648-1710	B4AN1T16 *
	2	9410230937-0945	B4AN1T01
		9410230952-0958	B4AN1T02 *
	3	9410231512-1519	B4AN1T13
		9410231524-1530	B4AN1T14 *
	4	9410231105-1110	B4AN1T04 *
		9410231114-1117	B4AN1T05
	5	9410231213-1219	B4AN1T07 *
		9410231222-1229	B4AN1T08
	6	9410231341-1344	B4AN1T09
		9410231348-1350	B4AN1T10 *
	7	9410231413-1423	B4AN1T11
		9410231426-1434	B4AN1T12 *

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B4AN1T16 .ase
ADCP/S4/EMF data	2	QUATTRO	B4AN1T02 .ase
ADCP/S4/EMF data	3	QUATTRO	B4AN1T14 .ase
ADCP/S4/EMF data	4	QUATTRO	B4AN1T04 .ase
ADCP/S4/EMF data	5	QUATTRO	B4AN1T07 .ase
ADCP/S4/EMF data	6	QUATTRO	B4AN1T10 .ase
ADCP/S4/EMF data	7	QUATTRO	B4AN1T12 .ase
Echosounder data	1	QUATTRO	B4AN1T16 .ech
Echosounder data	2	QUATTRO	B4AN1T02 .ech
Echosounder data	3	QUATTRO	B4AN1T14 .ech
Echosounder data	4	QUATTRO	B4AN1T04 .ech
Echosounder data	5	QUATTRO	B4AN1T07 .ech
Echosounder data	6	QUATTRO	B4AN1T10 .ech
Echosounder data	7	QUATTRO	B4AN1T12 .ech
Transect plot data	1	QUATTRO	B4AN1T16 .trs
Transect plot data	2	QUATTRO	B4AN1T02 .trs
Transect plot data	3	QUATTRO	B4AN1T14 .trs
Transect plot data	4	QUATTRO	B4AN1T04 .trs
Transect plot data	5	QUATTRO	B4AN1T07 .trs
Transect plot data	6	QUATTRO	B4AN1T10 .trs
Transect plot data	7	QUATTRO	B4AN1T12 .trs
Iso-velocity plot data	1	MIKE 21	B4AN1T16 .ct2
		MIKE 21	B4AN1T16 .dt2
Iso-velocity plot data	2	MIKE 21	B4AN1T02 .ct2
		MIKE 21	B4AN1T02 .dt2
Iso-velocity plot data	3	MIKE 21	B4AN1T14 .ct2
		MIKE 21	B4AN1T14 .dt2
Iso-velocity plot data	4	MIKE 21	B4AN1T04 .ct2
		MIKE 21	B4AN1T04 .dt2
Iso-velocity plot data	5	MIKE 21	B4AN1T07 .ct2
		MIKE 21	B4AN1T07 .dt2
Iso-velocity plot data	6	MIKE 21	B4AN1T10 .ct2
		MIKE 21	B4AN1T10 .dt2
Iso-velocity plot data	7	MIKE 21	B4AN1T12 .ct2
		MIKE 21	B4AN1T12 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

- High land
- Low char
- Cross section

N

5000m 2500m 0

Map is based on SPOT images of October 1994

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9037: 04 November, 1994	
		Jamuna River, Bifurcation flow	
	Date : 30 May 1996	Location map	page 1.1
	Init : kah		

Type of measurement	Method	No. of measurements in Lines							
		BT6X 001	BT6X 002	BT6X 003	BT6X 004	BT6X 005	BT6X 006	BT6X 007	BT6X 008
Discharge	ADCP transect	2	2	2	2	2	1	1	1
	EMF transect	2	2	2	2	2	1	1	1
	Echo-Sounding	2	2	2	2	2	1	1	1
Vertical current profile	No.of verticals in channel	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-
	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

Transect name	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)
b4b43t02	1375.08	5060.58	15.39	3976.55	-	-
b4b43t03	1327.71	6220.42	15.39	2655.01	-	-
b4b43t04	515.52	3980.34	15.39	2574.41	-	-
b4b43t05	647.03	3976.76	15.39	2615.22	-	-
b4b43t06	756.89	3836.48	15.39	2484.85	-	-
b4b43t07	1028.12	6299.65	15.39	5719.82	-	-
b4b43t08	1355.41	6577.05	15.39	5585.34	-	-
b4b43t09	1851.04	7203.69	15.39	5921.66	-	-
b4b43t10	1561.41	3494.81	15.39	3046.10	-	-
b4b43t11	668.51	1733.24	15.39	1800.57	-	-
b4b43t12	404.23	2611.60	15.39	2854.45	-	-
					-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	04 Nov 94	15.39	FAP24

Table 2.3 : Water levels

Short Description :

Bifurcation flow patterns. Measurement of the flow division at a bar in order to determine secondary flow patterns.

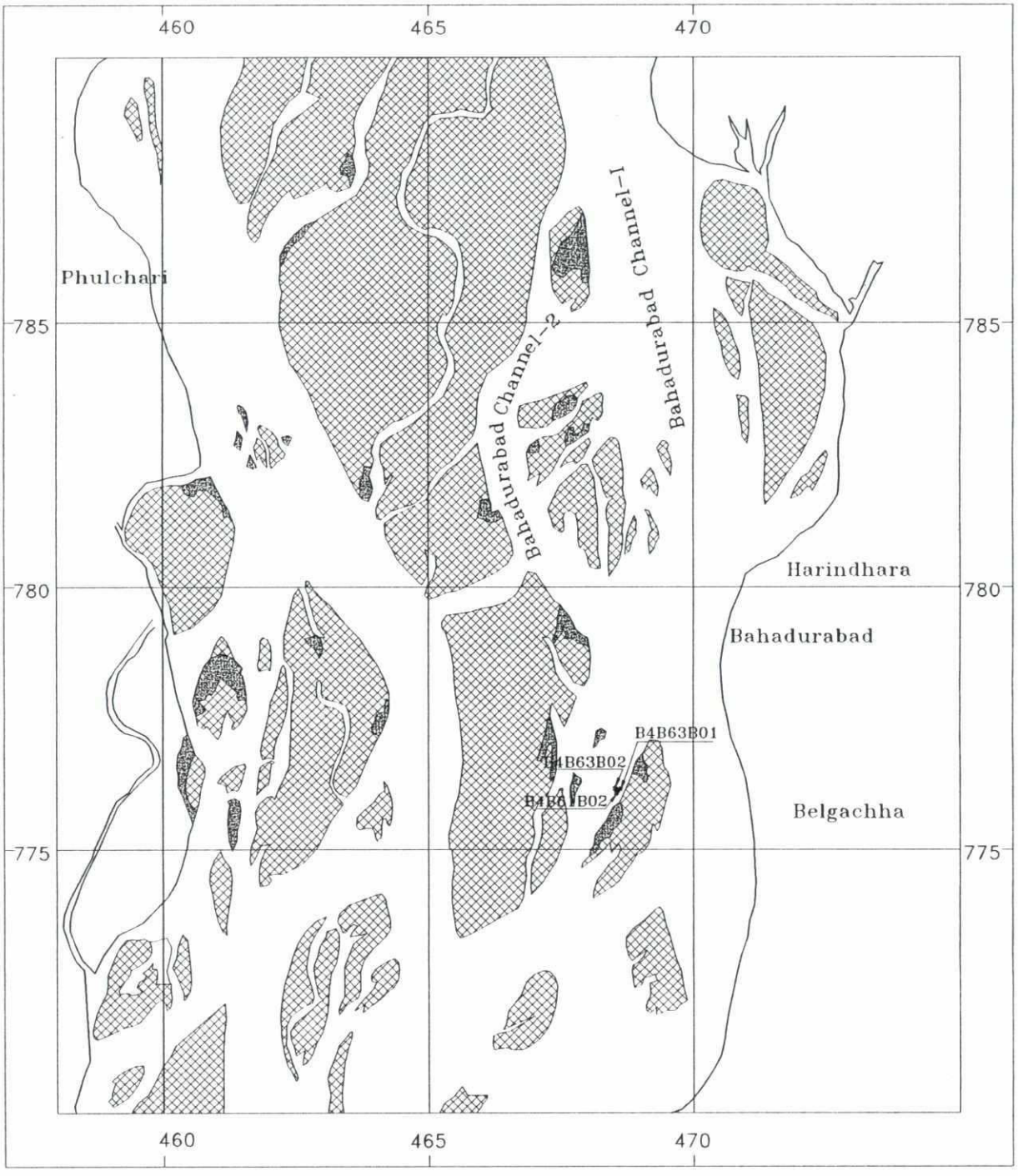
Transect / Echosounding file name	Profile file name	Line no	Survey date	Type of data
B4B43T01		BT6X008	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T02 *		BT6X007	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T03 *		BT6X004	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T04 *		BT6X003	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T05 *		BT6X002	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T06 *		BT6X001	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T07 *		BT6X001	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T08 *		BT6X002	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T09 *		BT6X003	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T10 *		BT6X004	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T11 *		BT6X005	1994-11-04	ADCP/EMF+Echo-sounding
B4B43T12 *		BT6X006	1994-11-04	ADCP/EMF+Echo-sounding

* : Transect / Echo sounding in PSD24 data base

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Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-11-04	B4B43T02	BT6X007	+	+	+							
1994-11-04	B4B43T03	BT6X004	+	+	+							
1994-11-04	B4B43T04	BT6X003	+	+	+							
1994-11-04	B4B43T05	BT6X002	+	+	+							
1994-11-04	B4B43T06	BT6X001	+	+	+							
1994-11-04	B4B43T07	BT6X001	+	+	+							
1994-11-04	B4B43T08	BT6X002	+	+	+							
1994-11-04	B4B43T09	BT6X003	+	+	+							
1994-11-04	B4B43T10	BT6X004	+	+	+							
1994-11-04	B4B43T11	BT6X005	+	+	+							
1994-11-04	B4B43T12	BT6X006	+	+	+							
Total number of files			11	11	11	-	-	-	-	-	-	-

Table 4.1: PSD24 Database file description



LEGEND:

High land

Low char

N

5000m 2500m 0

Map is based on SPOT images of October 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9037B: 06 Nov, 1994	
		Jamuna River, Flow vertical measurement optimization	
	Date : 09 July 1996	Location map	page 1.1
	Init : kah		

Type of measurement	Method	No. of measurements in Lines	
		BB1Y042	BT6X007
Discharge	ADCP transect	-	-
	EMF transect	-	-
	Echo-Sounding	2	2
Vertical current profile	No.of verticals in channel	-	-
	ADCP	-	-
	S4 current meter	-	-
	Ott current meter	-	-
Vertical sediment profile	Pump bottle sampling	-	-
	Andreasen settling tube	-	-
	MEX turbidity meter	-	-
	Integrated bottle sampling	-	-
	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

Line no	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)
BB1Y042	-	-	15.18	-	-	-
BT6X007	-	-	15.18	-	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	06 Nov 94	15.18	FAP24

Table 2.3 : Water levels

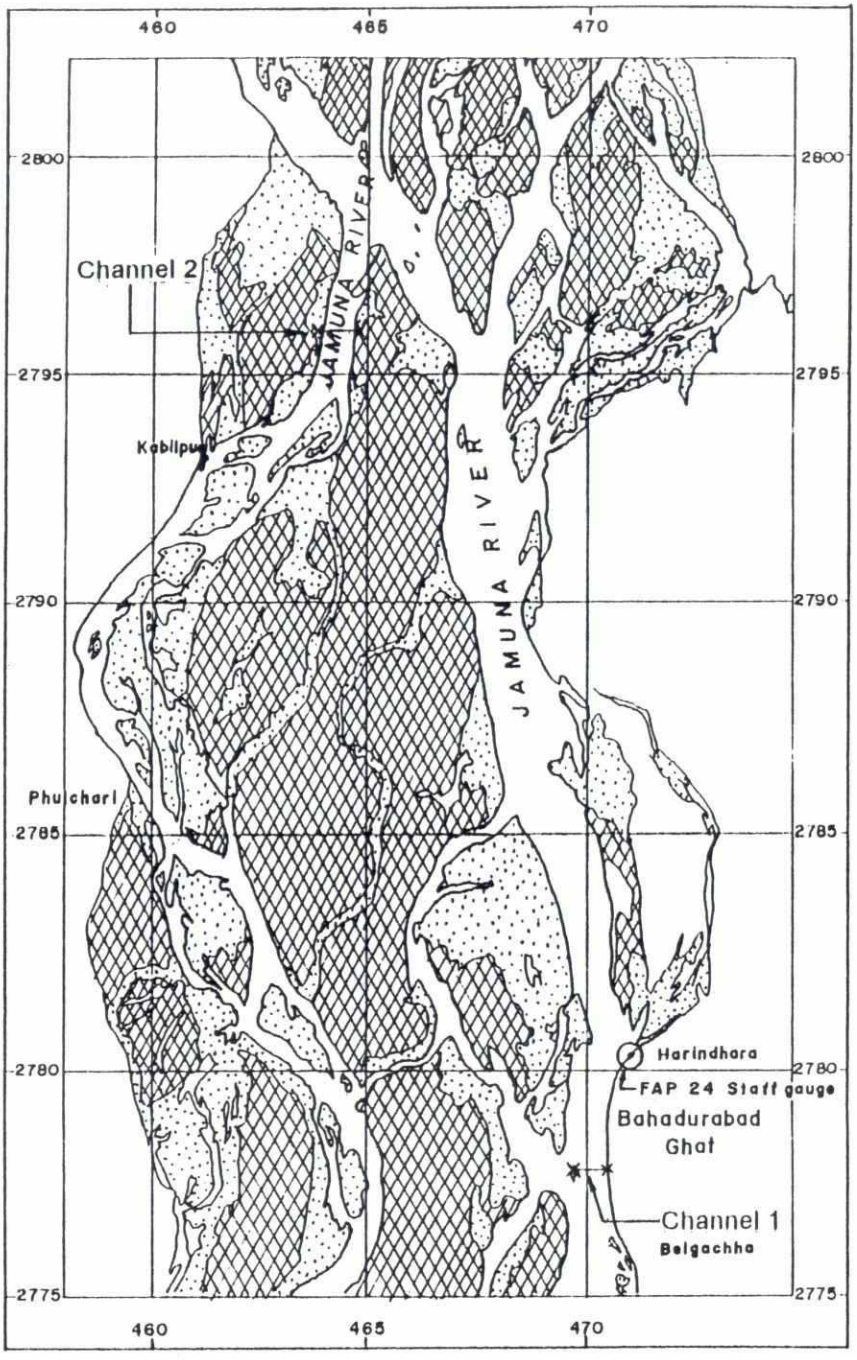
Short Description :
Time series measurements of flow profile, for optimization of the flow measuring period based on analysis of the turbulent flow structure.

Transect / Echosounding file name	Profile file name	Line no	Survey date	Type of data
B4B61B02 *		BB1Y042	1994-11-06	Echo-sounding
B4B63B01 *		BT6X007	1994-11-06	Echo-sounding
B4B63B02 *		BT6X007	1994-11-06	Echo-sounding

* : Transect / Echo sounding in PSD24 data base

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-11-06	B4B61B02	BB1Y042										
1994-11-06	B4B63B01	BT6X007										
1994-11-06	B4B63B02	BT6X007										
Total number of files												

Table 4.1: PSD24 Database file description



LEGEND:

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

N

5000 m 2500 m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9039 : 26 November, 1994	
	Location 1 : Jamuna River, Bahadurabad	
	Date : 15 Jan 1995	Location map
	Init : mzh/sjr	page 1.1

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

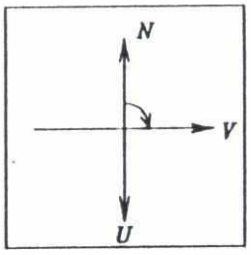
Table 2.1: Survey programme as made

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	763	5961	14.25	5482	-	-
Channel 2	272	1877	14.25	803	-	-

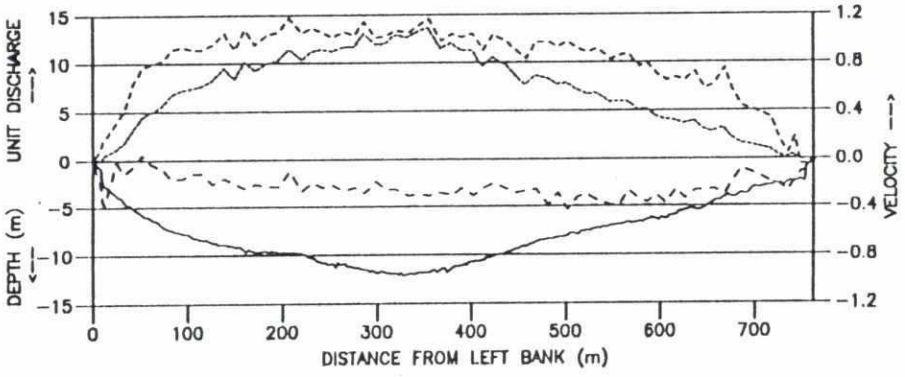
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	26 Nov 94	14.25	FAP 24
	Channel 2	26 Nov 94	14.25	

Table 2.3: Water-levels



TRANSECT AZIMUTH = 90°
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 (m²/s.m)*
---- *U (m/s)*
- - - *V (m/s)*

STAGE = 14.25 (m+PWD)
A = 5961 (m²)
Q = 5482 (m³/s)

FLOW

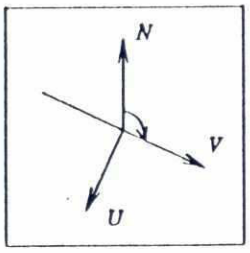
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9039 : 26 November, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4BQ1T05	Date : 15 Jan 1995	Horizontal distribution of flow and sediments	page
	Init : mzh/sjr	Channel 1	31

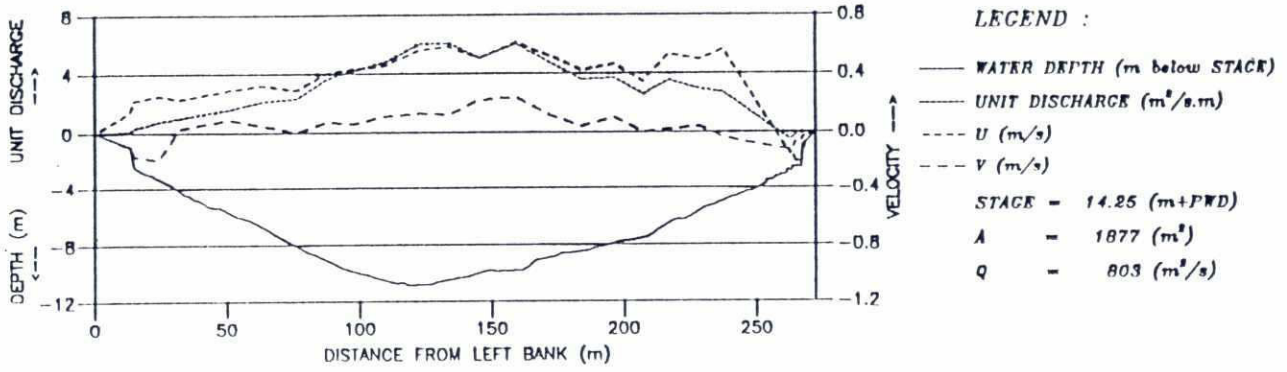


TRANSECT AZIMUTH = 116°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

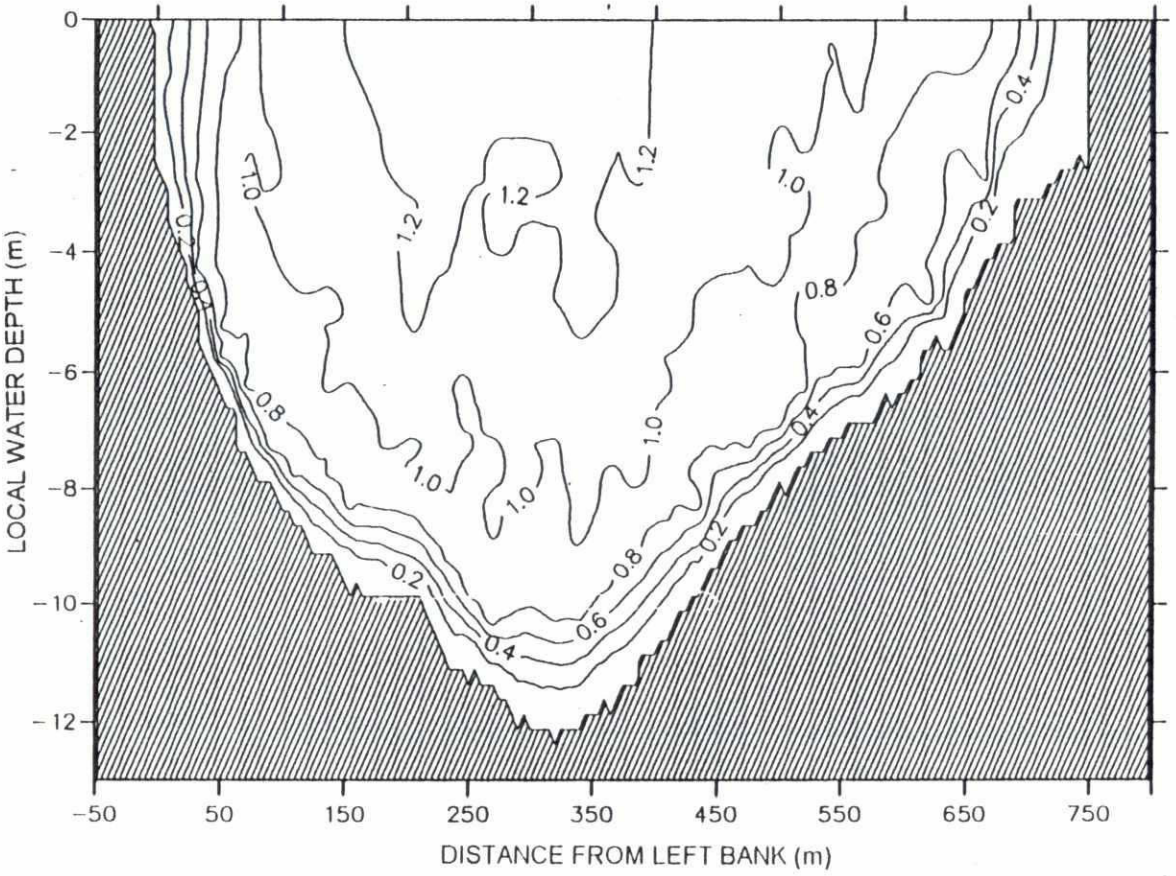
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

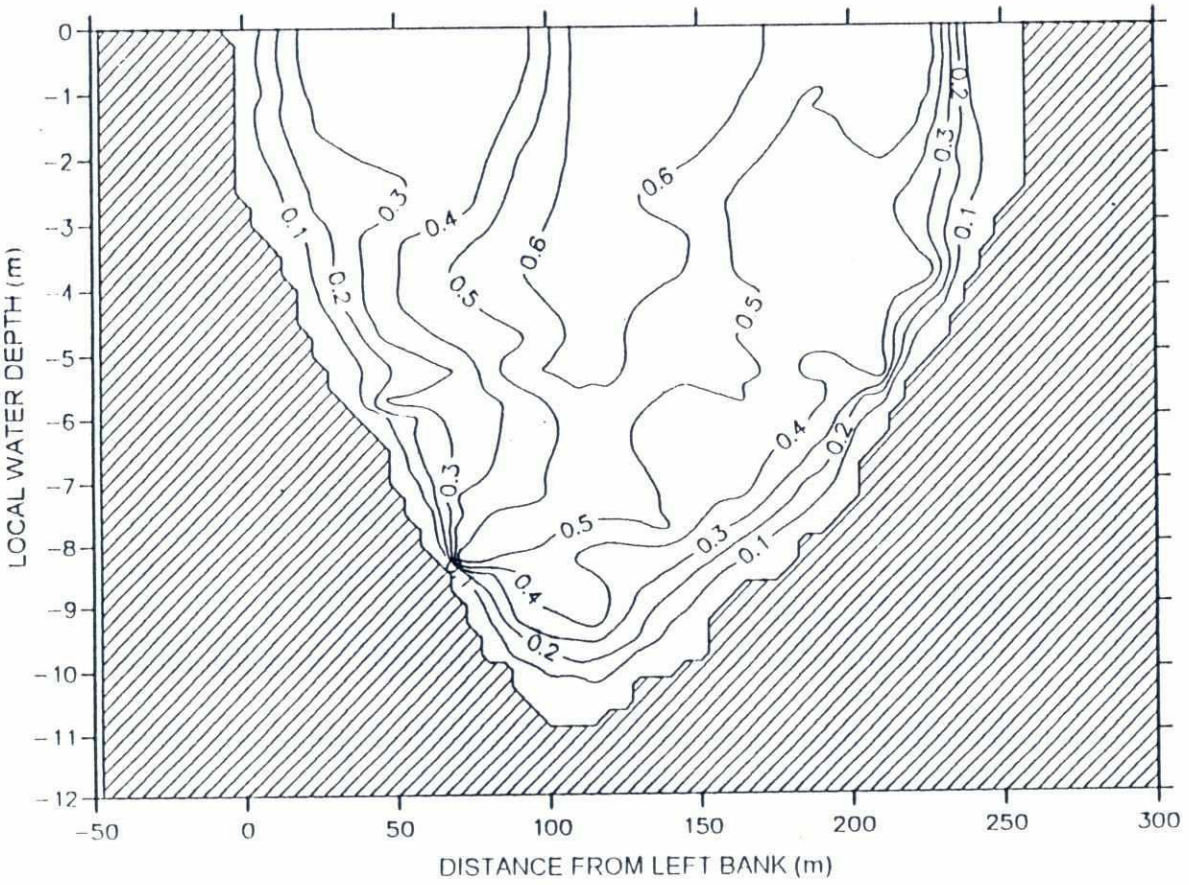
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9039 : 26 November, 1994 Location 1 : Jamuna River, Bahadurabad
File : B4BQ1103	Date : 15 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2
		page 3.2



Iso-velocity contours (m/s)
Water-level : 14.25 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 9039 : 26 November, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4BQ1T05	Date : 15 Jan 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 4.1



Iso-velocity contours (m/s)
Water-level : 14.25 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 9039 : 26 November, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4BQ1T03	Date : 15 Jan 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 2	page 4.2

Andreasen settling tube							
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 5.1: 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 < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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)
Sample not collected							

Table 5.3 : Grain size of bed load

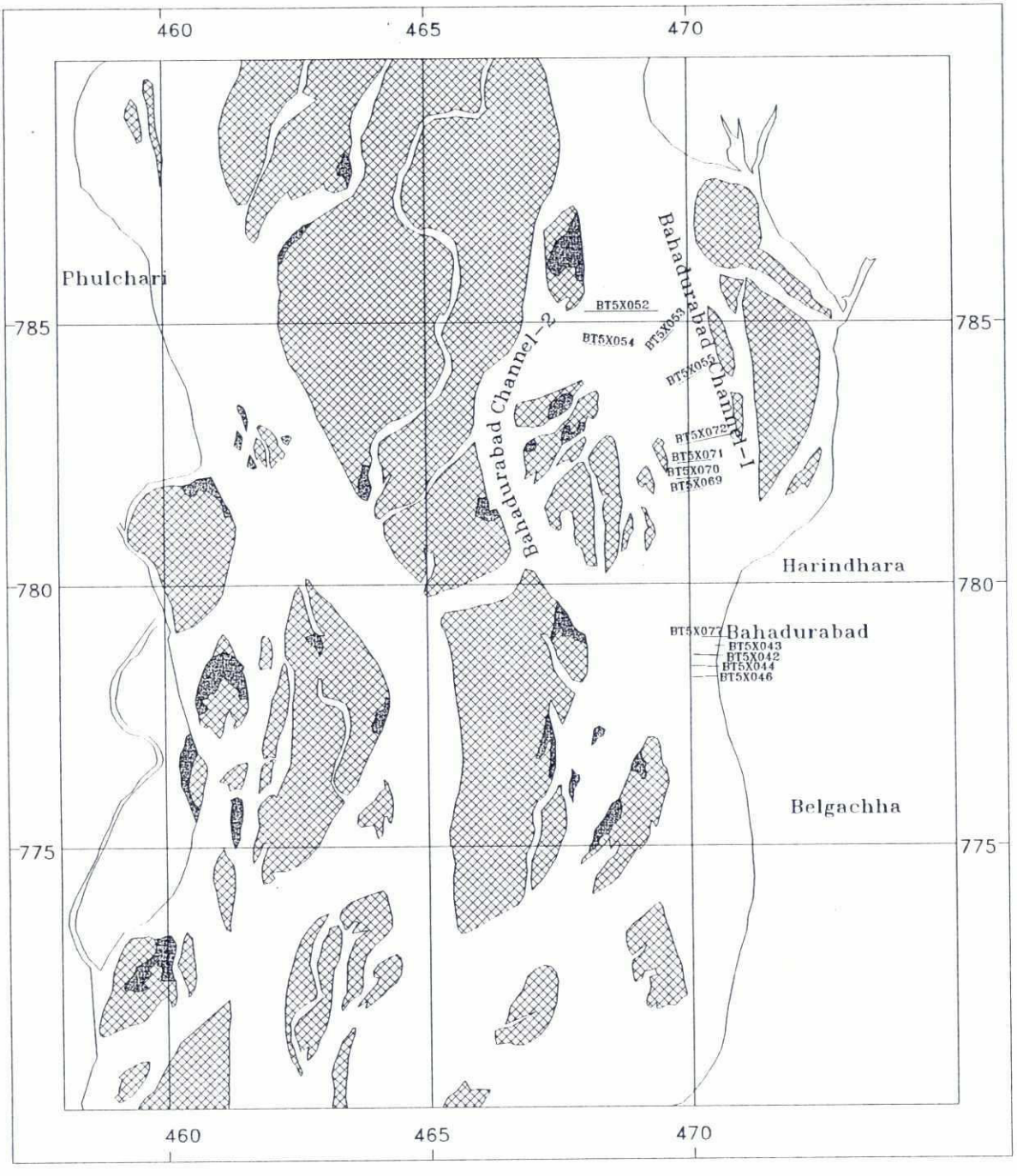
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9411261606-1613	B4BQ1T05 *
		9411261615-1620	B4BQ1T06
	2	9411261430-1433	B4BQ1T03 *
		9411261434-1436	B4BQ1T04

Table 6.1: ADCP & EMF transects * : transect in PSD 24 data base and presented in Sections 3 and 4

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B4BQ1T05 .ase
ADCP/S4/EMF data	2	QUATTRO	B4BQ1T03 .ase
Echosounder data	1	QUATTRO	B4BQ1T05 .ech
Echosounder data	2	QUATTRO	B4BQ1T03 .ech
Transect plot data	1	QUATTRO	B4BQ1T05 .trs
Transect plot data	2	QUATTRO	B4BQ1T03 .trs
Iso-velocity plot data	1	MIKE 21	B4BQ1T05 .ct2
	2	MIKE 21	B4BQ1T03 .dt2
Iso-velocity plot data	1	MIKE 21	B4BQ1T05 .ct2
	2	MIKE 21	B4BQ1T03 .dt2

Table 7.1 PSD 24 Database file description

W A R. P. O. LIBRARY. DHAKA



LEGEND:

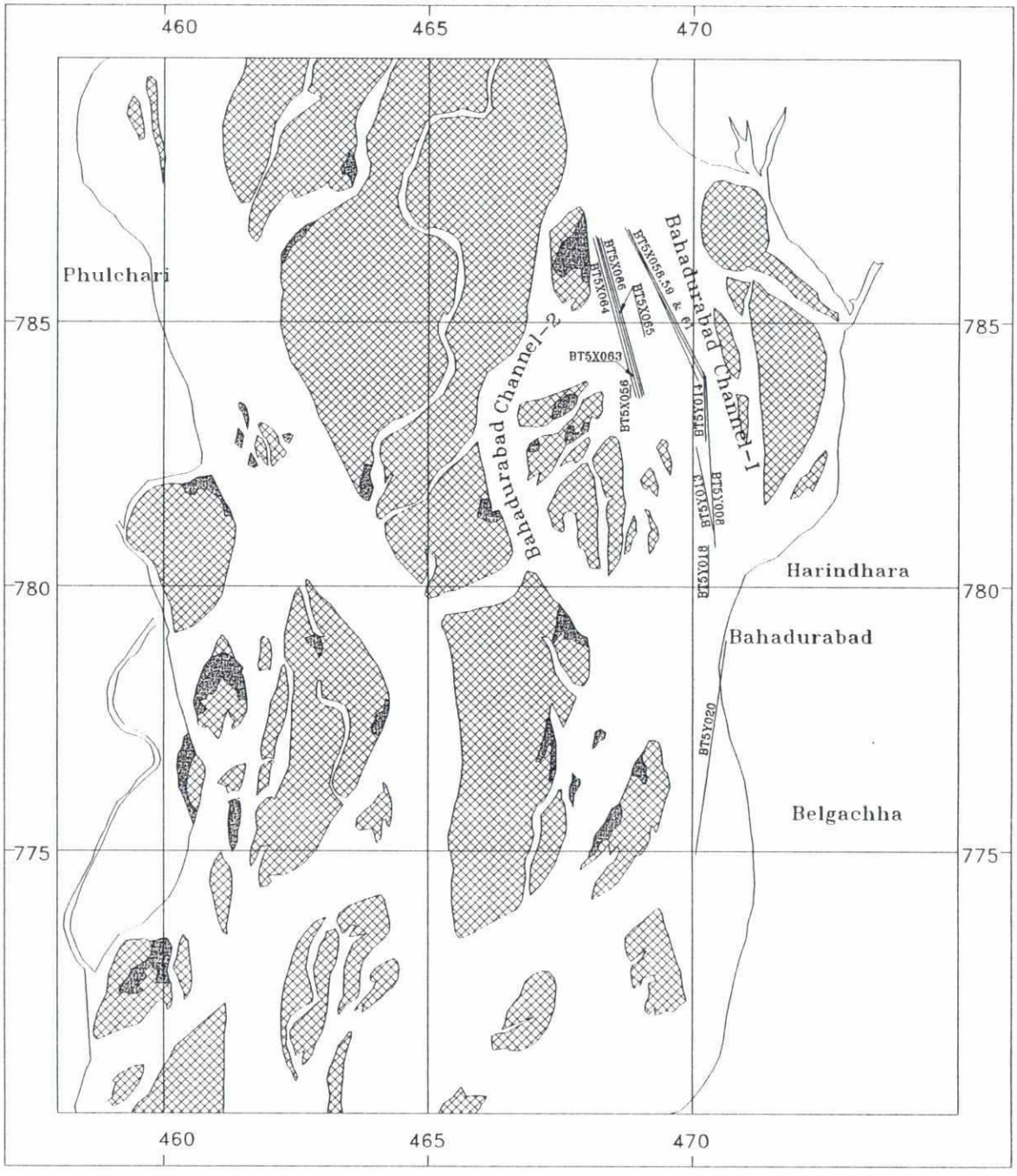
- High land
- Low char
- Cross section

N

5000m 2500m 0

Map is based on SPOT images of October 1994

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9040: 04 - 12 December, 1994		
	Jamuna River, Sediment measurement optimization		
	Date : 04 Mar 1996	Location map	page 1.1
	Init : kah		



LEGEND:

- High land
- Low char
- Cross section

N

5000m 2500m 0

Map is based on SPOT images of October 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9040: 04 - 12 December, 1994	
		Jamuna River, Sediment measurement optimization	
	Date : 04 Mar 1996	Location map	page 1.2
	Init : kah		

Type of measurement	Method	No. of measurements in Lines												
		BT5X 042	BT5X 043	BT5X 044	BT5X 046	BT5X 052	BT5X 053	BT5X 055	BT5X 056	BT5Y 058	BT5Y 059	BT5Y 061	BT5Y 063	BT5Y 064
Discharge	ADCP transect	3	1	1	1	1	1	1	1	1	1	1	1	1
	EMF transect	3	1	1	1	1	1	1	1	1	1	1	1	1
	Echo-Sounding	3	1	1	1	1	1	1	1	1	1	1	1	1
Vertical current profile	No.of verticals in channel	2	-	2	1	6	-	-	-	-	-	-	-	-
	ADCP	2	-	2	1	6	-	-	-	-	-	-	-	-
	S4 current meter	2	-	2	1	6	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	18	-	18	9	30	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-	-	-	-	-	-
	MEX turbidity meter	20	-	-	-	47	-	-	-	-	-	-	-	-
	Integrated bottle sampling	6	-	5	3	6	-	-	-	-	-	-	-	-
	Collapsible bag	-	-	-	-	-	-	-	-	-	-	-	-	-
Bed load	Dune tracking	-	-	-	-	-	-	-	-	-	-	-	-	-
	Helley-smith sampler	5	-	-	-	12	-	-	-	-	-	-	-	-
	Delft Bottle	6	-	6	3	19	-	-	-	-	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-	-	-	-	-	-	-	-	-	-
	Van Veen bed sampler	2	-	2	1	6	-	-	-	-	-	-	-	-

Table 2.1 : Survey programme as made

Line no	Transect file name	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)
BT5X042	B4C51T03	555.23	5489.78	14.00	3095.31	3.82	630.44
BT5X043	B4C41T05	396.90	3547.34	14.00	2039.62	-	-
BT5X044	B4C61T01	734.92	5801.17	13.95	2543.39	0.00	738.76
BT5X046	B4C61T03	679.24	5091.82	13.95	4362.53	-	-
BT5X052	B4C71T07	1462.53	7681.94	13.94	5373.79	12.39	1050.38
BT5X053	B4C81T01	406.63	2536.35	13.92	2704.38	-	-
BT5X055	B4C81T02	726.59	3514.23	13.92	2907.27	-	-
BT5X056	B4C91T02	453.84	2099.46	13.89	2041.75	-	-
BT5Y058	B4C91T05	3209.12	18953.93	13.89	2576.25	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	04 Dec 94	14.00	FAP24
Bahadurabad	05 Dec 94	13.97	FAP24
Bahadurabad	06 Dec 94	13.95	FAP24
Bahadurabad	07 Dec 94	13.94	FAP24

Table 2.3 : Water levels

Description:

The survey which was done in the Jim's Bar area, North of Bahadurabad included parts relevant for different study topics: Optimization of sediment measuring techniques; bar topography and dune inventory; measurements of sediment transport near eroding banks and mapping of bed levels.

Type of measurement	Method	No. of measurements in Lines											
		BT5Y	BT5Y	BT5Y	BT5X	BT5X	BT5X	BT5X	BT5Y	BT5Y	BT5X	BT5Y	BT5Y
		065	066	008	069	070	071	072	013	014	077	018	020
Discharge	ADCP transect	1	1	1	2	2	2	2	1	1	1	1	1
	EMF transect	1	1	1	2	2	2	2	1	1	1	1	1
	Echo-Sounding	1	1	1	2	2	2	2	1	1	1	1	1
Vertical current profile	No of verticals in channel	-	-	-	-	-	-	-	-	-	2	-	-
	ADCP	-	-	-	-	-	-	-	-	-	2	-	-
	S4 current meter	-	-	-	-	-	-	-	-	-	2	-	-
	Ott current meter	-	-	-	-	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-	-	1	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-	-	1	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-	-	-	-	-
	Collapsible bag	-	-	-	-	-	-	-	-	-	-	-	-
Bed load	Dune tracking	-	-	-	-	-	-	-	-	-	-	-	-
	Helley-smith sampler	-	-	-	-	-	-	-	-	-	2	-	-
	Delft Bottle	-	-	-	-	-	-	-	-	-	4	-	-
Bed material	US BM-54 bed sampler	-	-	-	-	-	-	-	-	-	-	-	-
	Van Veen bed sampler	-	-	-	-	-	-	-	-	-	1	-	-

Table 2.1 : Survey programme as made

Line no	Transect file name	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)
BT5Y059	B4C91T06	3129.24	13666.15	13.89	1296.99	-	-
BT5Y061	B4C91T08	3226.1	22632.32	13.89	2979.44	-	-
BT5Y063	B4CA1T01	3241.99	22178.94	13.85	905.94	-	-
BT5Y064	B4CA1T03	3188.33	18938.84	13.85	838.17	-	-
BT5Y065	B4CA1T04	3174.02	23810.33	13.85	2273.03	-	-
BT5Y066	B4CA1T05	3188.29	24406.31	13.85	2662.35	-	-
BT5Y008	B4CA1T06	3281.73	27275.01	13.85	3959.45	-	-
BT5X069	B4CB1T04	3174.02	23810.33	13.83	2273.03	-	-
BT5X070	B4CB1T06	470.39	3628.11	13.83	3503.31	-	-
BT5X071	B4CB1T08	694.47	4049.76	13.83	3573.73	-	-
BT5X072	B4CB1T09	1173.36	5832.84	13.83	4942.81	-	-
BT5Y013	B4CB1T11	1660.15	15206.65	13.83	425.65	-	-
BT5Y014	B4CB1T12	1313.81	7260.96	13.83	2090.54	-	-
BT5X077	B4CC1T03	558.82	5946.76	13.79	4916.01	2.00	2230.44
BT5Y018	B4CC1T04	1001.4	8022.78	13.79	1207.97	-	-
BT5Y020	B4CC1T06	4117.87	32336.7	13.79	7304.31	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	08 Dec 94	13.92	FAP24
Bahadurabad	09 Dec 94	13.89	FAP24
Bahadurabad	10 Dec 94	13.85	FAP24
Bahadurabad	11 Dec 94	13.83	FAP24
Bahadurabad	12 Dec 94	13.79	FAP24

Table 2.3 : Water levels

Transect file name	Profile file name	Line no	Survey date	Type of data
B4C41T03 *		BT5X042	1994-12-04	ADCP/EMF+Echosounding
B4C41T05 *		BT5X043	1994-12-04	ADCP/EMF+Echosounding
B4C51T03 *		BT5X042	1994-12-05	ADCP/EMF+Echosounding
	B4C51P03	BT5X042	1994-12-05	ADCP/S4/EMF+Echosounding+Sediment
	B4C51P04	BT5X042	1994-12-05	ADCP/S4/EMF+Echosounding+Sediment
B4C61T01 *		BT5X044	1994-12-06	ADCP/EMF+Echosounding
B4C61T03 *		BT5X046	1994-12-06	ADCP/EMF+Echosounding
	B4C61P02	BT5X044	1994-12-06	ADCP/EMF+Echosounding+Sediment
	B4C61P03	BT5X044	1994-12-06	ADCP/EMF+Echosounding+Sediment
	B4C61P06	BT5X046	1994-12-06	ADCP/EMF+Echosounding+Sediment
B4C71T02		BT5X048	1994-12-07	ADCP/EMF+Echosounding
B4C71T03		BT5X049	1994-12-07	ADCP/EMF+Echosounding
B4C71T04		BT5X050	1994-12-07	ADCP/EMF+Echosounding
B4C71T05		BT5X050	1994-12-07	ADCP/EMF+Echosounding
B4C71T06		BT5X051	1994-12-07	ADCP/EMF+Echosounding
B4C71T07 *		BT5X052	1994-12-07	ADCP/EMF+Echosounding
	B4C71P03	BT5X052	1994-12-07	ADCP/S4/EMF+Echosounding+Sediment
	B4C71P04	BT5X052	1994-12-07	ADCP/S4/EMF+Echosounding+Sediment
	B4C81P01	BT5X052	1994-12-08	ADCP/S4/EMF+Echosounding+Sediment
	B4C81P02	BT5X052	1994-12-08	ADCP/S4/EMF+Echosounding+Sediment
	B4C81P03	BT5X052	1994-12-08	ADCP/S4/EMF+Echosounding+Sediment
	B4CA1P01	BT5X052	1994-12-10	ADCP/S4/EMF+Echosounding+Sediment
B4C81T01 *		BT5X053	1994-12-08	ADCP/EMF+Echosounding
B4C81T02 *		BT5X055	1994-12-08	ADCP/EMF+Echosounding
B4C81T03		BT5X054	1994-12-08	Echosounding
B4C91T02 *		BT5X056	1994-12-09	ADCP/EMF+Echosounding
B4C91T03		BT5X057	1994-12-09	ADCP/EMF+Echosounding
B4C91T05 *		BT5Y058	1994-12-09	ADCP/EMF+Echosounding
B4C91T06 *		BT5Y059	1994-12-09	ADCP/EMF+Echosounding
B4C91T07		BT5Y060	1994-12-09	ADCP/EMF+Echosounding
B4C91T08 *		BT5Y061	1994-12-09	ADCP/EMF+Echosounding
B4CA1T01 *		BT5Y063	1994-12-10	ADCP/EMF+Echosounding
B4CA1T03 *		BT5Y063	1994-12-10	ADCP/EMF+Echosounding
B4CA1T04 *		BT5Y063	1994-12-10	ADCP/EMF+Echosounding
B4CA1T05 *		BT5Y063	1994-12-10	ADCP/EMF+Echosounding
B4CA1T06 *		BT5Y008	1994-12-10	ADCP/EMF+Echosounding

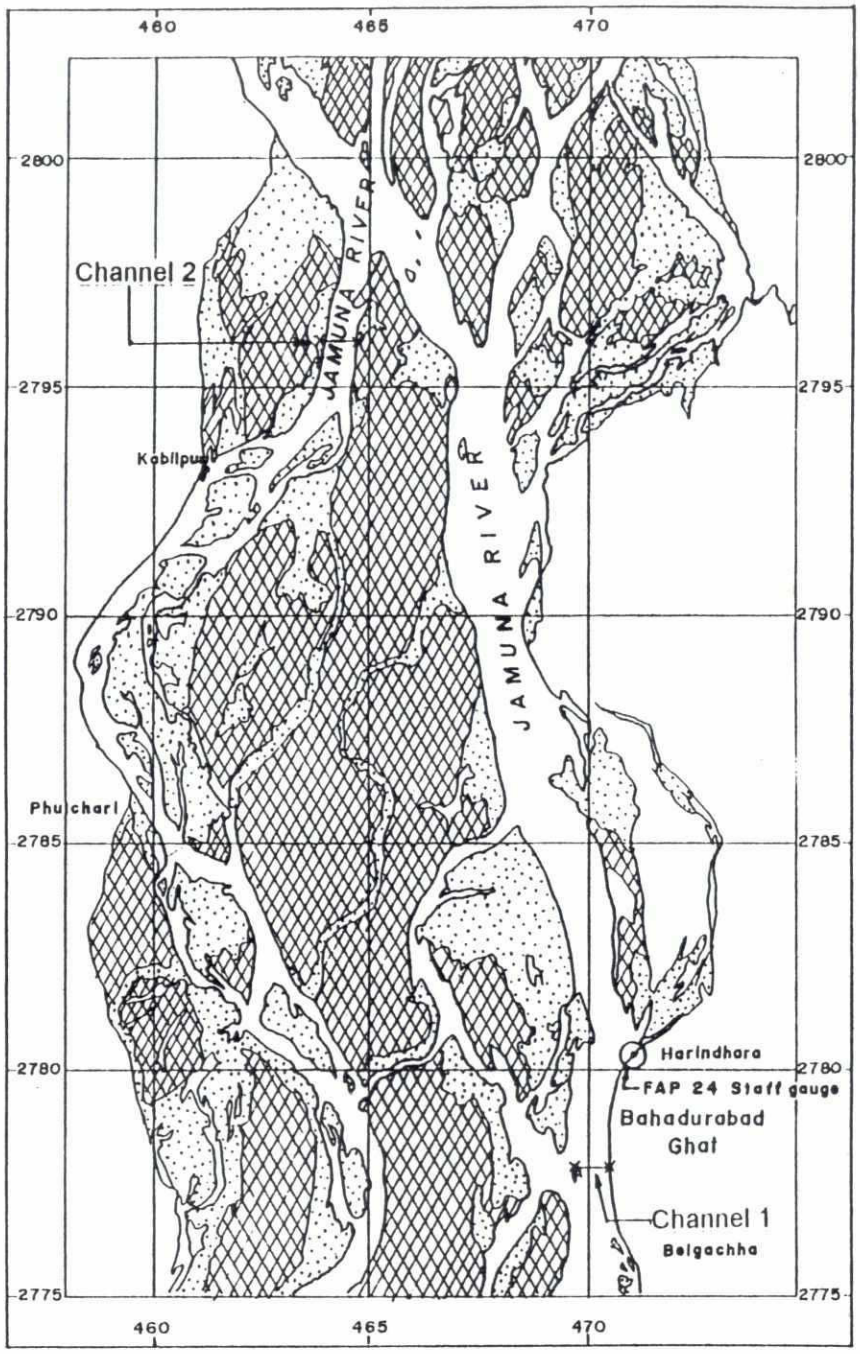
*: Transect / Echo sounding in PSD24 data base

Transect file name	Profile file name	Line no	Survey date	Type of data
B4CB1T01		BT5X068	1994-12-11	ADCP/EMF+Echosounding
B4CB1T02		BT5X068	1994-12-11	ADCP/EMF+Echosounding
B4CB1T03		BT5X069	1994-12-11	ADCP/EMF+Echosounding
B4CB1T04 *		BT5X069	1994-12-11	ADCP/EMF+Echosounding
B4CB1T05		BT5X070	1994-12-11	ADCP/EMF+Echosounding
B4CB1T06 *		BT5X070	1994-12-11	ADCP/EMF+Echosounding
B4CB1T07		BT5X071	1994-12-11	ADCP/EMF+Echosounding
B4CB1T08 *		BT5X071	1994-12-11	ADCP/EMF+Echosounding
B4CB1T09 *		BT5X072	1994-12-11	ADCP/EMF+Echosounding
B4CB1T10		BT5X072	1994-12-11	ADCP/EMF+Echosounding
B4CB1T11 *		BT5Y013	1994-12-11	ADCP/EMF+Echosounding
B4CB1T12 *		BT5Y014	1994-12-11	ADCP/EMF+Echosounding
B4CB1T14		BT5X076	1994-12-11	ADCP/EMF+Echosounding
B4CB1T17 *		BT5Y016	1994-12-11	ADCP/EMF+Echosounding
B4CC1T01		BT5X042	1994-12-12	ADCP/EMF+Echosounding
B4CC1T03 *		BT5X077	1994-12-12	ADCP/EMF+Echosounding
B4CC1T04 *		BT5Y018	1994-12-12	ADCP/EMF+Echosounding
B4CC1T06 *		BT5Y020	1994-12-12	ADCP/EMF+Echosounding
	B4CC1P01	BT5X077	1994-12-12	ADCP/S4/EMF+Echosounding+Sediment
	B4CC1P02	BT5X077	1994-12-12	ADCP/S4/EMF+Echosounding+Sediment

*** : Transect / Echo sounding in PSD24 data base**

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1994-12-04	B4C41T05	BT5X043	+	+	+							
1994-12-05	B4C51T03	BT5X042	+	+	+	+	+	+	+	+		
1994-12-06	B4C61T01	BT5X044	+	+	+	+	+	+	+	+		
	B4C61T03	BT5X046	+	+	+							
1994-12-07	B4C71T07	BT5X052	+	+	+	+	+	+	+			
1994-12-08	B4C81T01	BT5X053	+	+	+							
	B4C81T02	BT5X055	+	+	+							
1994-12-09	B4C91T02	BT5X056	+	+	+							
	B4C91T05	BT5X058	+	+	+							
	B4C91T06	BT5X059	+	+	+							
	B4C91T08	BT5X061	+	+	+							
1994-12-10	B4CA1T01	BT5X063	+	+	+							
	B4CA1T03	BT5X063	+	+	+							
	B4CA1T04	BT5X063	+	+	+							
	B4CA1T05	BT5X063	+	+	+							
	B4CA1T06	BT5Y008	+	+	+							
1994-12-11	B4CB1T04	BT5X069	+	+	+							
	B4CB1T06	BT5X070	+	+	+							
	B4CB1T08	BT5X071	+	+	+							
	B4CB1T09	BT5X072	+	+	+							
	B4CB1T11	BT5Y013	+	+	+							
	B4CB1T12	BT5Y014	+	+	+							
1994-12-12	B4CC1T03	BT5X077	+	+	+	+	+	+	+			
	B4CC1T04	BT5Y018	+	+	+							
	B4CC1T06	BT5Y020	+	+	+							
Total number of files			25	25	25	4	4	4	4	2		

Table 4.1: PSD24 Database file description



LEGEND:

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

N

5000 m 2500 m 0

Map is based on satellite images of March 1994

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9041 : 13 December, 1994	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 14 Jan 1995	Location map	page 1.1
	Init : mzh/sjr		

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

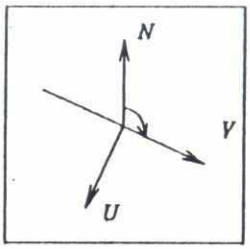
Table 2.1 Survey programme as made

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	249	1688	13.77	564	-	-
Channel 2	956	5689	13.77	4795	-	-

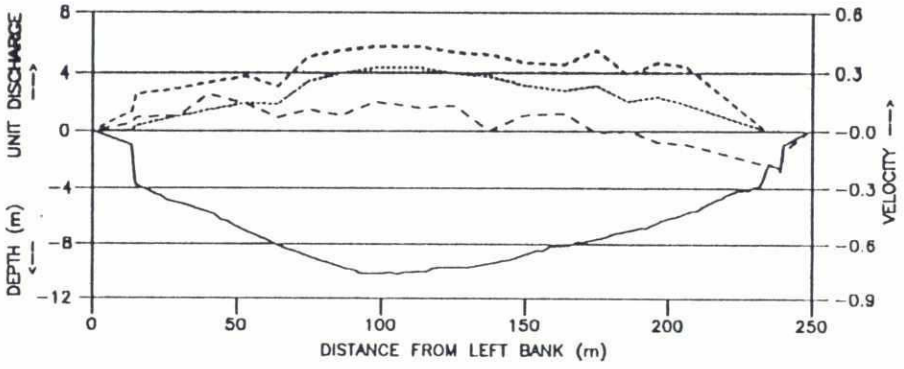
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	13 Dec 94	13.77	FAP 24
	Channel 2	13 Dec 94	13.77	

Table 2.3: Water-levels



TRANSECT AZIMUTH = 115°
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 (m²/s.m)
U (m/s)
V (m/s)

STAGE = 13.77 (m+PWD)
A = 1688 (m²)
Q = 564 (m³/s)

FLOW

Sample not collected

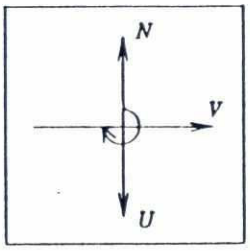
SEDIMENT TRANSPORT

Sample not collected

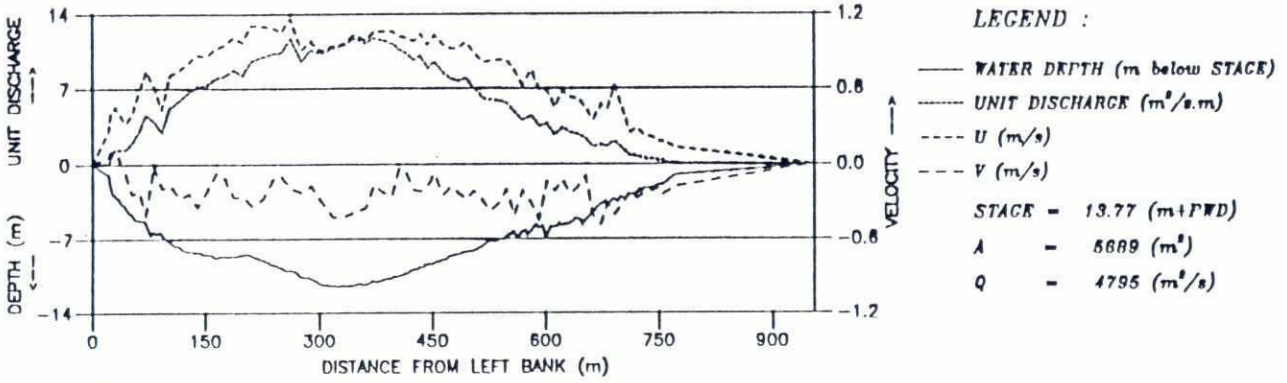
GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9041 : 13 December, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4CD1T01	Date : 14 Jan 1995	Horizontal distribution of flow and sediments	page 31
	Init : mzh/sjr	Channel 1	

029



TRANSECT AZIMUTH = 270°
U – VELOCITY NORMAL TO TRANSECT (m/s)
V – VELOCITY PARALLEL TO TRANSECT (m/s)
N – MAGNETIC NORTH



FLOW

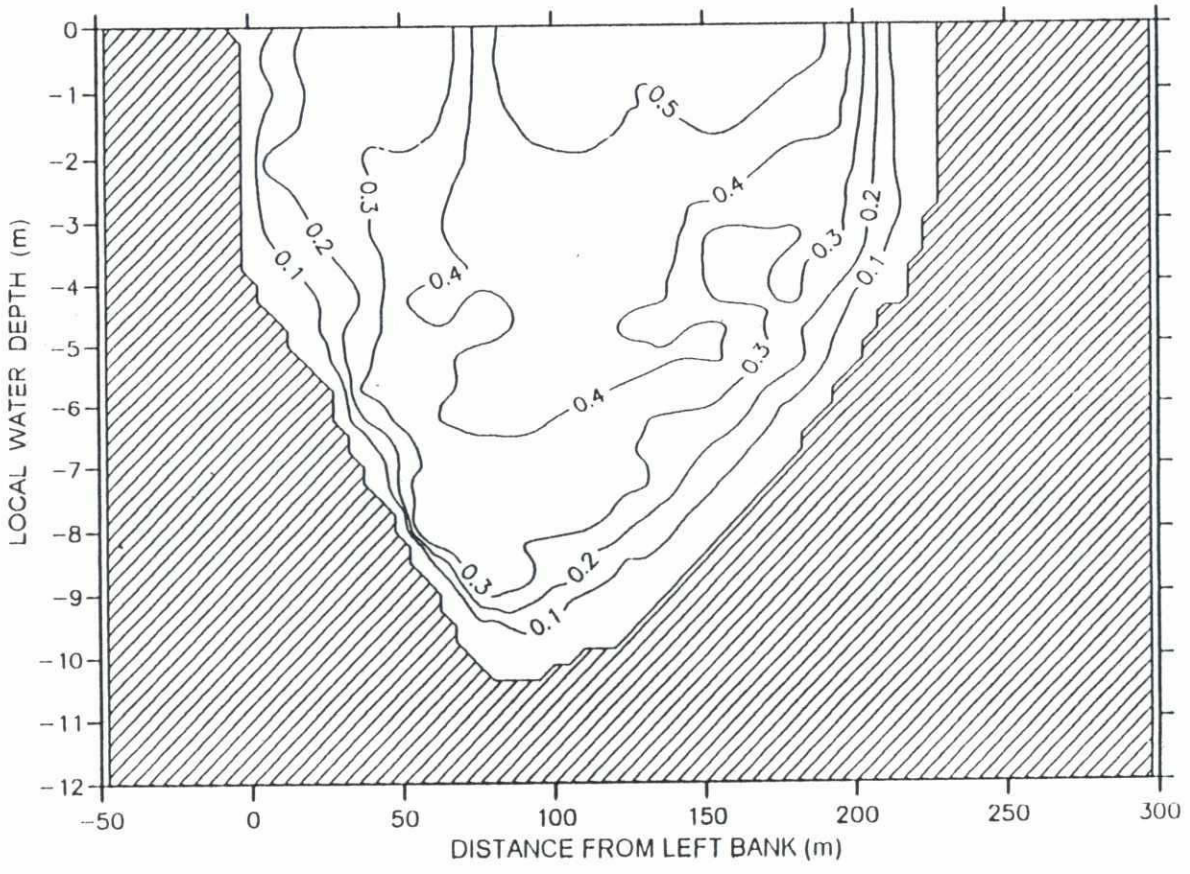
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

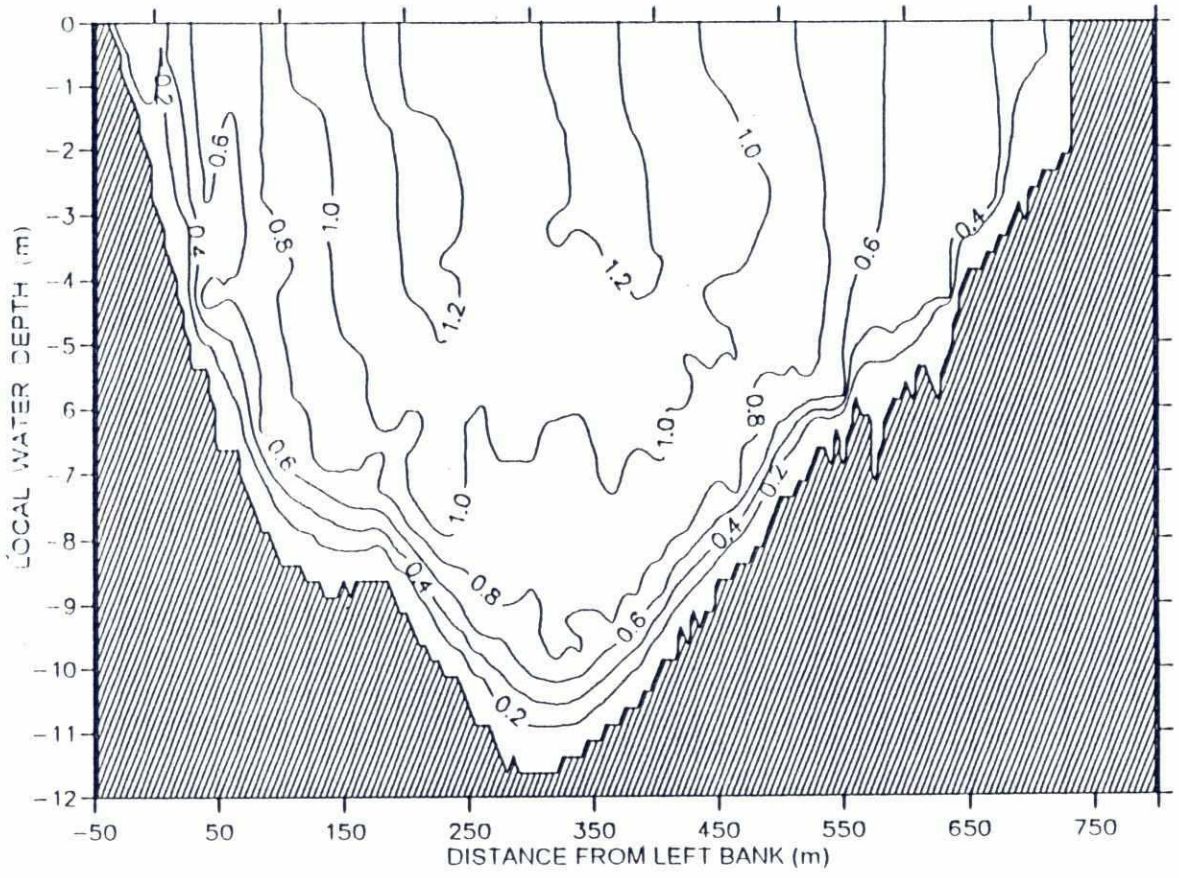
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9041 : 13 December, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4CD1T03	Date : 14 Jan 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2	page 3.2



Iso-velocity contours (m/s)
Water-level : 13.77 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 9041 : 13 December, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File . B4CD1T01	Date : 14 Jan 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 4 1



Iso-velocity contours (m/s)
Water-level : 13.77 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 9041 : 13 December, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4CD1T03	Date : 14 Jan 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 2	page 4.2

Andreasen settling tube

Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth (m)	Weight percent < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (mm)

200

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 (m)	Weight percent < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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)

Sample not collected

Table 5.3 : Grain size of bed load

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9412130951-0954	B4CD1T01 *
		9412130957-0959	B4CD1T02
	2	9412131355-1401	B4CD1T03 *
		9412131404-1410	B4CD1T04

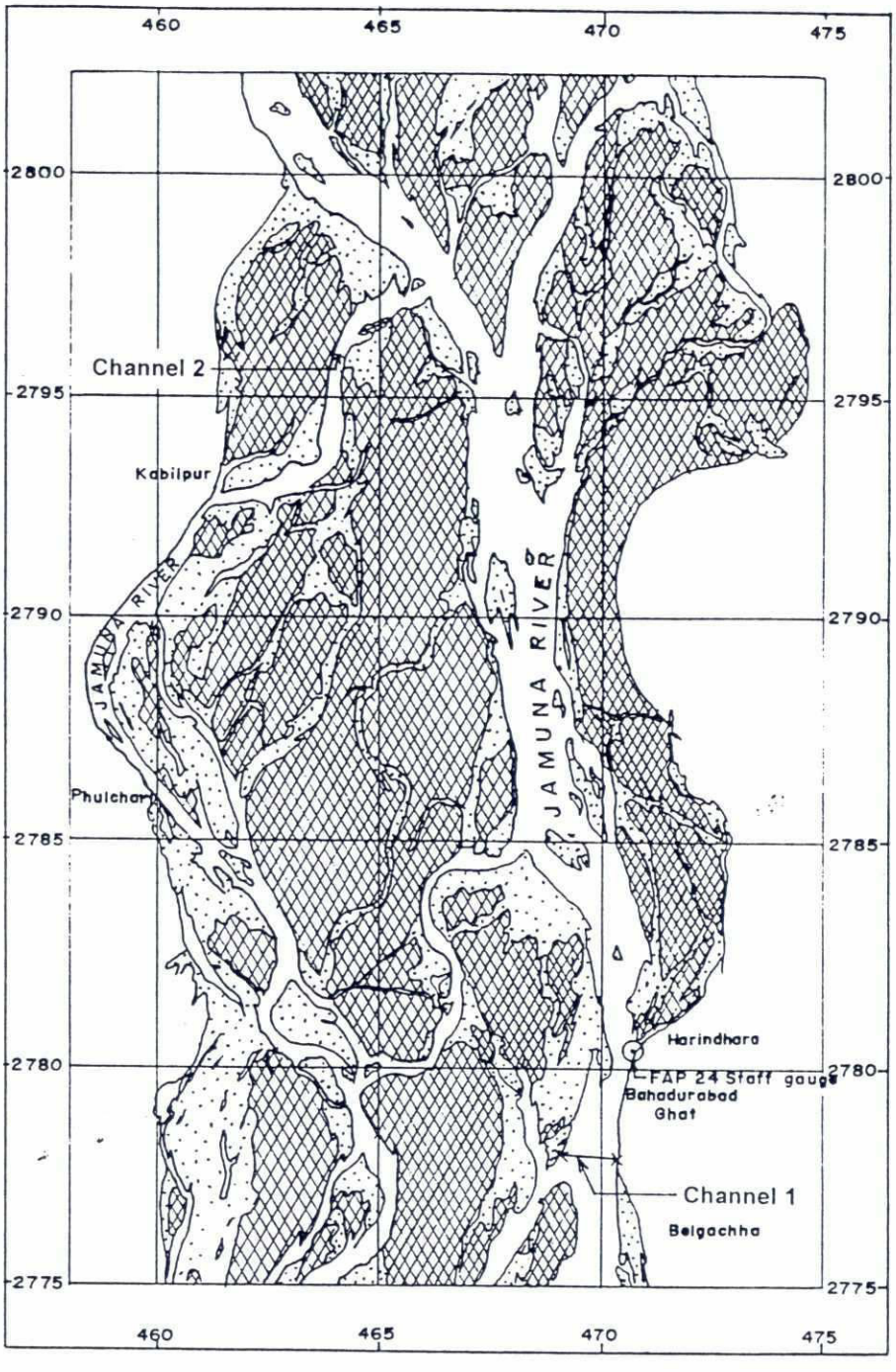
Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B4CD1T01 .ase
ADCP/S4/EMF data	2	QUATTRO	B4CD1T03 .ase
Echosounder data	1	QUATTRO	B4CD1T01 .ech
Echosounder data	2	QUATTRO	B4CD1T03 .ech
Transect plot data	1	QUATTRO	B4CD1T01 .trs
Transect plot data	2	QUATTRO	B4CD1T03 .trs
Iso-velocity plot data	1	MIKE 21	B4CD1T01 .ct2
	2	MIKE 21	B4CD1T03 .dt2
Iso-velocity plot data	1	MIKE 21	B4CD1T01 .ct2
	2	MIKE 21	B4CD1T03 .dt2

Table 7.1 PSD 24 Database file description

W A R. P. O.
LIBRARY.
DHAKA



LEGEND:

- High land
- Unstable / low char
- ⊙ FAP 24 Staff gauge

N

5000 m 2500m 0

Map is based on satellite images of March 1995

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9045 : 08 February, 1995 Location 1 : Jamuna River, Bahadurabad	
	Date : 09 Sep 1995 Init : mzh	Location map	page 1.1

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

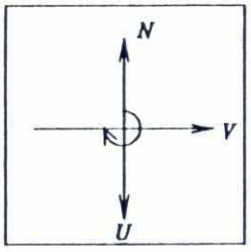
Table 2.1: Survey programme as made

	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	679	4878	12.91	3336	-	-
Channel 2	220	1358	12.91	247	-	-

Table 2.2: Key figures

Gauge location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	08 Feb 95	12.91	FAP 24
	Channel 2	08 Feb 95	12.91	

Table 2.3: Water-levels

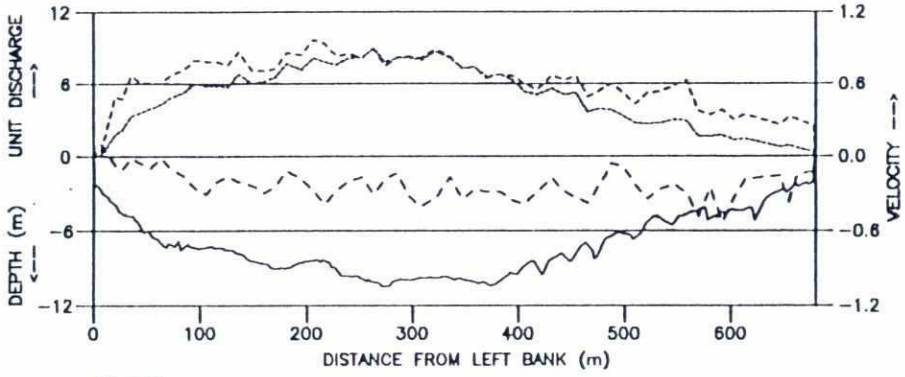


TRANSECT AZIMUTH = 270°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 12.91 (m+PWD)

A = 4878 (m²)

Q = 3336 (m³/s)

FLOW

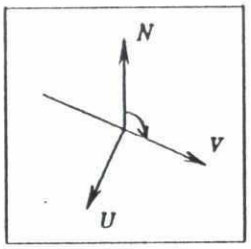
Sample not collected

SEDIMENT TRANSPORT

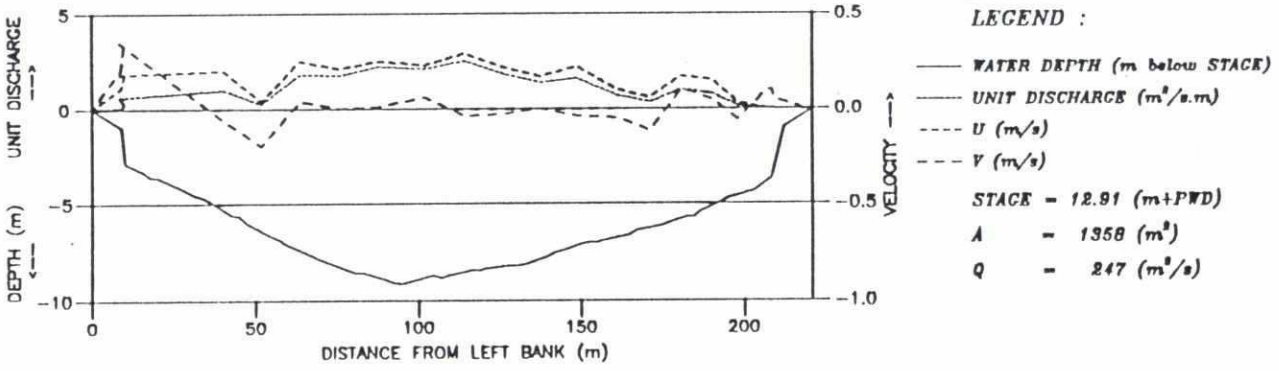
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9045 : 08 February , 1995	
		Location 1 : Jamuna River, Bahadurabad	
File : B5281T08	Date : 09 Sep 1995 Init : mzh	Horizontal distribution of flow and sediments Channel 1	page 31



TRANSECT AZIMUTH = 115°
U – VELOCITY NORMAL TO TRANSECT (m/s)
V – VELOCITY PARALLEL TO TRANSECT (m/s)
N – MAGNETIC NORTH



FLOW

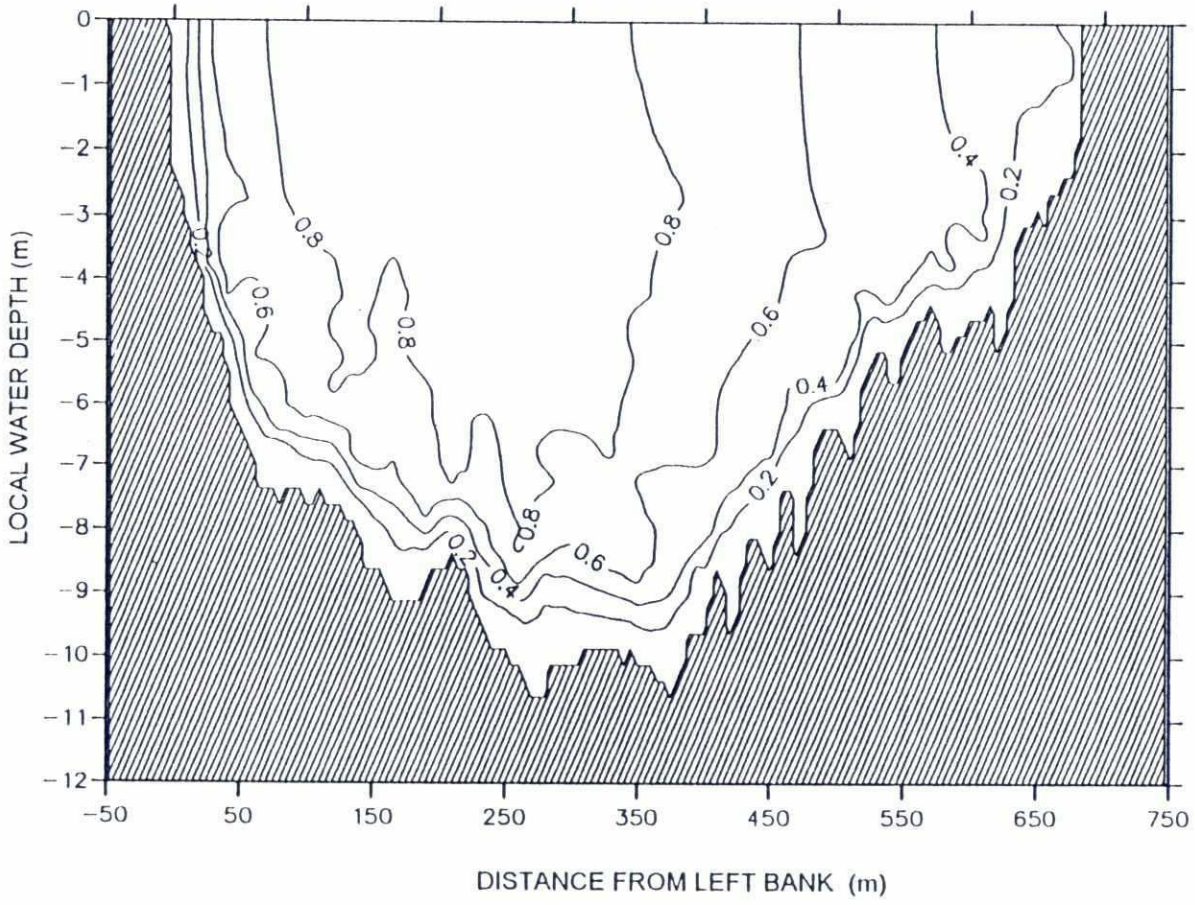
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

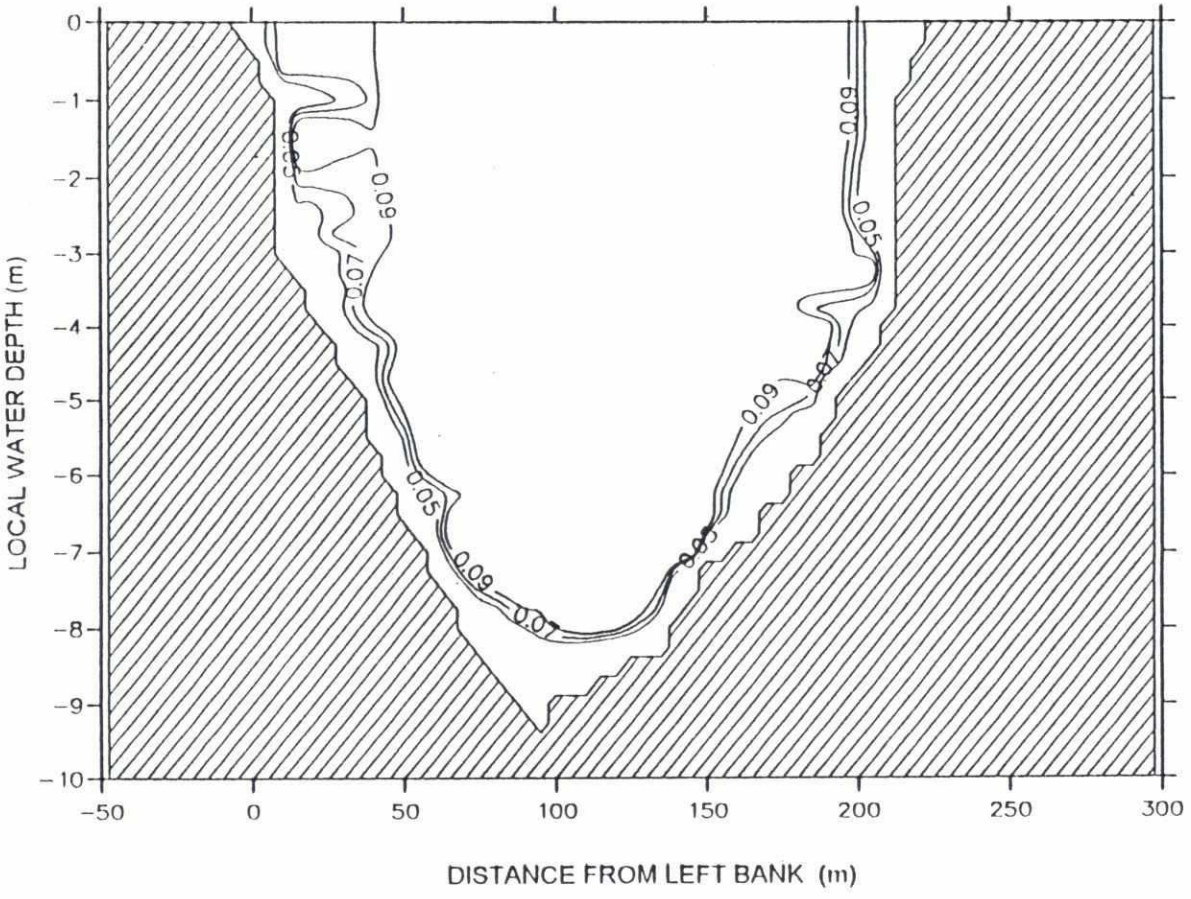
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9045 : 08 February , 1995	
		Location 1 : Jamuna River, Bahadurabad	
File : B5281T05	Date : 09 Sep 1995 Init : mzh	Horizontal distribution of flow and sediments Channel 2	page 3.2



Iso-velocity contours (m/s)
Water level : 12.91 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 9045 : 08 February , 1995	
		Location 1 : Jamuna River, Bahadurabad	
File : B5281T08	Date : 09 Sep 1995	Cross-sectional distribution of flow velocity	page 41
	Init : mzh	Channel 1	



Iso-velocity contours (m/s)
Water level : 12.91 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 9045 : 08 February , 1995	
		Location 1 : Jamuna River, Bahadurabad	
File : B5281T05	Date : 09 Sep 1995 Init : mzh	Cross-sectional distribution of flow velocity Channel 2	page 4.2

Andreasen settling tube

Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
6021							
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

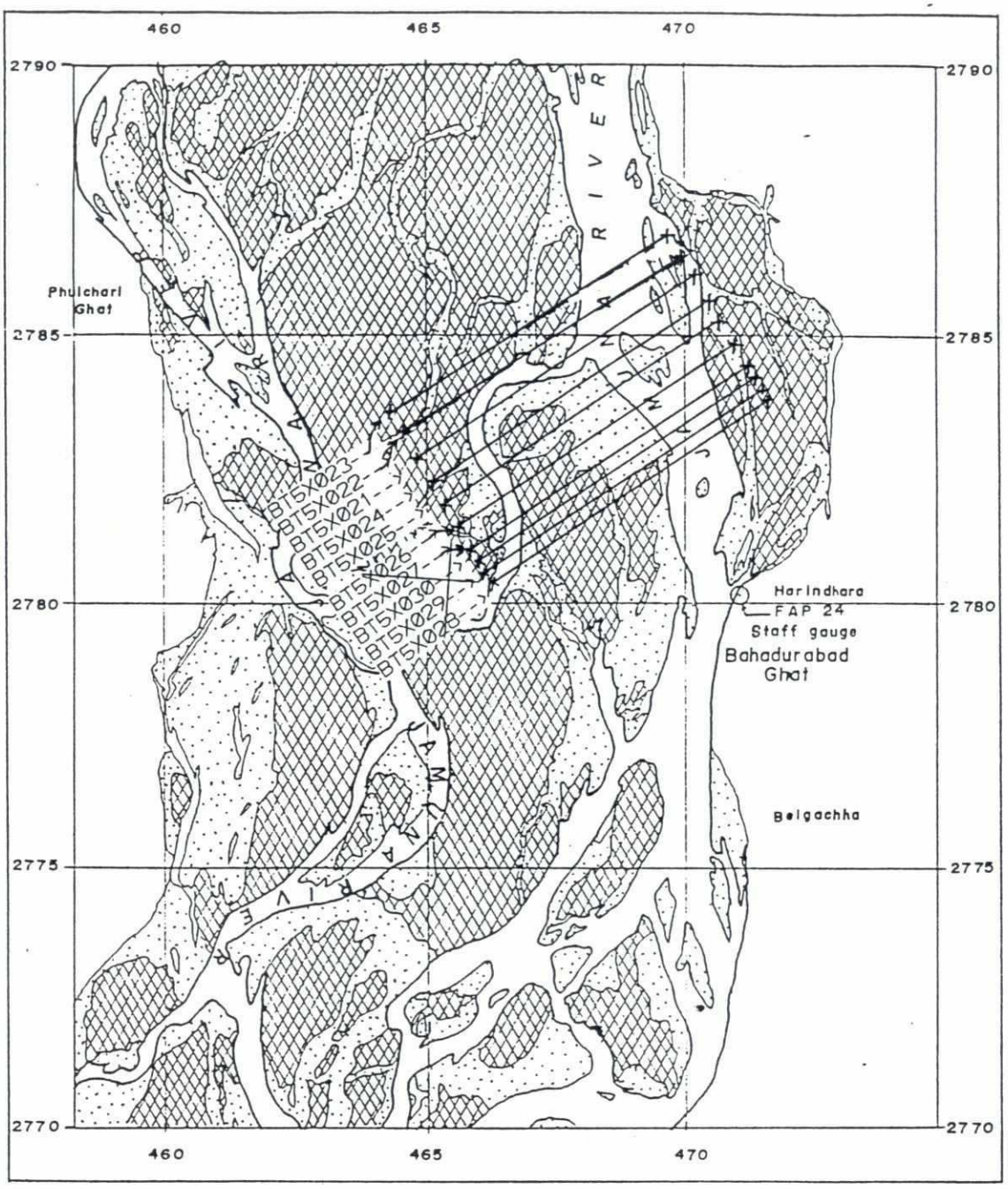
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9502081714-1720	B5281108*
	2	9502081510-1511	B5281105*
		9502081514-1516	B5281106

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B5281T08.ase
ADCP/S4/EMF data	2	QUATTRO	B5281T05.ase
Echosounder data	1	QUATTRO	B5281T08.ech
Echosounder data	2	QUATTRO	B5281T05.ech
Transect plot data	1	QUATTRO	B5281T08.trs
Transect plot data	2	QUATTRO	B5281T05.trs
Iso-velocity plot data	1	MIKE 21	B5281T08.ct2
		MIKE 21	B5281T08.dt2
Iso-velocity plot data	2	MIKE 21	B5281T05.ct2
		MIKE 21	B5281T05.dt2

Table 7.1 PSD 24 Database file description



LEGEND:

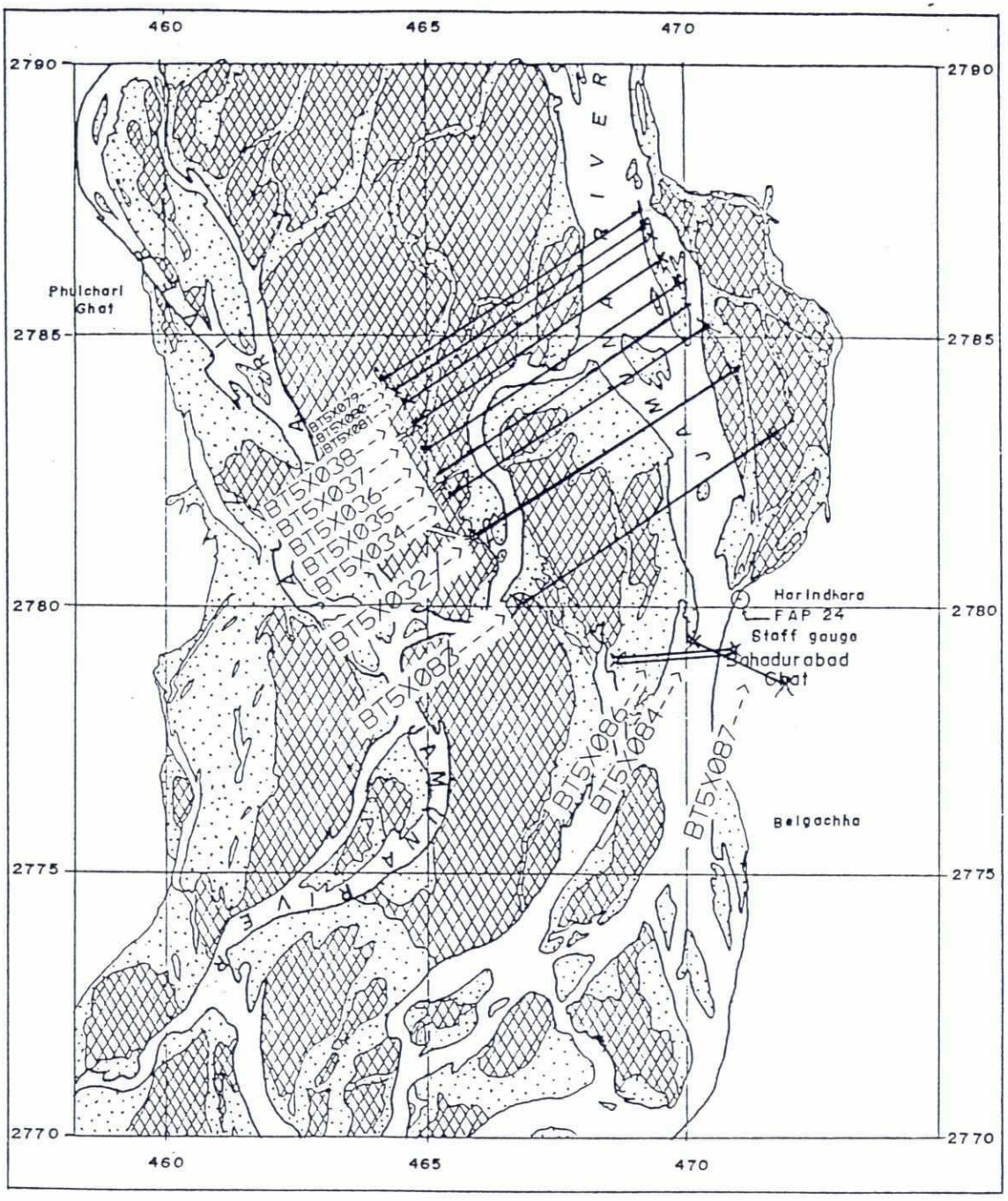
- Cross section
- High land
- Unstable / low char
- FAP 24 Staff gauge

N

5000 m 2500 m 0

Map is based on satellite images of March 1995

FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities DELFT - DHI		Survey Bulletin 9048: 06 - 13 March, 1995	
		Jamuna River, Char topography	
	Date : 14 Apr 1996	Location map	page 1.1
	Init : kah		



LEGEND:

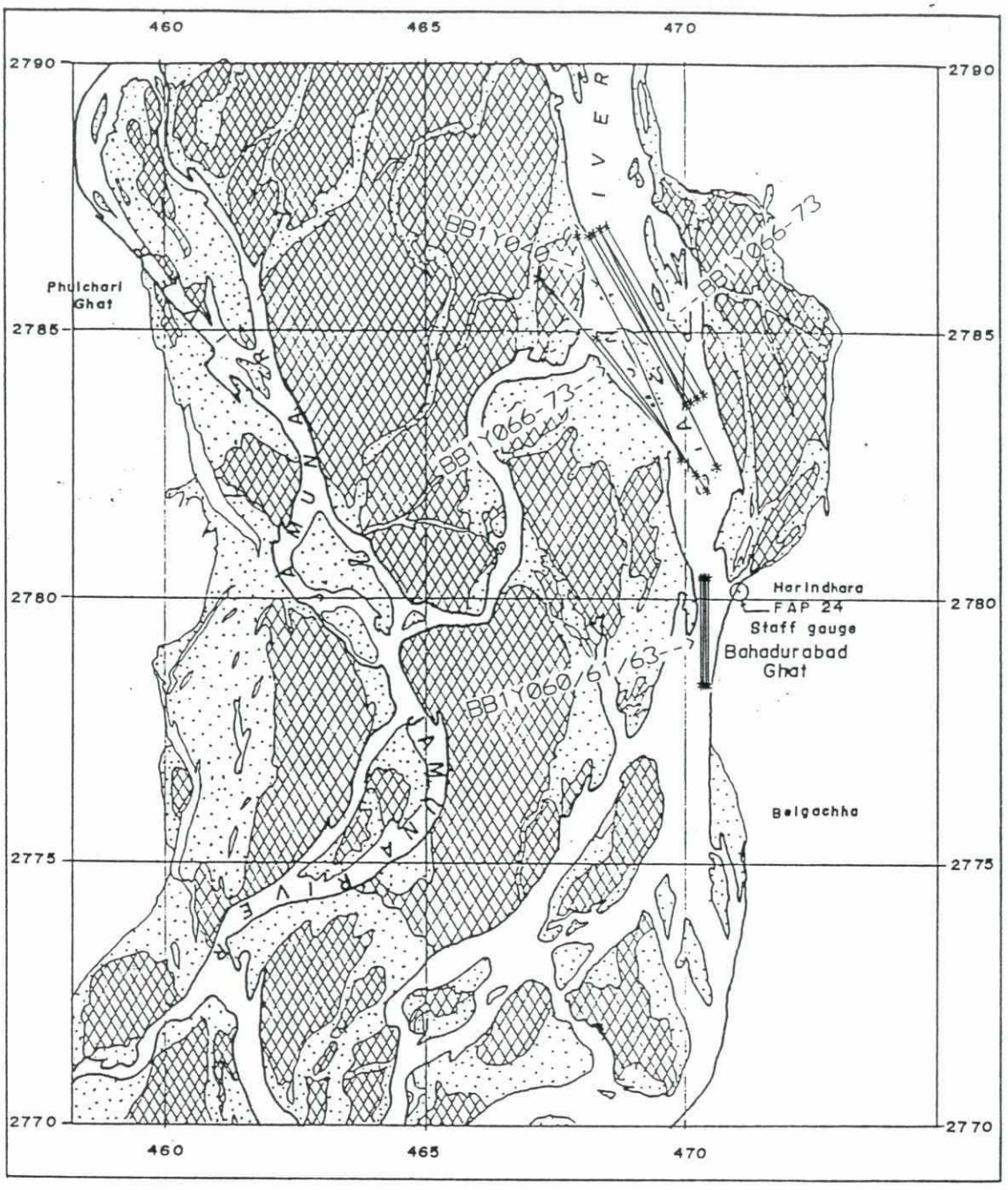
- Cross section
- High land
- Unstable / low char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1995

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9048: 06 - 13 March, 1995	
		Jamuna River, Char topography	
	Date : 14 Apr 1996	Location map	page 1.2
	Init : kah		



LEGEND:

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

N

5000m 2500m 0

Map is based on satellite images of March 1995

FAP 24 RIVER SURVEY PROJECT, Flood Plan Coordination Organization, Commission of the European Communities, DELFT - DHI	Survey Bulletin 9048: 06 - 13 March, 1995	
	Jamuna River, Char topography	
Date : 14 Apr 1996 Init : kah	Location map	page 1.3

Type of measurement	Method	No. of measurements in Lines												
		BT5X 021	BT5X 022	BT5X 024	BT5X 025	BT5X 026	BT5X 027	BT5X 028	BT5X 030	BT5X 032	BT5X 033	BT5X 034	BT5X 035	BT5X 036
Discharge	ADCP transect	1	2	2	1	2	2	3	3	2	2	2	4	1
	EMF transect	1	2	2	1	2	2	3	3	2	2	2	4	1
	Echo-Sounding	1	2	2	1	2	2	3	3	2	2	2	5	1
Vertical current profile	No of verticals in channel	-	-	-	-	-	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-	-	-	-	-	-
	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

Line no	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)
BT5X021	1538.64	6279 49	13 13	3763 48	-	-
BT5X022	1501.05	6710 90	13 13	3799 75	-	-
BT5X024	570.11	2422 15	13 13	2026 43	-	-
BT5X025	333.34	2298.54	13 13	2179 84	-	-
BT5X026	483.30	2562 69	13 14	2148 45	-	-
BT5X027	1050.09	3085 77	13 14	2255 70	-	-
BT5X028	1151.33	5090 70	13 10	3109 58	-	-
BT5X030	1274.76	5444 28	13 14	3410 19	-	-
BT5X032	809.62	3030 21	13 14	1946 20	-	-
BT5X033	566.22	1958 73	13 10	1302 26	-	-
BT5X034	434.45	1942 39	13 10	1418 31	-	-
BT5X035	635.87	2592 14	13 10	2031 49	-	-
BT5X036	1515.54	6766 08	13 13	3450 61	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	06 Mar 95	13 12	FAP24
Bahadurabad	07 Mar 95	13 13	FAP24
Bahadurabad	08 Mar 95	13 14	FAP24
Bahadurabad	09 Mar 95	13 12	FAP24
Bahadurabad	10 Mar 95	13 11	FAP24
Bahadurabad	12 Mar 95	13 10	FAP24
Bahadurabad	13 Mar 95	13 10	FAP24

Table 2.3 : Water levels

Short Description :
Bar topography. Land survey of bar, and bed level survey of dunes. Also flow measurements.
Side scan sonar survey of bed form variation accross the channel.

Type of measurement	Method	No. of measurements in Lines												
		BT5X 037	BT5X 038	BT5X 079	BT5X 080	BT5X 081	BT5X 083	BT5X 084	BT5X 086	BT5X 087	BB1Y 040	BB1Y 60	BB1Y 61	BB1Y 62
Discharge	ADCP transect	1	1	1	1	2	2	1	1	2	1	3	4	3
	EMF transect	1	1	1	1	2	2	1	1	2	1	3	4	3
	Echo-Sounding	1	2	1	1	2	2	1	1	2	1	3	4	3
Vertical current profile	No of verticals in channel	-	-	-	-	-	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-	-	-	-	-	-
	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

Line no	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)
BT5X037	1501.97	6922.29	13.13	3241.00	-	-
BT5X038	1307.10	5117.36	13.13	2586.20	-	-
BT5X079	1412.16	6323.39	13.14	3313.93	-	-
BT5X080	1204.01	6495.16	13.14	-	-	-
BT5X081	1166.69	6259.98	13.14	3500.84	-	-
BT5X083	685.98	4195.31	13.11	2573.68	-	-
BT5X084	390.40	4841.63	13.11	3772.90	-	-
BT5X086	401.06	4814.18	13.11	3643.65	-	-
BT5X087	573.29	4544.69	13.11	3337.96	-	-
BB1Y040	1247.56	9755.42	13.12	-	-	-
BB1Y060	1766.77	22571.75	13.14	2289.77	-	-
BB1Y061	1886.24	22649.75	13.14	2854.79	-	-
BB1Y062	1995.77	21291.82	13.14	3245.47	-	-

Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	06 Mar 95	13.12	FAP24
Bahadurabad	07 Mar 95	13.13	FAP24
Bahadurabad	08 Mar 95	13.14	FAP24
Bahadurabad	09 Mar 95	13.12	FAP24
Bahadurabad	10 Mar 95	13.11	FAP24
Bahadurabad	12 Mar 95	13.10	FAP24
Bahadurabad	13 Mar 95	13.10	FAP24

Table 2.3 : Water levels

Type of measurement	Method	No. of measurements in Lines							
		BB1Y 66	BB1Y 67	BB1Y 68	BB1Y 69	BB1Y 70	BB1Y 71	BB1Y 72	BB1Y 73
Discharge	ADCP transect	1	1	1	1	1	1	1	2
	EMF transect	1	1	1	1	1	1	1	2
	Echo-Sounding	1	1	1	1	-	1	1	1
Vertical current profile	No of verticals in channel	-	-	-	-	-	-	-	-
	ADCP	-	-	-	-	-	-	-	-
	S4 current meter	-	-	-	-	-	-	-	-
	Ott current meter	-	-	-	-	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-	-	-	-	-
	Andreasen settling tube	-	-	-	-	-	-	-	-
	MEX turbidity meter	-	-	-	-	-	-	-	-
	Integrated bottle sampling	-	-	-	-	-	-	-	-
	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

Line no	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)
BB1Y066	942.80	2823.67	13.12	795.11	-	-
BB1Y067	3725.37	24229.31	13.12	2808.91	-	-
BB1Y068	2784.49	8622.43	13.11	595.15	-	-
BB1Y069	2615.70	11378.39	13.10	-	-	-
BB1Y071	4029.04	22857.58	13.12	2828.55	-	-
BB1Y072	3312.02	17539.72	13.10	-	-	-
BB1Y073	1799.01	16800.01	13.11	-	-	-

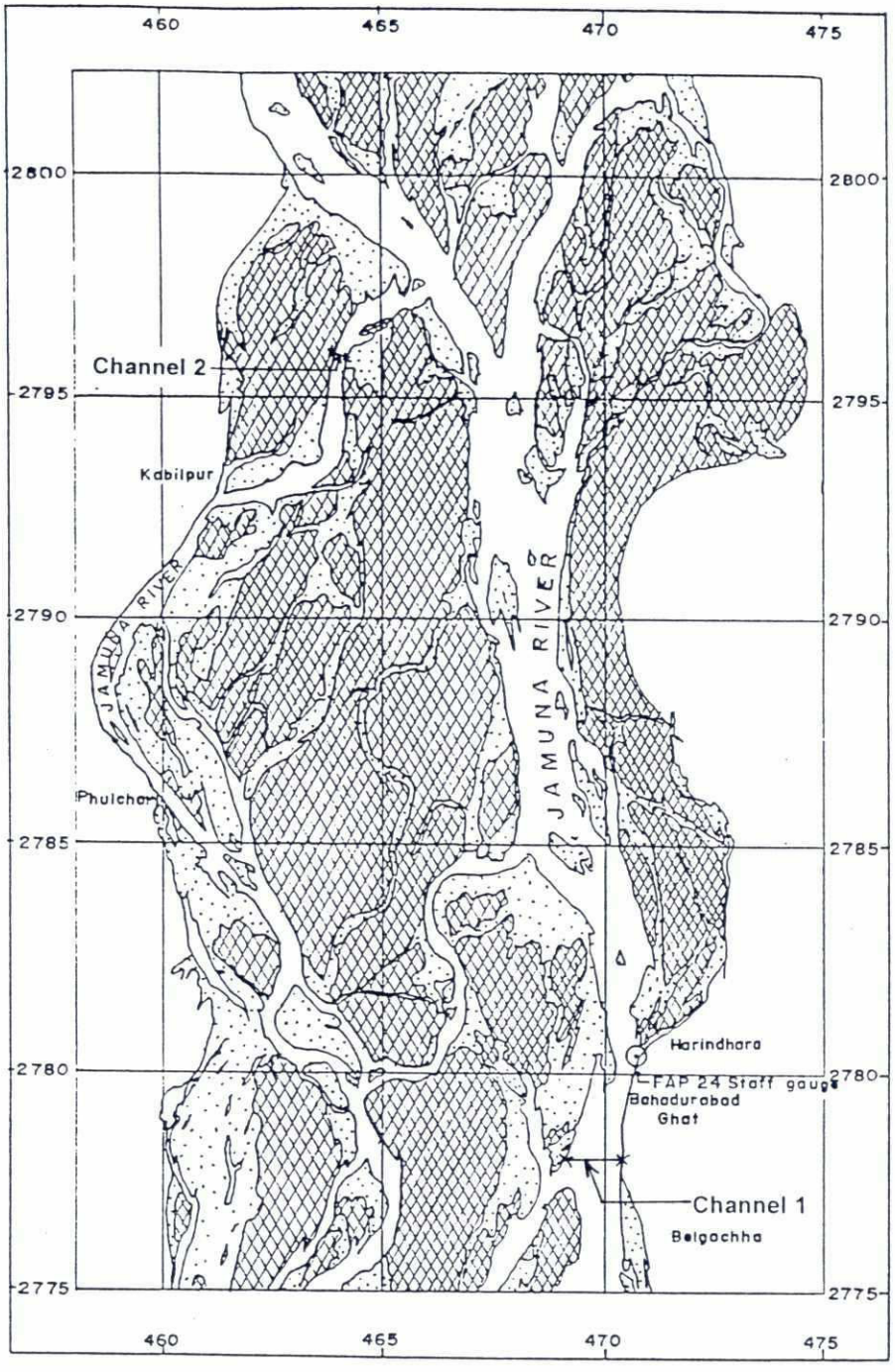
Table 2.2 : Key figures

Gauge Location	Date	Water level (Daily average) (m + PWD)	Gauge
Bahadurabad	06 Mar 95	13.12	FAP24
Bahadurabad	07 Mar 95	13.13	FAP24
Bahadurabad	08 Mar 95	13.14	FAP24
Bahadurabad	09 Mar 95	13.12	FAP24
Bahadurabad	10 Mar 95	13.11	FAP24
Bahadurabad	12 Mar 95	13.10	FAP24
Bahadurabad	13 Mar 95	13.10	FAP24

Table 2.3 : Water levels

Survey date	File name	Line no	.ase	.ech	.trs	.sed	.bdl	.bdm	.ssc	.ssz	.prf	.lng
1995-03-06	B5361T03	BT5X035	+	+	+							
1995-03-07	B5371T06	BT5X038	+	+	+							
1995-03-07	B5371T09	BT5X037	+	+	+							
1995-03-07	B5371T10	BT5X022	+	+	+							
1995-03-07	B5371T11	BT5X022	+	+	+							
1995-03-07	B5371T13	BT5X034	+	+	+							
1995-03-07	B5371T16	BT5X024	+	+	+							
1995-03-07	B5371T17	BT5X035		+	+							
1995-03-07	B5371T18	BT5X021	+	+	+							
1995-03-07	B5371T19	BT5X036	+	+	+							
1995-03-07	B5371T21	BT5X025	+	+	+							
1995-03-07	B5371T22	BT5X033	+	+	+							
1995-03-08	B5381T03	BB1Y60	+	+	+							
1995-03-08	B5381T04	BB1Y61	+	+	+							
1995-03-08	B5381T05	BB1Y62	+	+	+							
1995-03-08	B5381T06	BT5X028	+	+	+							
1995-03-08	B5381T07	BT5X030	+	+	+							
1995-03-08	B5381T08	BT5X030	+	+	+							
1995-03-08	B5381T09	BT5X026	+	+	+							
1995-03-08	B5381T10	BT5X032	+	+	+							
1995-03-08	B5381T11	BT5X027	+	+	+							
1995-03-08	B5381T12	BT5X079	+	+	+							
1995-03-08	B5381T13	BT5X080		+	+							
1995-03-08	B5381T14	BT5X081	+	+	+							
1995-03-08	B5381T15	BT5X081	+	+	+							
1995-03-09	B5391T01	BB1Y60		+								
1995-03-09	B5391T02	BB1Y61	+	+	+							
1995-03-09	B5391T08	BB1Y62	+	+	+							
1995-03-09	B5391T09	BB1Y071	+	+	+							
1995-03-09	B5391T10	BB1Y066	+	+	+							
1995-03-09	B5391T11	BB1Y067	+	+	+							
1995-03-10	B53A1T01	BB1Y068	+	+	+							
1995-03-10	B53A1T02	BT5X083	+	+	+							
1995-03-10	B53A1T03	BB1Y60	+	+	+							
1995-03-10	B53A1T04	BB1Y61	+	+	+							
1995-03-10	B53A1T06	BB1Y62	+	+	+							
1995-03-10	B53A1T08	BB1Y73		+								
1995-03-10	B53A1T11	BT5X084	+	+	+							
1995-03-10	B53A1T12	BT5X086	+	+	+							
1995-03-10	B53A1T19	BT5X087	+	+	+							
1995-03-10	B53A1T20	BT5X087	+	+	+							
1995-03-12	B53C1T11	BB1Y61	+	+	+							
1995-03-13	B53D1T01	BT5X035	+	+	+							
1995-03-13	B53D1T02	BT5X035	+	+	+							
1995-03-13	B53D1T03	BT5X024	+	+	+							
1995-03-13	B53D1T04	BT5X034	+	+	+							
1995-03-13	B53D1T05	BT5X025	+	+	+							
1995-03-13	B53D1T06	BT5X033	+	+	+							
1995-03-13	B53D1T07	BT5X026	+	+	+							
1995-03-13	B53D1T08	BT5X032	+	+	+							
1995-03-13	B53D1T09	BT5X027	+	+	+							
1995-03-13	B53D1T10	BT5X028	+	+	+							
1995-03-13	B53D1T11	BT5X028		+	+							
1995-03-13	B53D1T13	BT5X030	+	+	+							
1995-03-13	B53D1T14	BT5X083	+	+	+							
1995-03-13	B53D1T15	BB1Y072		+	+							
1995-03-13	B53D1T16	BB1Y069		+	+							
Total number of files			50	57	55							

Table 4.1: PSD24 Database file description



LEGEND:

- High land
- Unstable / low char
- FAP 24 Staff gauge

N

5000 m 2500m 0

Map is based on satellite images of March 1995

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9049 : 11 March, 1995 Location 1 : Jamuna River, Bahadurabad	
Date : 09 Sep 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	2	1	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No.of verticals in channel	-	-	-	-
	ADCP	-	-	-	-
	S4 current meter	-	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	-	-	-	-
	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

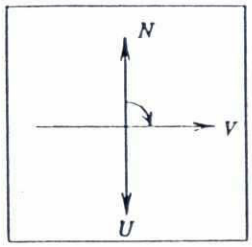
	Width (m)	Area (m^2)	Stage h (m+PWD)	Discharge Q (m^3/s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	856	5124	13.10	3487	-	-
Channel 2	260	1425	13.10	331	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	11 Mar 95	13.10	FAP 24
	Channel 2	11 Mar 95	13.10	FAP 24

Table 2.3: Water-levels

W.A.R.P.O. LIBRARY. DHAKA

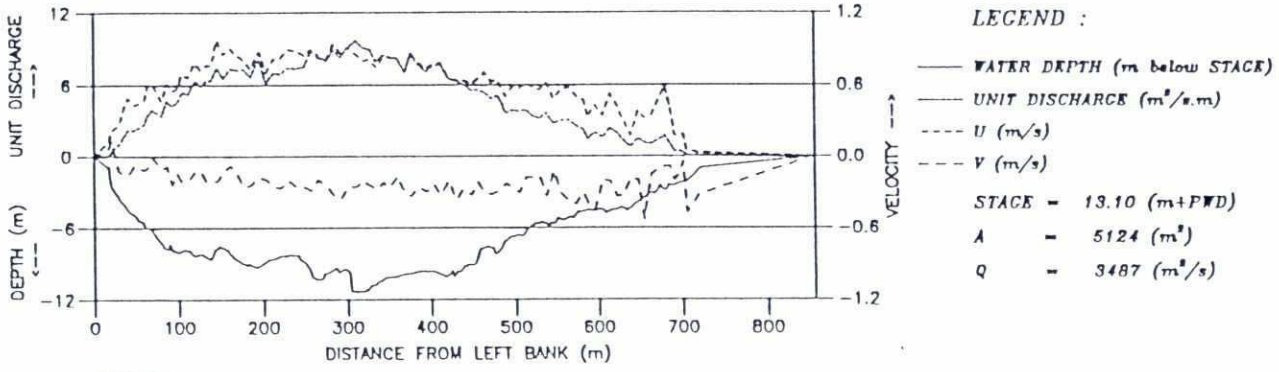


TRANSECT AZIMUTH = 90°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 13.10 (m+PWD)

A = 5124 (m²)

Q = 3487 (m³/s)

FLOW

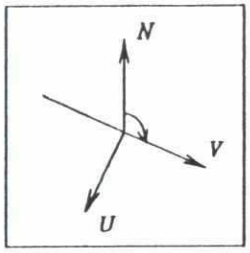
Sample not collected

SEDIMENT TRANSPORT

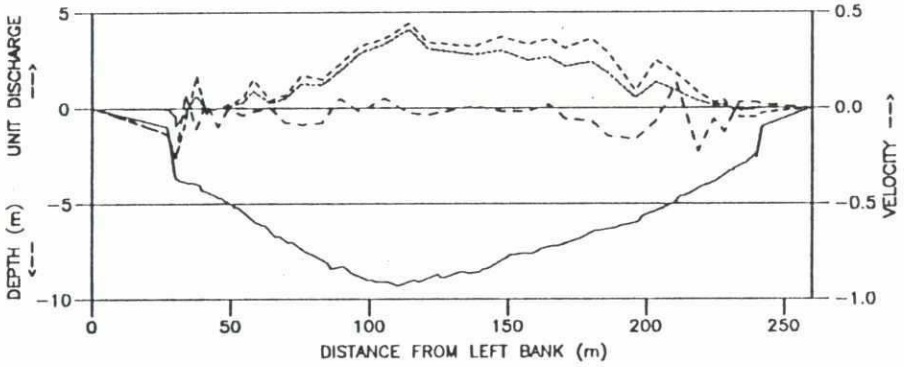
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9049 : 11 March , 1995	
		Location 1 : Jamuna River, Bahadurabad	
File : B53B1T02	Date : 09 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 1	page 3.1



TRANSECT AZIMUTH = 114°
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 (m²/s.m)
U (m/s)
V (m/s)
STAGE = 13.10 (m+PWD)
A = 1425 (m²)
Q = 331 (m³/s)

FLOW

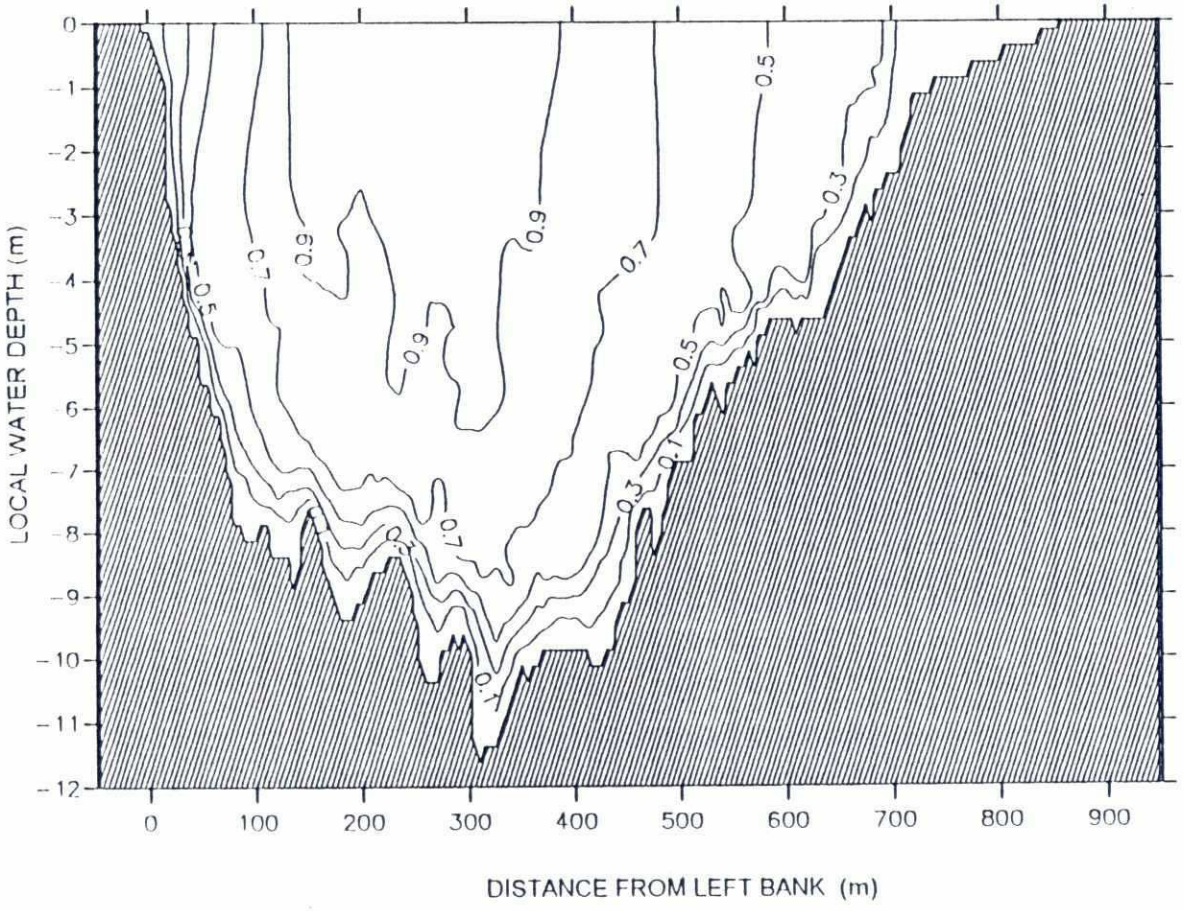
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

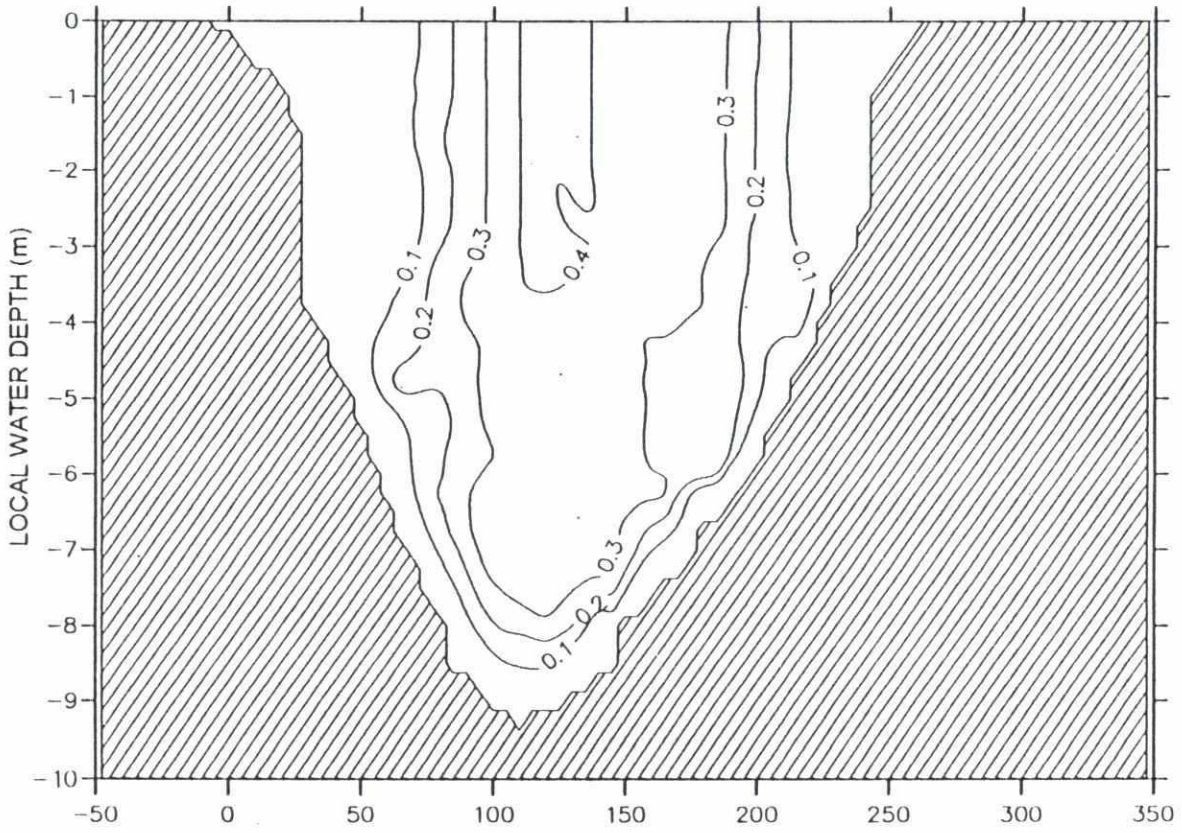
GRAIN SIZE

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9049 : 11 March , 1995 Location 1 : Jamuna River, Bahadurabad	
File : B53B1T04	Date : 09 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2	page 32



Iso-velocity contours (m/s)
Water level : 13.10 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 9049 : 11 March , 1995 Location 1 : Jamuna River, Bahadurabad	
File : B53B1T02	Date : 09 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 4.1



Iso-velocity contours (m/s)
Water level : 13.10 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 9049 : 11 March , 1995 Location 1 : Jamuna River, Bahadurabad	
File : B53B1T04	Date : 09 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 2	page 42

Andreasen settling tube

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

Table 5.3 Grain sizes of bed load

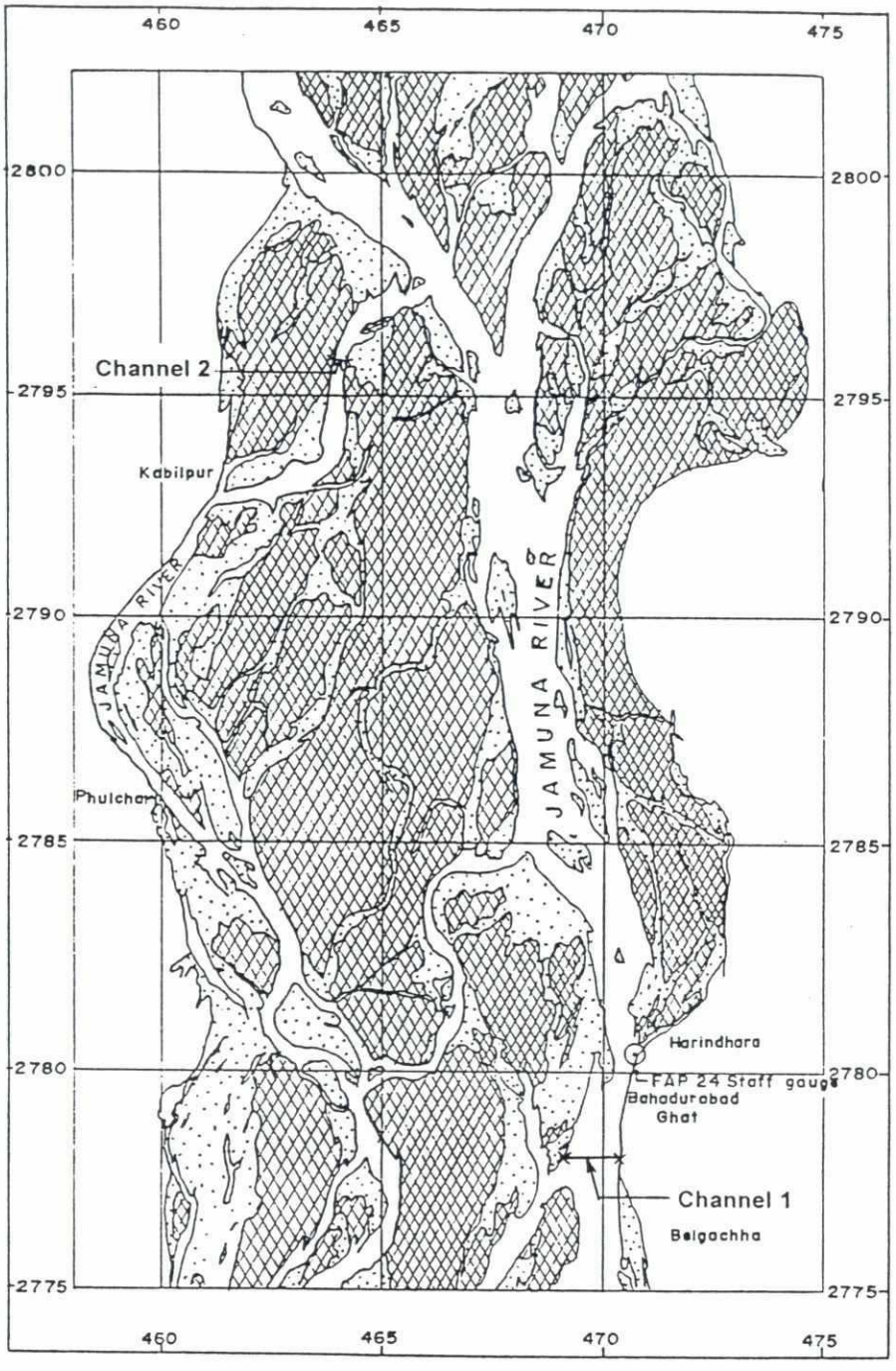
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9503110820-0828 9503110830-0838	B53B1T02 * B53B1T03
	2	9503111054-1058	B53B1T04 *

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B53B1T02 .ase
ADCP/S4/EMF data	2	QUATTRO	B53B1T04 .ase
Echosounder data	1	QUATTRO	B53B1T02 .ech
Echosounder data	2	QUATTRO	B53B1T04 .ech
Transect plot data	1	QUATTRO	B53B1T02 .trs
Transect plot data	2	QUATTRO	B53B1T04 .trs
Iso-velocity plot data	1	MIKE 21	B53B1T02 .ct2
		MIKE 21	B53B1T02 .dt2
Iso-velocity plot data	2	MIKE 21	B53B1T04 .ct2
		MIKE 21	B53B1T04 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

- High land
- Unstable / low char
- FAP 24 Staff gauge

N

5000m 2500m 0

Map is based on satellite images of March 1995

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9052 : 27 March, 1995	
		Location 1 : Jamuna River, Bahadurabad	
	Date : 10 Sep 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	2	3	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No.of verticals in channel	-	-	-	-
	ADCP	-	-	-	-
	S4 current meter	-	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	-	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	-	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	-	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-
	Van Veen bed sampler	-	-	-	-

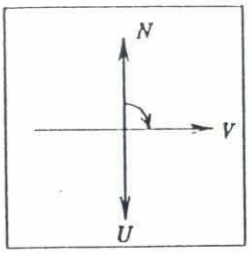
Table 2.1: Survey programme as made

	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	910	5259	13.30	3740	-	-
Channel 2	259	1503	13.30	413	-	-

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	27 Mar 95	13.30	FAP 24
	Channel 1	27 Mar 95	13.30	FAP 24

Table 2.3: Water-levels

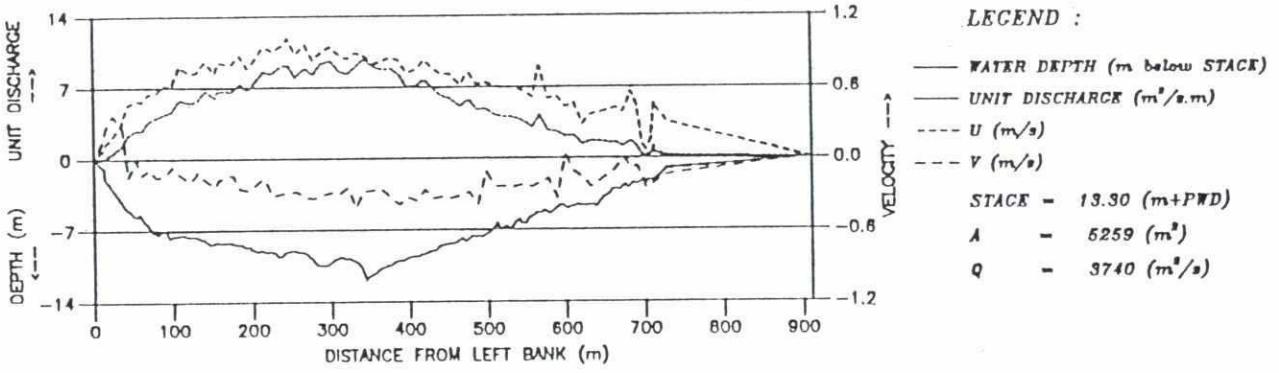


TRANSECT AZIMUTH = 90°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

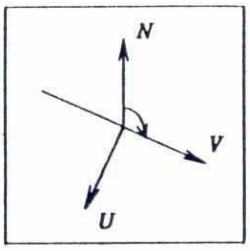
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9052 : 27 March , 1995	
		Location 1 : Jamuna River, Bahadurabad	
File : B53R1T03	Date : 10 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 1	page 3.1

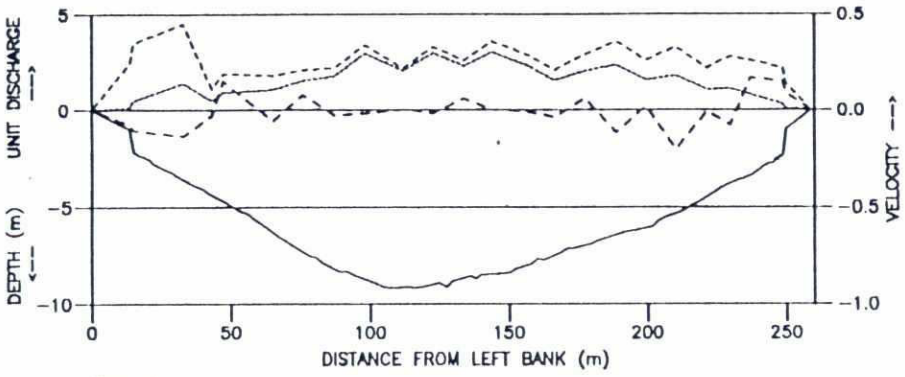


TRANSECT AZIMUTH = 114°

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 (m²/s.m)

U (m/s)

V (m/s)

STAGE = 19.30 (m+PWD)

A = 1503 (m²)

Q = 413 (m³/s)

FLOW

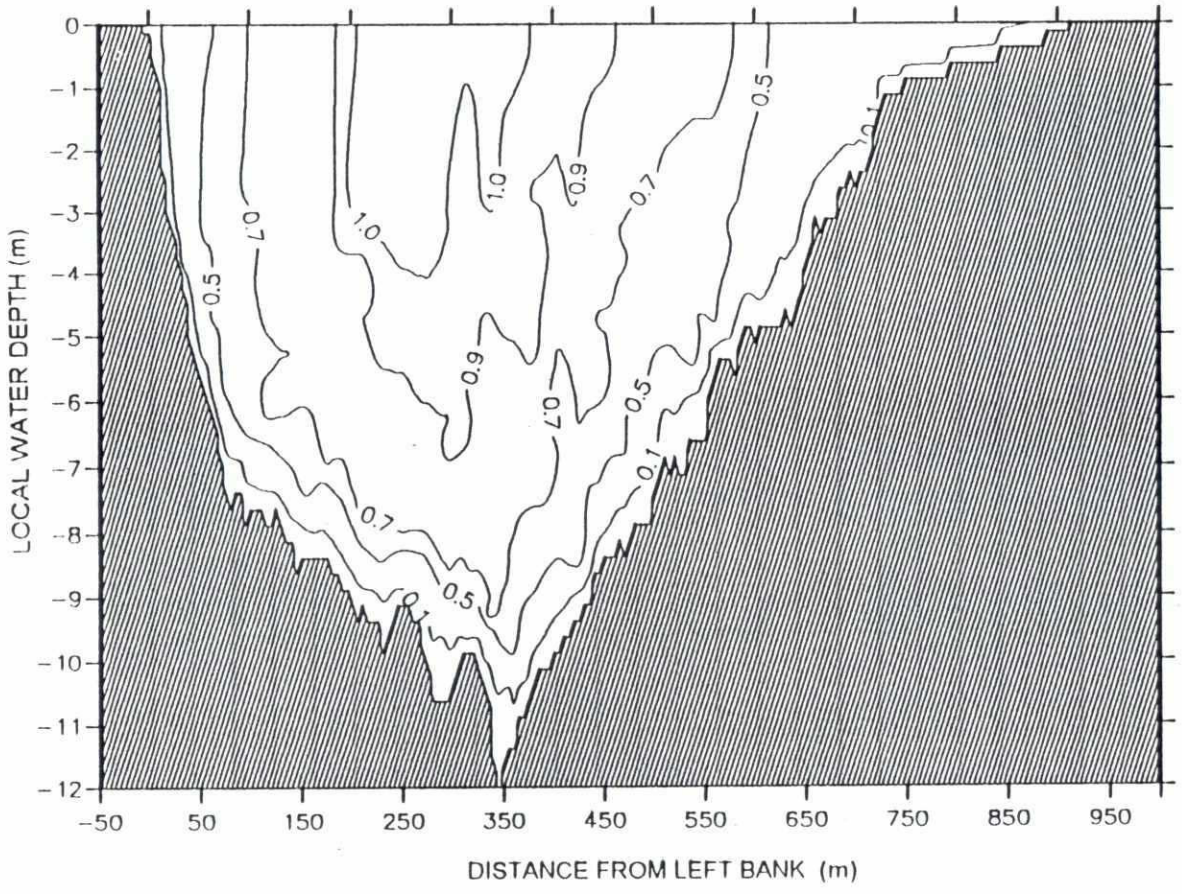
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

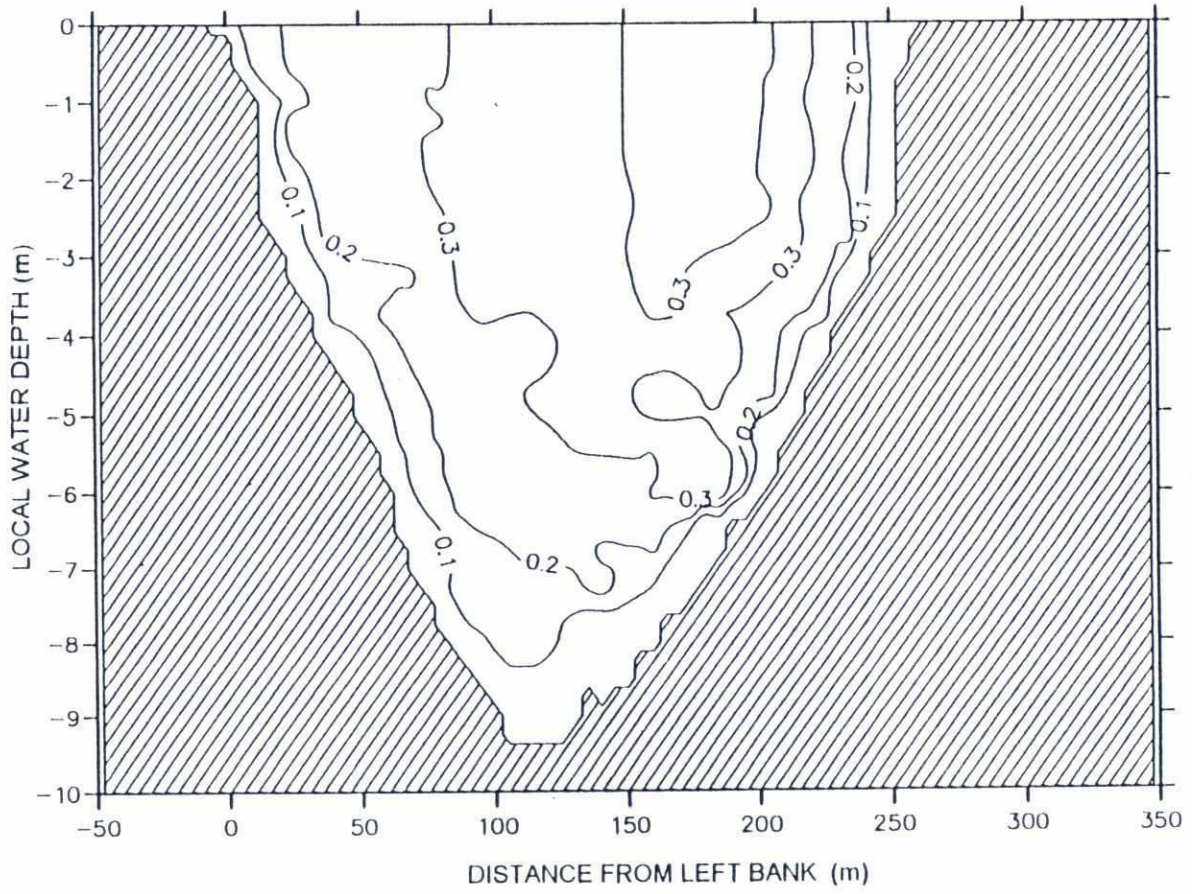
GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9052 : 27 March , 1995 Location 1 : Jamuna River, Bahadurabad	
File : B53R1T08	Date : 10 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2	page 3 2



Iso-velocity contours (m/s)
Water level : 13.30 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 9052 : 27 March , 1995 Location 1 : Jamuna River, Bahadurabad	
File : B53R1T03	Date : 10 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 1	page 4.1



Iso-velocity contours (m/s)
Water level : 13.30 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 9052 : 27 March , 1995	
		Location 1 : Jamuna River, Bahadurabad	
File : B53R1T08	Date : 10 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 2	page 42

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)
Sample not collected							

Table 5.3 : Grain sizes of bed load

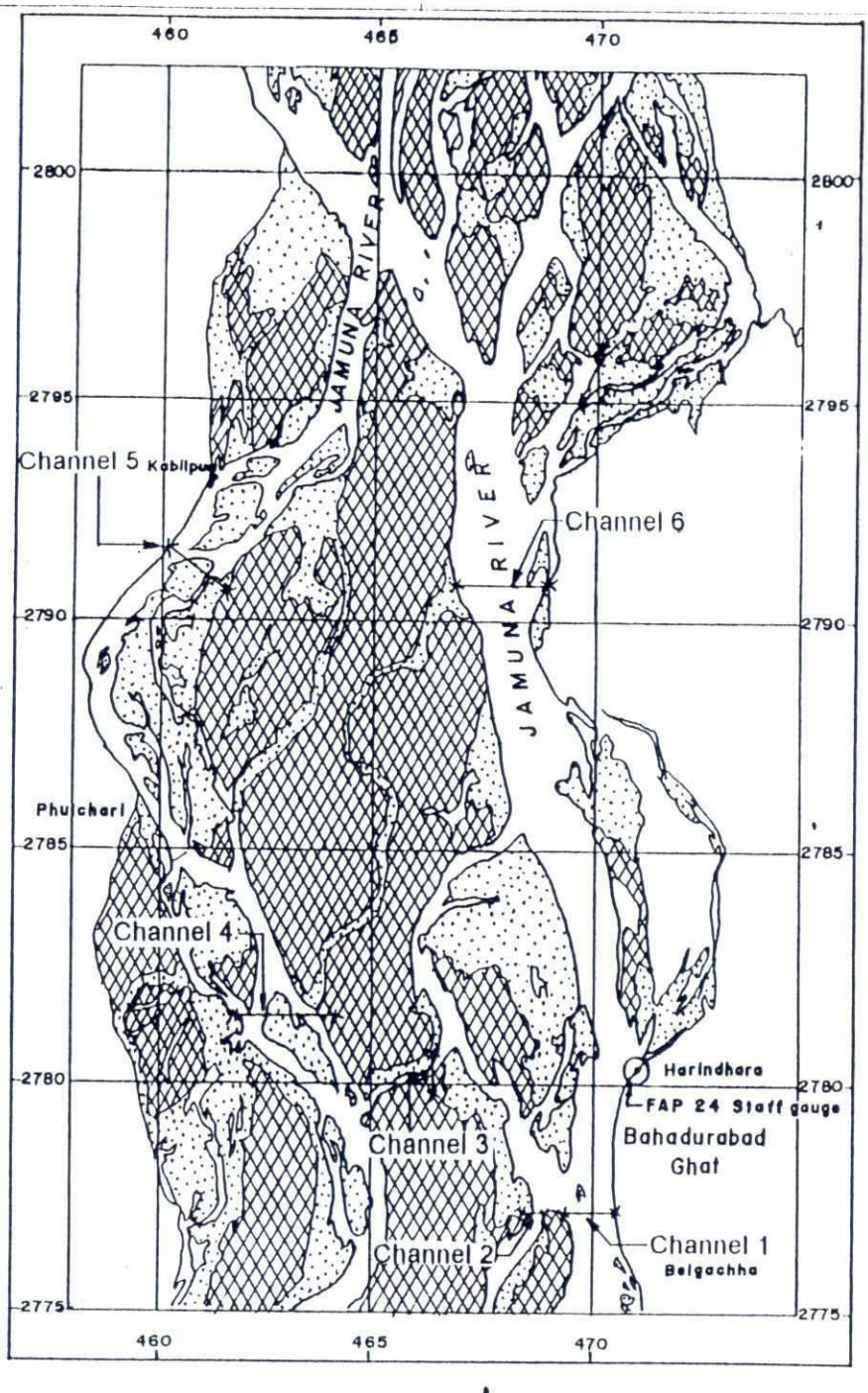
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9503270816-0822	B53R1T01
		9503270828-0835	B53R1T03 *
	2	9503271042-1050	B53R1T07
		9503271059-1102	B53R1T08 *
		9503271107-1111	B53R1T09

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B53R1T03 .ase
ADCP/S4/EMF data	2	QUATTRO	B53R1T08 .ase
Echosounder data	1	QUATTRO	B53R1T03 .ech
Echosounder data	2	QUATTRO	B53R1T08 .ech
Transect plot data	1	QUATTRO	B53R1T03 .trs
Transect plot data	2	QUATTRO	B53R1T08 .trs
Iso-velocity plot data	1	MIKE 21 MIKE 21	B53R1T03 .ct2 B53R1T03 .dt2
Iso-velocity plot data	2	MIKE 21 MIKE 21	B53R1T08 .ct2 B53R1T08 .dt2

Table 7.1 PSD 24 Database file description



FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994
		Location 1 : Jamuna River, Bahadurabad
	Date : 07 Sep 1995	Location map
	Init : mzh/sjr	page 11

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

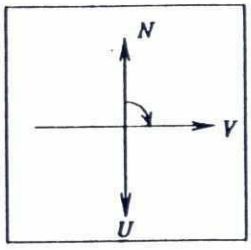
Table 2.1: Survey programme as made

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	1443	11159	17.96	12510	-	-
Channel 2	721	4473	17.96	4196	-	-
Channel 3	669	3156	18.06	1658	-	-
Channel 4	2632	7874	18.06	5044	-	-
Channel 5	1678	7206	18.06	5895	-	-
Channel 6	2511	15789	17.96	18871	-	-

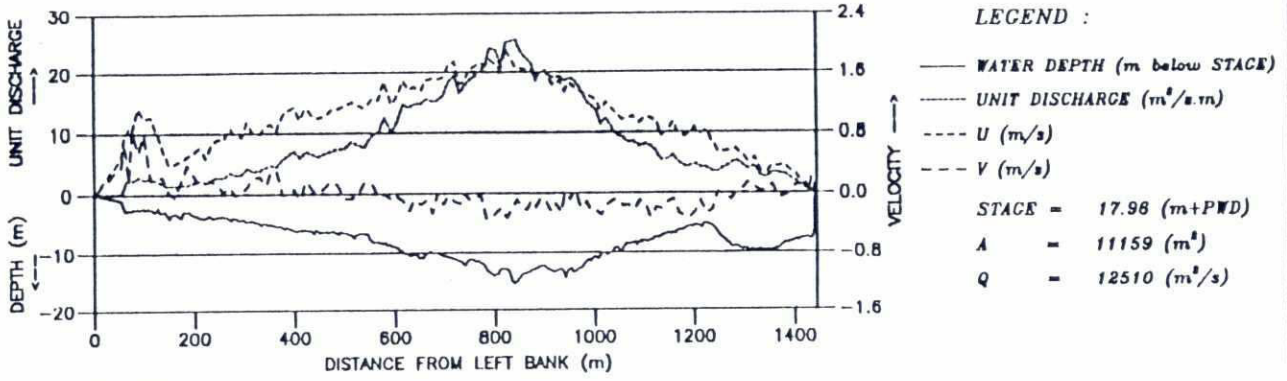
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bahadurabad	Channel 1	01 Sep 94	17.96	FAP 24
	Channel 2	01 Sep 94	17.96	FAP 24
	Channel 3	31 Aug 94	18.06	FAP 24
	Channel 4	31 Aug 94	18.06	FAP 24
	Channel 5	31 Aug 94	18.06	FAP 24
	Channel 6	01 Sep 94	17.96	FAP 24

Table 2.3: Water-levels



TRANSECT AZIMUTH = 90°
U – VELOCITY NORMAL TO TRANSECT (m/s)
V – VELOCITY PARALLEL TO TRANSECT (m/s)
N – MAGNETIC NORTH



FLOW

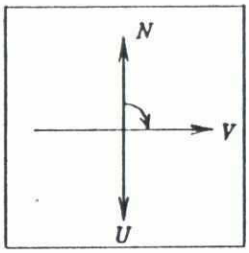
Sample not collected

SEDIMENT TRANSPORT

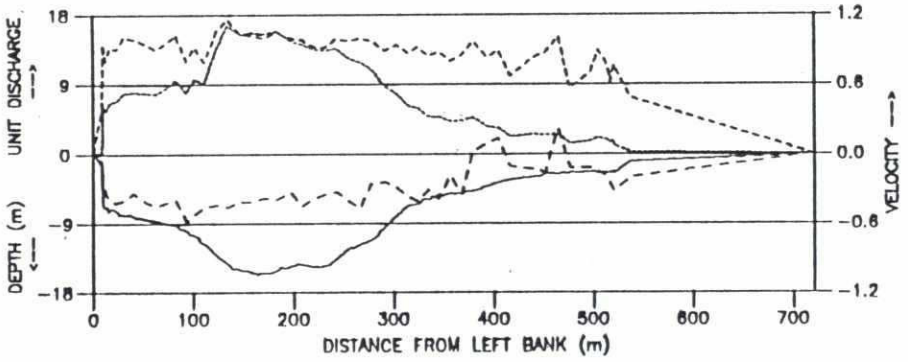
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4911T08	Date : 07 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 1	page 31



TRANSECT AZIMUTH = 90°
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 (m²/s.m)*
---- *U (m/s)*
- - - *V (m/s)*

STAGE = 17.96 (m+PWD)
A = 4473 (m²)
Q = 4196 (m³/s)

FLOW

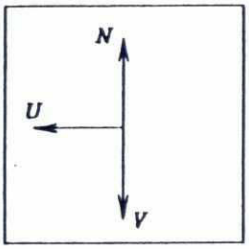
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4911T07	Date : 07 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 2	page 3.2

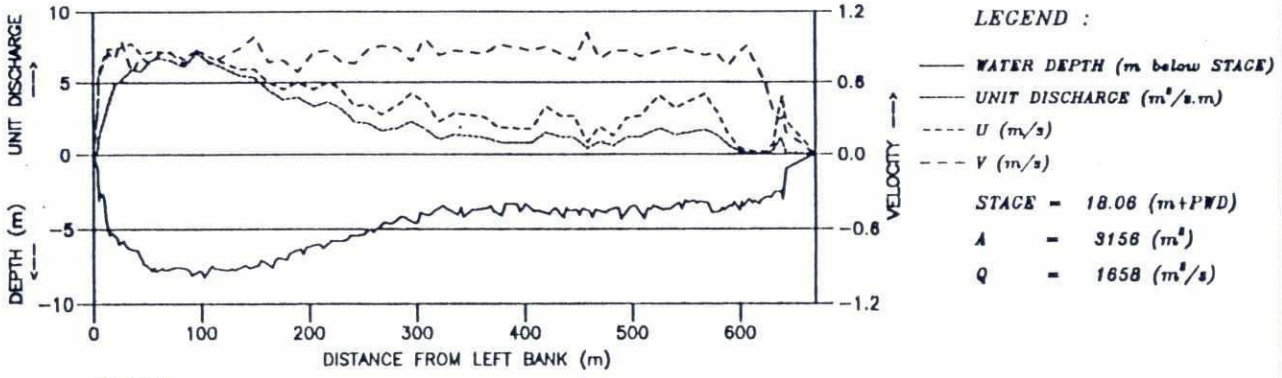


TRANSECT AZIMUTH = 180°

U – VELOCITY NORMAL TO TRANSECT (m/s)

V – VELOCITY PARALLEL TO TRANSECT (m/s)

N – MAGNETIC NORTH



FLOW

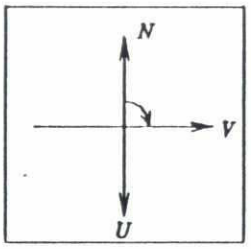
Sample not collected

SEDIMENT TRANSPORT

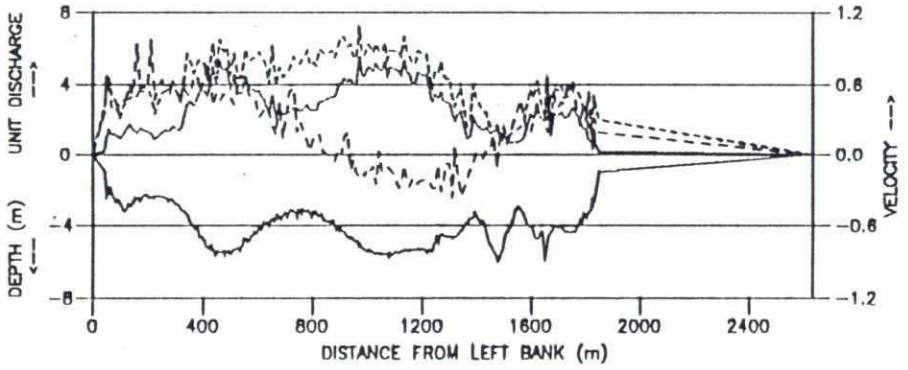
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994
		Location 1 : Jamuna River, Bahadurabad
File : B48V1T09	Date : 07 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 3
		page 33



TRANSECT AZIMUTH = 90°
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 (m²/s.m)
U (m/s)
V (m/s)

STAGE = 18.06 (m+PWD)
A = 7874 (m²)
Q = 5044 (m³/s)

FLOW

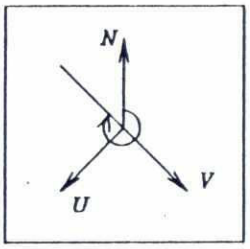
Sample not collected

SEDIMENT TRANSPORT

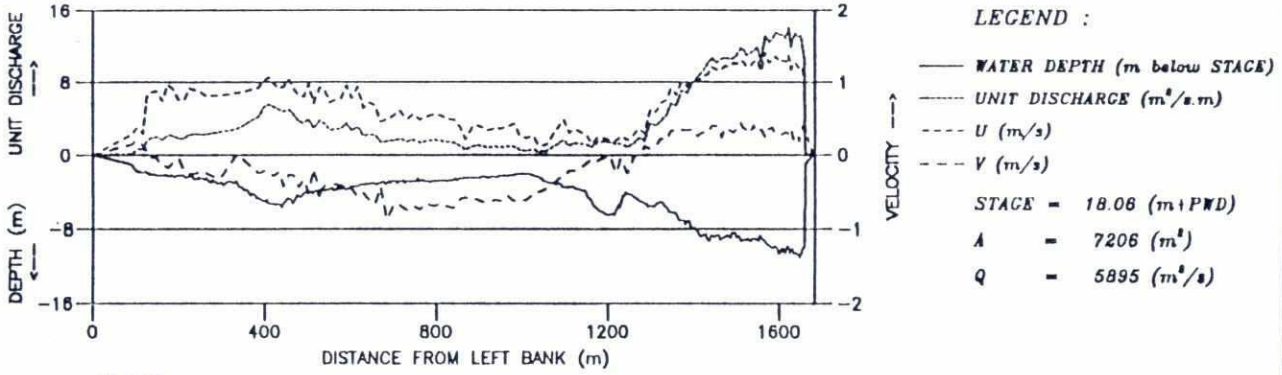
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		**Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994**	
		Location 1 : Jamuna River, Bahadurabad	
File : B48V1T13	Date : 07 Sep 1995 Init : mzh/sjr	**Horizontal distribution of flow and sediments** **Channel 4**	page 3.4



TRANSECT AZIMUTH = 315°
U – VELOCITY NORMAL TO TRANSECT (m/s)
V – VELOCITY PARALLEL TO TRANSECT (m/s)
N – MAGNETIC NORTH



FLOW

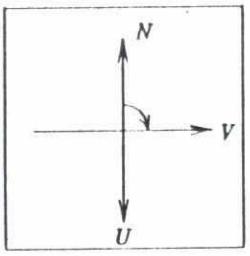
Sample not collected

SEDIMENT TRANSPORT

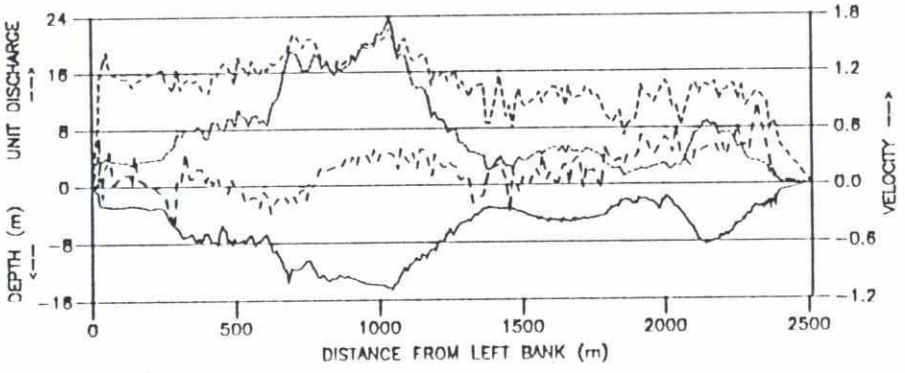
Sample not collected

GRAIN SIZE

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994	
	Location 1 : Jamuna River, Bahadurabad	
File : B48V1T19	Date : 07 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 5
		page 35



TRANSECT AZIMUTH = 90°
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 (m²/s.m)
U (m/s)
V (m/s)
STAGE = 17.96 (m+PWD)
A = 15789 (m²)
Q = 18871 (m³/s)

FLOW

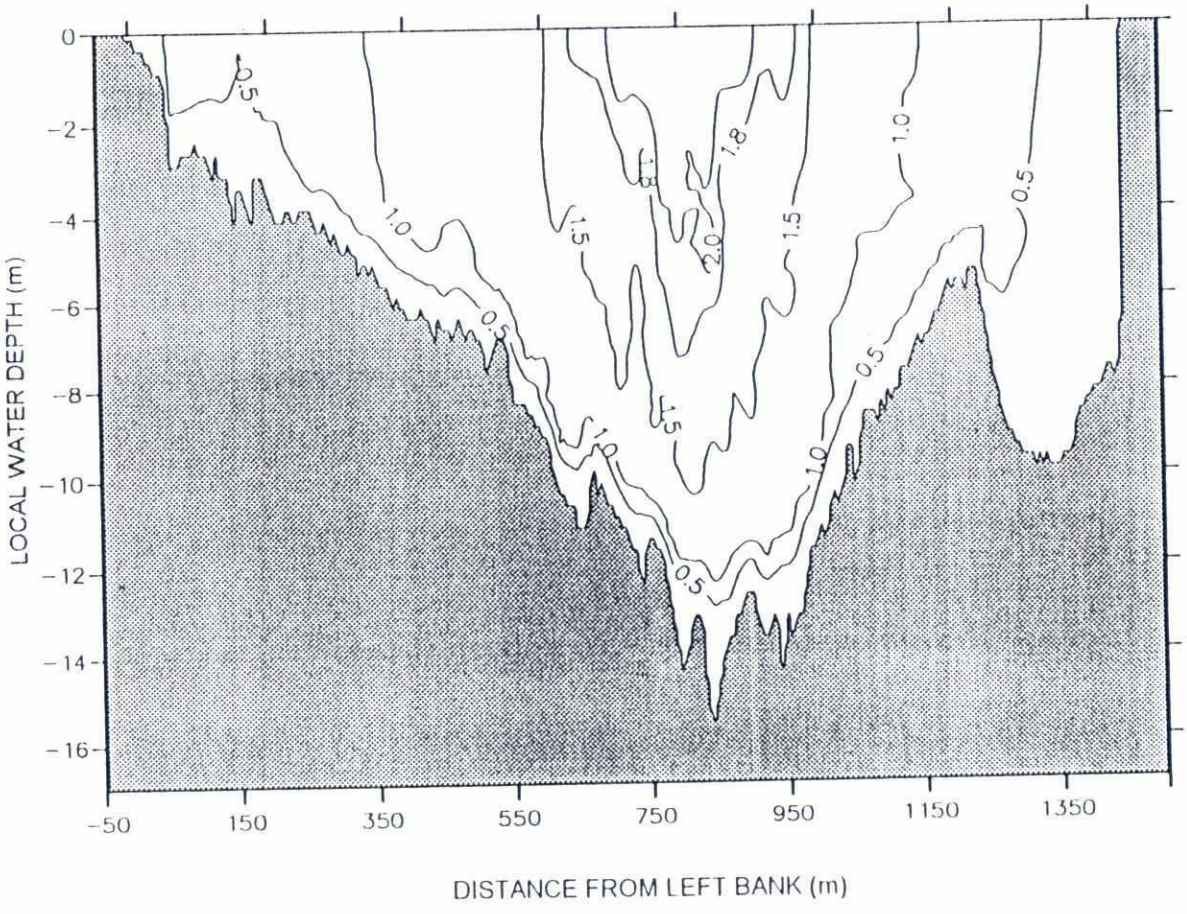
Sample not collected

SEDIMENT TRANSPORT

Sample not collected

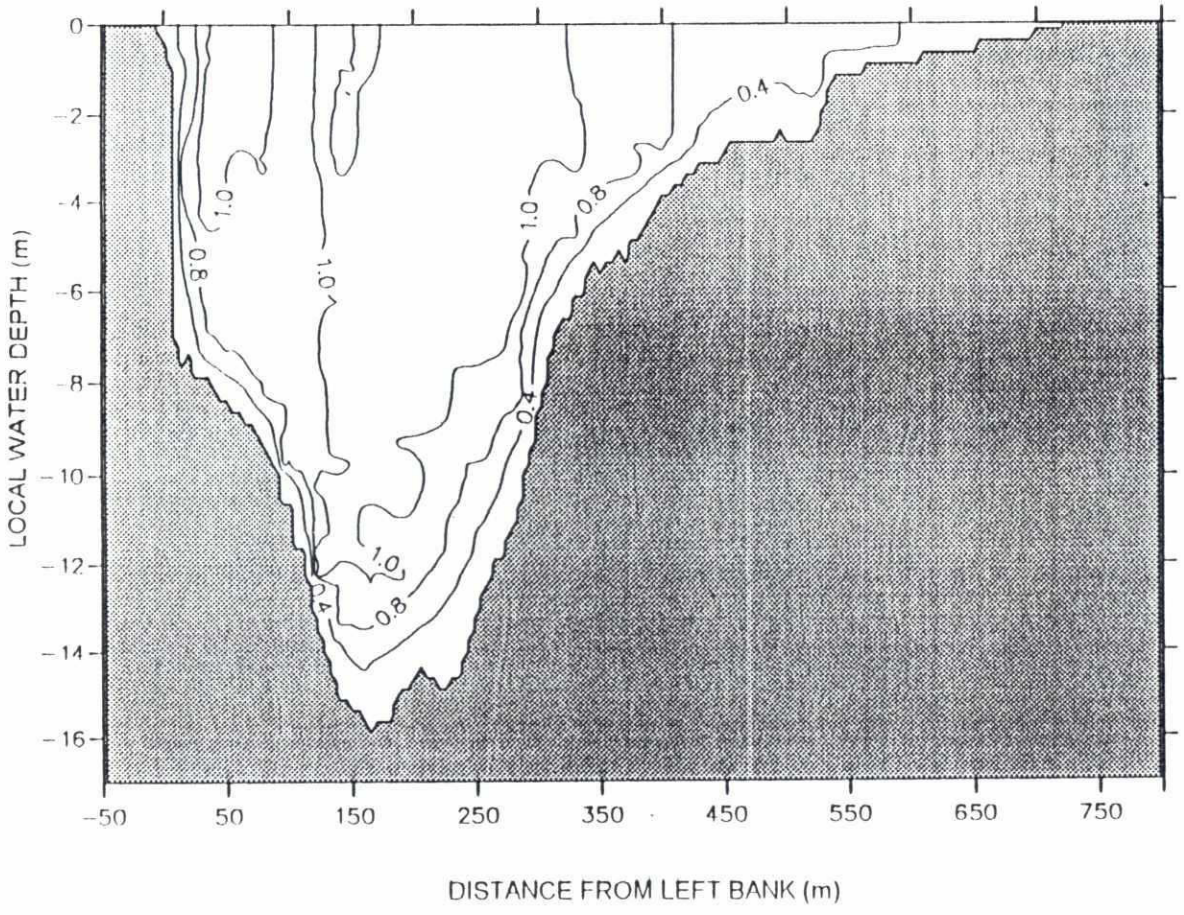
GRAIN SIZE

FAP 24 DELFT · DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4911T05	Date : 07 Sep 1995 Init : mzh/sjr	Horizontal distribution of flow and sediments Channel 6	page 3.6



Iso-velocity contours (m/s)
Water level : 17.96 m + PWD measured at the station indicated on Page 1.1

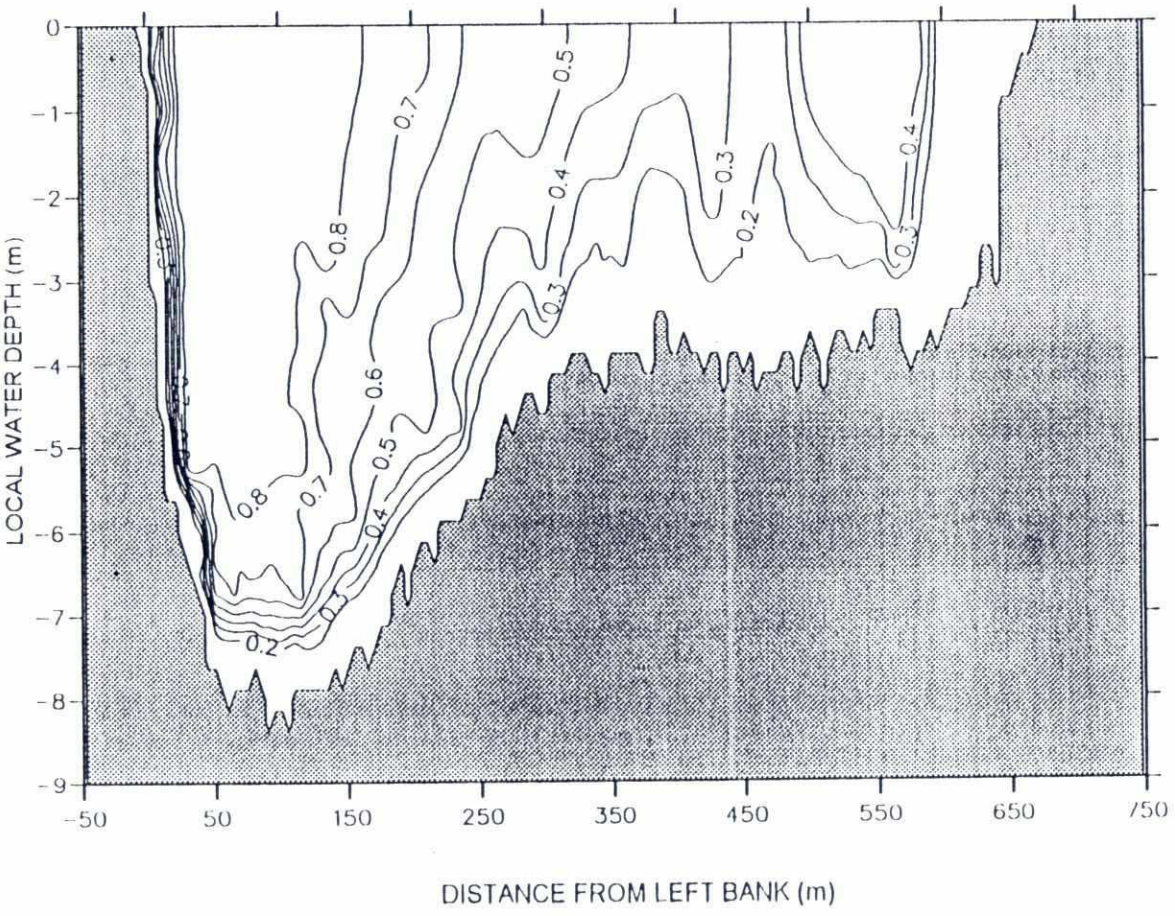
FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4911T08	Date : 07 Sep 1995	Cross-sectional distribution of flow velocity	page 41
	Init : mzh/sjr	Channel 1	



Iso-velocity contours (m/s)
Water level : 17.96 m + PWD measured at the station indicated on Page 1.1

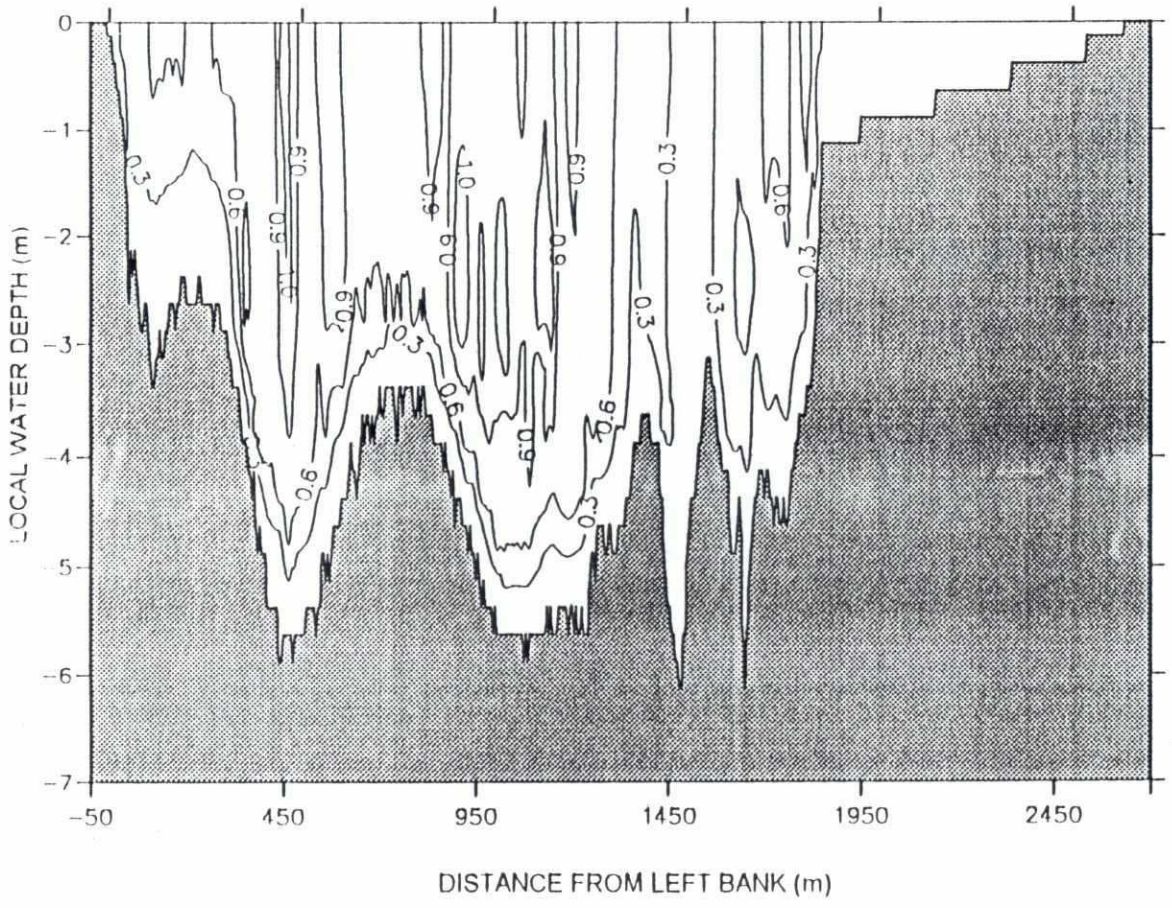
FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4911T07	Date : 07 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 2	page 4.2

099



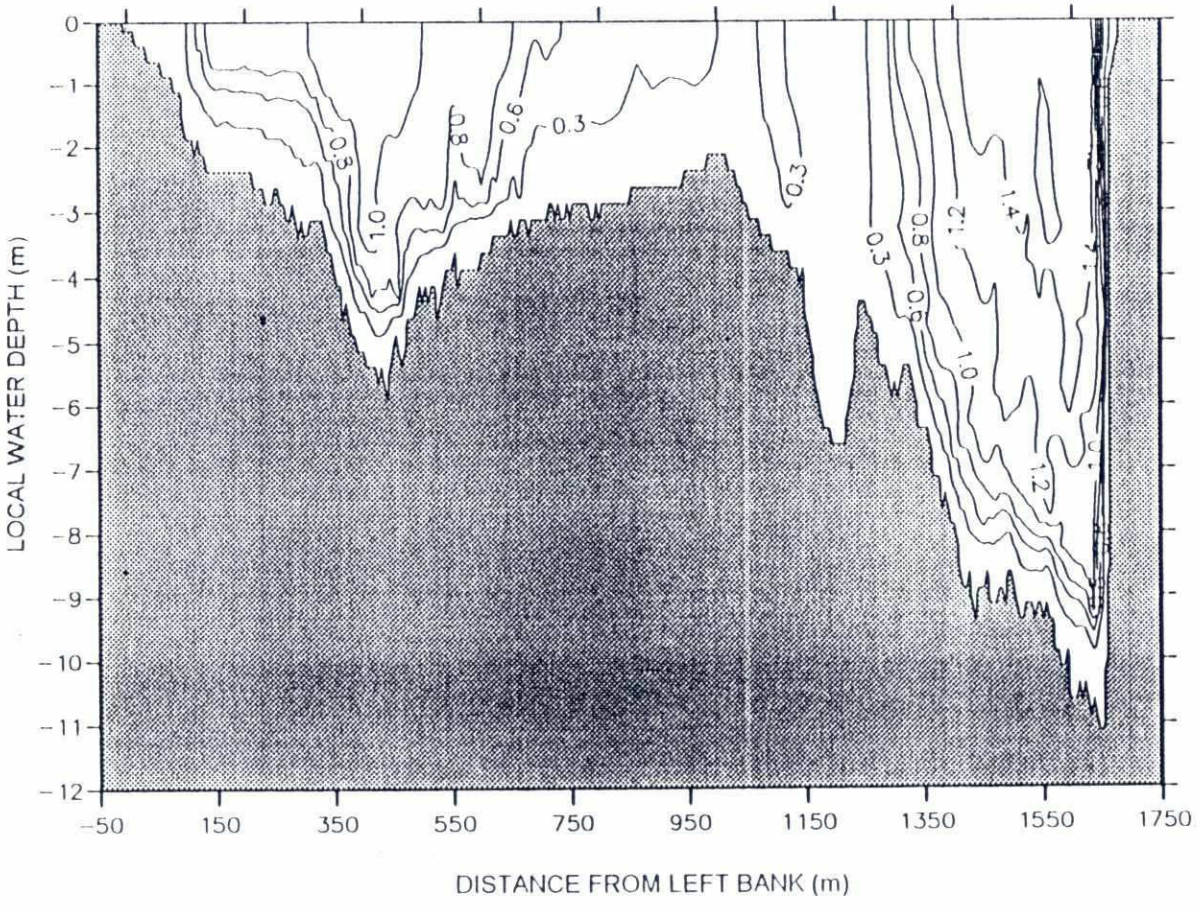
Iso-velocity contours (m/s)
Water level : 18.06 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	**Survey Bulletin 9022B : 31 Aug - 01 Sep, 1994**	
	Location 1 : Jamuna River, Bahadurabad	
File : B48V1T09	Date : 07 Sep 1995 Init : mzh/sjr	**Cross-sectional distribution of flow velocity** **Channel 3**
		page 43



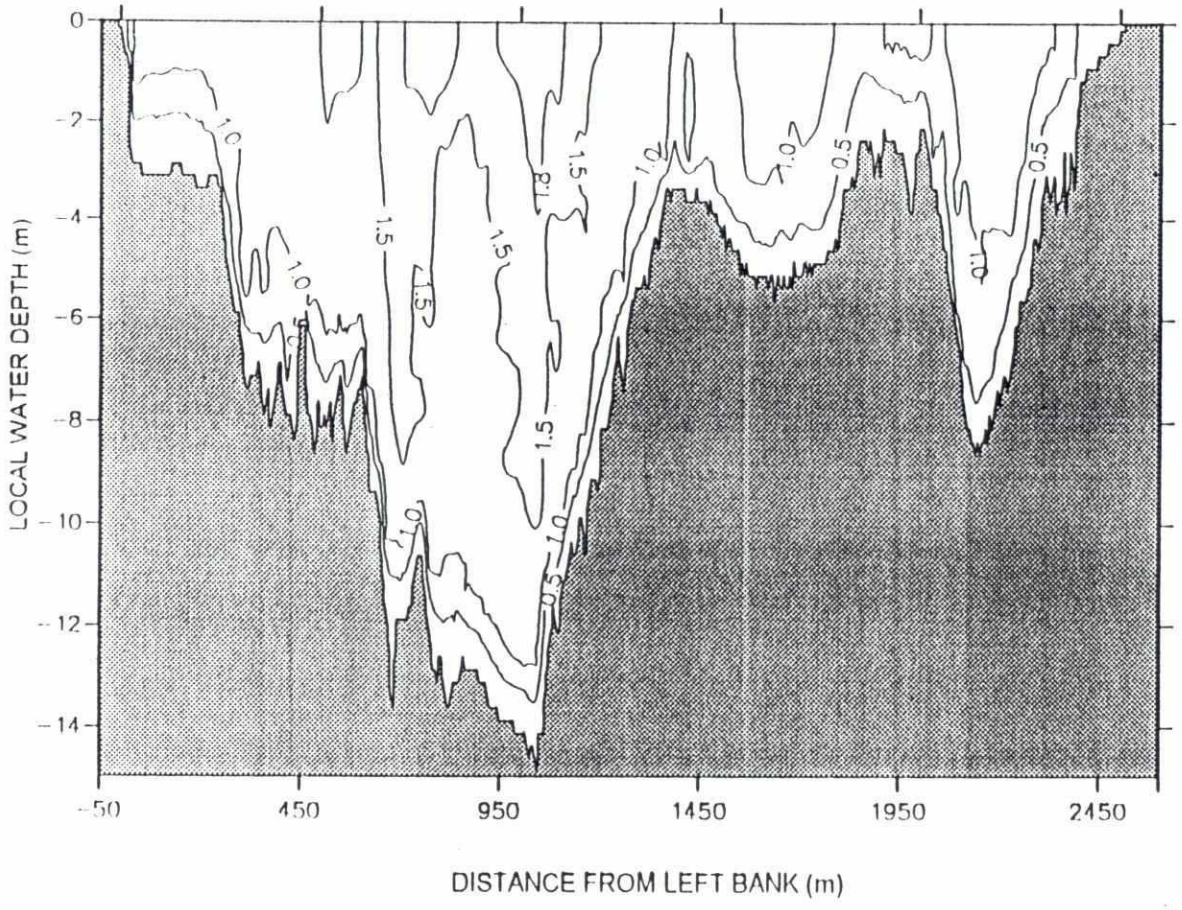
Iso-velocity contours (m/s)
Water level : 18.06 m + PWD measured at the station indicated on Page 1.1

FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		**Survey** Bulletin 9022B : 31 Aug - 01 Sep, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48V1T13	Date : 07 Sep 1995 Init : mzh/sjr	Cross-sectional distribution of flow velocity Channel 4	page 4.4



Iso-velocity contours (m/s)
Water level : 18.06 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 9022B : 31 Aug - 01 Sep, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B48V1T19	Date : 07 Sep 1995	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 5	45



Iso-velocity contours (m/s)
Water level : 17.96 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 9022B : 31 Aug - 01 Sep, 1994	
		Location 1 : Jamuna River, Bahadurabad	
File : B4911T05	Date : 07 Sep 1995	Cross-sectional distribution of flow velocity	page
	Init : mzh/sjr	Channel 6	4.6

Andreasen settling tube

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 5.1 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 < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (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)
Sample not collected							

Table 5.3 : Grain size of bed load

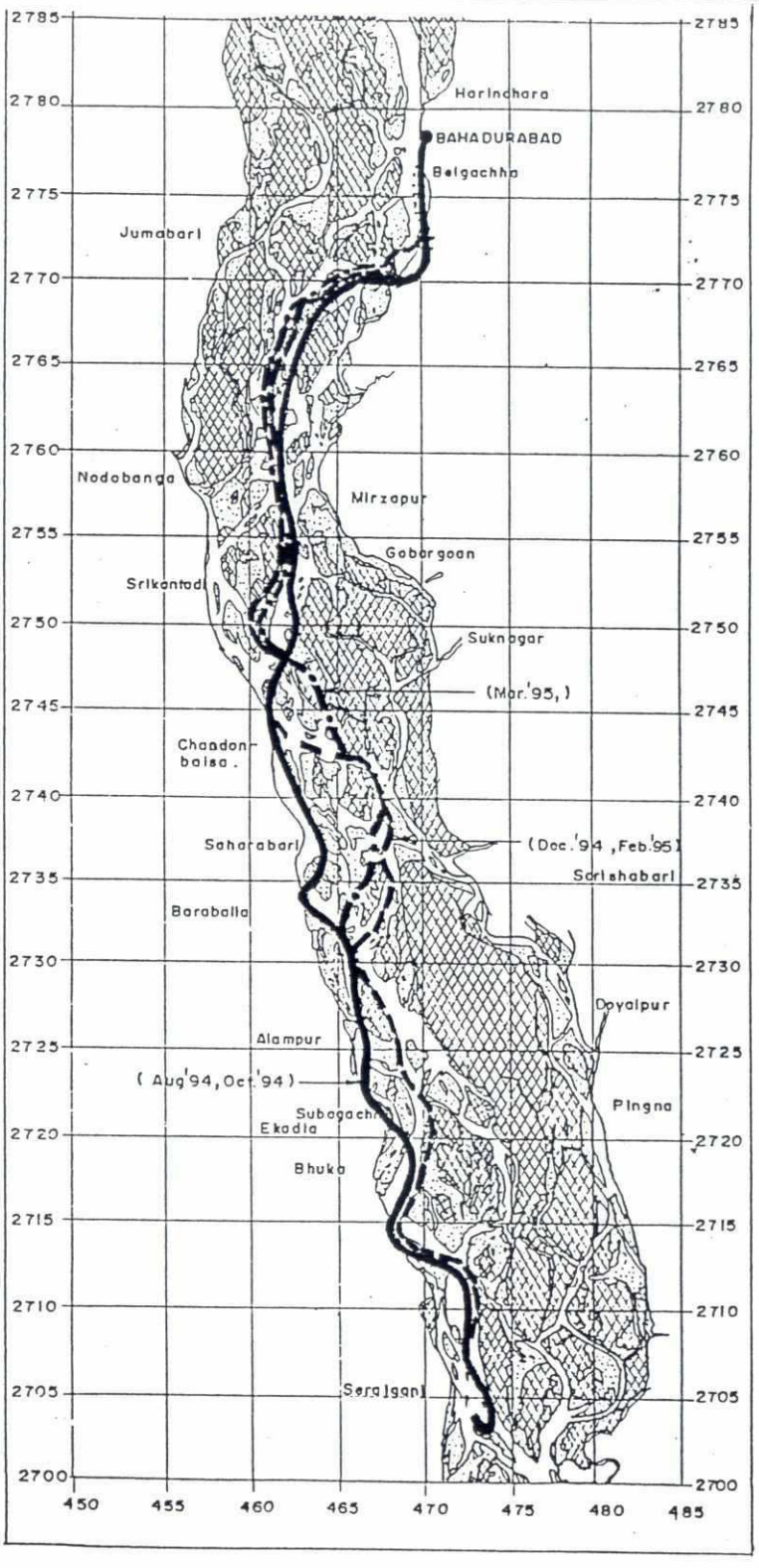
Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9409011229-1240 9409011247-1257	B4911T08 * B4911T09
	2	9409011206-1210 9409011212-1217	B4911T06 B4911T07 *
	3	9408311158-1203 9408311206-1211	B48V1T08 B48V1T09 *
	4	9408311505-1518	B48V1T13 *
	5	9408311709-1721	B48V1T19 *
	6	9409010858-0918 9409011018-1036	B4911T01 B4911T05 *

Table 6.1: ADCP & EMF transects

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

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	B4911T08 .ase
ADCP/S4/EMF data	2	QUATTRO	B4911T07 .ase
ADCP/S4/EMF data	3	QUATTRO	B48V1T09 .ase
ADCP/S4/EMF data	4	QUATTRO	B48V1T13 .ase
ADCP/S4/EMF data	5	QUATTRO	B48V1T19 .ase
ADCP/S4/EMF data	6	QUATTRO	B4911T05 .ase
Echosounder data	1	QUATTRO	B4911T08 .ech
Echosounder data	2	QUATTRO	B4911T07 .ech
Echosounder data	3	QUATTRO	B48V1T09 .ech
Echosounder data	4	QUATTRO	B48V1T13 .ech
Echosounder data	5	QUATTRO	B48V1T19 .ech
Echosounder data	6	QUATTRO	B4911T05 .ech
Transect plot data	1	QUATTRO	B4911T08 .trs
Transect plot data	2	QUATTRO	B4911T07 .trs
Transect plot data	3	QUATTRO	B48V1T09 .trs
Transect plot data	4	QUATTRO	B48V1T13 .trs
Transect plot data	5	QUATTRO	B48V1T19 .trs
Transect plot data	6	QUATTRO	B4911T05 .trs
Iso-velocity plot data	1	MIKE 21	B4911T08 .ct2
		MIKE 21	B4911T08 .dt2
Iso-velocity plot data	2	MIKE 21	B4911T07 .ct2
		MIKE 21	B4911T07 .dt2
Iso-velocity plot data	3	MIKE 21	B48V1T09 .ct2
		MIKE 21	B48V1T09 .dt2
Iso-velocity plot data	4	MIKE 21	B48V1T13 .ct2
		MIKE 21	B48V1T13 .dt2
Iso-velocity plot data	5	MIKE 21	B48V1T19 .ct2
		MIKE 21	B48V1T19 .dt2
Iso-velocity plot data	6	MIKE 21	B4911T05 .ct2
		MIKE 21	B4911T05 .dt2

Table 7.1 PSD 24 Database file description



LEGEND:

HIGH LAND.

UNSTABLE / LOW CHAR

5km 0 5km

FAP 24

DELFT - DHI

RIVER SURVEY PROJECT

Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletins 9020,21,24,25,29,30,31,36,42,43,46,47,50

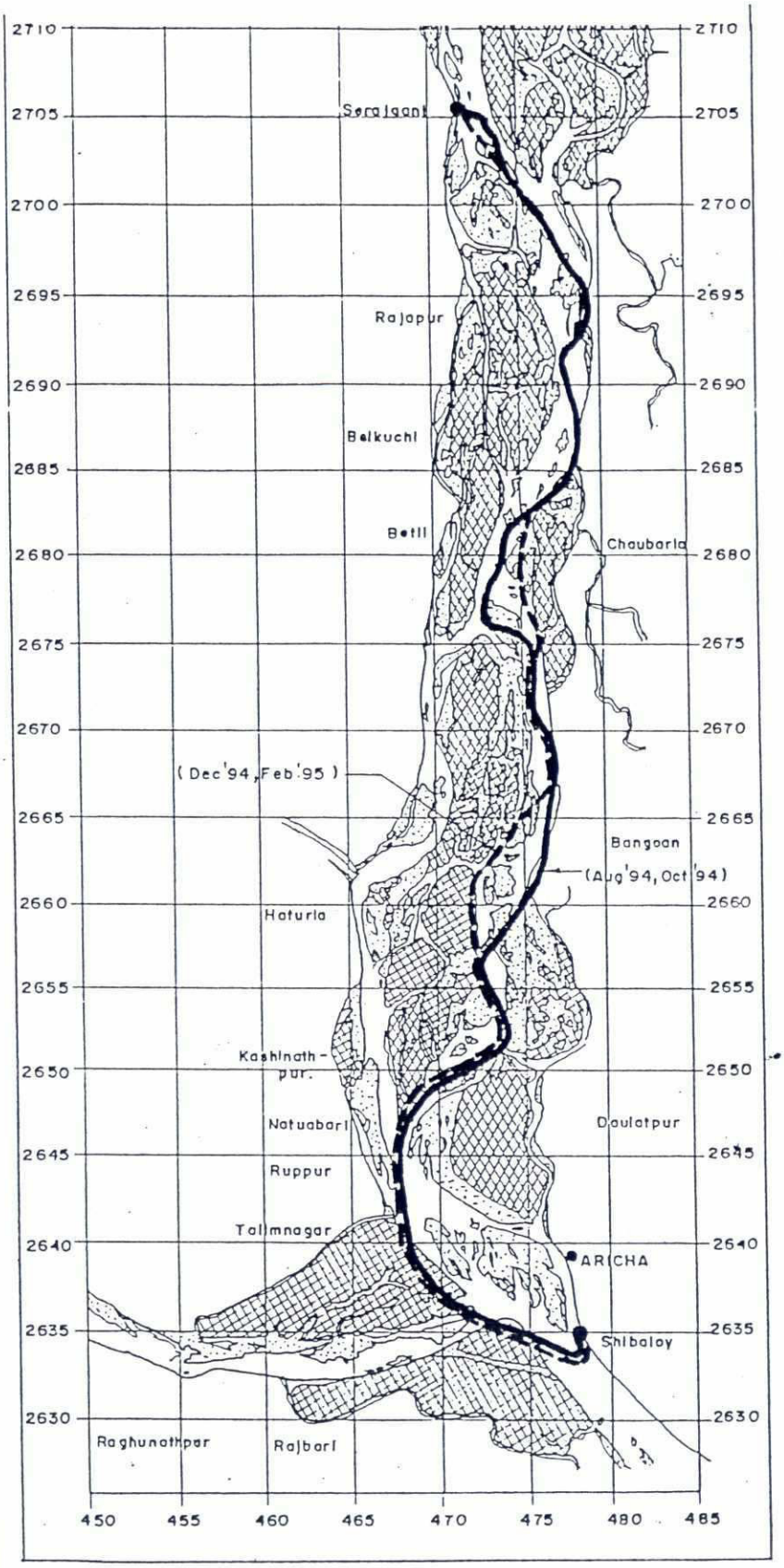
Jamuna River, Bahadurabad to Aricha

Date : 26 Dec 1995

Init : kah

Location map - Bahadurabad to Sirajganj

page 1.1



LEGEND:

HIGH LAND.

UNSTABLE / LOW CHAR

5 km 0 5 km

FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletins 9020,21,24,25,29,30,31,36,42,43,46,47,50	
		Jamuna River, Bahadurabad to Aricha	
	Date : 26 Dec 1995	Location map - Sirajganj to Aricha	page 1.2
	Init : kah		

DUNE TRACKING

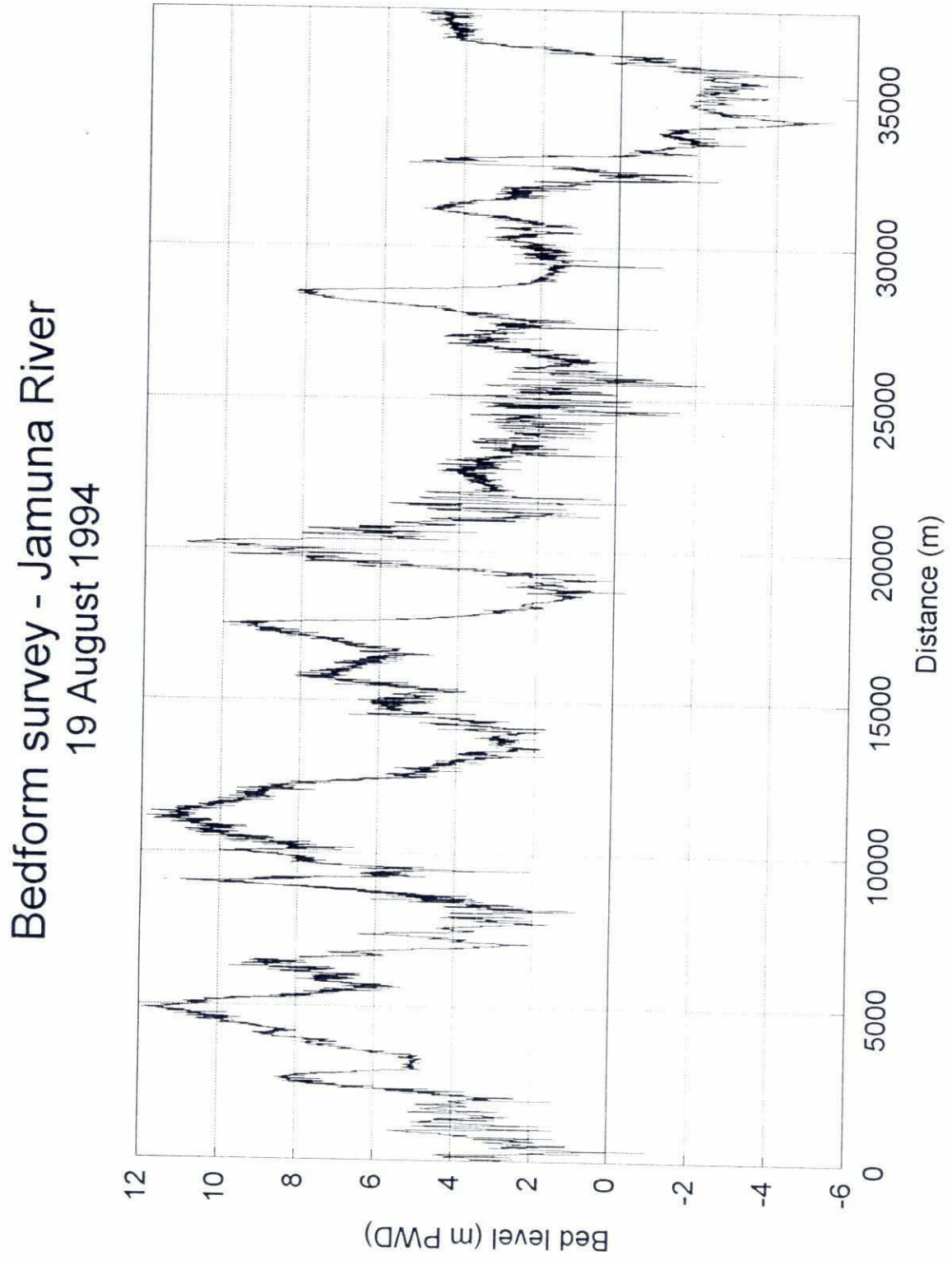
(Echo -Sounding lines)

Survey period		Bulletin	QPRO	Start of line		End of line		Length of	Water level		Angle
Start date	End date	No	File name in psd24	Easting (m)	Northing (m)	Easting (m)	Northing (m)	line (m)	Start (m)	End (m)	(deg)
19/08/94	20/08/94	9020	b48j1a.lng	470437	778735	462223	741496	54108	18.39	9.18	184.1
			b48j1b.lng	462225	741490	466604	724764				
			b48j1c.lng	466426	724663	473323	704664	21155	18.39	9.18	161.0
			b48k1.lng	473158	704222	477327	669423	35048	18.39	9.15	173.2
28/08/94	29/08/94	9021	m48s1a.lng	475755	634853	473416	654918	70317	8.70	12.18	-3.0
			m48s1b.lng	473416	654918	475437	680530				
			m48s1c.lng	475439	680532	472115	705076				
07/09/94	08/09/94	9024	b4971.lng	470910	779882	464269	737049	46816	17.36	13.30	188.2
			b4972.lng	465355	732094	473511	703807	29439	13.30	11.38	163.9
16/09/94	16/09/94	9025	s49g3a.lng	466760	724796	461414	743531	54807	13.40	17.53	4.2
			s49g3b.lng	461413	743535	462293	762767				
			s49g3c.lng	462294	762776	470767	779456				
01/10/94	06/10/94	9029	b4a12a.lng	462778	765099	464004	735381	46208	17.20	13.14	171.7
			b4a12b.lng	464000	735377	469402	719511				
			b4a13.lng	469582	717888	472795	703911	14342	13.14	11.13	167.1
15/10/94	15/10/94	9030	a4af1a.lng	477613	636013	473419	650955	69216	6.85	10.81	-4.6
			a4af1b.lng	473422	650958	476380	673177				
			a4af1c.lng	476379	673180	478833	692337				
			a4af1d.lng	478835	692340	472073	705030				
16/10/94	16/10/94	9031	s4ag1a.lng	472115	705078	467856	721334	74707	10.82	17.17	-1.0
			s4ag1b.lng	467853	721336	463345	738984				
			s4ag1c.lng	463343	738988	461824	759806				
			s4ag1d.lng	461824	759809	470831	779774				
25/10/94	25/10/94	9036	b4ap1a.lng	471376	780187	462945	733745	75949	16.31	10.06	179.2
			b4ap1b.lng	462946	733739	472489	704239				
14/12/94	14/12/94	9042	b4ce1a.lng	470978	779902	462854	752028	74622	13.75	7.27	179.2
			b4ce1b.lng	462854	752022	465898	728934				
			b4ce1c.lng	465898	728938	472042	705287				
17/12/94	17/12/94	9043	s4ch1a.lng	471995	705198	476102	682393	70411	7.18	3.20	175.3
			s4ch1b.lng	476101	682389	472551	657317				
			s4ch1c.lng	472550	657311	477754	635022				
11/02/95	11/02/95	9046	j52ba.lng	470322	778177	462963	749440	72943	13.24	6.67	178.7
			j52b1b.lng	462962	749436	468880	724378				
			j52b1c.lng	468881	724372	472028	705254				
11/02/95	11/02/95	9047	j52e1a.lng	472014	705617	476014	676476	69710	6.61	2.39	175.3
			j52e1b.lng	476017	676472	469903	649082				
			j52e1c.lng	469899	649079	477671	636137				
14/03/95	14/03/95	9050	b53e1a.lng	470441	778794	467757	740128	49666	13.19	8.49	185.2
			b53e1b.lng	467758	740119	465907	729336				
			b53e1.lng	466493	729424	601073	659212	151794	8.49	6.43	117.6

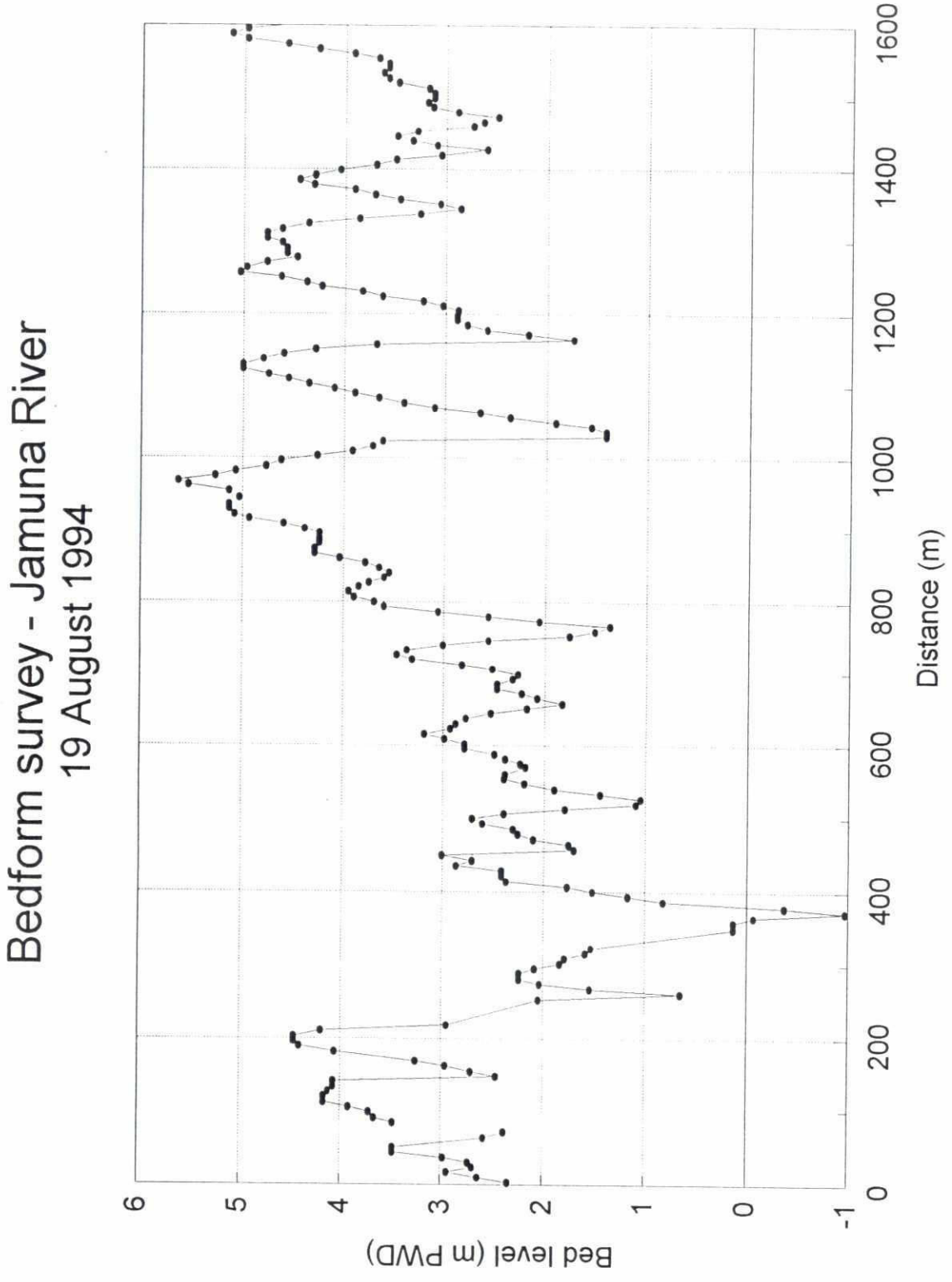
Water level from nearest water level station (Bahadurabad, Sirajganj or Aricha)

Short Description:

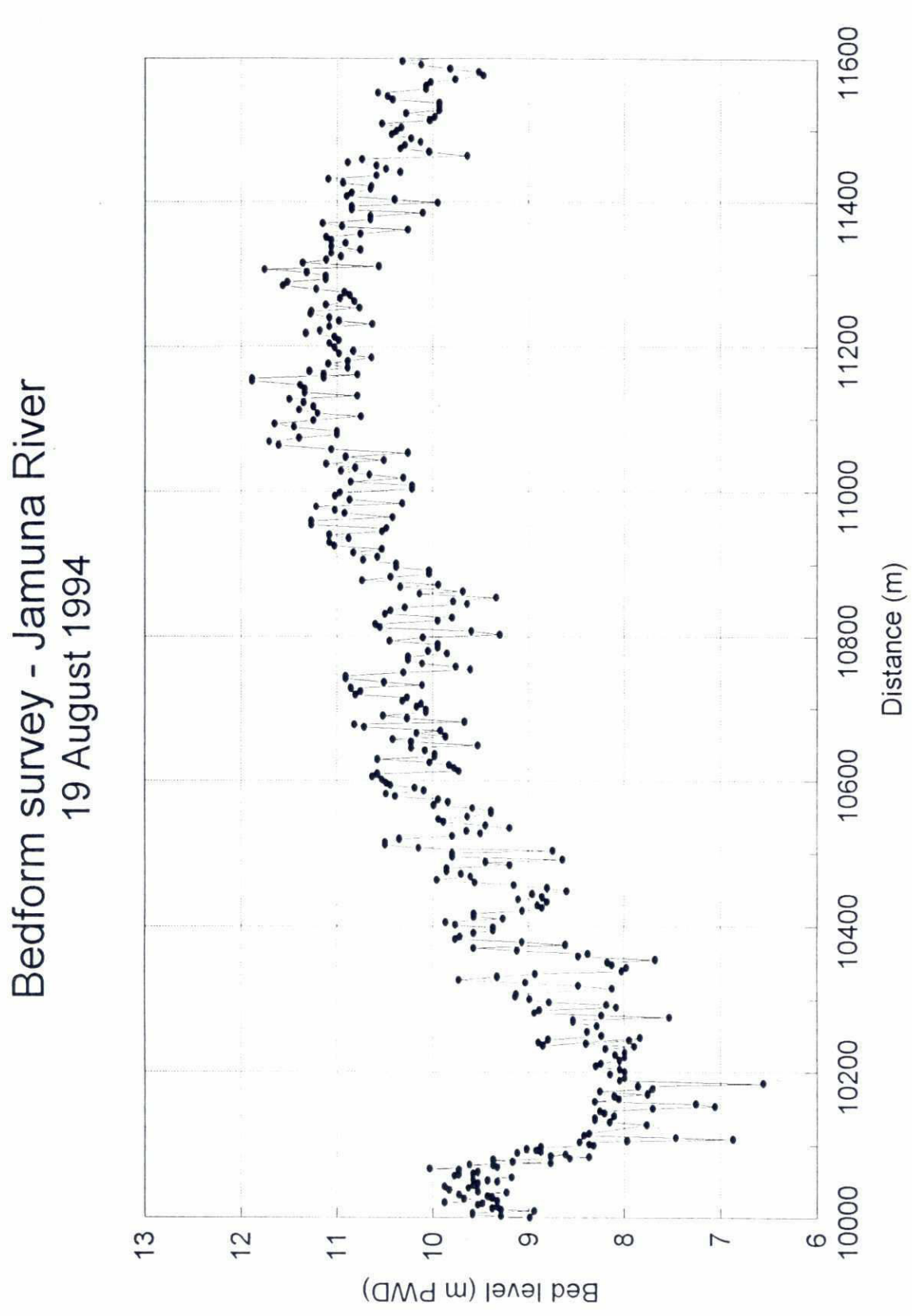
Bedform inventory. Measurements of bed levels in order to map the spatial distribution of bars. Results are reported in RSP Special Report 9.



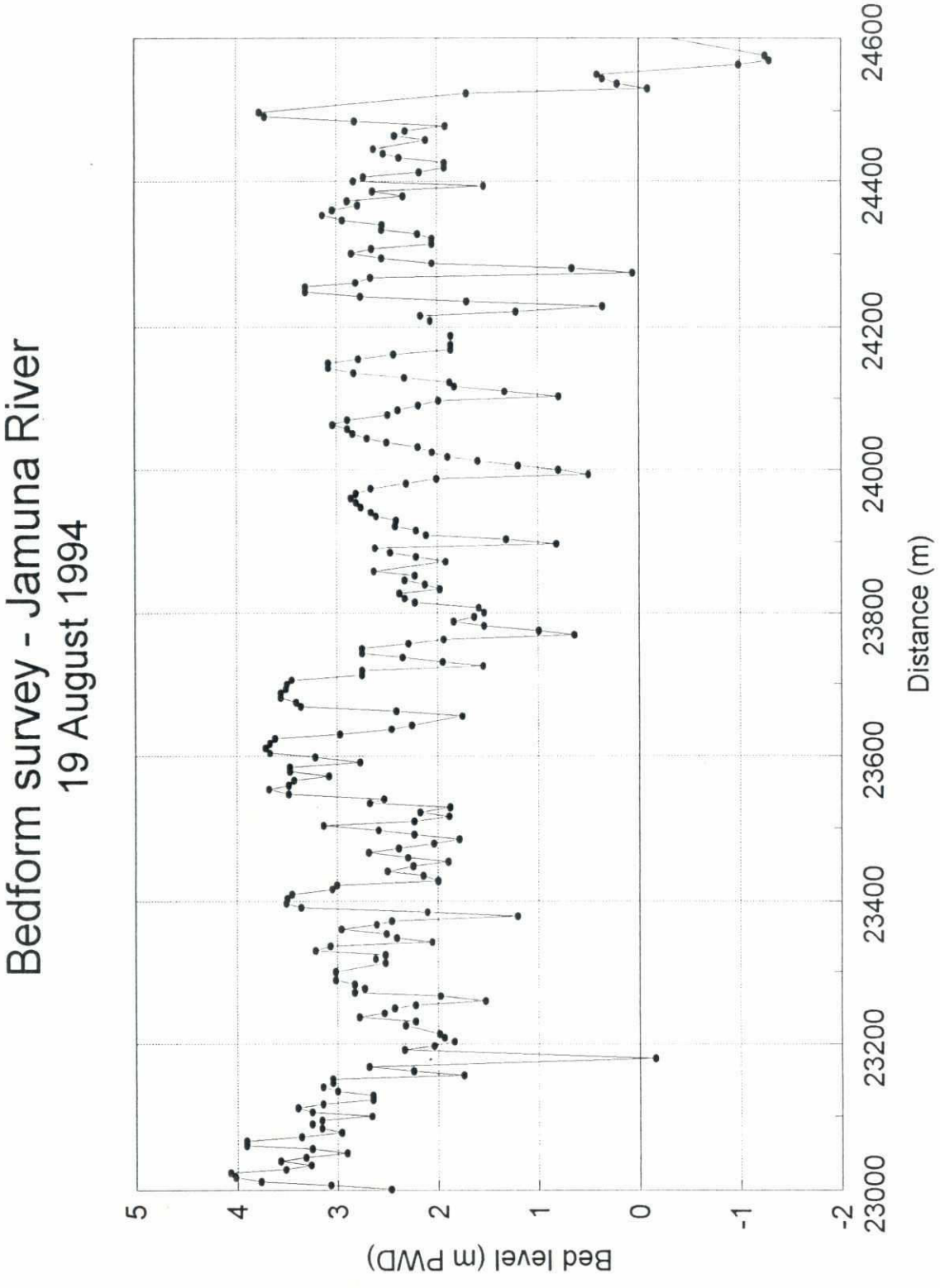
FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletins 9020,21,24,25,29,30,31,36,42,43,46,47,50
		Bedform measurements, Bahadurabad to Aricha
	Date : 26 Dec 1995	Examples of data
	Init : kah	page 3.1



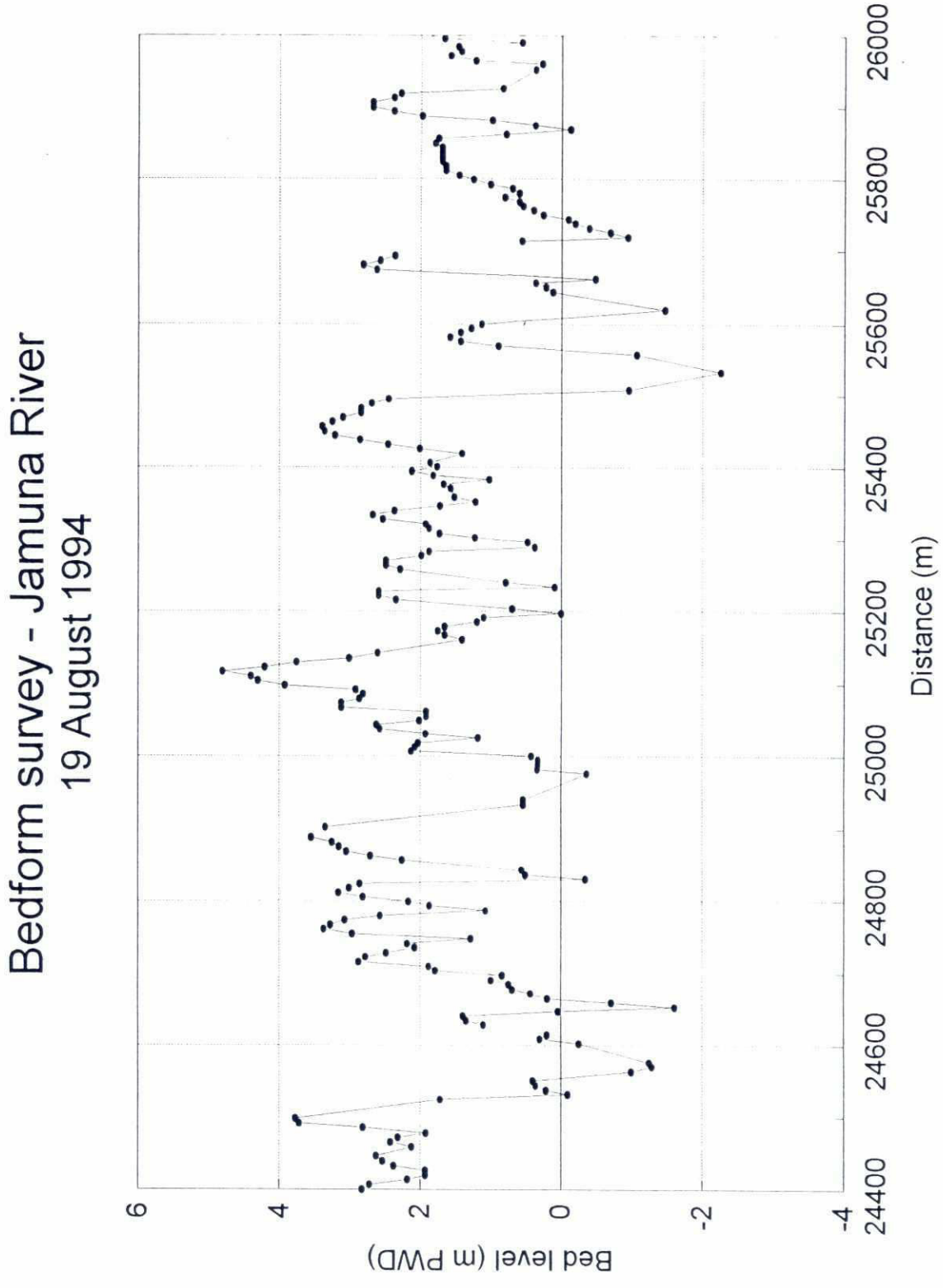
FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletins 9020,21,24,25,29,30,31,36,42,43,46,47,50	
		Bedform measurements, Bahadurabad to Aricha	
	Date : 26 Dec 1995	Examples of data	page 3.2
	Init : kah		



FAP 24 DELFT - DHI RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletins 9020,21,24,25,29,30,31,36,42,43,46,47,50	
		Bedform measurements, Bahadurabad to Aricha	
	Date : 26 Dec 1995	Examples of data	page 3.3
	Init : kah		



FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletins 9020,21,24,25,29,30,31,36,42,43,46,47,50	
		Bedform measurements, Bahadurabad to Aricha	
	Date : 26 Dec 1995	Examples of data	page 3.4
	Init : kah		



FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletins 9020,21,24,25,29,30,31,36,42,43,46,47,50	
		Bedform measurements, Bahadurabad to Aricha	
	Date : 26 Dec 1995	Examples of data	page 3.5
	Init : kah		