

FIGURES

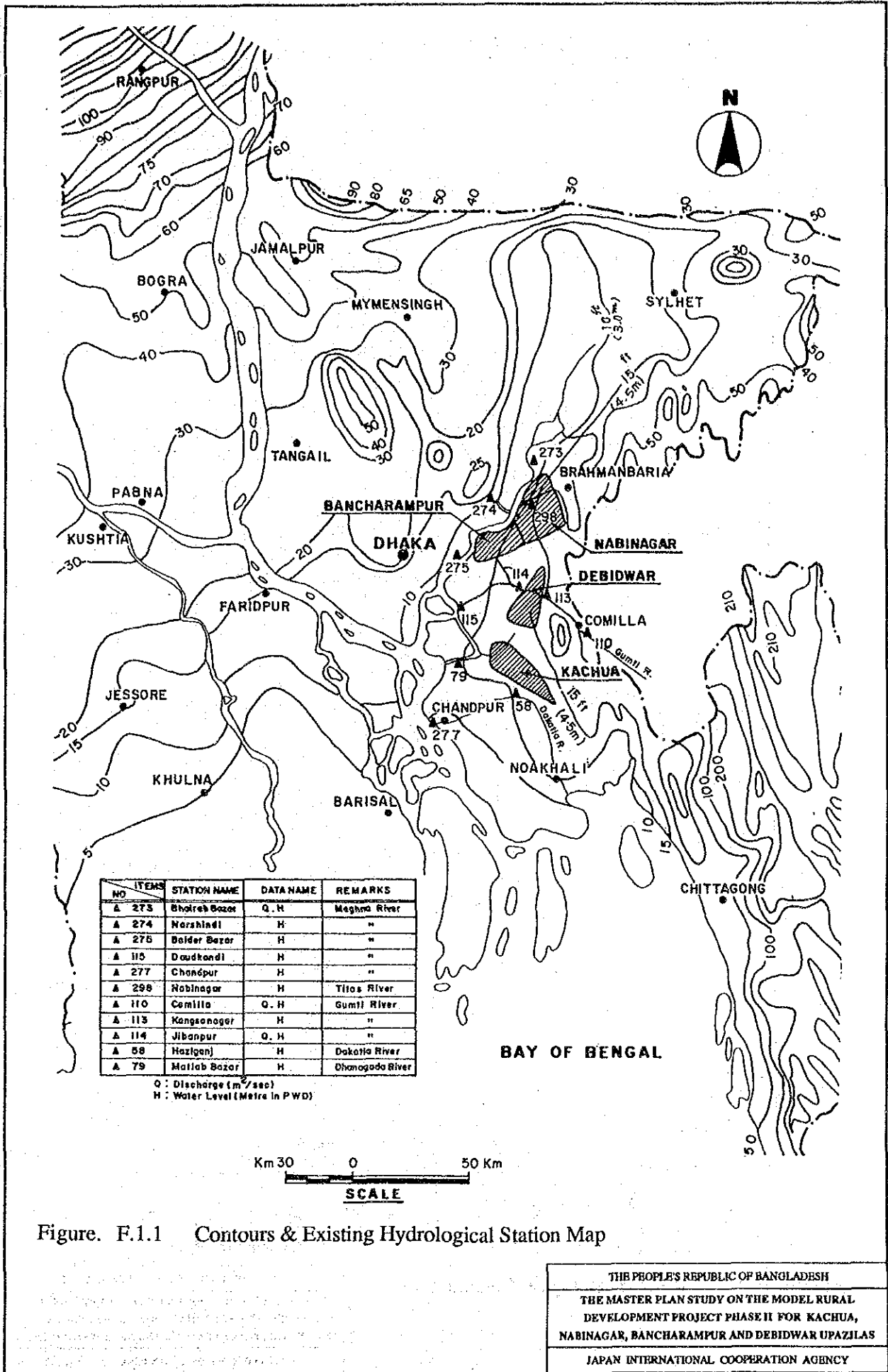
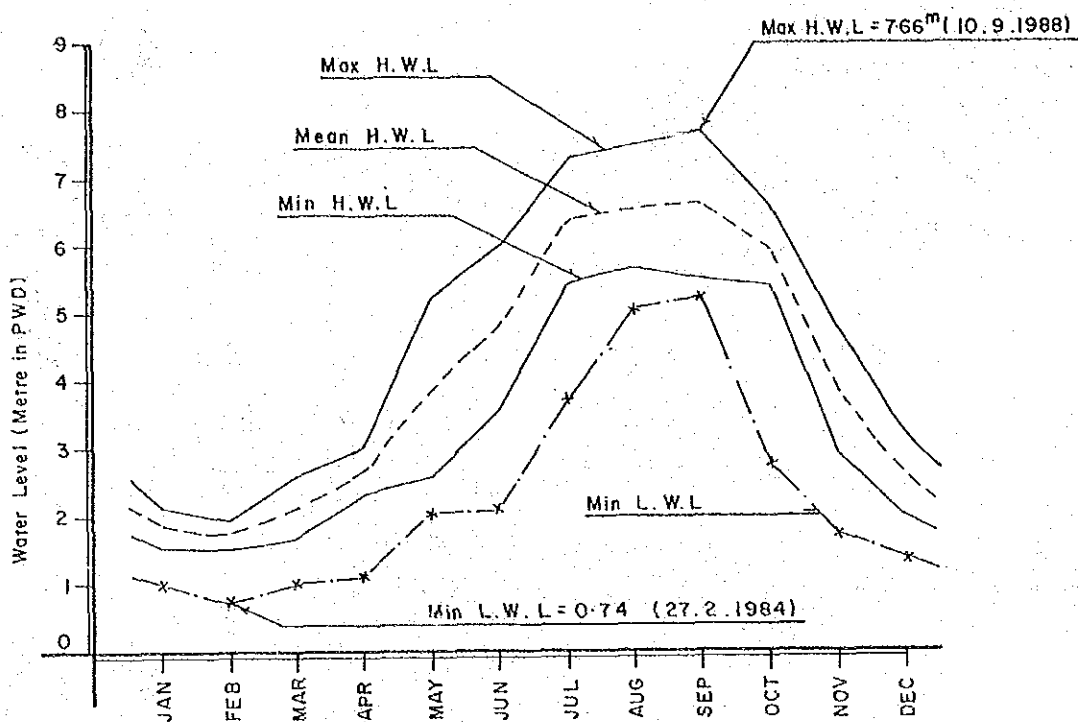


Figure. F.1.1 Contours & Existing Hydrological Station Map

Station: 273 BHAIRAB BAZAR

(River: 102 Surma-Meghna)

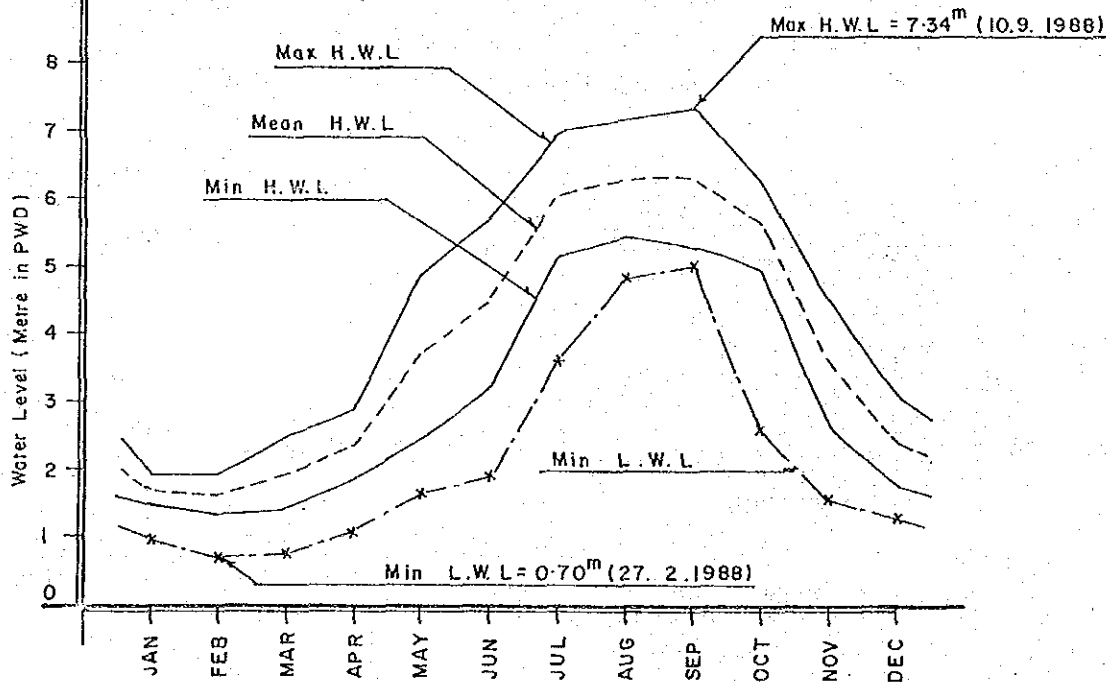
(Data: 1980-1989)



Station: 298 NABINAGAR

(River: 108 Titas)

(Data: 1977-1989)

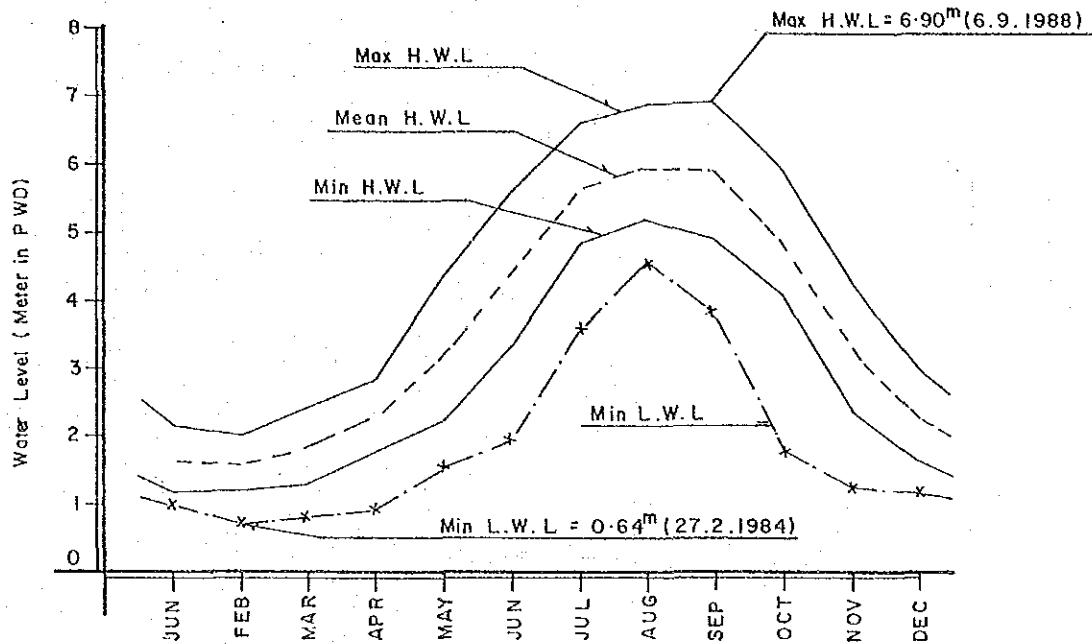


(Contour: in Feet)

Figure. F.1.2 River Hydrological Condition

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DERIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

Station: 274 NARSINGDI (River: 102 Surma-Meghna)
 (Data: 1970-1989)



Station: 275 BADYER BAZAR (River: 102 Surma-Meghna)
 (Data: 1970-1989)

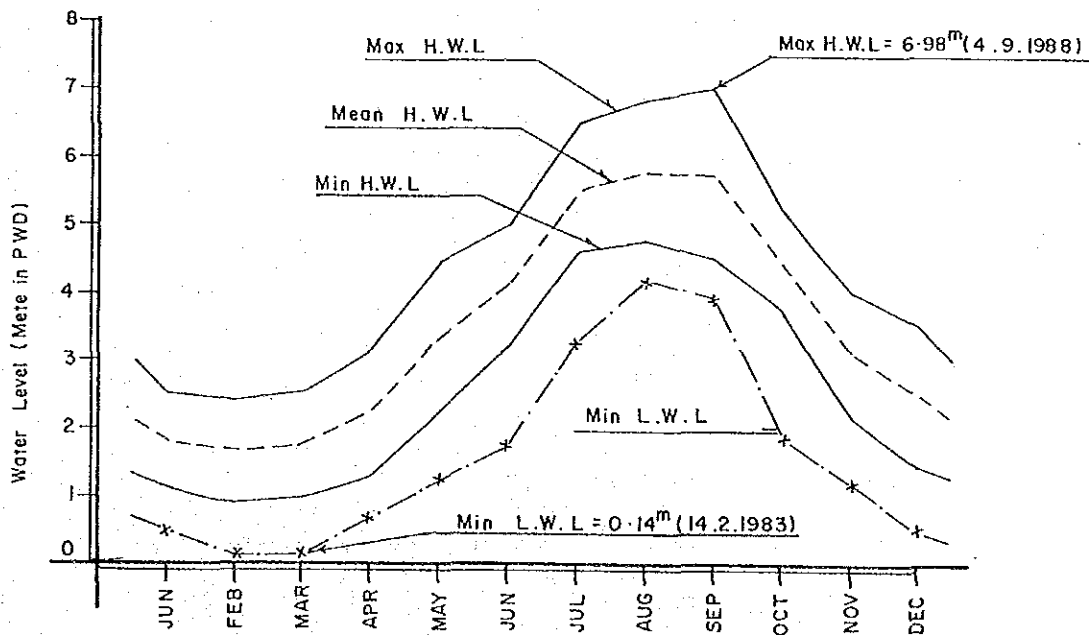
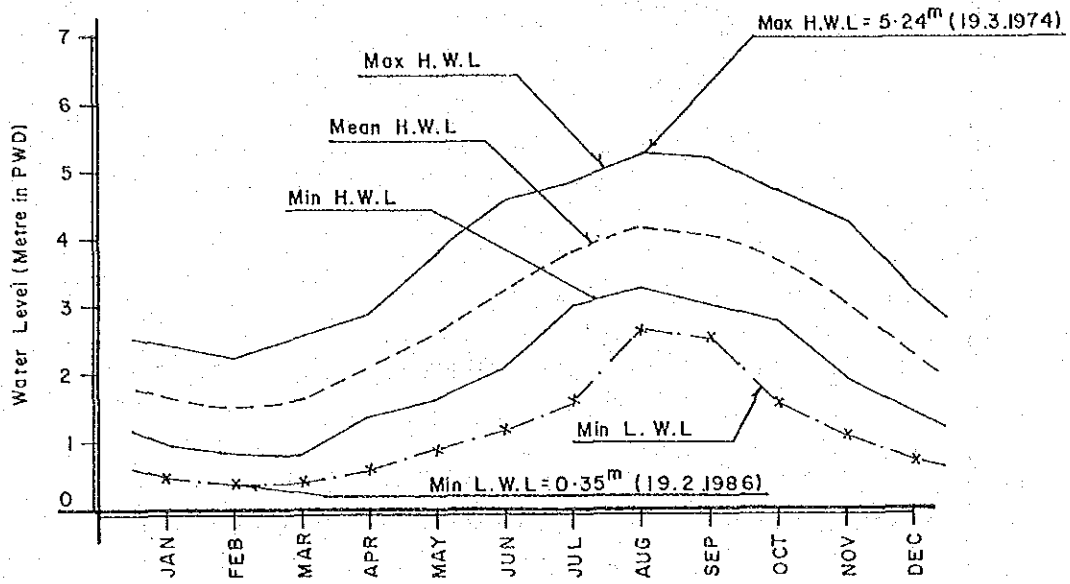


Figure. F.1.2 River Hydrological Condition

THE PEOPLE'S REPUBLIC OF BANGLADESH
THE MASTER PLAN STUDY ON THE MODEL RURAL DEVELOPMENT PROJECT PHASE II FOR KACHUA, NABINAGAR, BANCHARAMPUR AND DERIDWAR UPAZILAS
JAPAN INTERNATIONAL COOPERATION AGENCY

Station : 277 CHANDPUR (River : 102 Surma-Meghna)
 (Data : 1970-1989)



Station : 79 MATLAB BAZAR (River : 34 Dhanagoda)
 (Data : 1978-1990)

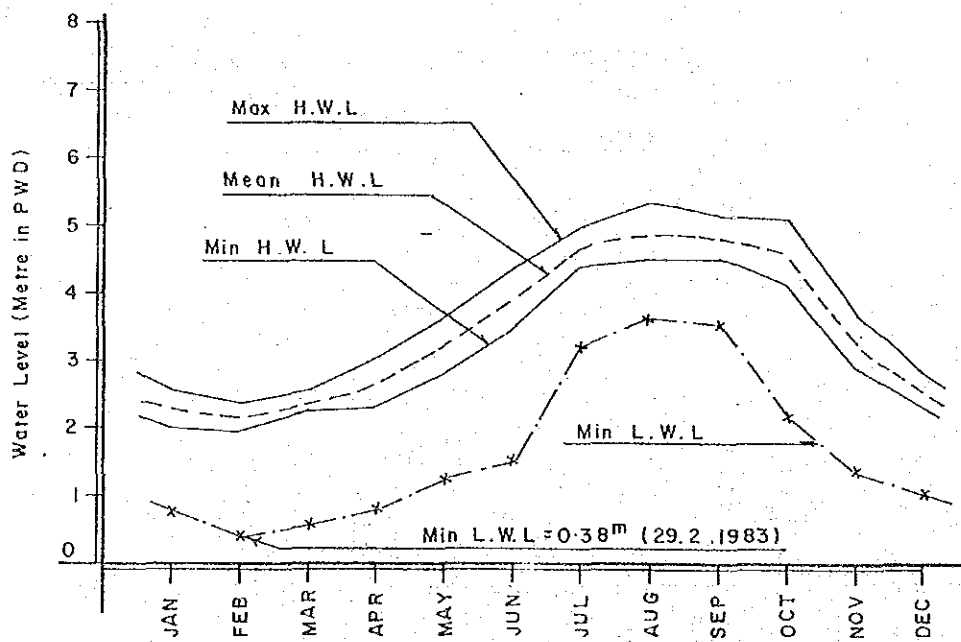
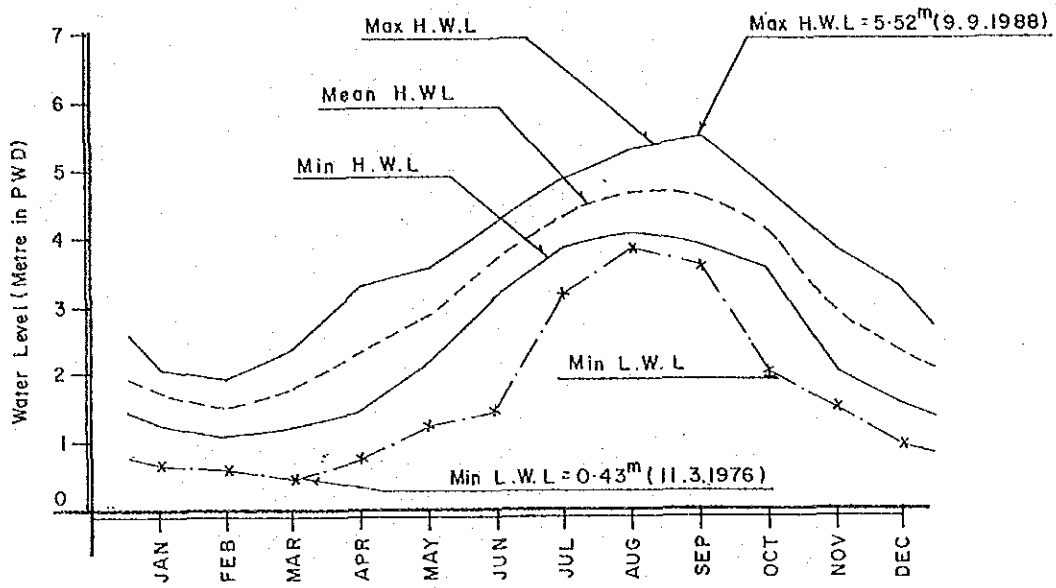


Figure. F.1.2 River Hydrological Condition

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

Station: 58 HAJIGANJ (River: 27 Dakatia)
 (Date = 1970-1989)



Station: 110 COMILLA (River: 43 Gumti-Burinadi)
 (Date: 1970-1989)

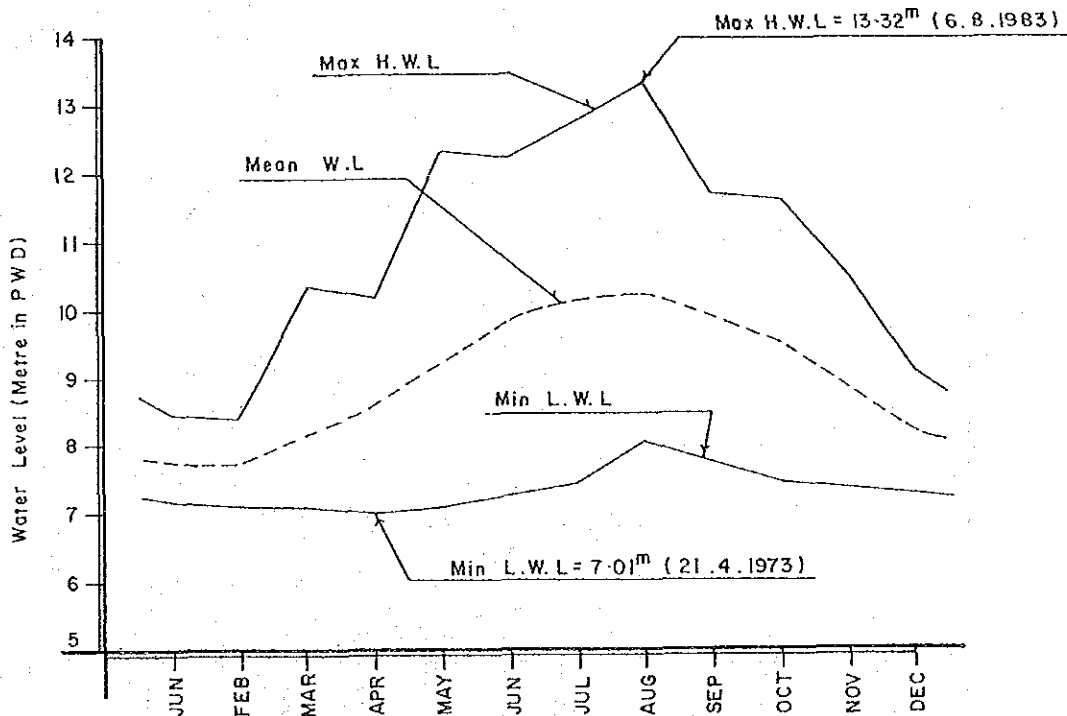


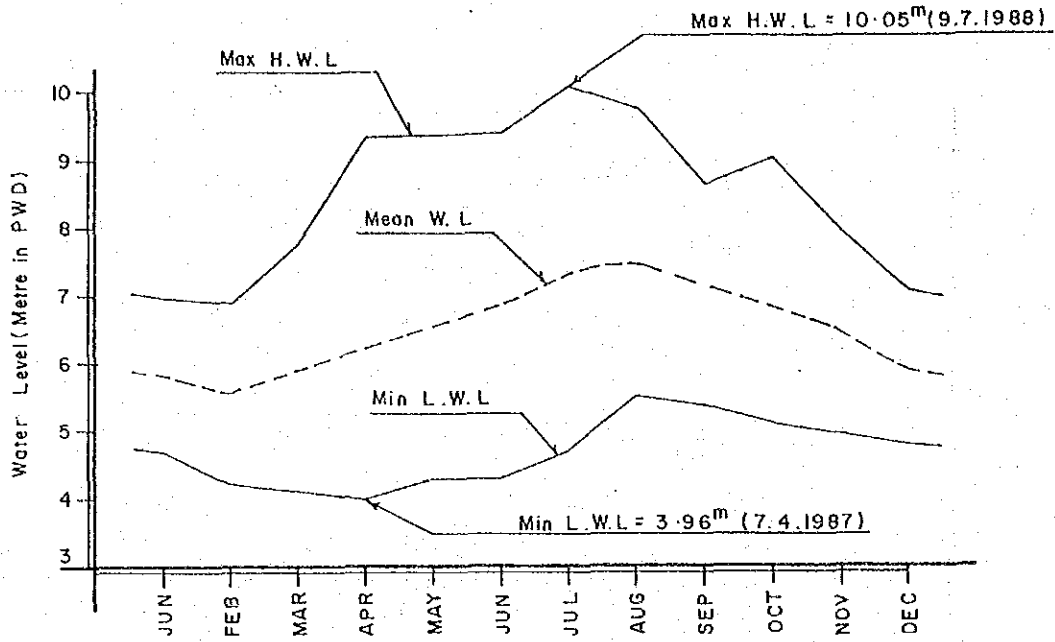
Figure. F.1.2 River Hydrological Condition

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

Station: 113 KANGSANAGAR

(River : 43 Gumti-Burinadi)

(Data : 1979-1989)



Station: 114 JIBANPUR

(River : 43 Gumti-Burinadi)

(Data : 1977-1989)

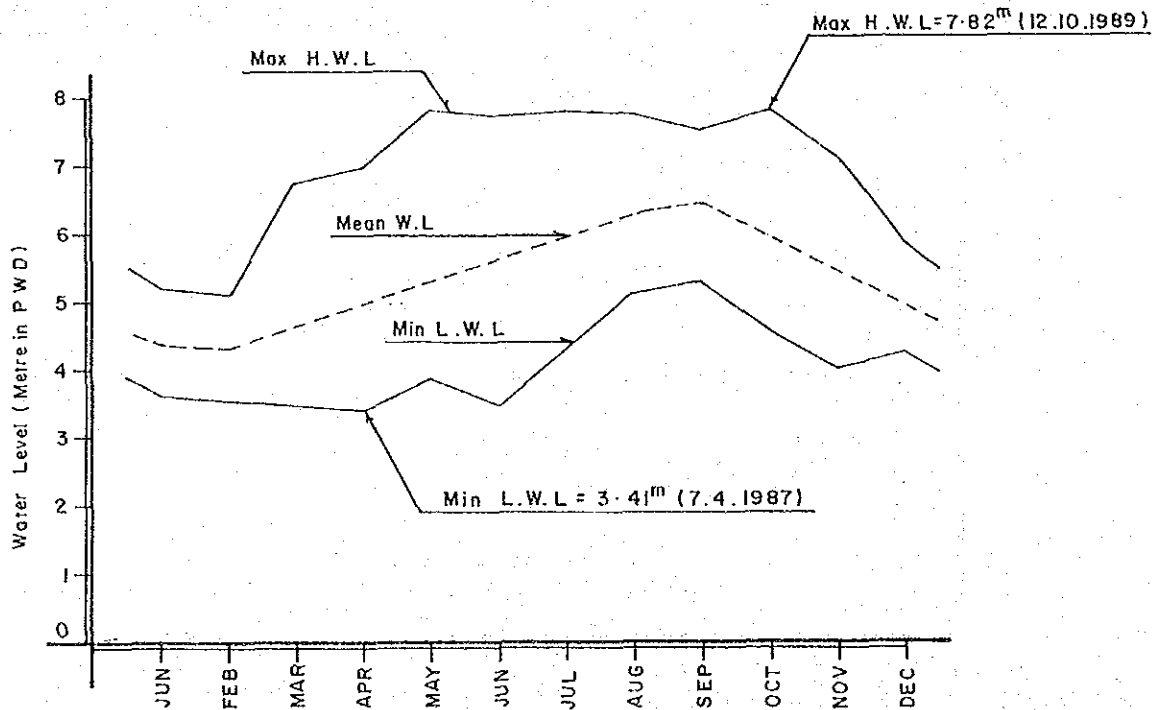
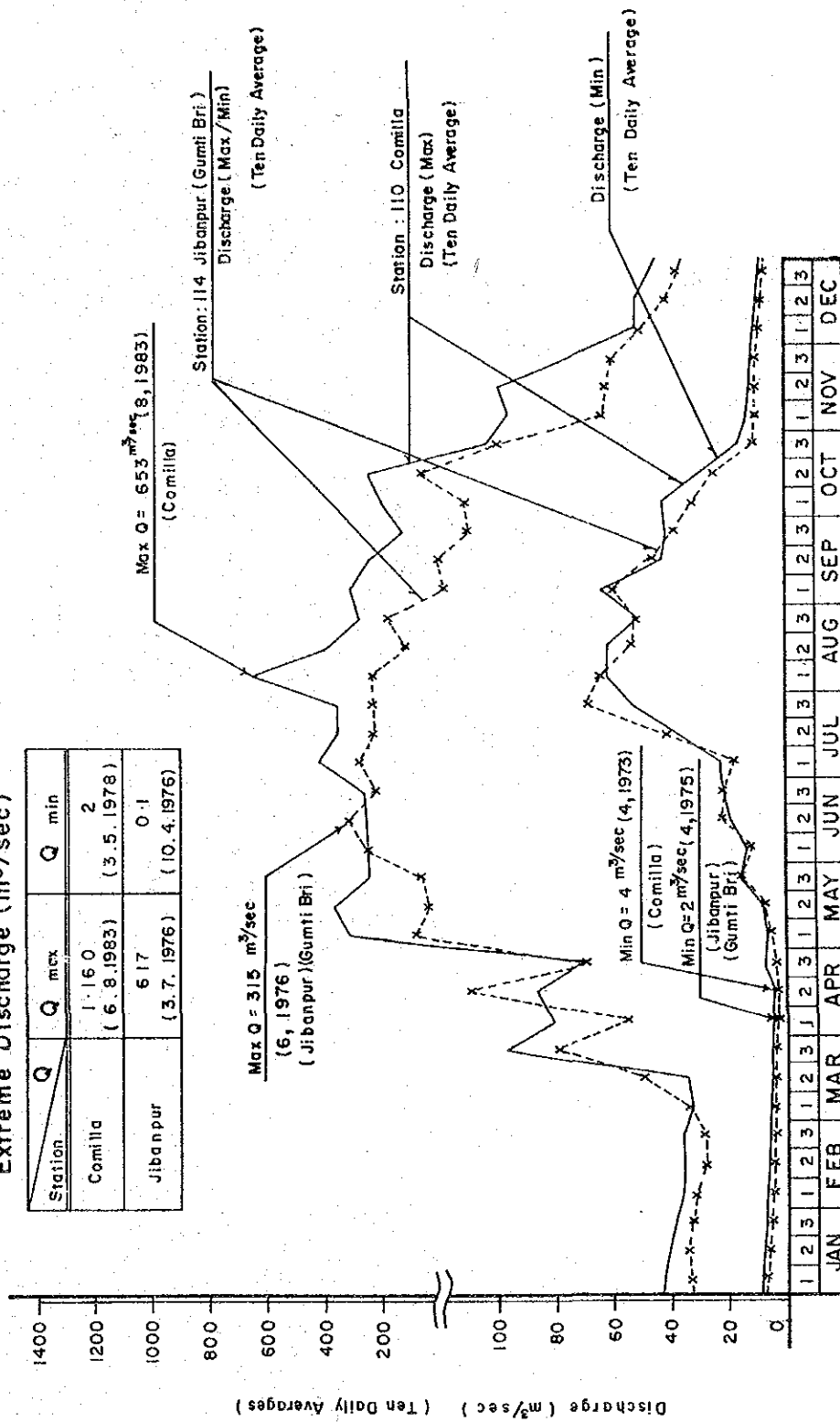


Figure. F.1.2 River Hydrological Condition

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEWIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

Extreme Discharge (m³/sec)

Station	Q max	Q min
Comilla	1160 (6.8.1983)	2 (3.5.1978)
Jibbanpur	617 (3.7.1976)	0.1 (10.4.1976)



Ten Daily Averages Discharge (m³/sec)

(Data: 1970-1989)

Figure. F.1.2 River Hydrological Condition

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHAKAMPUR AND DESIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

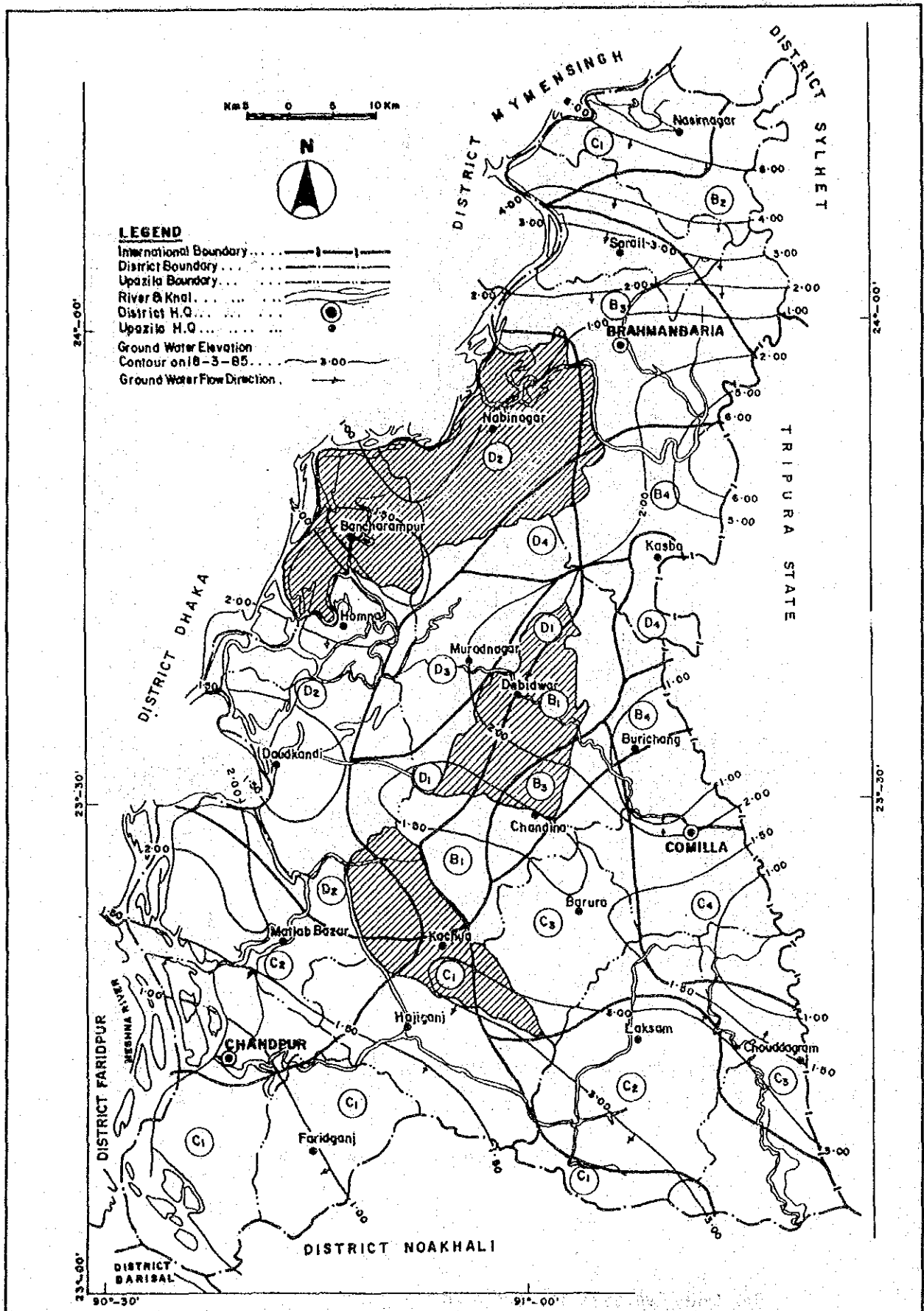


Figure. F.1.3 Hydrogeological Map of Greater Comilla District

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

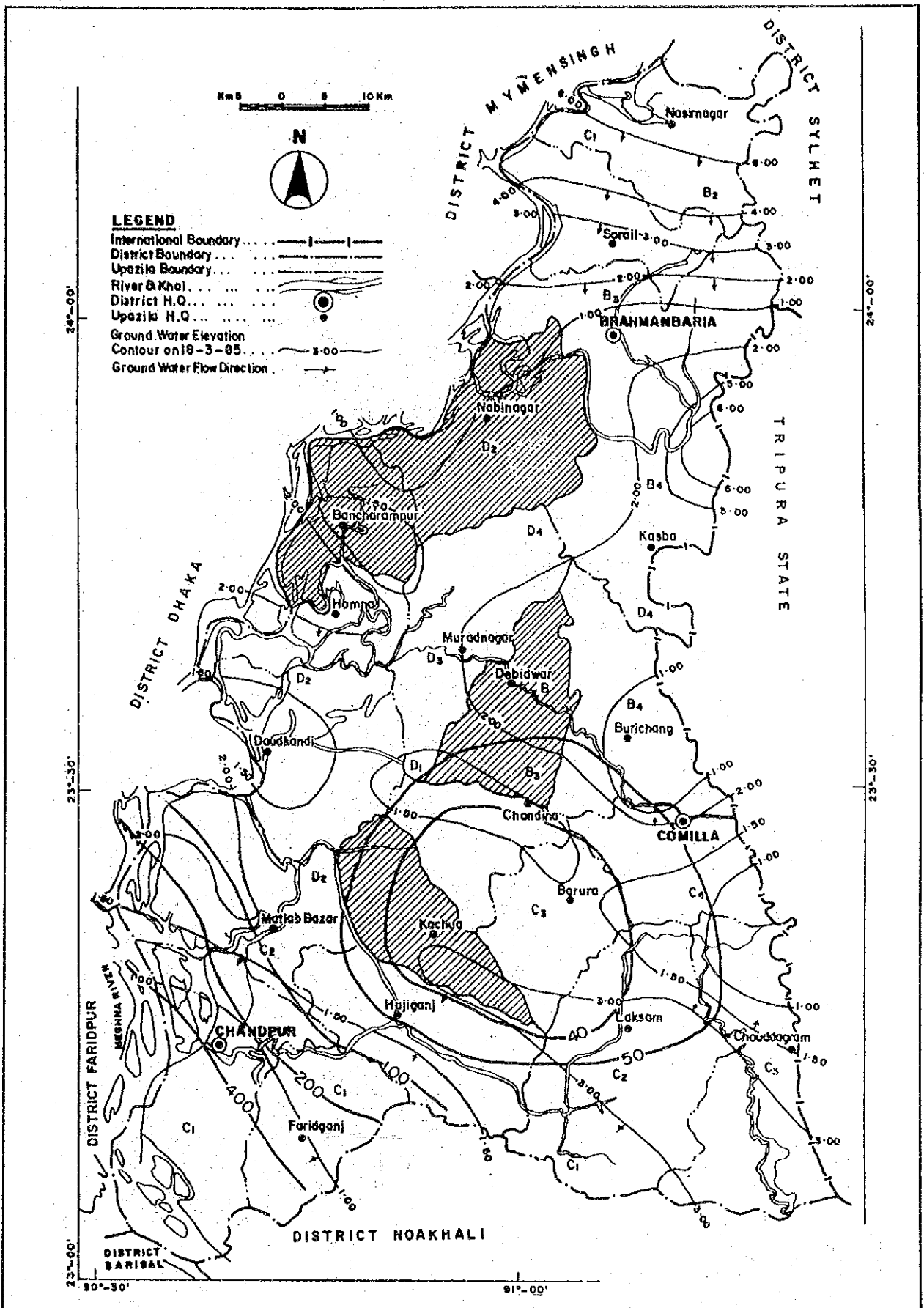


Figure. F.1.4 Concentration Map of Chloride (Cl) in PPM (1/2) (Chloride in PPM from 30 - 61 metre depth range)

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

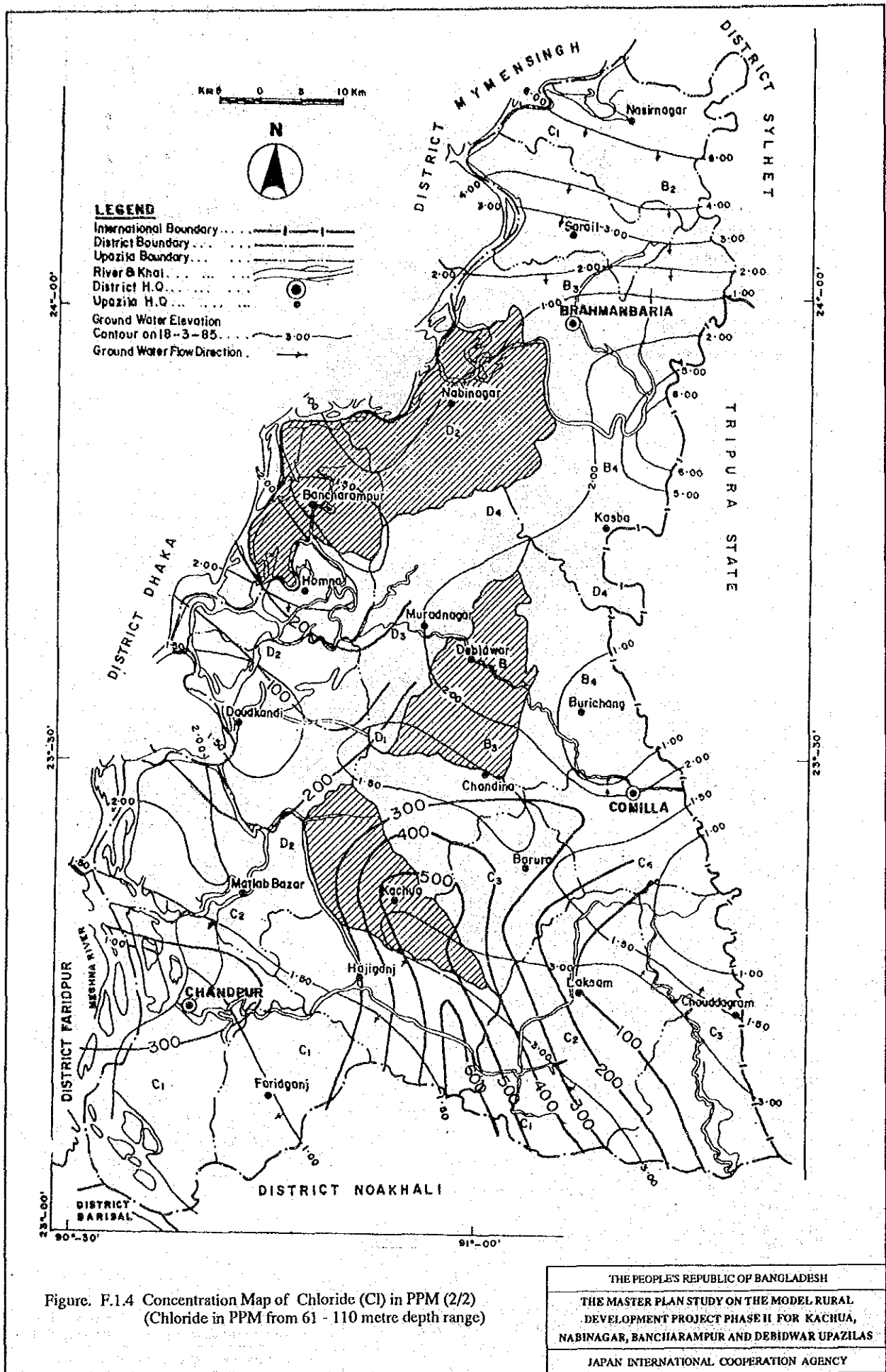


Figure. F.14 Concentration Map of Chloride (Cl) in PPM (2/2)
 (Chloride in PPM from 61 - 110 metre depth range)

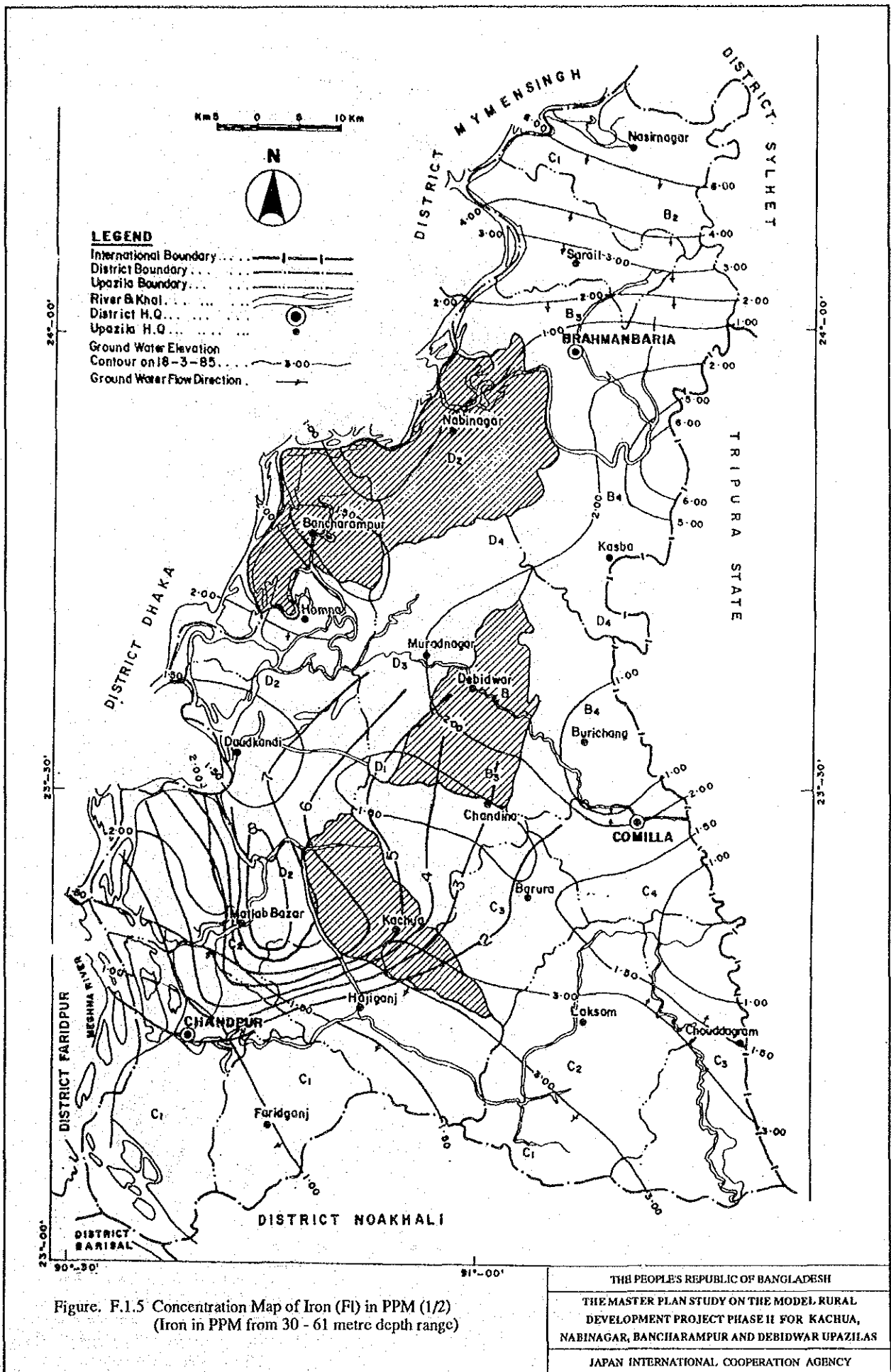


Figure. F.1.5 Concentration Map of Iron (Fe) in PPM (1/2)
 (Iron in PPM from 30 - 61 metre depth range)

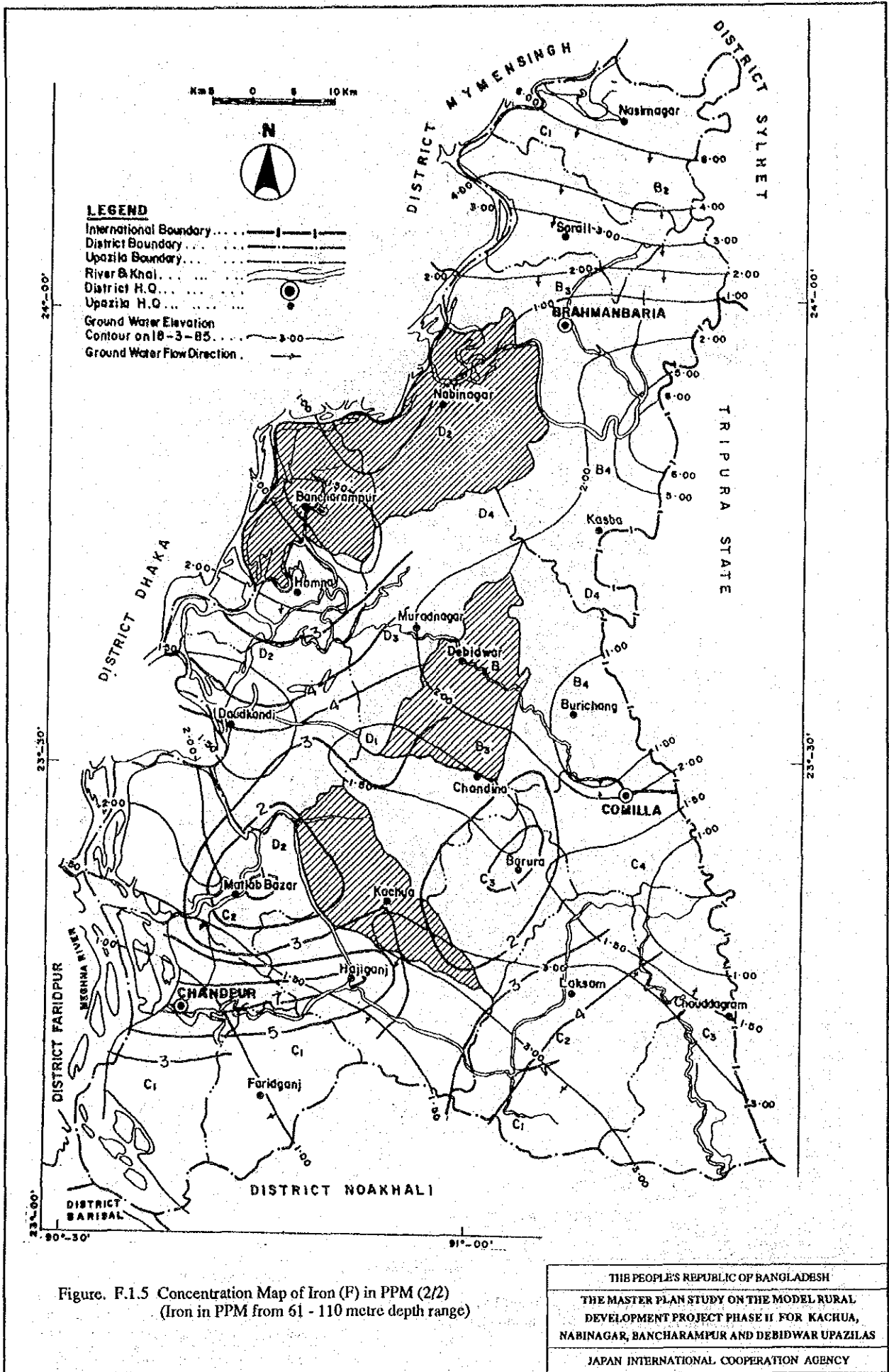


Figure. F.1.5 Concentration Map of Iron (F) in PPM (2/2)
 (Iron in PPM from 61 - 110 metre depth range)

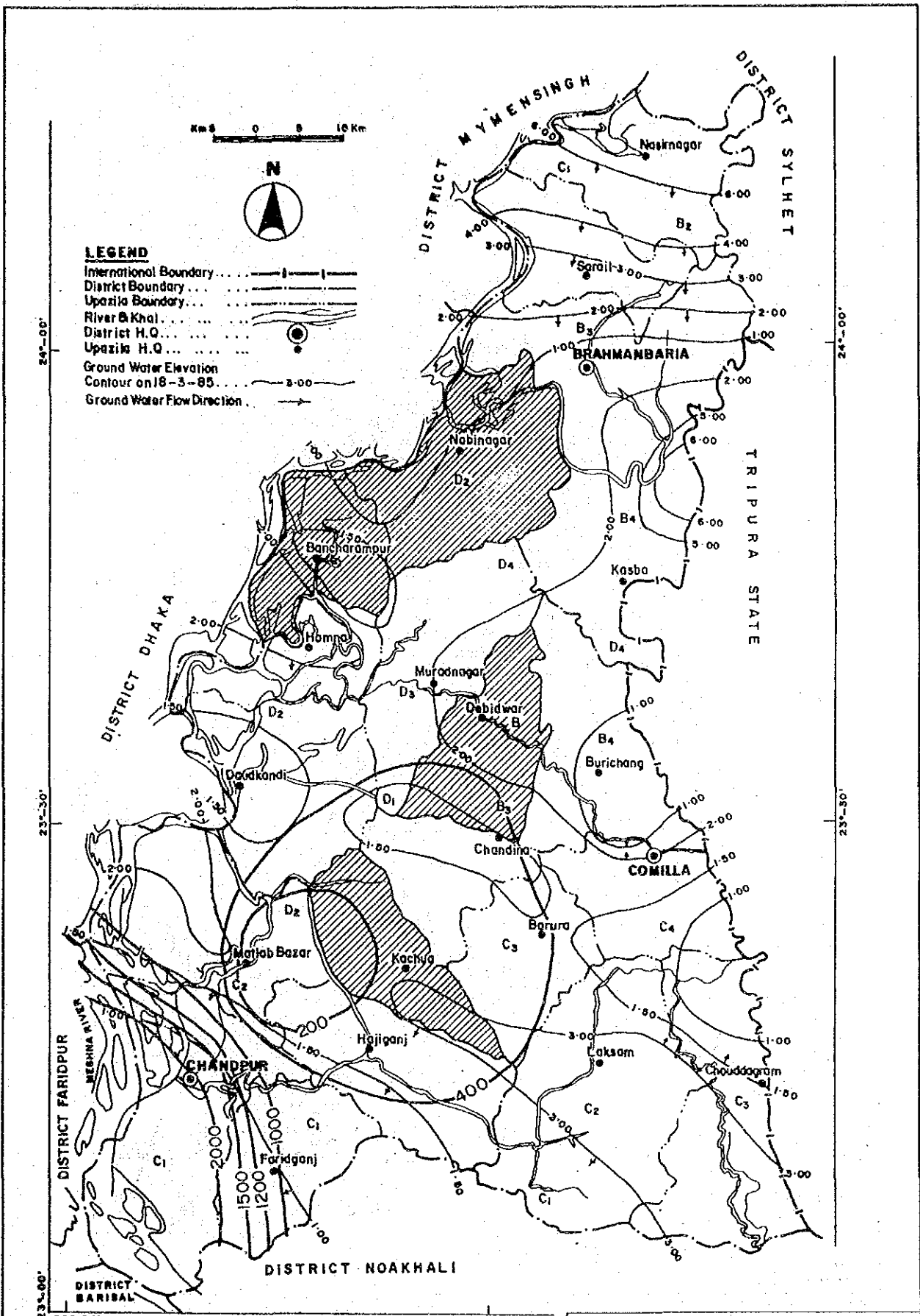


Figure. F.1.6 Concentration Map of TDS in PPM (1/2)
(TDS in PPM from 30 - 61 metre depth range)

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

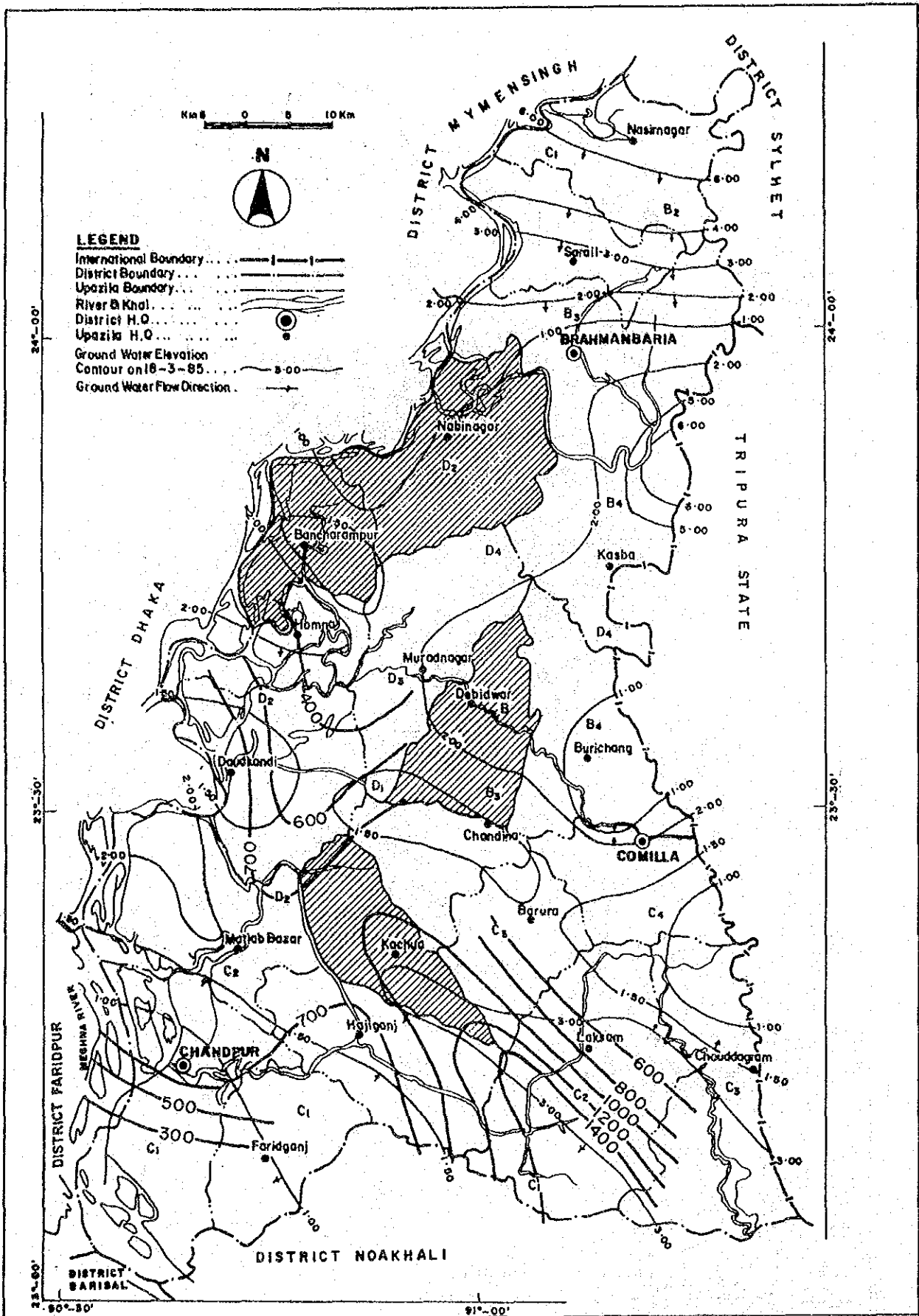


Figure. F.1.6 Concentration Map of TDS in PPM (2/2)
(TDS in PPM from 61 - 110 metre depth range)

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

UPAZILA: BANCHARAMPUR



Minor Irrigation Equipment Numbers and Irrigation Area

Union Name	Area (Hectares)	DTM		STW		LIP		Total Irr. Area (Hectares)	Irr. Area (Hectares)	Irr. Area (%)
		No.	Capacity (Cm)	No.	Capacity (Cm)	No.	Capacity (Cm)			
1. Dewanganj (W)	1,130	7	63	34	170	26	306	1,130	100	0.28
2. Bancharampur (E)	3,220	-	-	34	170	14	70	215	215	6.7
3. Rajkhal (W)	990	2	63	22	220	15	75	215	215	21.6
4. Bancharampur (S)	1,420	-	-	29	145	40	200	245	245	17.2
5. Bancharampur (N)	1,360	3	66	35	165	13	60	441	441	32.4
6. Bancharampur (W)	3,220	1	33	31	150	10	50	214	214	6.7
7. Bancharampur (E)	1,420	4	120	45	220	20	100	485	485	34.2
8. Bancharampur (W)	3,220	1	33	23	110	31	155	229	229	7.1
9. Bancharampur (E)	1,020	2	65	36	170	5	20	209	209	20.5
10. Bancharampur (W)	990	-	-	11	55	27	130	415	415	41.9
11. Bancharampur (E)	1,420	-	-	-	-	-	-	49	49	3.4
12. Bancharampur (W)	1,420	-	-	34	170	49	245	315	315	22.2
13. Bancharampur (E)	1,420	1	33	49	245	49	245	527	527	37.1
14. Bancharampur (W)	1,420	16	330	149	745	300	1,500	2,775	2,775	195.4
Average	1,360	13	330	113	565	113	565	1,130	1,130	82.4

Figure. F.2.1 Minor Irrigation Equipment Numbers and Irrigation Area (1/4)

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

UPAZILA NABINAGAR

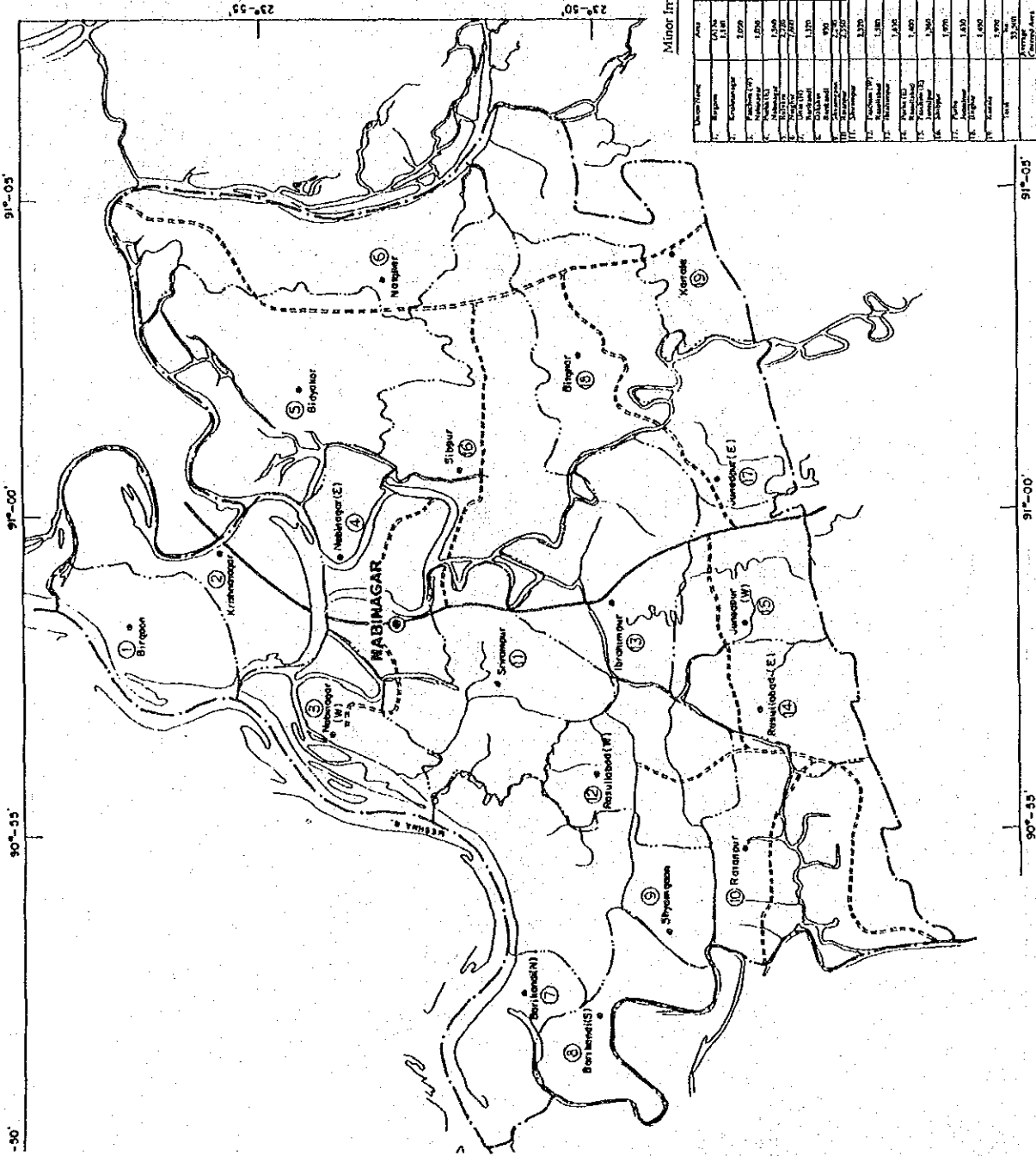
Metre 1000 2000 3000 4000

SCALE



LEGEND

- Upazila Boundary
- Union Boundary
- River & Khali
- Upazila H.Q.
- Union H.Q.
- Feder Road (Type 'B')
- RHD Road



Minor Irrigation Equipment Numbers and Irrigation Area

Union Name	Area (Hectares)	Number of Equipment	Area (Hectares)	Number of Equipment
1. Birgaon	1,070	1	1,070	1
2. Kramarbari	1,070	2	1,070	2
3. Nabinagar	1,070	3	1,070	3
4. Nabinagar (E)	1,070	4	1,070	4
5. Nabinagar (W)	1,070	5	1,070	5
6. Baitanali (S)	1,070	6	1,070	6
7. Baitanali (N)	1,070	7	1,070	7
8. Sripur	1,070	8	1,070	8
9. Nabinagar (E)	1,070	9	1,070	9
10. Nabinagar (W)	1,070	10	1,070	10
11. Nabinagar (E)	1,070	11	1,070	11
12. Nabinagar (W)	1,070	12	1,070	12
13. Nabinagar (E)	1,070	13	1,070	13
14. Nabinagar (W)	1,070	14	1,070	14
15. Nabinagar (E)	1,070	15	1,070	15
16. Nabinagar (W)	1,070	16	1,070	16
17. Nabinagar (E)	1,070	17	1,070	17
18. Nabinagar (W)	1,070	18	1,070	18
19. Nabinagar (E)	1,070	19	1,070	19
20. Nabinagar (W)	1,070	20	1,070	20
Total	21,400	214	21,400	214

Figure. F.2.1 Minor Irrigation Equipment Numbers and Irrigation Area (2/4)

THE PEOPLES REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

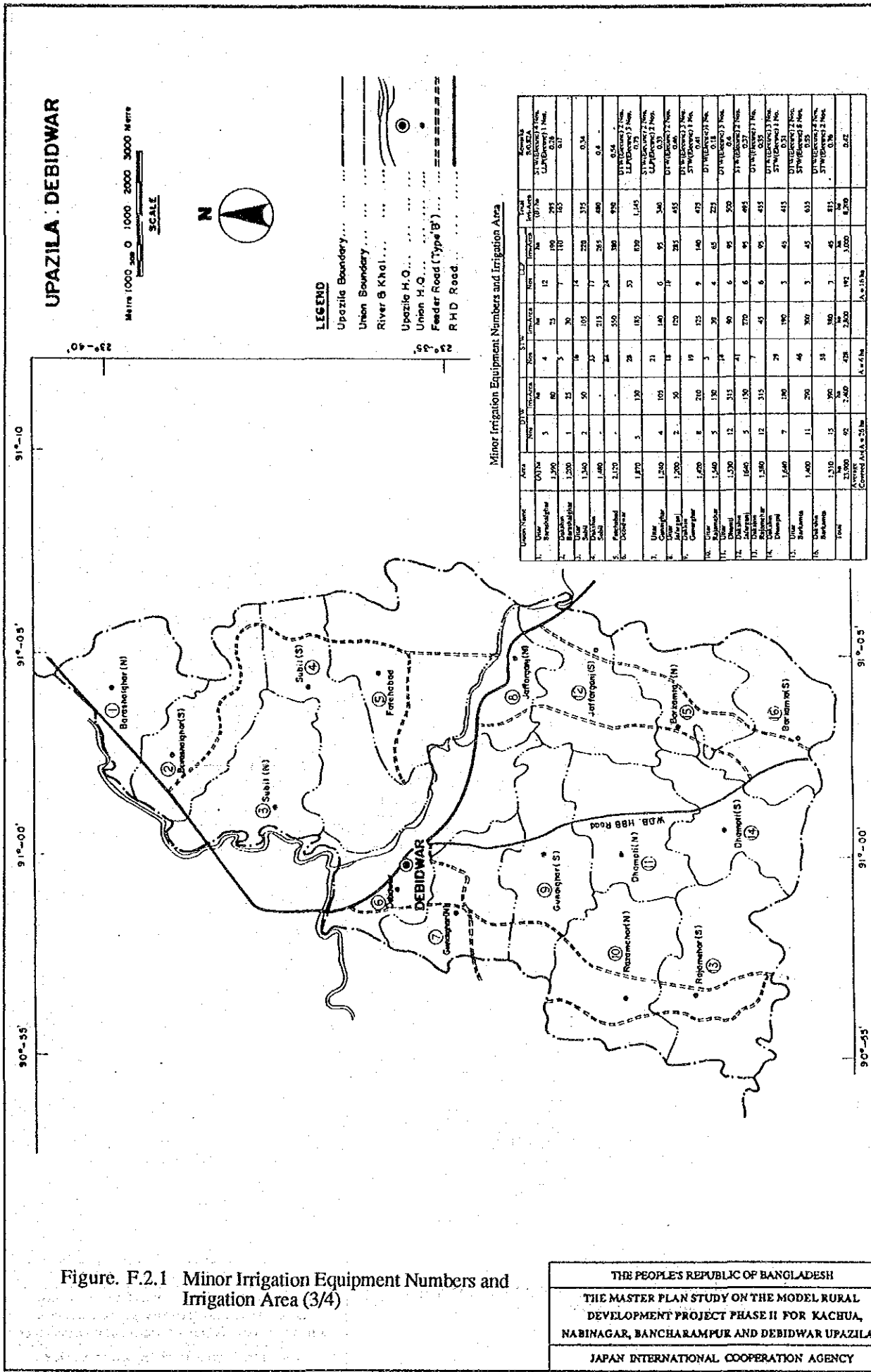


Figure. F.2.1 Minor Irrigation Equipment Numbers and Irrigation Area (3/4)

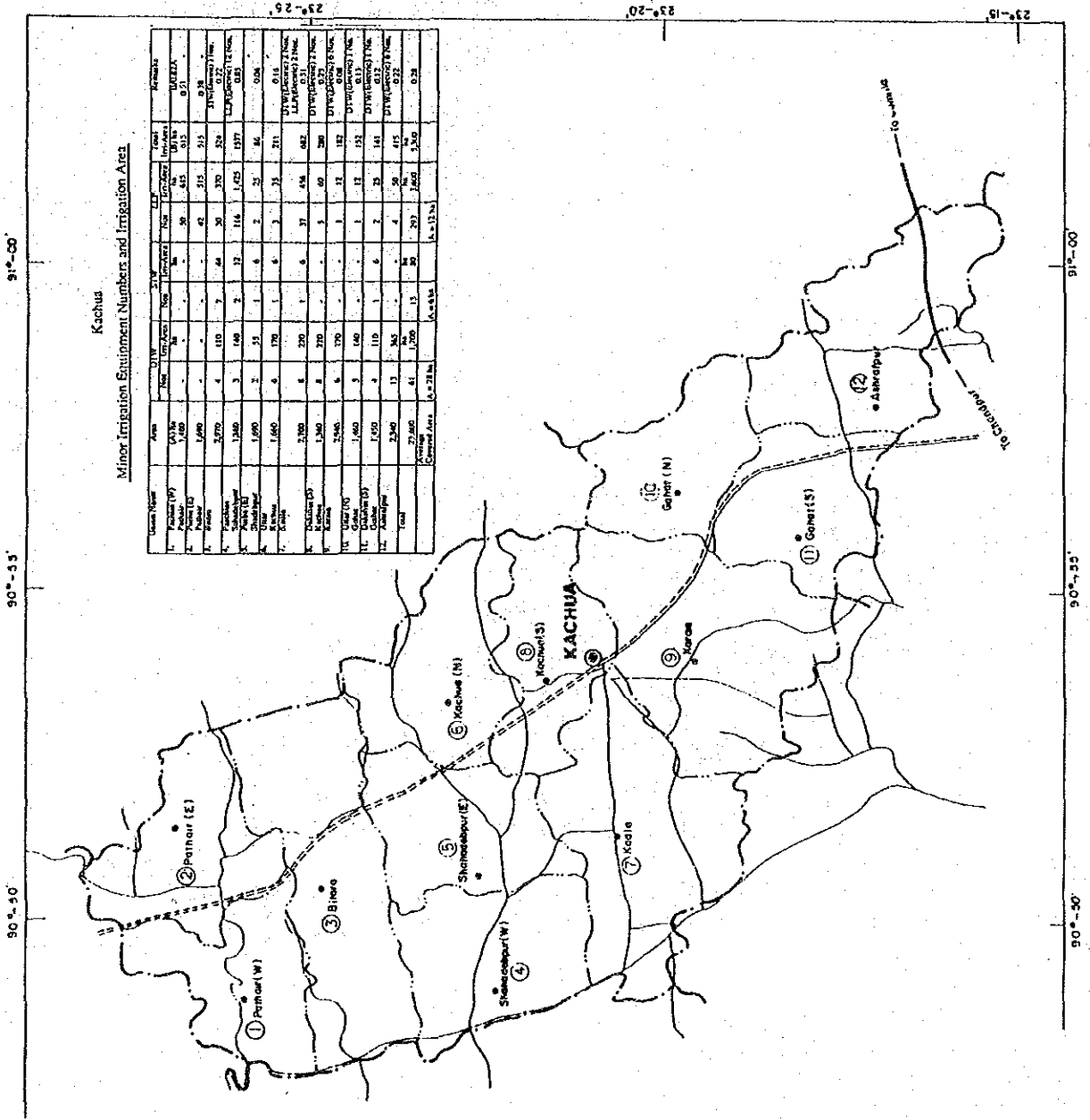
UPAZILA: KACHUA

Bar's 1000 up to 1000 2000 3000 Meters
SCALE



LEGEND

- Upazila Boundary
- Union Boundary
- River & Khel
- Upazila H.Q.
- Union H.Q.
- Feeder Road (Type 'B')
- Feeder Road (Type 'A')
- RHD Road



Minor Irrigation Equipment Numbers and Irrigation Area

Union Name	Area (Sq. Km)	Type 'A'		Type 'B'		Total	Irrigation Area (Sq. Km)	Irrigation Area (%)
		No.	Capacity (Cusec)	No.	Capacity (Cusec)			
1. Paimar (W)	1,400	-	-	50	4.85	50	3.15	0.22
2. Paimar (E)	1,400	-	-	42	3.15	42	2.70	0.19
3. Bihore	2,000	4	110	2	44	30	370	3.00
4. Shantapur (W)	1,400	3	160	2	114	1,025	1,027	0.73
5. Shantapur (E)	1,400	2	35	1	6	2	25	0.18
6. Kachua (N)	1,400	6	170	1	6	3	35	0.25
7. Kachua (S)	2,000	6	270	1	6	37	434	0.31
8. Kodla	1,400	8	270	-	-	8	60	0.43
9. Gohar (N)	2,400	5	370	-	-	5	112	0.82
10. Gohar (S)	1,400	3	160	-	-	3	112	0.82
11. Asharapur	1,400	3	160	-	-	3	112	0.82
12. Asharapur	1,400	4	110	-	-	4	25	0.18
Total	27,400	13	845	4	60	17	475	0.35
Total	27,400	41	1,700	15	80	56	1,600	0.58

Figure. F.2.1 Minor Irrigation Equipment Numbers and Irrigation Area (4/4)

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

NABINAGAR

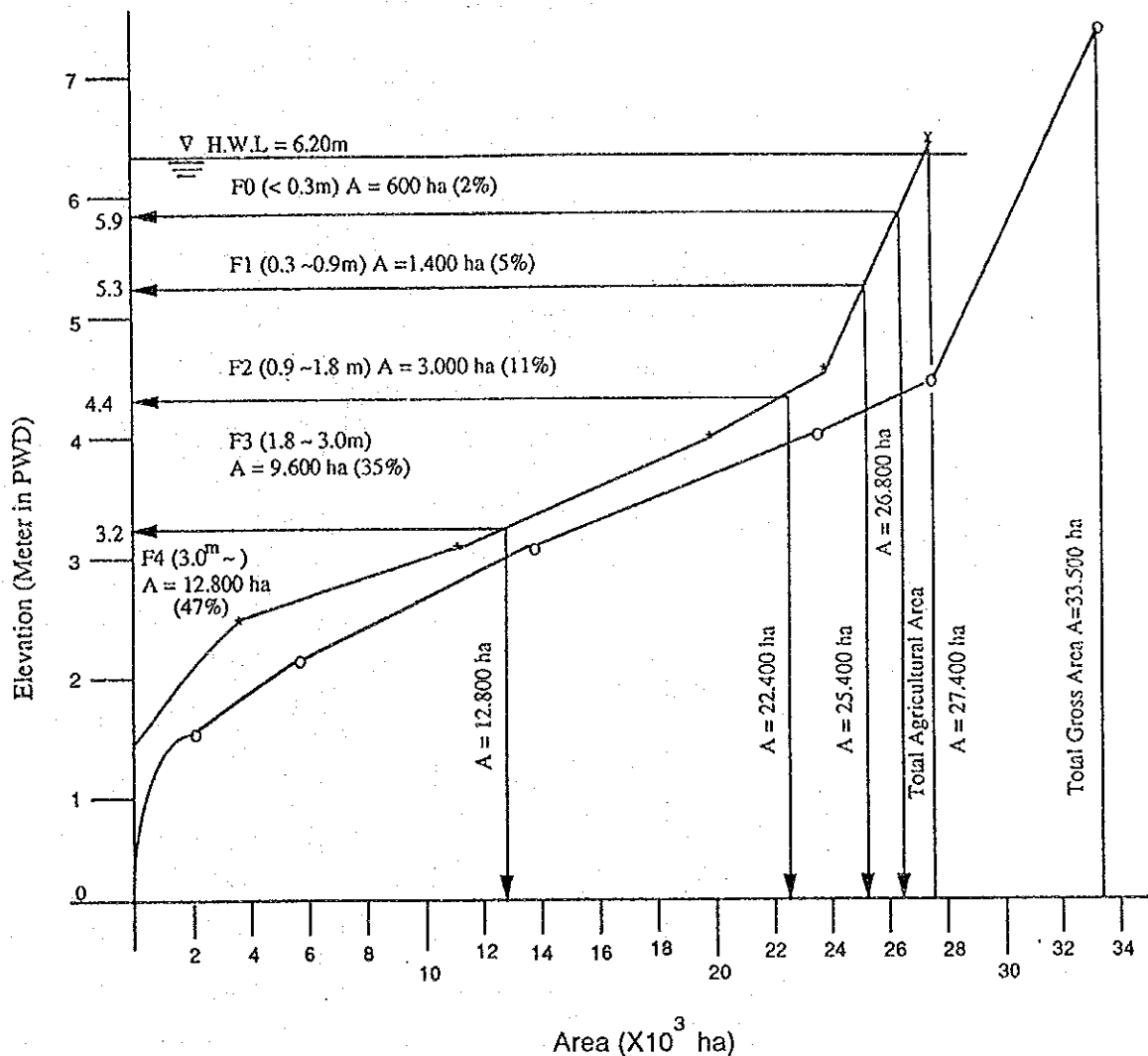


Figure. F.2.2 Relationship between Ground Elevation and Land Area (1/4)

THE PEOPLE'S REPUBLIC OF BANGLADESH
THE MASTER PLAN STUDY ON THE MODEL RURAL DEVELOPMENT PROJECT PHASE II FOR KACHUA, NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
JAPAN INTERNATIONAL COOPERATION AGENCY

BANCHRAMPUR

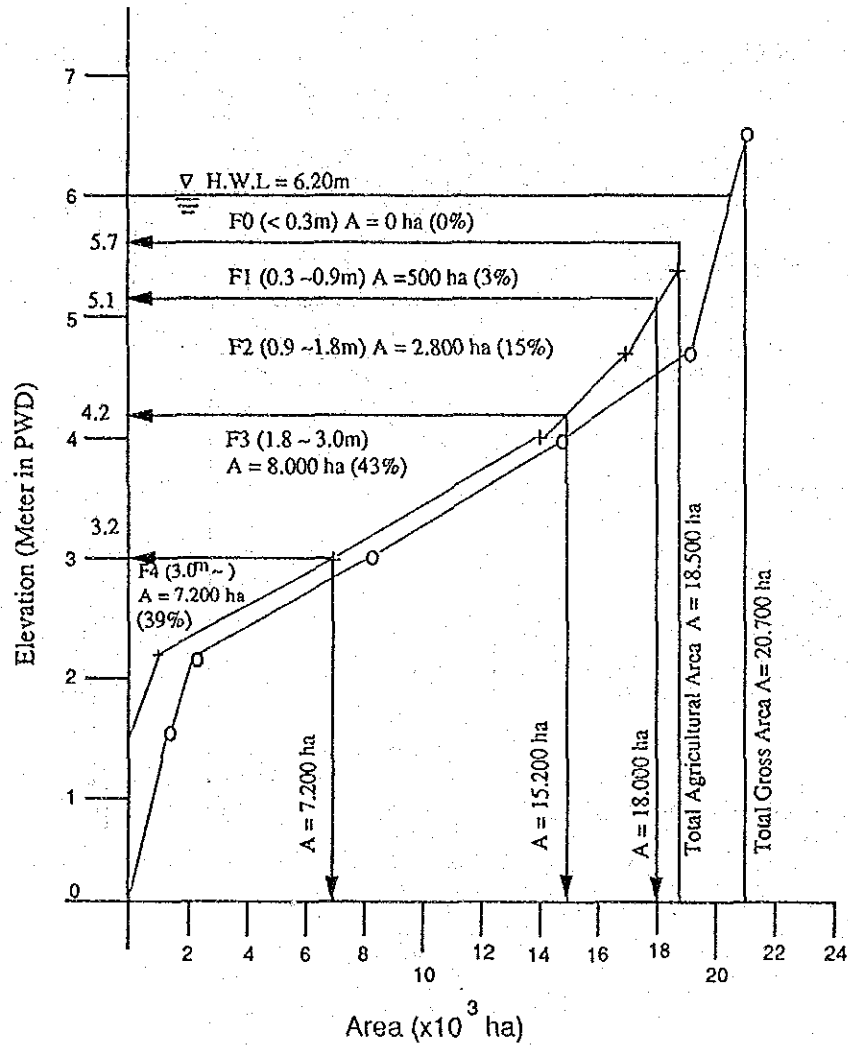


Figure. F.2.2 Relationship between Ground Elevation and Land Area (2/4)

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL KURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHRAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

DEBIDWAR

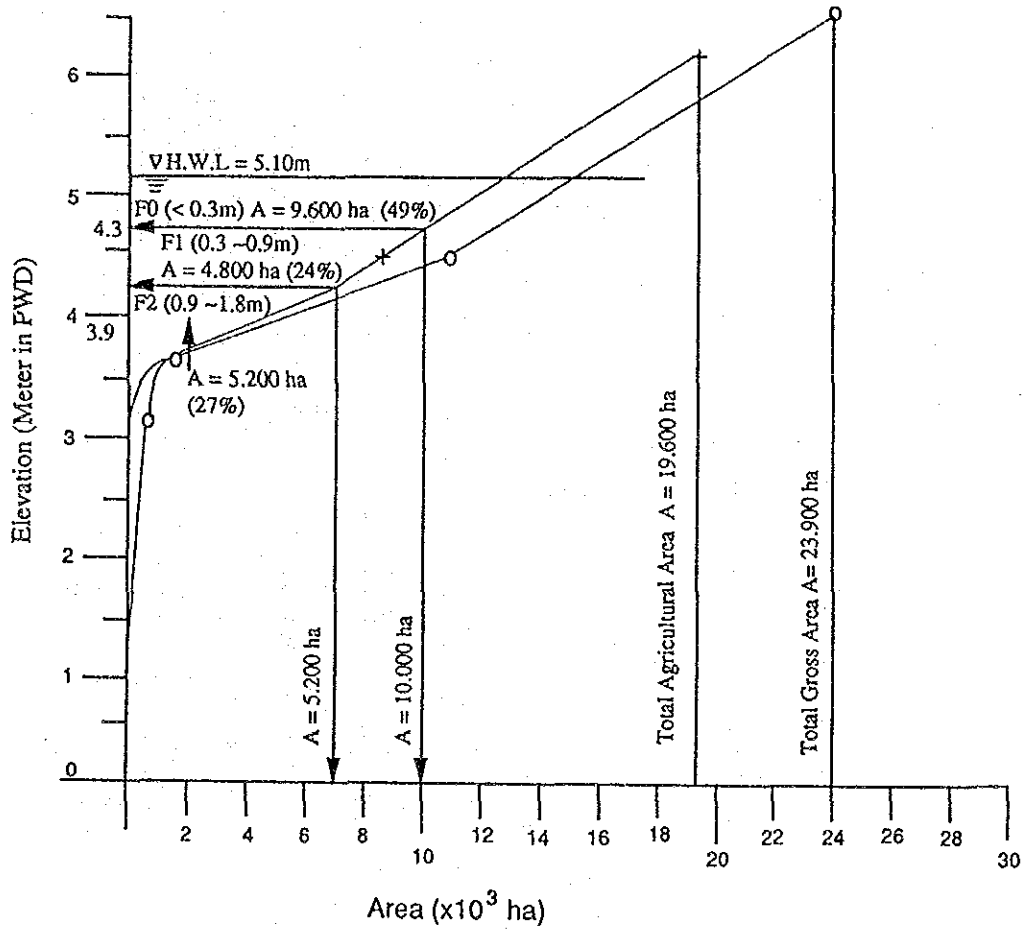


Figure. F.2.2 Relationship between Ground Elevation and Land Area (3/4)

THE PEOPLE'S REPUBLIC OF BANGLADESH
THE MASTER PLAN STUDY ON THE MODEL RURAL DEVELOPMENT PROJECT PHASE II FOR KACHUA, HABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
JAPAN INTERNATIONAL COOPERATION AGENCY

KACHUA

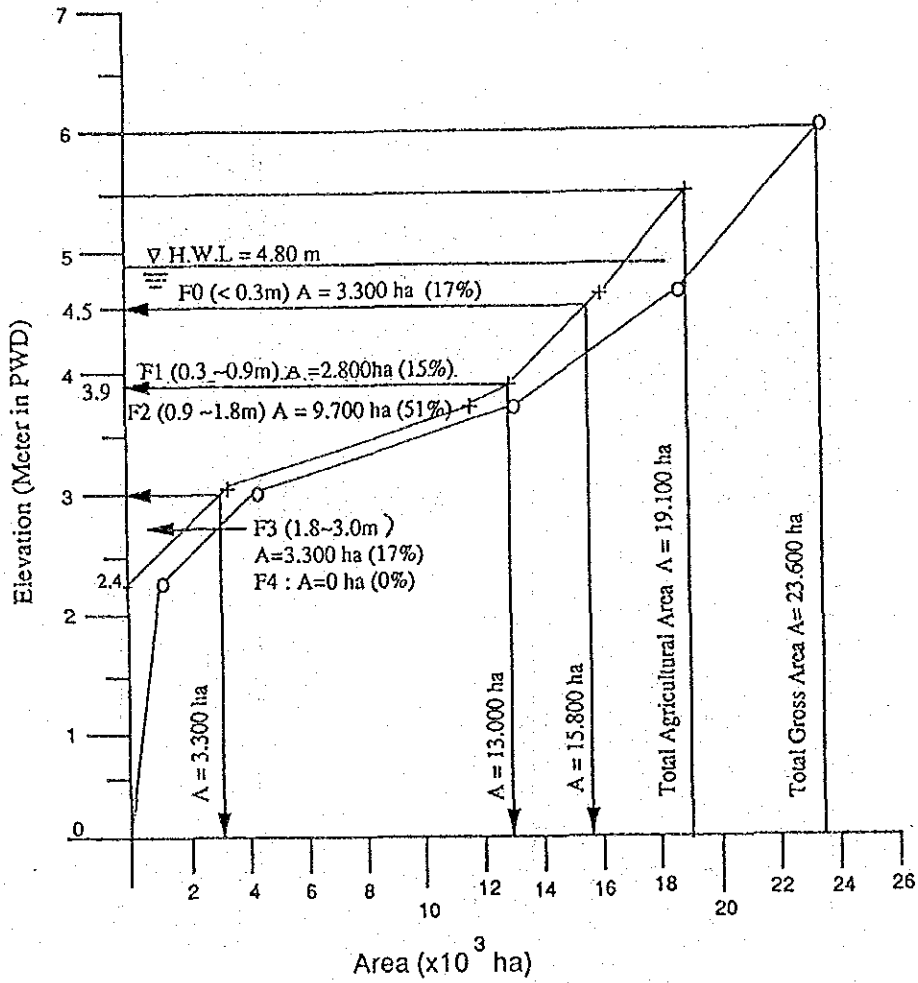


Figure. F.2.2 Relationship between Ground Elevation and Land Area (4/4)

THE PEOPLE'S REPUBLIC OF BANGLADSH
THE MASTER PLAN STUDY ON THE MODEL RURAL DEVELOPMENT PROJECT PHASE II FOR KACHUA, NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
JAPAN INTERNATIONAL COOPERATION AGENCY

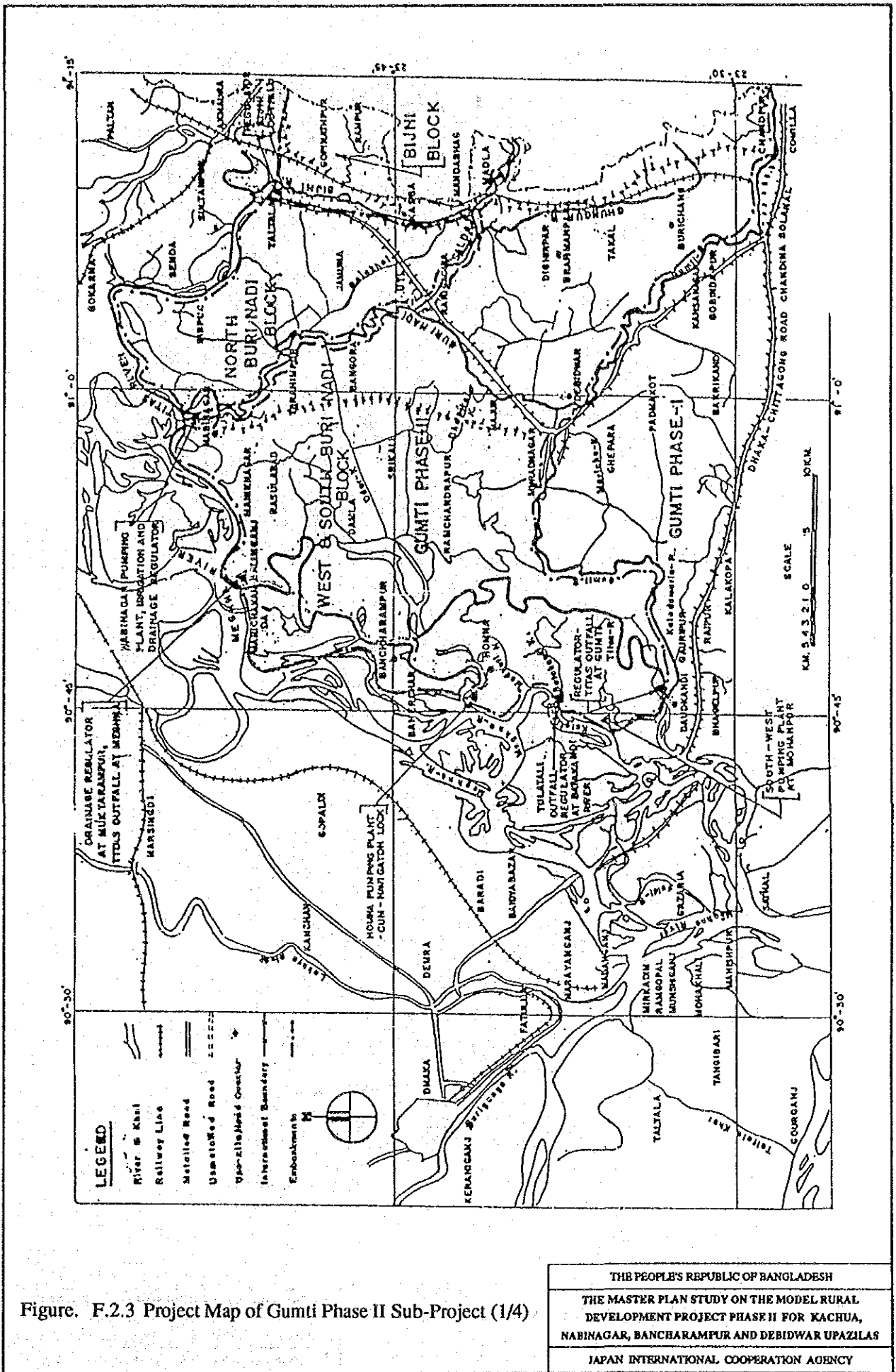


Figure. F.2.3 Project Map of Gumti Phase II Sub-Project (1/4)

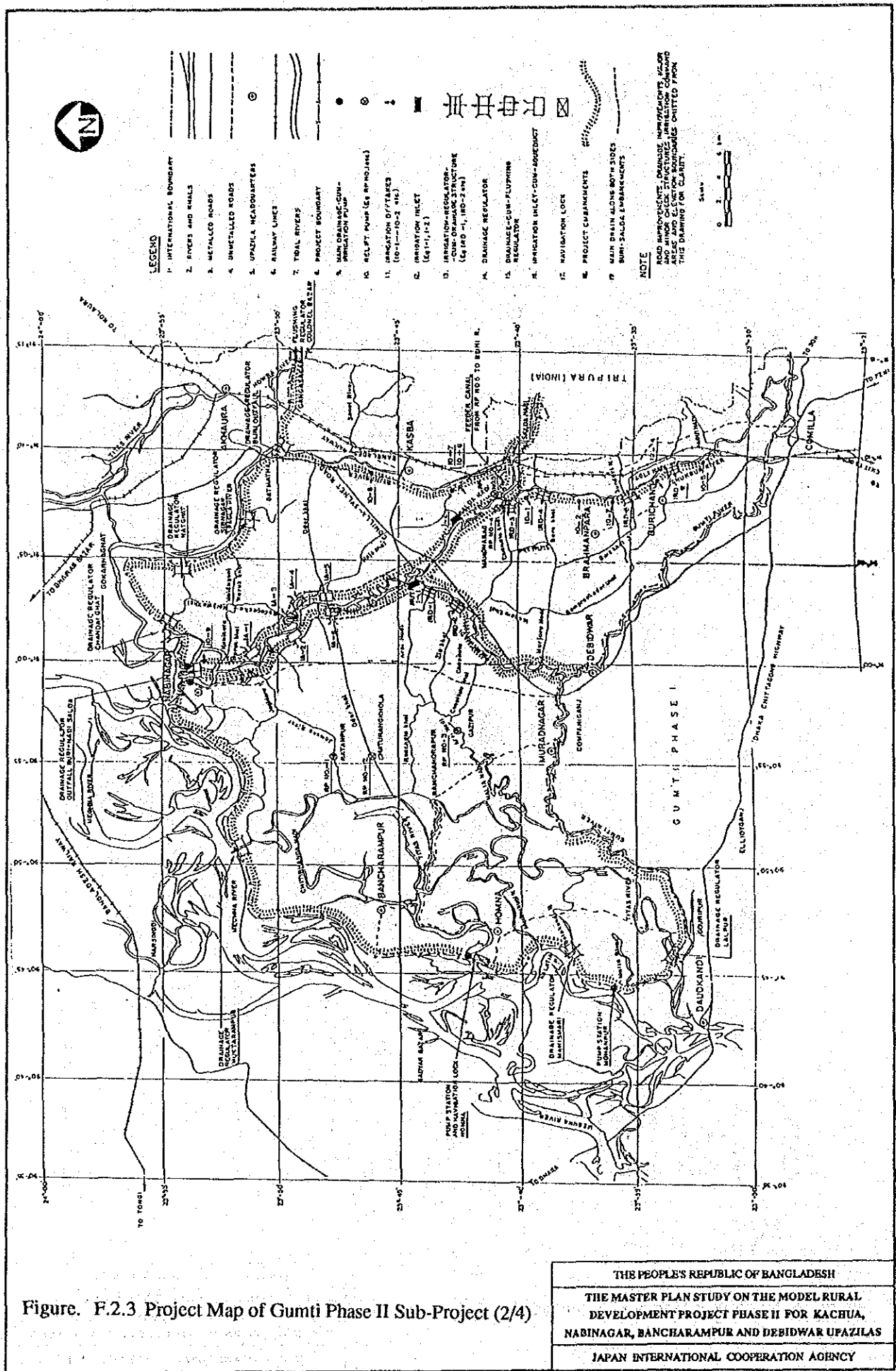


Figure. F.2.3 Project Map of Gumti Phase II Sub-Project (2/4)

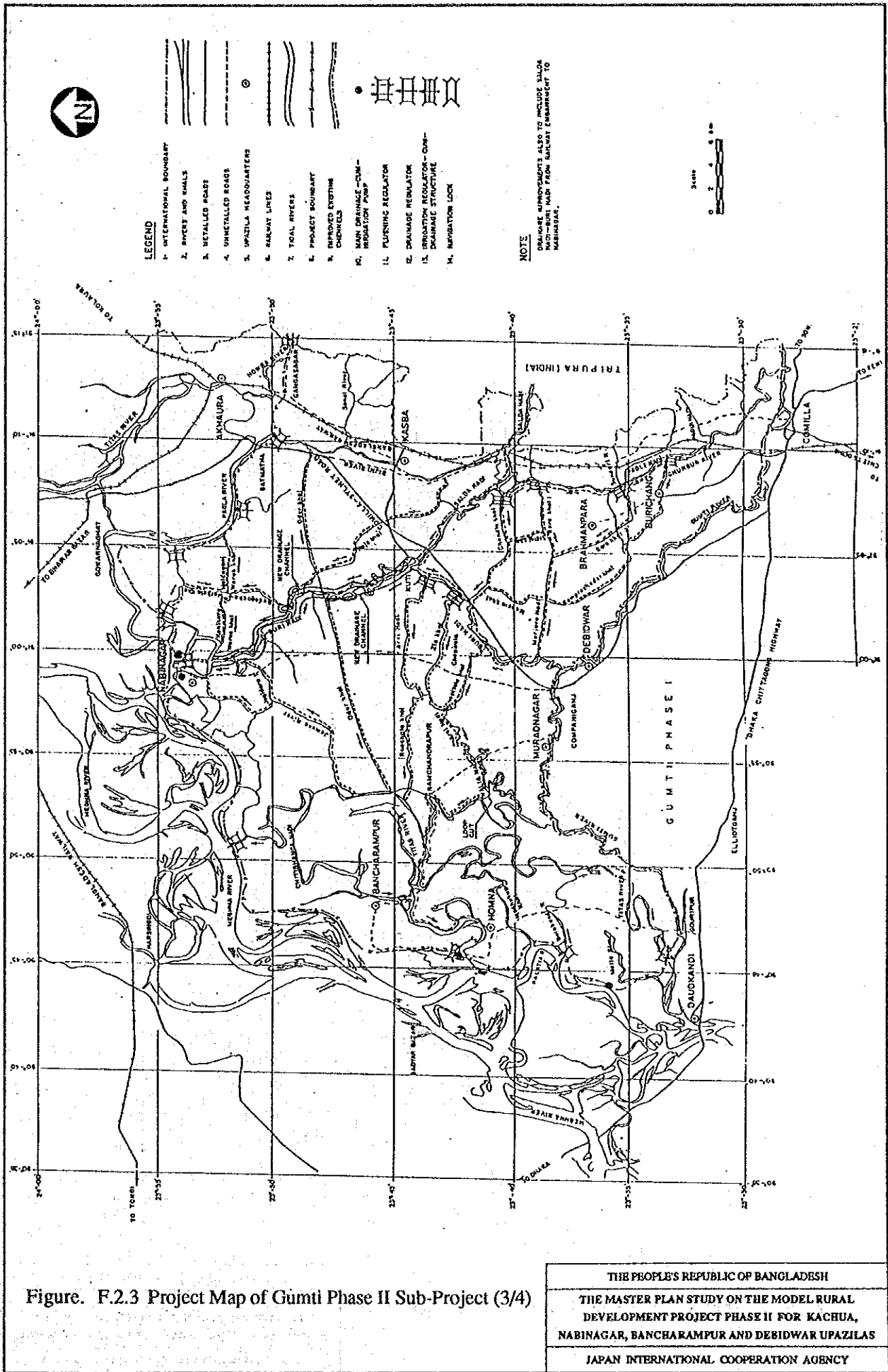
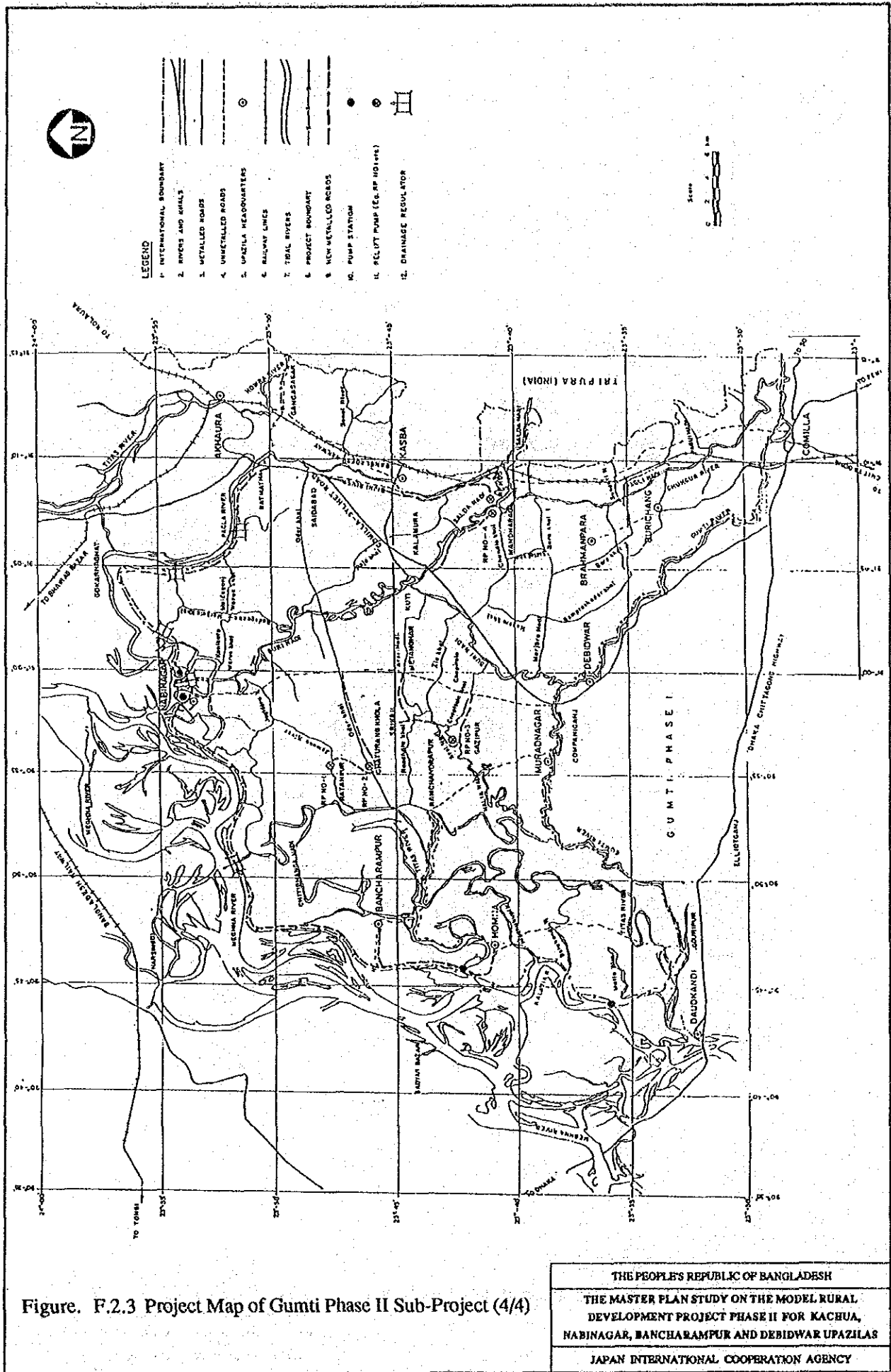
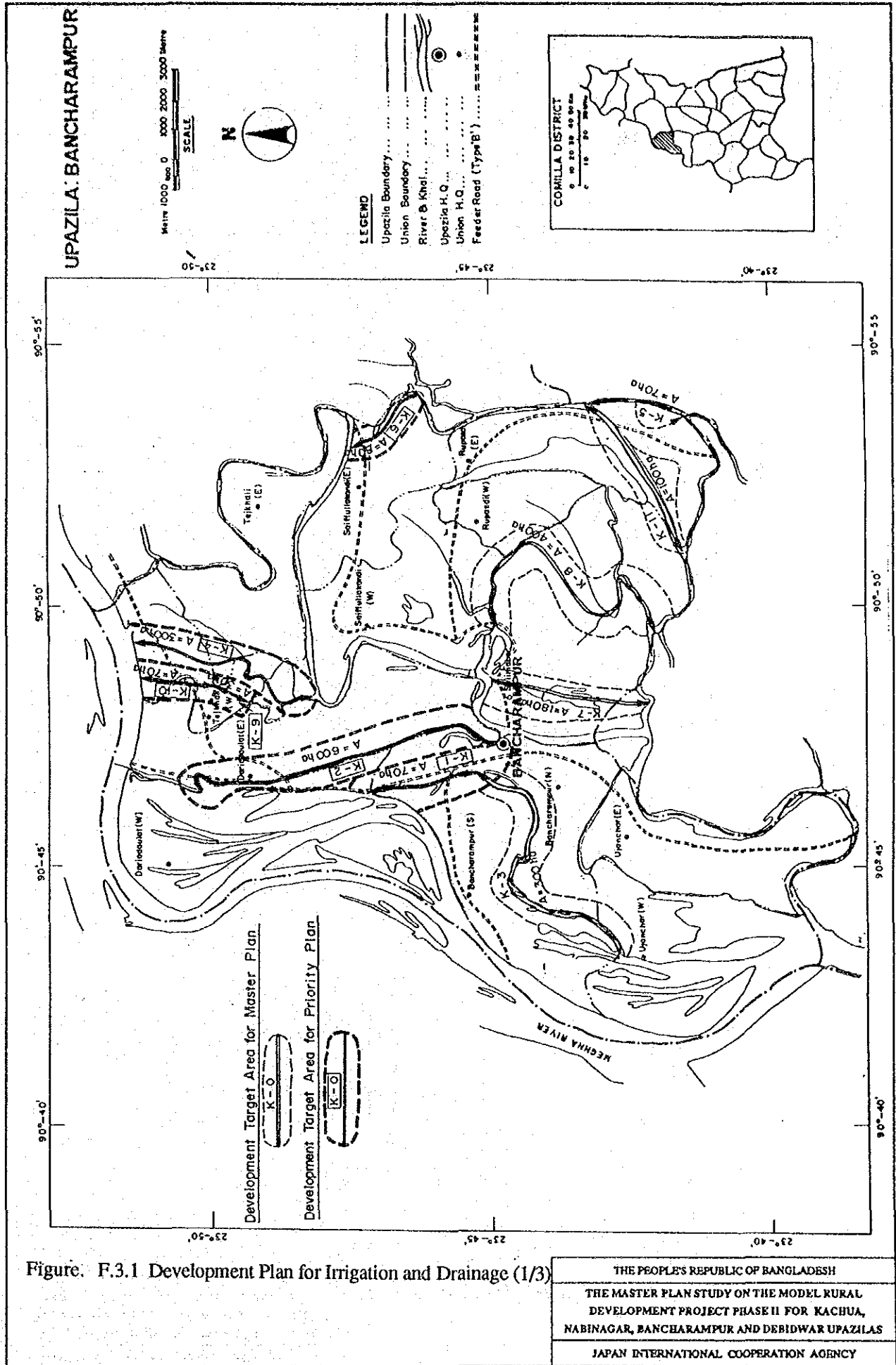


Figure. F.2.3 Project Map of Gumti Phase II Sub-Project (3/4)





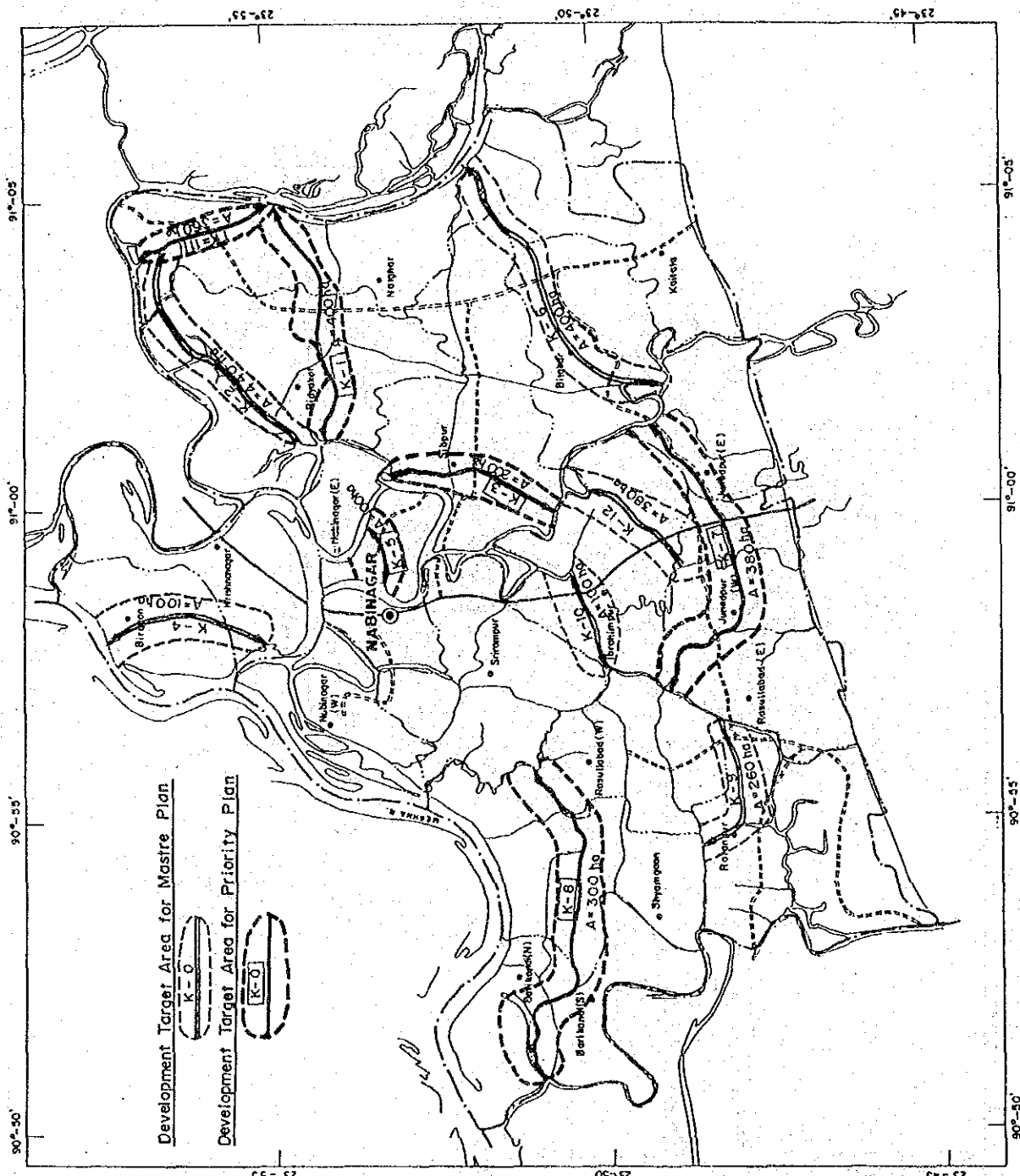
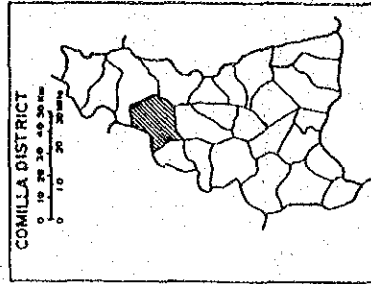
UPAZILA : NABINAGAR

Map 1:000 000 1000 2000 5000 Metre
SCALE



LEGEND

- Upazila Boundary ...
- Union Boundary ...
- River & Khal ...
- Upazila H.Q. ...
- Union H.Q. ...
- Feeder Road (Type 'B') ...
- RHD Road ...



Development Target Area for Master Plan
K-0

Development Target Area for Priority Plan
K-0

Figure. F.3.1 Development Plan for Irrigation and Drainage (2/3)

THE PEOPLE'S REPUBLIC OF BANGLADESH
THE MASTER PLAN STUDY ON THE MODEL RURAL
DEVELOPMENT PROJECT PHASE II FOR KACHUA,
NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
JAPAN INTERNATIONAL COOPERATION AGENCY

UPAZILA: KACHUA

Metre 1000 2000 3000
SCALE



- LEGEND**
- Upazila Boundary
 - Union Boundary
 - River & Khai
 - Upazila H.Q.
 - Union H.Q.
 - Feeder Road (Type 'B')
 - RHD Road

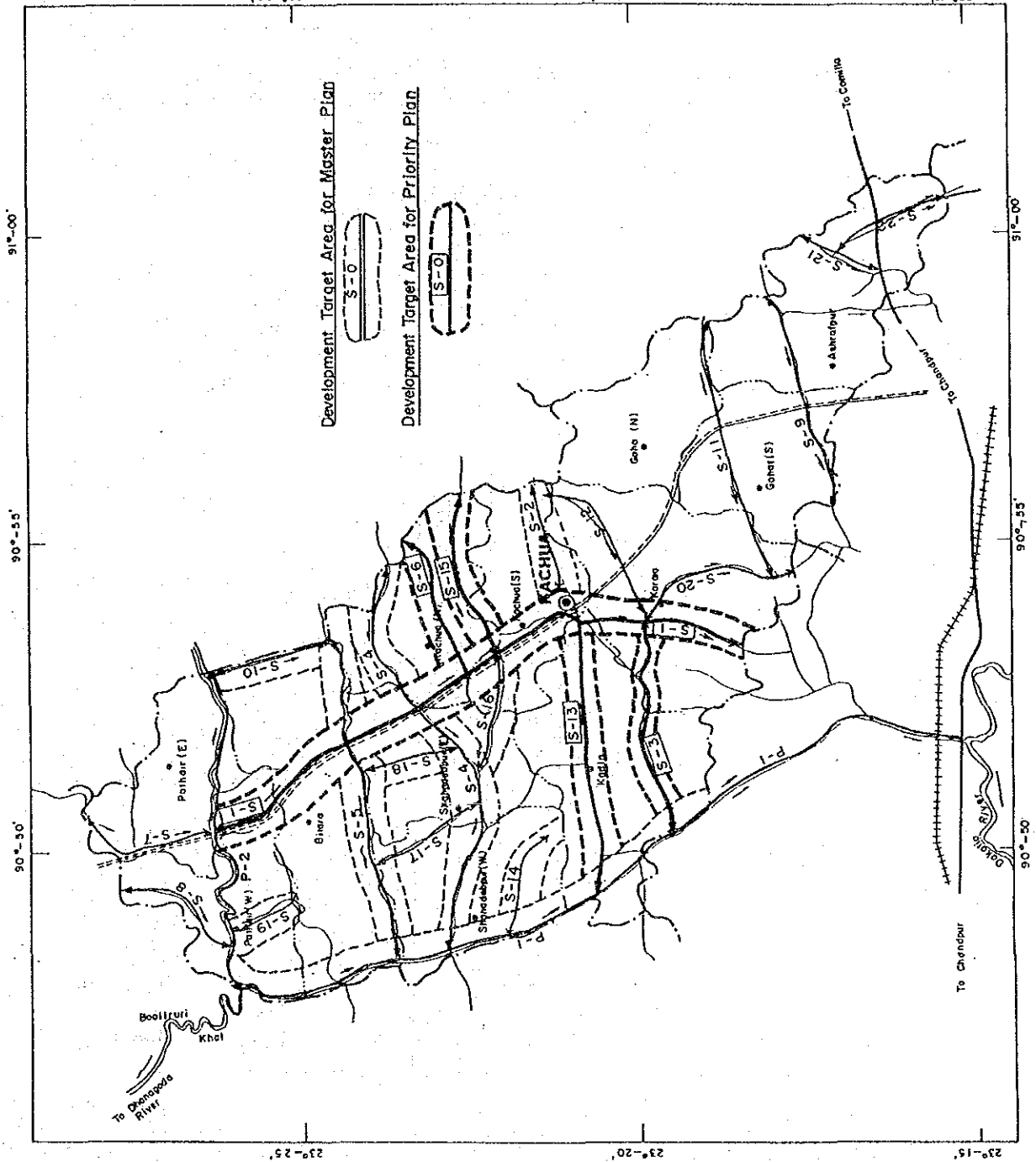
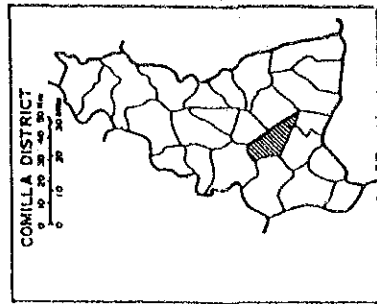
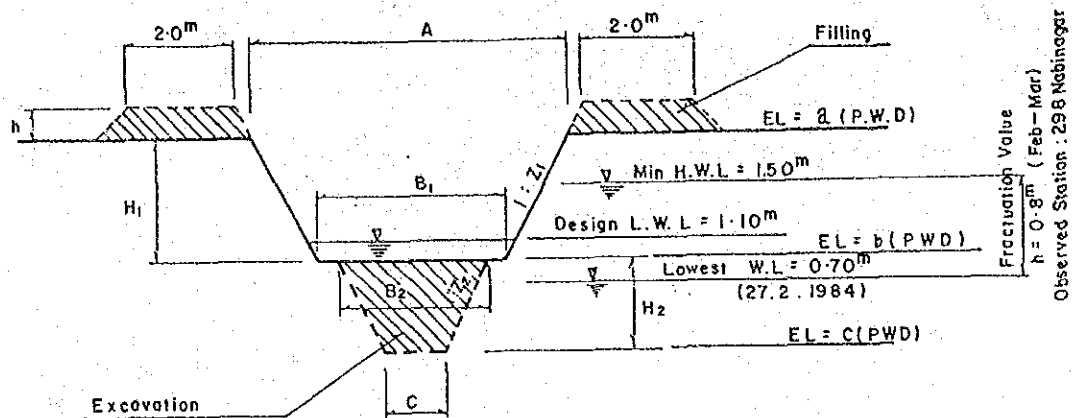


Figure. F.3.1 Development Plan for Irrigation and Drainage (3/3)

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

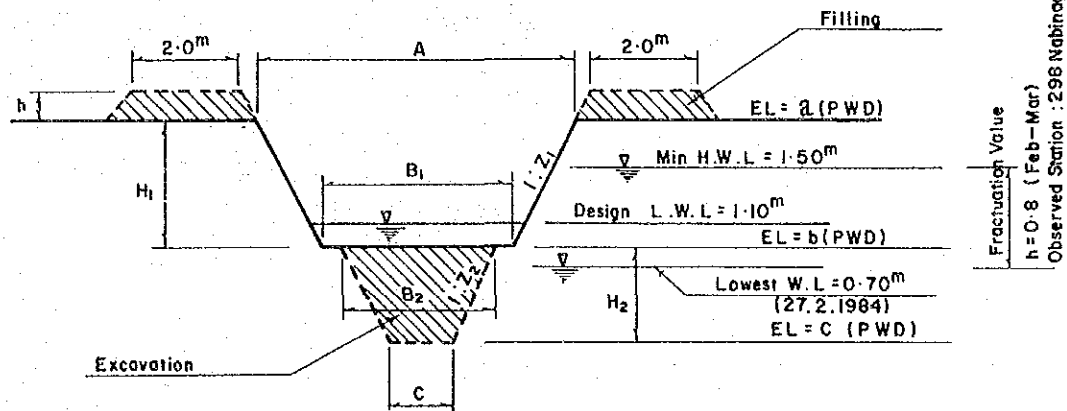


Canal Name	Specification (Existing)						Specification (Planned)						
	A	B	H ₁	Z ₁	EL = a	EL = b	B ₂	C	H ₂	Z ₂	EL = C	T	
Kalshakhali	m	m	m		m	m	m	m	m		m	m	
Khal - 1	9.0	5.0	1.5	1.3	3.0	1.5	4.0	1.0	1.0	1.5	0.5	0.3	
Dulbang													
" 2	14.0	6.0	2.0	"	"	1.0	6.0	2.0	"	2.0	0.0	0.5	
Dairaar char													
3	21.0	6.0	1.8	4.0	"	1.2	"	"	"	"	0.2	"	
Murader													
" 4	11.0	5.0	"	1.7	"	"	5.0	1.5	"	1.7	"	0.4	
Dariakandi bara													
" 5	9.0	5.0	1.5	1.3	"	1.5	4.0	1.0	"	1.5	0.5	0.3	
Nandalia													
" 6	9.0	4.0	1.8	1.4	"	1.2	3.0	"	0.7	"	0.5	0.2	
Hossainpur													
" 7	8.0	4.0	1.5	1.3	2.5	1.0	3.4	"	0.8	"	0.2	0.3	
Mandalia													
" 8	9.0	4.0	1.8	1.4	3.0	1.2	3.0	"	0.7	"	0.5	0.2	
Pahariakandi													
" 9	9.0	4.0	1.6	1.4	"	1.2	3.1	"	"	"	0.5	"	
Kalakandisona miah													
" 10	8.0	4.0	1.5	1.3	"	1.2	3.1	"	"	"	0.5	"	
Mara titos													
" 11	31.0	11.0	1.5	6.7	"	1.5	7.0	"	1.5	"	0.0	0.7	

Figure. F.3.2 Canal Standard Section for Irrigation and Drainage Improvement (1/3)

BANCHARAMPUR

THE PEOPLE'S REPUBLIC OF BANGLADESH
THE MASTER PLAN STUDY ON THE MODEL RURAL DEVELOPMENT PROJECT PHASE II FOR KACHUA, NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
JAPAN INTERNATIONAL COOPERATION AGENCY

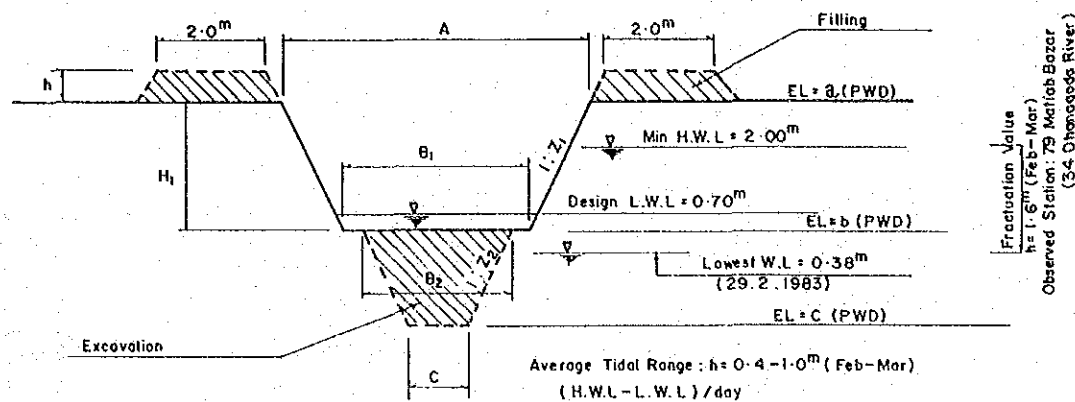


Canal Name	Specification (Existing)						Specification (Planned)					
	A	B ₁	H ₁	Z ₁	EL = a	EL = b	B ₂	C	H ₂	Z ₂	EL = c	T
	m	m	m		m	m	m	m	m		m	m
Mazikata Khal - 1	12.0	6.0	1.8	1.7	3.5	1.7	6.0	1.0	1.5	1.7	0.2	0.7
Jafarpur " 2	14.0	"	1.6	2.5	2.5	0.9	5.0	2.0	0.7	2.5	"	0.4
Laor Fatehpur " 3	12.0	5.0	"	2.2	3.0	1.4	"	1.0	1.0	2.0	0.4	0.5
Bikhali " 4	15.0	6.0	1.8	2.5	"	1.2	6.0	"	"	2.5	0.2	"
Adalmanil Char " 5	12.0	"	"	1.7	"	"	4.5	"	"	1.7	"	0.4
Bash " 6	11.0	"	1.5	"	3.5	2.0	6.0	"	1.5	"	0.5	0.7
Birugau " 7	15.0	"	2.0	2.2	"	1.5	"	"	1.1	2.2	0.4	0.5
Begduhar " 8	"	"	"	"	"	"	"	"	"	"	"	"
Deurjuri " 9	14.0	"	"	2.0	"	"	"	"	1.2	2.0	0.3	"
Samegram " 10	12.0	5.0	2.0	1.7	"	1.5	5.0	"	1.2	1.7	0.3	"
Rasullobed " 11	11.0	"	1.5	2.0	2.5	1.0	"	"	1.0	2.0	0.0	0.4
Rasulpur " 12	11.0	"	"	"	3.0	1.5	5.0	"	1.0	"	0.5	"

Figure. F.3.2 Canal Standard Section for Irrigation and Drainage Improvement (2/3)

NABINAGAR

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY

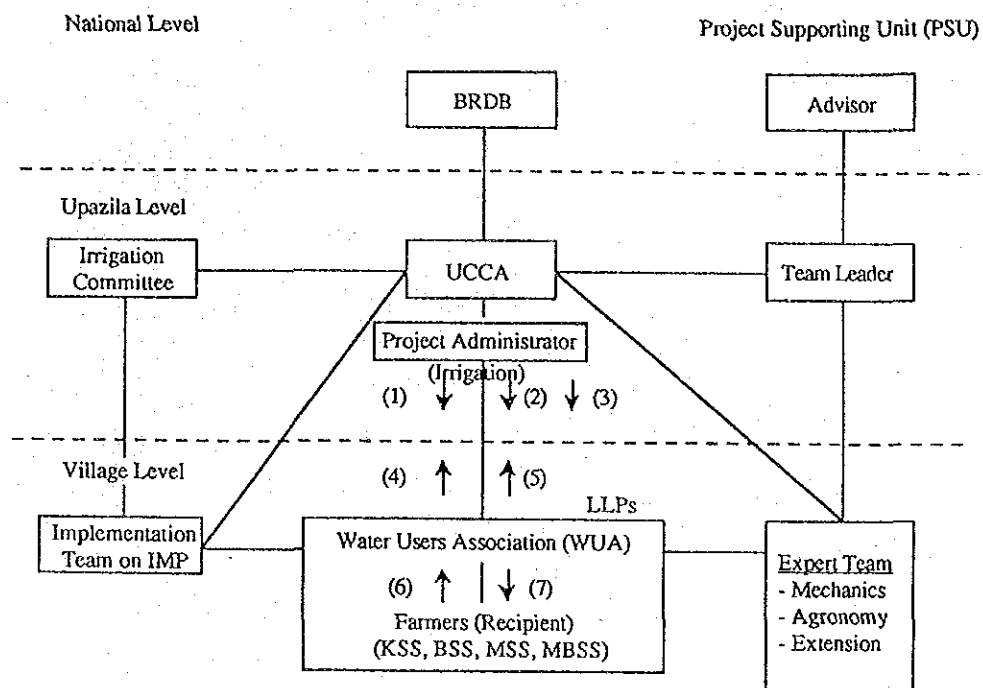


Canal Name	Specification (Existing)						Specification (Planned)					
	A	B ₁	H ₁	Z ₁	EL = a	EL = b	B ₂	C	H ₂	Z ₂	EL = c	T
	m	m	m		m	m	m	m	m		m	m
Bealji Primary - 1	25.0	10.0	3.0	2.5	3.5	0.5	(7.0)	(2.0)	(1.0)	(2.5)	(-0.5)	(0.6)
Sachar " 2	35.0	20.0	3.5	2.1	"	0.0	(-)	(-)	(-)	(-)	(-)	(-)
Sachar - Hajigonj Secondary - 1	20.0	5.0	2.5	3.0	3.5	1.0	7.0	1.0	1.2	2.5	-0.2	0.5
Dhamalua - Keylain " 2	15.0	3.5	"	2.3	3.5	"	-	-	-	-	-	-
Korayo - Ragunatpur " 3	12.0	"	"	1.8	"	"	3.5	1.0	0.7	1.8	0.3	0.2
Noadda - Charelbongo " 4	18.0	4.5	"	2.7	"	"	5.5	"	0.9	2.5	0.1	0.4
Bitora - Aliora " 5	18.0	4.8	"	2.6	3.0	0.5	5.5	"	0.9	2.5	-0.4	"
Uzari - Telua " 6	15.0	5.0	"	2.0	3.5	1.0	5.0	"	1.0	2.0	0.0	"
Sachar - Bayek " 7	21.0	6.0	"	3.0	3.0	0.5	(-)	(-)	(-)	(-)	(-)	(-)
Madhupur - Barelara " 8	15.0	5.0	"	2.0	3.0	0.5	(-)	(-)	(-)	(-)	(-)	(-)
Amujan " 9	"	3.8	2.0	2.8	4.0	2.0	-	-	-	-	-	-
Baichora " 10	"	3.0	2.5	2.4	3.0	0.5	3.0	1.0	0.8	2.0	-0.3	0.2
Bafeshar - Rahimanagar " 11	14.0	4.0	2.0	2.5	4.0	2.0	-	-	-	-	-	-
Sreerompur - Korayo " 12	15.0	4.5	2.5	2.1	"	1.5	-	-	-	-	-	-
Udara " 13	21.0	6.0	2.8	2.6	3.5	0.7	6.0	1.0	0.9	2.6	-0.2	0.4
Fattepur " 14	15.0	4.5	2.5	2.1	"	1.0	4.5	"	0.8	2.1	-0.2	0.3
Kajkamta - Komarkasha " 15	12.0	3.5	"	1.7	"	1.0	3.5	"	0.7	1.7	0.2	0.2
Bachaia " 16	18.0	"	2.8	2.5	"	0.7	"	"	0.5	2.5	0.2	"
Singua " 17	14.0	"	2.5	2.1	"	1.0	3.8	"	0.7	2.0	0.3	"
Pala - Budhumda " 18	13.0	3.8	2.8	1.6	"	0.7	3.0	"	0.5	2.0	0.2	0.1
Atishar " 19	12.0	3.5	2.5	1.7	"	1.0	3.5	"	0.7	1.7	0.3	0.2
Akaria - Nasirpur " 20	12.0	"	2.8	1.5	3.0	0.2	-	-	-	-	-	-
Masnigacha - Amujan " 21	"	3.0	2.0	2.2	4.0	2.0	-	-	-	-	-	-
Jagalpur - Pepalpara " 22	17.0	3.5	2.0	3.3	"	"	-	-	-	-	-	-

Figure. F.3.2 Canal Standard Section for Irrigation and Drainage Improvement (3/3)

KACHUA

THE PEOPLE'S REPUBLIC OF BANGLADESH
 THE MASTER PLAN STUDY ON THE MODEL RURAL
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 NABINAGAR, BANCHARAMPUR AND DEBIDWAR UPAZILAS
 JAPAN INTERNATIONAL COOPERATION AGENCY



- (1) Guidance
- (2) Training
- (3) Operation Schedule
- (4) Rental Charge of LLPs
- (5) Spare Parts & Repair Charge
- (6) Water Charge
- (7) Wage (Construction & Maintenance of distribution Canal)

Figure. F.4.1 Work Flow of LLPs Project

THE PEOPLE'S REPUBLIC OF BANGLADESH
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 DEVELOPMENT PROJECT PHASE II FOR KACHUA,
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 JAPAN INTERNATIONAL COOPERATION AGENCY

**CENTRAL CO-ORDINATING COMMITTEE
FOR IRRIGATION MANAGEMENT**

Chairman : Minister for Agriculture

Members : Secretaries of MOA (AFD, FLD), MLGRD & C, MIWDFC,
DGs of DAE, BRDB
Chairman of BPDB, BADC, REB, BWDB, BARC
Directors of BB, RDA

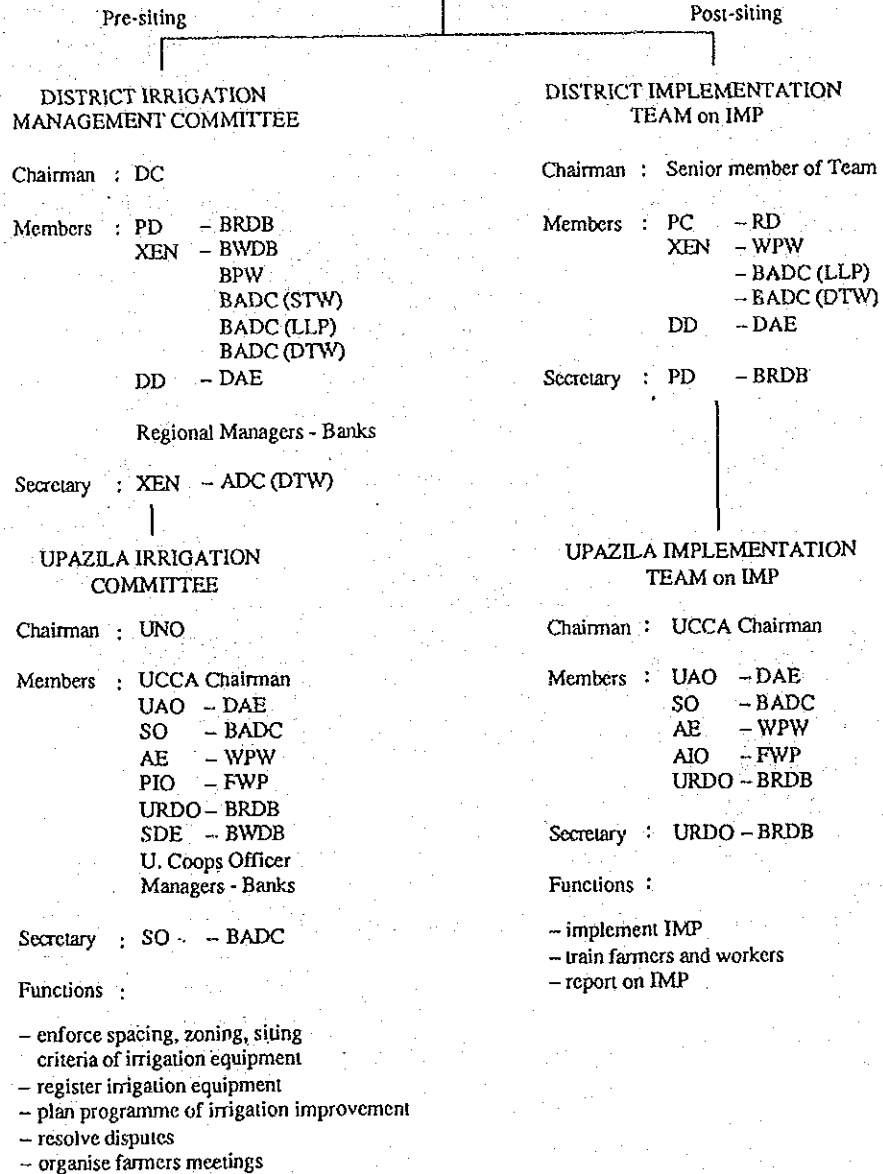


Figure. F.4.2 Official Organization of Irrigation Management Programme

ATTACHMENT

HYDROLOGY DATA

WATER LEVEL
&
DISCHARGE

Station : 274 Narsingdi

(River : 102 Surma - Meghna) (2)

1985	H	1.67	1.17	1.84	1.34	2.20	1.69	2.47	2.21	3.03	2.62	4.50	4.49	5.48	5.46	5.67	5.66	5.16	5.16	4.74	4.74	3.63	3.49	2.31	1.98	H	5.670(3/8)	1.020(3/12)	3.123	
1985	M	1.38	1.09	1.41	1.05	1.75	1.39	2.16	1.78	2.56	2.24	2.03	3.94	4.99	4.98	5.06	5.26	4.98	4.98	4.71	4.29	4.27	2.76	2.55	1.99	1.67	L	5.660(3/8)	0.880(2/2)	2.929
1985	L	1.02	0.96	1.08	0.88	1.24	1.16	1.68	1.30	2.17	1.81	3.02	2.74	4.55	4.54	4.97	5.26	4.72	4.71	3.67	3.54	2.14	1.95	1.46	1.33	L	5.150(10/8)	0.890(19/2)	2.932	
1986	H	1.83	1.51	1.63	1.22	1.88	1.44	2.72	2.41	2.86	2.40	3.69	3.66	4.83	4.82	5.15	5.14	4.99	4.98	4.86	4.86	3.91	3.90	2.35	2.19	H	5.140(10/8)	0.730(22/2)	2.769	
1986	M	1.49	1.22	1.35	1.02	1.49	1.12	2.03	1.73	2.46	2.24	2.70	2.63	4.24	4.23	4.97	4.78	4.80	4.79	4.62	4.61	3.13	3.07	1.85	1.65	L	6.270(21/8)	0.980(9/3)	3.256	
1986	L	1.04	0.89	0.89	0.73	0.90	0.87	1.25	1.02	2.15	2.06	2.06	1.97	3.75	3.72	4.51	4.50	4.68	4.67	3.94	3.92	2.30	2.14	1.36	1.24	L	6.260(21/8)	0.810(10/3)	3.062	
1987	H	1.83	1.40	1.80	1.36	1.86	1.37	2.54	2.14	2.50	2.21	4.06	4.04	5.59	5.56	6.27	6.26	5.90	5.88	5.78	5.77	3.54	3.46	2.31	2.01	H	6.900(6/9)	1.170(30/1)	3.480	
1987	M	1.46	1.15	1.51	1.13	1.49	1.10	2.10	1.81	2.32	2.06	3.22	3.12	4.97	4.95	6.12	6.11	5.71	5.70	4.81	4.79	2.86	2.67	2.05	1.76	L	6.890(6/9)	0.920(28/2)	3.310	
1987	L	1.13	0.96	1.14	0.96	0.98	0.81	1.50	1.33	2.06	1.87	2.40	2.21	4.18	4.12	5.69	5.66	5.58	5.58	3.54	3.51	2.07	1.95	1.62	1.45	L	5.580(6/8)	0.880(31/2)	2.987	
1988	H	1.91	1.55	1.90	1.40	2.12	1.70	2.61	2.09	4.34	4.29	5.01	4.98	6.40	6.38	6.70	6.68	6.90	6.89	5.20	5.19	3.60	3.58	2.55	2.39	H	6.900(6/9)	1.170(30/1)	3.480	
1988	M	1.62	1.27	1.57	1.18	1.64	1.26	2.08	1.72	2.94	2.74	4.54	4.52	5.87	5.79	5.77	6.39	6.37	6.37	4.54	4.52	2.93	2.74	2.08	1.81	L	6.890(6/9)	0.920(28/2)	3.310	
1988	L	1.17	1.04	1.24	0.92	1.24	1.04	1.71	1.44	2.04	1.51	4.26	4.25	5.03	5.02	5.99	5.99	5.20	5.18	3.74	3.67	2.48	2.30	1.44	1.25	L	5.580(6/8)	1.060(4/3)	3.163	
1989	H	1.79	1.39	1.98	1.43	1.94	1.40	2.30	1.10	3.24	3.04	4.68	4.66	5.48	5.02	5.58	5.58	5.10	5.09	5.02	5.01	3.98	2.94	2.32	2.04	H	5.580(6/8)	0.880(31/2)	2.987	
1989	M	1.47	1.20	1.53	1.19	1.49	1.15	1.89	1.55	2.59	2.38	3.87	3.78	5.05	5.04	5.94	5.94	5.07	5.07	4.70	4.69	2.92	2.75	1.83	1.58	L	1.010(20/2)	0.680(19/2)	-	
1989	L	1.21	1.03	1.15	0.98	1.06	0.88	1.14	0.88	2.06	2.00	3.26	3.08	4.31	4.30	5.05	5.05	5.02	5.02	4.04	4.02	2.08	2.04	1.42	1.24	L	-	-	-	
1990	H	1.76	1.39	1.84	1.48	2.15	1.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	H	-	-	-	
1990	M	1.47	1.16	1.46	1.09	1.64	1.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	-	
1990	L	1.19	0.95	1.01	0.68	1.28	0.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	-	
HWL	Max	2.13	1.92	1.98	1.68	2.42	1.92	2.84	2.46	4.34	4.29	5.53	5.53	6.58	6.48	6.87	6.86	6.90	6.89	5.87	5.86	4.25	4.25	2.97	2.65	Max	6.90	-	-	
HWL	Min	1.67	1.17	1.54	1.20	1.66	1.30	2.21	1.77	2.50	2.21	3.40	3.31	4.83	4.82	5.15	5.14	4.89	4.89	4.10	4.07	2.44	2.35	1.91	1.61	Min	5.15	-	-	
LWL	Max	1.45	1.22	1.26	1.05	1.50	1.25	1.75	1.58	2.59	2.47	4.26	4.25	5.03	5.02	5.85	5.84	5.69	5.68	4.28	4.28	3.32	2.56	1.96	1.83	Max	-	-	0.96	
LWL	Min	1.02	0.98	0.84	0.64	0.96	0.78	1.14	0.88	1.66	1.51	2.06	1.91	3.58	3.55	4.51	4.50	3.86	3.86	1.74	1.74	1.51	1.17	1.25	1.12	Min	-	-	0.64	

Station : 275 Baidyer Bazar (River : 102 Surma - Meghna) (2)

1985	H	1.71	1.31	1.41	1.01	2.01	1.71	2.13	1.90	3.00	2.55	4.40	4.20	5.25	5.15	5.70	5.50	5.00	4.85	4.65	4.40	3.55	3.30	2.73	2.43	H	5.70(6/8)	1.01(5/2)	3.107
1985	M	1.35	0.98	1.24	0.85	1.73	1.44	1.96	1.67	2.52	2.17	3.62	3.39	4.77	4.60	5.13	4.96	4.79	4.64	4.19	3.94	2.71	2.43	2.24	1.94	L	5.50(6/8)	0.53(1/12)	2.840
1985	L	1.11	0.81	1.01	0.61	1.31	1.01	1.71	1.41	2.10	1.80	3.05	2.80	4.20	4.00	4.75	4.60	4.55	4.40	3.35	3.10	2.35	2.05	1.73	1.43	L	5.39(7/8)	1.35(23/5)	3.202
1986	H	2.13	1.78	1.93	1.58	2.32	1.83	3.03	2.73	3.43	3.13	4.06	3.76	5.10	4.92	5.39	5.19	5.04	4.89	4.96	4.81	4.06	3.86	2.67	2.41	H	5.19(7/8)	1.03(20/3)	2.937
1986	M	1.86	1.54	1.64	1.31	1.75	1.38	2.40	2.10	2.82	2.45	3.21	2.89	4.72	4.51	5.03	4.83	4.90	4.72	4.67	4.49	3.26	3.00	2.18	1.88	L	5.19(7/8)	1.32(24/2)	2.937
1986	L	1.63	1.33	1.38	1.08	1.33	1.03	1.93	1.68	2.53	2.13	2.53	2.23	4.26	4.06	4.64	4.44	4.69	4.49	4.06	3.91	2.66	2.41	1.87	1.57	L	5.19(7/8)	1.17(11/1)	3.672
1987	H	2.12	1.82	1.97	1.67	2.05	1.72																			H			
1987	M	1.73	1.43	1.66	1.37	1.75	1.42																			L			
1987	L	1.40	1.17	1.32	1.17	1.57	1.17																			L			
1988	H							2.84	2.54	4.41	4.29	4.82	4.69	6.50	6.40	6.83	6.77	6.98	6.93	5.22	4.99	3.93	3.81	3.01	2.79	H	6.98(4/9)		3.672
1988	M							2.41	2.04	3.27	2.98	4.54	4.37	5.86	5.73	5.86	5.76	6.36	6.29	4.56	4.45	2.93	2.63	2.50	2.06	H			3.423
1988	L							2.04	1.64	2.59	2.29	4.39	4.24	4.84	4.69	5.55	5.45	5.25	5.17	4.03	3.93	2.20	1.80	1.95	1.55	L	6.93(6/9)		3.414
1989	H	2.28	1.92	2.37	1.97	2.40	2.11	2.76	2.36	3.63	3.38	4.73	4.58	5.50	5.36	5.35	5.26	5.15	5.05	5.06	4.96	4.02	3.72	2.82	2.57	H	5.5(23/7)	1.45(31/1)	3.147
1989	M	1.84	1.51	1.86	1.47	1.97	1.66	2.45	2.04	3.14	2.79	4.18	3.96	5.06	4.89	5.10	5.02	5.04	4.96	4.75	4.62	3.25	2.97	2.31	1.99	L	5.36(23/7)	1.10(1/2)	3.147
1989	L	1.45	1.15	1.48	1.10	1.56	1.26	1.71	1.41	2.63	2.33	3.63	3.33	4.43	4.23	4.92	4.84	4.90	4.82	4.09	3.94	2.71	2.43	1.92	1.57	L		1.27(19/2)	
1990	H	2.31	2.02	2.12	1.80	2.55	1.93																			H			
1990	M	1.91	1.65	1.67	1.36	2.00	1.41																			L			
1990	L	1.92	1.92	1.27	0.93	1.60	1.05																			L			
	Max	2.48	2.02	2.37	1.97	2.55	2.11	3.12	2.92	4.41	4.29	4.94	4.85	6.50	6.40	6.83	6.77	6.98	6.93	5.22	5.06	4.02	3.87	3.54	3.47	Max	6.98		
	Min	1.51	1.08	1.25	0.90	1.52	0.96	1.62	1.28	2.50	2.19	3.38	3.18	4.74	4.59	4.89	4.77	4.68	4.50	3.83	3.73	2.42	2.19	1.78	1.45	Min	5.01		
	Max	1.87	1.42	1.54	1.17	1.60	1.26	2.04	1.68	2.64	2.39	4.39	4.24	4.84	4.69	5.55	5.45	5.25	5.17	4.09	3.94	2.93	2.62	2.13	1.83	Max		1.17	
	Min	0.91	0.47	0.85	0.14	0.41	0.14	1.13	0.64	1.52	1.22	2.01	1.68	3.36	3.23	4.25	4.16	4.04	3.92	2.00	1.84	1.60	1.20	0.91	0.49	Min		0.14	

Station : 277 Chandpur

(River : 102 Surma - Meghna) (2)

1985	H	2.00	1.20	2.16	0.90	2.45	1.42	2.46	1.62	3.14	2.03	4.05	3.05	4.42	3.72	4.72	3.86	4.38	3.57	4.56	3.50	3.46	2.23	2.58	1.40	H	4.72(2/8)	1.10(15/2)	2.821	
1985	M	1.53	0.87	1.59	0.78	1.94	1.12	2.18	1.33	2.61	1.68	3.59	2.70	4.09	3.34	4.16	3.47	4.02	3.31	3.70	2.86	2.70	1.77	2.05	1.18	L	3.86(6/8)	0.58(15/2)	1.994	
1985	L	1.25	0.75	1.10	0.58	1.30	0.80	1.40	0.90	2.01	1.48	3.13	1.97	3.73	2.89	3.72	3.08	3.52	3.02	3.28	2.33	2.06	1.38	1.43	0.90	L	4.41(22/7)	0.77(19/2)	2.634	
1986	H	2.10	0.94	1.91	0.84	2.09	1.10	2.68	1.52	2.93	1.63	3.53	2.63	4.41	3.25	4.24	3.49	4.07	3.41	3.99	3.53	3.39	2.35	2.51	1.66	H	4.41(22/7)	0.77(19/2)	2.634	
1986	M	1.59	0.80	1.48	0.64	1.60	0.76	2.03	1.02	2.39	1.42	2.73	1.79	3.72	2.94	3.87	3.12	3.83	3.18	3.50	2.87	2.69	1.97	1.91	1.29	L	3.49(8/8)	0.35(19/2)	1.857	
1986	L	0.90	0.60	0.77	0.35	1.01	0.56	1.19	0.59	1.88	1.19	2.05	1.28	3.31	2.73	3.43	2.79	3.59	2.94	2.84	2.55	1.83	1.49	1.49	1.01	L	4.77(27/8)	0.82(10/3)	2.809	
1987	H	2.13	1.19	2.06	1.11	2.07	1.02	2.64	1.58	2.74	1.94	3.39	2.92	4.60	3.82	4.77	4.32	4.57	4.03	4.27	3.78	3.13	2.53	2.54	1.84	H	4.77(27/8)	0.82(10/3)	2.809	
1987	M	1.64	0.95	1.64	0.87	1.59	0.78	2.10	1.27	2.32	1.53	3.03	2.35	4.11	3.48	4.56	4.05	4.33	3.81	3.58	2.93	2.72	2.04	2.10	1.43	L	4.32(21/8)	0.52(8/3)	2.147	
1987	L	1.14	0.77	1.16	0.69	0.82	0.52	1.23	0.90	1.72	1.32	2.32	1.70	3.59	2.94	4.38	3.84	3.91	3.65	2.85	2.41	2.20	1.64	1.54	1.15	L	5.16(29/8)	0.88(28/1)	2.910	
1988	H	1.98	1.18	2.16	1.06	2.26	1.21	2.66	1.45	3.72	2.90	3.81	3.03	4.59	4.01	5.16	4.71	5.14	4.86	4.00	3.23	3.54	2.36	2.73	2.10	H	4.86(31/9)	0.59(29/1)	2.287	
1988	M	1.60	0.97	1.59	0.88	1.64	0.97	1.99	1.28	2.78	2.08	3.62	2.85	4.10	3.54	4.43	3.93	4.62	4.18	3.51	2.84	2.66	1.95	2.24	1.62	L	4.86(31/9)	0.59(29/1)	2.287	
1988	L	0.88	0.59	1.16	0.68	1.06	0.72	1.42	1.06	2.01	1.43	3.30	2.57	3.61	2.87	3.97	3.57	4.09	3.20	2.84	2.31	2.34	1.64	1.64	1.26	L	4.66(23/7)	1.08(2/3)	2.733	
1989	H	2.24	1.44	2.25	1.27	2.10	1.41	2.28	1.64	3.26	2.58	4.14	3.31	4.66	3.91	4.31	3.73	4.16	3.45	4.45	3.25	3.09	2.21	2.25	1.55	H	3.91(23/7)	0.69(30/3)	2.085	
1989	M	1.67	1.12	1.63	0.99	1.58	0.98	1.91	1.28	2.69	1.96	3.53	2.86	4.05	3.45	4.06	3.43	3.90	3.23	3.52	2.86	2.46	1.81	1.87	1.24	L	-	-	-	
1989	L	1.26	0.87	1.10	0.79	1.08	0.69	1.21	0.73	1.91	1.57	3.08	2.50	3.70	2.88	3.69	3.27	3.54	3.03	2.90	2.49	1.89	1.47	1.40	0.87	L	-	-	-	
1990	H	1.81	1.22	1.83	1.18	2.21	1.33																				H	-	-	-
1990	M	1.61	0.95	1.45	0.85	1.66	1.02																				L	-	-	-
1990	L	1.30	0.86	0.76	0.59	1.09	0.74																				L	-	-	-
	Max	2.44	1.65	2.25	1.27	2.58	1.86	2.90	2.09	3.80	2.93	4.60	4.08	4.82	4.45	5.24	4.82	5.17	4.86	4.69	4.30	4.28	3.84	3.20	2.10	Max	5.24			
	Min	1.81	0.94	1.83	0.82	2.00	0.79	2.03	1.36	2.74	1.60	3.19	2.86	4.05	2.99	4.24	3.23	4.07	2.99	3.54	2.74	2.41	1.89	2.25	1.40	Min	4.41			
	Max	1.65	1.04	1.33	0.81	1.54	0.80	1.89	1.16	2.56	1.71	3.46	2.64	3.96	3.44	4.38	4.02	4.39	3.93	4.08	3.70	2.38	1.83	1.92	1.34	Max	-	0.76		
	Min	0.84	0.47	0.76	0.35	0.82	0.37	0.99	0.53	1.08	0.87	1.75	1.11	2.99	1.54	3.43	2.62	3.29	2.50	2.26	1.52	1.62	1.07	1.22	0.66	Min	-	0.35		

Surface Water Levels (High/Low Tides)

Monthly Means & Extremes

Station : 79 Malab Bazar

(River : 34 Dhanagoda)

Year	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Annual Mean & Extremes and Date					
	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	H.W.L	L.W.L	Max	Min	Mean			
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H.W.L	Max	2.56	1.99	6.33	1.44	2.54	1.45	3.05	1.98	3.63	1.09	4.37	3.94	5.00	4.74	5.33	1.08	5.14	4.78	5.10	4.55	3.70	2.92	2.82	2.25	Max	-	-	-	-
L.W.L	Min	2.00	1.20	1.95	1.04	2.23	1.18	2.30	1.34	2.82	2.06	3.48	3.06	4.40	3.93	4.49	4.15	4.50	4.05	4.13	3.74	2.89	2.15	2.29	1.45	Min	-	-	-	-
L.W.L	Max	1.47	1.05	1.45	1.00	1.45	0.97	1.64	1.14	2.50	1.98	3.51	5.05	4.12	3.70	4.80	4.53	4.67	4.46	3.48	3.00	2.35	1.85	1.75	1.35	Max	-	-	-	-
L.W.L	Min	1.10	0.73	0.94	0.30	1.05	0.58	1.20	0.78	1.98	1.25	2.20	1.47	3.62	3.20	3.85	3.63	3.75	3.55	2.59	2.13	1.92	1.37	1.52	1.04	Min	0.84	0.58	-	-

Surface Water Levels

Monthly Means & Extremes

Station : 110 Comilla (River : 43 Gumti - Burinadi) (1)

Month	H.W.L.		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean & Extremes and Data		
	Mean	W.L.													H.W.L.	L.W.L.	Max
Year																	
1970	H	7.50	7.50	7.96	7.50	7.30	8.23	9.58	11.00	10.31	9.16	9.87	8.38	7.59	H	11.00(26/7)	7.12(14/3)
1970	M	7.46	7.43	7.36	7.47	7.36	7.47	8.50	9.36	8.41	8.41	8.53	7.83	7.46	L		
1970	L	7.41	7.33	7.26	7.12	7.17	7.12	7.44	7.85	8.39	8.04	7.86	7.59	7.36	L		
1971	H	7.36	7.42	7.17	9.39	10.49	10.25	10.85	10.85	10.29	10.29	8.90	9.21	7.67	H	10.85(23/7)	7.08(1/4)
1971	M	7.32	7.26	7.11	8.06	9.04	9.24	9.11	9.11	9.13	9.13	8.29	8.06	7.56	L		
1971	L	7.28	7.19	7.07	7.37	7.65	8.31	8.05	8.05	8.42	8.42	7.84	7.68	7.48	L		
1972	H	7.48	7.62	7.37	7.87	10.12	10.51	10.48	10.48	8.68	8.68	8.23	7.43	7.33	H		
1972	M	7.42	7.38	7.23	7.39	8.11	9.27	8.44	8.44	8.15	8.15	7.74	7.39	7.31	L	10.51(21/8)	7.09(19/3)
1972	L	7.37	7.28	7.18	7.09	7.25	8.64	7.42	7.42	7.72	7.72	7.44	7.36	7.27	L		
1973	H	7.28	7.22	7.89	12.24	10.61	11.04	11.08	11.08	8.92	8.92	9.29	10.24	8.96	H	12.24(12/5)	7.01(21/4)
1973	M	7.23	7.16	7.25	9.64	9.75	9.22	9.28	9.28	8.41	8.41	8.31	8.61	7.96	L		
1973	L	7.17	7.13	7.08	7.47	8.80	8.53	8.30	8.30	8.21	8.21	7.86	7.89	7.68	L		
1974	H	7.67	7.48	8.08	10.20	11.60	11.54	11.76	11.76	11.65	11.65	10.71	8.62	8.51	H	11.76(30/7)	7.31(29/4)
1974	M	7.58	7.37	7.36	8.64	9.99	9.96	10.88	10.88	10.16	10.16	9.31	8.30	7.99	L		
1974	L	7.49	7.27	7.20	7.52	8.80	9.07	9.57	9.57	9.25	9.25	8.66	8.11	7.84	L		
1975	H	7.84	7.84	7.49	9.43	11.14	11.50	12.20	12.20	10.63	10.63	10.21	9.33	8.04	H	12.20(30/7)	7.28(14/4)
1975	M	7.76	7.65	7.41	7.90	8.93	9.93	9.65	9.65	9.75	9.75	9.04	8.52	7.87	L		
1975	L	7.71	7.50	7.32	7.28	7.97	8.87	7.79	7.79	9.17	9.17	8.30	8.06	7.76	L		
1976	H	7.74	7.73	7.75	9.72	12.10	11.12	12.44	12.44	10.22	10.22	9.12	8.09	7.95	H	12.44(3/7)	7.21(10/9)
1976	M	7.67	7.52	7.40	8.33	9.54	10.10	11.00	11.00	9.24	9.24	8.49	7.97	7.73	L		
1976	L	7.56	7.38	7.26	7.36	7.70	9.59	9.44	9.44	8.70	8.70	8.08	7.84	7.67	L		
1977	H	7.88	8.11	7.85	10.27	11.49	10.58	11.09	11.09	9.56	9.56	10.19	8.73	7.93	H	11.49(29/6)	7.56(30/3)
1977	M	7.82	7.77	7.68	8.97	9.96	9.24	9.83	9.83	8.94	8.94	8.71	8.18	7.85	L		
1977	L	7.74	7.67	7.56	8.05	9.06	8.53	9.27	9.27	8.18	8.18	8.23	7.92	7.79	L		
1978	H	7.84	7.73	7.62	10.85	12.21	9.92	10.78	10.78	10.46	10.46	9.69	8.24	8.04	H	12.21(27/6)	7.25(9/5)
1978	M	7.76	7.68	7.55	8.74	10.50	9.34	9.93	9.93	9.47	9.47	8.80	8.11	7.98	L		
1978	L	7.64	7.63	7.29	7.25	9.28	8.96	9.39	9.39	8.93	8.93	8.28	8.05	7.91	L		
1979	H	7.96	7.99	7.93	8.28	8.79	11.64	10.34	10.34	10.96	10.96	9.66	8.80	9.09	H	11.64(21/8)	7.55(21/4)
1979	M	7.91	7.85	7.77	7.74	8.10	9.23	9.25	9.25	9.47	9.47	8.68	8.15	8.16	L		
1979	L	7.83	7.76	7.55	7.60	7.58	8.05	8.09	8.09	8.98	8.98	8.17	7.92	7.94	L		
1980	H	7.98	8.11	8.17	10.20	10.14	10.08	10.12	10.12	10.71	10.71	9.73	8.40	8.05	H	10.71(16/9)	7.66(14/4)
1980	M	7.94	7.85	7.79	8.93	8.95	9.09	8.75	8.75	9.59	9.59	8.90	8.17	8.02	L		
1980	L	7.88	7.73	7.68	7.70	8.20	8.71	8.00	8.00	8.74	8.74	8.38	8.08	7.98	L		
1981	H	8.31	8.01	8.48	10.09	10.41	10.40	11.69	11.69	9.62	9.62	8.71	8.15	8.13	H	11.69(4/7)	7.79(3/3)
1981	M	7.99	7.91	7.89	8.75	8.93	9.41	9.94	9.94	8.87	8.87	8.28	8.12	8.08	L		
1981	L	7.90	7.79	7.79	8.11	8.38	8.75	9.15	9.15	8.44	8.44	8.13	8.08	7.97	L		

Station : 110 Comilla (River : 43 Gurni - Burinadi) (2)

1982	H	8.80	8.08	7.97	7.97	8.36	9.33	10.45	9.57	12.53	10.29	8.91	8.38	8.06	H	12.53(5/8)	7.84(8/6)	-
1982	M	8.02	7.97	7.91	7.91	7.99	8.19	8.58	8.58	9.73	9.23	8.36	8.09	8.01	L			
1982	L	7.96	7.91	7.82	7.82	7.85	7.94	7.84	8.27	8.51	8.46	8.09	7.94	7.93	L			
1983	H	8.03	8.31	8.80	8.80	10.15	11.51	10.58	12.10	13.32	10.13	10.01	8.51	8.30	H	13.32(6/8)	7.80(31/5)	-
1983	M	7.98	7.92	8.11	8.11	8.42	10.03	8.96	9.53	11.18	9.33	9.15	8.28	8.08	L			
1983	L	7.94	7.87	7.92	7.92	7.88	8.79	8.31	8.75	8.78	8.67	8.53	8.15	7.98	L			
1984	H	8.07	7.96	7.85	7.85	7.87	12.32	12.22	11.30	10.20	11.22	9.60	8.43	8.23	H	12.32(14/5)	7.56(1/4)	-
1984	M	7.99	7.87	7.75	7.75	7.69	9.54	9.42	9.95	9.66	9.91	8.48	8.27	8.15	L			
1984	L	7.96	7.77	7.59	7.59	7.56	7.69	8.30	8.60	9.08	9.03	8.40	8.17	8.10	L			
1985	H	8.13	8.41	8.43	8.43	8.85	11.70	10.61	12.21	10.16	9.37	9.37	8.20	8.15	H	12.21(10/7)	7.79(9/1)	-
1985	M	8.03	8.00	8.92	8.92	8.10	8.72	9.53	9.68	9.16	8.85	8.40	8.16	8.12	L			
1985	L	7.79	7.89	7.83	7.83	7.88	7.99	8.84	8.74	8.66	8.46	8.16	8.11	8.05	L			
1986	H	8.12	8.04	7.90	7.90	8.62	8.80	10.24	10.78	9.16	10.51	10.72	10.46	8.15	H	10.78(26/7)	7.34(9/6)	-
1986	M	8.07	7.93	7.79	7.79	7.94	8.17	7.80	8.33	8.62	9.00	9.22	8.49	8.04	L			
1986	L	8.01	7.86	7.68	7.68	7.70	7.51	7.34	7.81	8.15	8.18	8.21	8.12	7.96	L			
1987	H	8.01	7.95	8.57	8.57	9.31	8.98	9.67	11.69	12.45	11.24	9.88	9.15	8.17	H	12.45(28/8)	7.26(8/5)	-
1987	M	7.89	7.64	7.73	7.73	7.77	7.92	8.21	8.34	9.87	9.47	8.82	8.28	8.09	L			
1987	L	7.32	7.32	7.26	7.26	7.31	7.52	7.61	7.72	8.63	8.64	8.27	8.08	8.03	L			
1988	H	8.11	8.03	8.46	8.46	8.60	11.41	10.82	12.79	11.56	11.46	10.48	8.48	9.09	H	12.79(9/7)	7.56(24/5)	-
1988	M	8.03	7.87	7.92	7.92	7.98	9.23	9.19	10.68	10.31	10.40	9.44	8.49	8.36	L			
1988	L	7.98	7.89	7.56	7.56	7.65	7.79	8.35	8.87	9.01	9.16	8.78	8.35	8.10	L			
1989	H	8.45	8.17	8.04	8.04	8.81	8.56	10.79	11.12	10.47	10.37	11.59	8.83	8.20	H	11.59(12/10)	7.69(13/3)	-
1989	M	8.19	8.06	7.95	7.95	7.95	8.09	8.68	9.14	8.79	8.75	9.26	8.26	8.03	L			
1989	L	7.91	8.01	7.85	7.85	7.82	7.69	7.89	7.99	8.27	8.12	8.16	8.02	7.83	L			
1990	H	8.11	8.01	10.37	10.37										H		7.67(28/2)	-
1990	M	7.49	7.85	8.25	8.25										L			
1990	L	7.75	7.67	7.69	7.69										L			
	Max	8.45	8.41	10.37	10.37	10.15	17.32	12.22	12.79	13.32	11.65	11.59	10.46	9.09	Max	13.32	-	-
	Min	7.17	7.13	7.07	7.07	7.01	7.09	7.25	7.42	8.05	7.72	7.44	7.36	7.27	Min	-	7.01	-

Surface Water Levels

Monthly Means & Extremes

Station : 113 Kangsanagar (River : 43 Gumti - Burinadi)

Year	H.W.L		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean & Extremes and Data		
	Mean	W.L													H	L	Max
1979																	
1979	H	W.L	5.01	5.00	4.88	4.50	5.17	5.75	7.64	8.96	8.38	7.03	5.50	6.45	H	8.96(21/8)	4.25(16/4)
1979	M	W.L	4.84	4.65	4.59	4.29	4.46	4.92	6.67	6.89	6.89	5.90	5.05	5.14	L		
1979	L	W.L	4.72	4.45	4.40	4.25	4.28	4.28	5.84	5.50	6.36	5.17	4.91	4.89	L		
1980	H	W.L	5.01	5.00	4.88	4.60	7.56	7.57	7.84	7.84	8.28	7.30	5.43	4.94	H	8.28(16/9)	4.33(14/4)
1980	M	W.L	4.84	4.65	4.59	4.41	6.13	6.05	7.94	6.69	7.11	6.39	5.10	4.90	L		
1980	L	W.L	4.72	4.45	4.40	4.33	4.39	5.09	5.00	6.36	6.45	5.30	4.94	4.85	L		
1981	H	W.L	5.18	4.76	5.91	7.85	7.64	7.85	10.00	7.73	6.90	6.10	5.14	5.10	H	10.00(3/7)	4.66(1/3)
1981	M	W.L	4.80	4.70	5.18	6.02	5.98	6.26	7.70	6.94	6.37	5.43	5.06	5.03	L		
1981	L	W.L	4.69	4.69	4.66	5.01	4.83	5.50	6.23	6.45	5.75	5.06	4.95	4.93	L		
1982	H	W.L	5.01	4.88	4.79	4.50	6.24	8.31	6.43	9.37	7.46	7.29	7.37	7.08	H	9.37(4/8)	4.60(25/3)
1982	M	W.L	4.97	4.85	4.70	4.86	5.37	6.74	5.95	7.50	7.11	6.18	7.07	7.00	L		
1982	L	W.L	4.90	4.80	4.60	4.60	4.95	5.73	5.74	6.29	6.69	5.49	6.91	6.87	L		
1983	H	W.L	6.99	6.90	7.36	9.34	9.39	9.38	9.37	9.77	7.52	7.62	6.10	5.47	H	9.77(5/8)	5.47(31/11)
1983	M	W.L	6.93	6.76	7.06	7.46	8.96	8.26	8.70	8.21	7.08	6.95	5.71	65.36	L		
1983	L	W.L	6.84	6.71	6.79	6.75	8.15	7.48	8.22	7.37	6.69	6.19	5.47	5.28	L		
1984	H	W.L	5.39	5.19	4.95	5.00	9.37	9.10	9.22	7.47	8.17	7.00	5.77	5.50	H	9.37(14/5)	4.51(7/4)
1984	M	W.L	5.23	5.06	4.78	4.71	6.99	6.88	7.22	7.06	7.21	6.36	5.59	5.40	L		
1984	L	W.L	5.17	4.97	4.67	4.51	4.93	5.82	6.33	6.80	6.69	5.70	5.46	5.35	L		
1985	H	W.L	5.36	5.29	5.72	6.21	9.23	8.64	9.59	9.15	7.58	6.42	5.42	5.34	H	9.59(8/7)	4.79(14/3)
1985	M	W.L	5.20	5.08	4.94	5.33	6.17	7.41	8.05	7.96	6.99	5.77	5.36	5.27	L		
1985	L	W.L	4.88	4.94	4.79	4.92	5.23	6.70	7.03	7.02	6.18	5.40	5.28	5.18	L		
1986	H	W.L	5.23	5.07	4.83	5.89	6.14	5.50	8.34	6.75	7.85	8.24	7.93	5.08	H	8.34(26/7)	4.30(9/6)
1986	M	W.L	5.15	4.91	4.17	5.02	5.41	4.74	6.23	6.00	6.40	6.64	5.64	4.90	L		
1986	L	W.L	5.07	4.79	4.60	4.58	4.57	4.30	4.90	5.50	5.46	5.26	5.09	4.78	L		
1987	H	W.L	4.86	4.72	5.64	6.67	5.95	6.98	8.67	9.54	8.61	7.60	6.59	5.23	H	9.54(28/8)	3.96(7/4)
1987	M	W.L	4.72	4.45	4.56	4.67	4.91	5.35	6.20	7.73	7.20	6.39	5.49	5.11	L		
1987	L	W.L	4.20	4.18	4.10	3.96	4.38	4.45	4.68	6.81	6.41	5.58	5.11	5.01	L		
1988	H	W.L	5.14	4.96	5.54	5.84	8.95	8.77	10.05	8.54	8.58	7.92	6.12	6.35	H	10.05(9/7)	4.41(24/3)
1988	M	W.L	5.01	4.88	4.89	4.99	6.64	6.86	8.05	7.55	7.71	6.96	5.71	5.51	L		
1988	L	W.L	4.92	4.81	4.41	4.58	4.80	5.80	6.51	6.54	6.62	6.17	5.50	4.93	L		
1989	H	W.L	5.52	5.09	4.94	5.44	5.75	8.36	8.59	8.16	7.66	9.01	6.35	5.33	H	9.01(12/10)	4.53(13/5)
1989	M	W.L	5.18	4.99	4.83	4.82	5.14	6.17	6.87	6.28	6.20	6.70	5.54	5.16	L		
1989	L	W.L	4.87	4.90	4.74	4.65	4.53	5.04	5.32	5.61	5.36	5.49	5.27	5.05	L		
1990	H	W.L	5.13	4.91	7.80										H		
1990	M	W.L	4.97	4.84	5.40										L		
1990	L	W.L	4.83	4.77	4.75										L		
W.L	Max	Min	6.99	6.90	7.80	9.34	9.36	9.38	10.05	9.77	8.61	9.01	7.93	7.08	Max	10.05	3.96
			4.69	4.18	4.10	3.96	4.28	4.28	4.68	5.50	5.36	5.06	4.91	4.78	Min		

Surface Water Levels (High/Low Tides)

Monthly Means & Extremes

Station : 114. Jibampur (Gumti Br.)

(River : 43 Gumti - Burinadi)

Period	H.W.L.		Mean	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean & Extremes and Data			
	H	L														H	L	Mean	
Year				W.L.	W.L.	W.L.	W.L.	W.L.	W.L.	W.L.	W.L.	W.L.	W.L.	W.L.	W.L.	W.L.	Max	Min	Mean
1977	H			6.52	6.52	6.52	6.52	6.52	7.46	7.18	6.78	6.31	6.58	5.25	4.61	4.61			
1977	M			5.34	5.68	6.35	5.93	5.93	6.31	6.11	6.11	5.93	5.37	4.82	4.50	4.50	7.46(30/6)		
1977	L			4.25	4.69	5.61	4.25	4.69	5.61	5.97	5.76	5.38	4.88	4.62	4.45	4.45			
1978	H			4.73	4.36	4.15	4.80	6.95	7.62	6.94	6.34	6.52	4.91	4.54	4.33	4.33			
1978	M			4.43	4.27	4.09	4.23	5.40	6.69	6.20	6.03	5.85	5.11	4.42	4.29	4.29	7.62(8/6)		3.99(10/4)
1978	L			4.34	4.15	4.02	3.99	4.05	5.63	5.83	5.67	5.41	4.57	4.33	4.27	4.27			
1979	H			4.27	4.30	4.24					NA								4.01(31/3)
1979	M			4.21	4.25	4.21					NA								
1979	L			4.21	4.15	4.01					NA								
1980	H																		
1980	M																		
1980	L																		
1981	H						6.95	6.88	7.07	7.52	6.80	6.37	5.57	4.69	4.63	4.63			
1981	M						5.95	5.63	5.68	6.01	6.19	6.01	5.02	4.62	4.59	4.59	7.52(3/7)		4.03(11/11)
1981	L						5.11	4.82	5.00	5.92	5.17	5.56	4.65	4.03	4.53	4.53			
1982	H			4.66	4.42	4.37	4.94	5.95	7.04	6.32	7.21	6.68	5.90	4.91	4.58	4.58			
1982	M			4.56	4.34	4.24	4.43	4.75	5.23	5.54	6.28	6.13	5.11	4.60	4.51	4.51	7.21(4/8)		4.16(31/3)
1982	L			4.46	4.28	4.16	4.16	4.37	4.22	5.27	5.58	5.60	4.63	4.45	4.44	4.44			
1983	H			4.50	4.60	5.49	6.99	7.53	7.34	7.37	7.19	6.64	4.71	5.79	5.46	5.46			
1983	M			4.93	4.17	4.60	4.92	6.62	5.67	6.11	6.72	6.47	6.35	4.45	5.18	5.18	7.53(6/5)		4.11(21/2)
1983	L			4.35	4.11	4.11	4.22	4.49	4.80	5.52	5.74	6.34	5.81	5.31	5.03	5.03			
1984	H			5.21	4.93	4.66	4.64	7.80	7.47	7.21	6.68	6.96	6.24	5.30	5.03	5.03			
1984	M			5.03	4.79	4.50	4.32	6.20	6.47	6.47	6.39	6.45	5.81	5.13	4.95	4.95	7.80(13/5)		4.22(5/4)
1984	L			4.96	4.69	4.26	4.22	4.54	5.47	5.85	6.02	6.05	5.31	5.01	4.87	4.87			
1985	H			4.89	5.15	5.23	5.62	7.52	7.53	7.80	6.96	6.37	6.14	4.95	4.79	4.79			
1985	M			4.73	4.65	4.51	4.83	5.49	6.58	6.63	6.28	5.93	5.29	4.84	4.71	4.71	7.80(10/7)		4.34(18/3)
1985	L			4.44	4.48	4.34	4.44	4.70	5.87	5.82	5.77	5.60	4.92	4.78	4.59	4.59			
1986	H			4.62	4.46	4.22	5.24	5.50	4.66	7.51	6.28	7.12	7.46	7.11	4.60	4.60			
1986	M			4.56	4.30	4.11	4.41	4.77	4.12	5.72	5.66	5.93	6.12	5.13	4.41	4.41	7.51(26/7)		3.49(10/6)
1986	L			4.45	4.20	4.00	4.01	3.98	3.49	4.51	5.33	5.31	4.93	4.59	4.29	4.29			
1987	H			4.31	4.04	4.97	6.02	5.46	6.32	7.44	7.76	7.51	6.95	6.00	4.66	4.66			
1987	M			4.17	3.84	3.97	4.10	4.38	4.78	5.69	6.94	6.63	5.93	4.97	4.55	4.55	7.76(27/8)		3.41(7/4)
1987	L			3.64	3.55	3.51	3.41	3.78	3.82	4.32	6.54	6.18	5.11	4.58	4.44	4.44			
1988	H			4.62	4.36	4.91	5.23	7.75	7.60	7.66	7.07	7.25	7.08	5.86	5.86	5.86			
1988	M			4.23	4.26	4.29	4.40	5.92	6.16	6.75	6.49	6.77	6.30	5.33	5.13	5.13	7.75(31/5)		4.02(14/4)
1988	L			4.29	4.19	4.07	4.02	4.34	5.28	6.00	6.06	6.01	5.73	5.14	4.33	4.33			
1989	H			5.07	4.70	4.55	5.08	5.50	7.72	7.59	7.35	7.13	7.82	5.80	4.73	4.73			
1989	M			4.79	4.61	4.44	4.45	4.86	5.80	6.38	6.11	6.00	6.26	5.05	4.54	4.54	7.82(12/10)		4.22(13/5)
1989	L			4.51	4.52	4.33	4.31	4.22	4.75	5.02	5.56	5.30	5.38	4.74	4.40	4.40			
1990	H			4.42	4.16	6.77													
1990	M			4.30	4.06	4.65													
1990	L			4.04	3.92	3.96													3.92(11/2)
W.L.	Max			5.21	5.15	6.77	6.99	7.80	7.72	7.80	7.76	7.51	7.82	7.11	5.86	5.86	7.82		
	Min			3.64	3.55	3.51	3.41	3.78	3.49	4.32	5.17	5.30	4.57	4.03	4.27	4.27			3.41

Ten Daily Averages Discharge (M3/sec)

Station : 230.1 Bhatrab Bazar Rly. Bri. (River : 86 Old Brahmaputra) (1)

Period	Jan			Feb			Mar			Apr			May			Jun			Remarks		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
Year																			Annual Q Min and Data		
1969																					
1970																					
1971																					
1972																					
1973																					
1974																					
1975																					
1976																					
1977																					
1978																					
1979	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	52	72	NA	NA		
1980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	137	NA	NA		
1981	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1982	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1983	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	132	NA	NA		
1984	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	138	167	NA	NA		
1985	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	152	NA	NA		
1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1987	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	75	112	NA		
1988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	71	92	125	NA		
1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	55	68	NA		
1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Discharge (Q)																			Annual Min (Q)	NA	
Max																			NA	NA	NA
Mean																			NA	NA	NA
Min																			40	52	68

Ten Daily Averages Discharge (M3/sec)

Station : 230.1 Bhatrab Bazar Rly. Bri (River : 86 Old Brahmaputra) (2)

Period	Jul			Aug			Sep			Oct			Nov			Dec			Remarks
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Year																			Annual Q Max and Date
1969																			
1970																			
1971																			
1972																			
1973																			
1974																			
1975																			
1976																			
1977																			
1978																			
1979	134	174	253	351	353	318	317	387	335	205	193	137	82	NA	NA	NA	NA	399(17.9)	
1980	133	133	257	301	404	544	441	299	245	196	107	91	67	41	29	NA	NA	569(26.8)	
1981	NA	268	297	357	341	318	330	337	296	231	160	82	51	NA	NA	NA	NA	367(6.8)	
1982	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1983	152	193	177	203	183	220	239	270	382	381	277	132	67	43	51	NA	NA	408(27.9)	
1984	159	220	322	372	312	215	186	315	554	316	165	95	67	NA	NA	NA	NA	629(25.9)	
1985	173	261	342	359	220	190	216	209	175	134	74	57		NA	NA	NA	NA	395(2.8)	
1986	55	98	136	150	112	91	101	99	115	126	150	113	60	43	NA	NA	NA	154(6.8)	
1987	135	172	224	369	404	368	289	243	251	238	140	69	39	NA	NA	NA	NA	412(17.8)	
1988	240	513	502	338	194	297	504	527	304	138	66	36	27	NA	NA	NA	NA	593(13.9)	
1989	113	217	154	123	112	72	62	78	108	78	55	31	19	NA	NA	NA	NA	243(18.7)	
1990																			
Discharge (Q)																			Annual Max (Q)
Max	240	513	502	372	404	544	504	527	554	381	277	137	82	NA	NA	NA	NA	Max 629(25.9.1984)	
Mean	144	225	266	292	264	263	269	276	277	204	139	84	48	NA	NA	NA	NA	Min 154(6.8.1986)	
Min	55	98	136	123	112	72	62	78	108	78	55	31	19						

Ten Daily Averages Discharge (M3/sec)

Station : 273 Bhaib Bazar

(River : 102 Surma - Meghna) (1)

Period	Jan			Feb			Mar			Apr			May			Jun			Remarks	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
Year																			Annual Q Min and Date	
1969																				
1970	468	445	318	306	205	523	348	395	816	1,250	1,160	986	1,210	1,140	2,010	3,380	4,440	6,210		
1971	858	701	620	469	478	397	294	362	NA										79.2(17.2)	
1972		NA			NA			NA		984	1,490	1,370	2,170	2,930	3,540	3,540	3,800	7,100	96.2(9.3)	
1973	337	285	199	221	263	254	347	229	329	744	1,340	1,710	2,710	4,530	5,600	5,880	7,360	10,300	87.2(30.1)	
1974	838	765	574	474	296	421	576	501	678	1,160	1,030	2,240	3,290	3,860	4,690	6,910	7,460	8,920	102(18.2)	
1975	574	524	459	401	459	313	440	349	386							3,070	4,030	4,740	130(20.2)	
1976		NA			NA			NA								3,780	8,630	10,900	NA	
1977		NA			NA			NA									NA		NA	
1978		NA			NA			NA									NA		NA	
1979		NA			NA			NA									NA		NA	
1980		NA			NA			NA									NA		NA	
1981		NA			NA			NA									NA		NA	
1982		NA			NA			NA									NA		NA	
1983		NA			NA			NA									NA		NA	
1984		NA			NA			NA									NA		NA	
1985	103	71	55	113	47	82	208	241	628	542	878	665	1,500	3,920	6,070	8,110	7,920	9,340	NA	
1986	267	277	129	155	110	104	134	242	260	826	1,240	1,510	1,910	1,310	1,840	4,350	7,920	8,870	8(16.2)	
1987	278	89	73	141	96	42	63	207	211	342	2,140	3,050	2,960	3,040	3,170	2,530	3,190	3,870	3(22.2)	
1988	263	80	108	64	119	149	177	238	243	358	1,040	595	1,470	3,860	7,250	12,500	10,000	11,400	10(10.3)	
1989		NA			NA			NA									NA		2(29.1)	
1990		NA			NA			NA									NA		NA	
Discharge (Q)																				Annual Min (Q)
Max	858	765	620	474	478	523	576	501	816	1,250	2,140	3,050	3,290	4,530	7,250	12,500	10,000	11,400		Max 130(20.2, 1975)
Mean	443	360	282	260	230	253	287	307	394	719	1,293	1,547	2,110	2,970	4,430	5,059	6,060	7,769		Min 2(29.1, 1988)
Min	103	71	55	64	47	42	63	207	211	342	878	595	1,370	1,140	1,840	2,530	3,190	3,870		

Ten Daily Averages Discharge (M3/sec)

Station : 273 Bhaibr Bazar

(River : 102 Surma - Meghna) (2)

Period	Jul			Aug			Sep			Oct			Nov			Dec			Remarks
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Year																			Annual Q Max and Date
1969	7,210	8,400	9,130	8,840	8,690	10,700	11,200	10,000	8,380	6,800	5,490	4,130	3,030	2,400	1,580	1,020	991	634	11,500(1.9)
1970	8,960	9,450	11,800	13,400	13,400	11,900	10,500	9,390	9,740	10,400	9,800	7,760	7,610	5,080	2,670	1,760	1,420	887	16,400(10.8)
1971		NA		NA	NA			NA			NA			NA			NA		NA
1972	9,530	8,040	8,390	11,100	10,700	8,730	8,000	7,790	6,380	5,080	4,200	3,500	2,160	1,300	1,350	262	585	572	11,500(10.8)
1973	12,100	11,200	9,940	11,500	12,300	11,900	10,700	10,400	11,400	10,500	8,970	6,880	5,010	4,440	3,350	2,070	2,230	1,270	12,400(15.8)
1974	11,300	12,600	14,800	18,800	16,300	13,700	13,000	13,000	12,500	11,500	10,100	8,600	6,610	43,330	2,290	1,840	1,180	573	19,500(7.8)
1975	5,500	7,270	10,500	12,600	11,700	10,900	10,800	10,800	8,900	7,880	7,600	7,010		NA			NA		12,700(5.8)
1976	14,700	16,500	14,500	11,600	11,700	12,100	11,700	9,670	8,230	6,770	4,740	3,640		NA			NA		16,700(15.7)
1977		NA						NA			NA			NA			NA		NA
1978		NA						NA			NA			NA			NA		NA
1979		NA						NA			NA			NA			NA		NA
1980		NA						NA			NA			NA			NA		NA
1981	6,810	8,710	9,730	11,000	10,400	10,300	10,100	10,600	10,200	8,900	6,780	3,980	2,490	NA	NA	NA	NA	NA	11,200(6.8)
1982	9,460	11,200	12,000	13,200	12,300	10,400	9,300	8,760	9,380	8,690	6,590	4,060	2,830	NA			NA		13,500(7.8)
1983	9,670	11,400	10,800	13,300	13,400	14,400	15,500	15,800	14,400	12,300	11,200	10,400	7,920	NA			NA		16,000(12.9)
1984	9,250	12,100	13,300	13,100	11,600	9,680	10,100	11,900	13,200	11,800	10,000	7,620	4,180	1,660	1,100	361	435	271	13,600(29.7)
1985	9,220	11,300	12,900	13,500	10,800	9,990	10,100	10,100	9,580	8,900	6,890	4,880	2,860	2,220	1,210	870	860	410	14,300(2.8)
1986	4,940	6,010	7,010	8,430	8,280	8,050	8,440	8,630	8,120	9,000	10,000	9,840	6,740	5,750	4,040	2,610	963	248	11,100(23.10)
1987	9,920	10,800	10,800	14,500	14,400	12,500	11,600	10,700	10,900	12,900	11,200	8,680	5,610	3,690	2,750	1,340	534	645	15,200(13.8)
1988	17,200	18,500	15,200	11,700	12,900	15,000	17,300	17,400	14,800	11,700	9,990	8,390	5,880	3,920	NA		NA		19,800(11.7) 17,900(13.9)
1989	10,900	13,800	13,700	15,200	14,200	12,700	12,000	11,700	10,900	10,400	11,100	10,300	8,890	NA	NA		NA		15,500(3.8)
1990																			
Discharge (Q)																			
Max	17,200	18,500	15,200	18,800	16,300	15,000	17,300	17,400	14,800	12,900	11,200	10,400	8,890	5,750	4,040	2,610	2,230	1,270	Annual Max (Q) Max 19,800(11.7.1988)
Mean	9,792	11,080	11,531	12,611	12,067	11,434	11,271	11,040	10,427	7,595	8,397	6,854	5,130	3,479	2,260	1,404	1,022	612	Min 11,100(23.10.1988)
Min	4,940	6,010	7,010	8,430	8,280	8,050	8,000	7,790	6,380	6,770	4,200	3,500	2,160	1,300	1,100	361	435	248	

Ten Daily Averages Discharge (M3/sec)

Station : 110 Comilla

(River : 43 Gumti-Burinadi) (1)

Period	Jan			Feb			Mar			Apr			May			Jun			Remarks
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Year																			Annual Q Min and Date.
1969																			
1970	14	13	13	12	10	18	12	11	9	13	20	11	6	19	34	58	82	82	
1971	13	12	11	10	11	8	6	5	5		NA			NA			NA		NA
1972		NA			NA			NA		17	11	20	16	7	33	13	75	102	6(18.5)
1973	9	8	7	7	6	6	18	7	5	5	4	38	117	287	155	176	206	196	4(11.4)
1974	21	19	17	15	12	10	10	8	19	8	20	9	87	88	48	245	105	266	7(28.4)
1975	21	19	18	17	17	12	10	10	8	5	23	18	7	29	68	174	115	49	4(13.4)
1976	21	19	15	19	12	9	9	7	11	10	24	14	25	104	43	117	163	188	4(21.5)
1977	26	26	18	14	13	16	15	15	15	15	47	80	69	94	121	251	123	224	11(1.4)
1978	20	19	17	16	14	13	13	14	16	9	13	7	11	51	225	231	251	302	2(3.5)
1979	24	24	23	25	20	19	17	17	18	16	15	13	25	18	15	17	67	46	9(21.4)
1980	22	22	22	22	17	16	23	14	13	16	16	16	73	138	82	143	84	42	13(29.4)
1981	28	27	24	25	25	21	20	22	29	40	86	70	40	97	83	124	65	50	19(3.3)
1982	27	25	22	22	21	22	21	19	21	23	25	36	33	56	19	23	85	80	14(26.5)
1983	30	30	28	26	26	28	29	34	45	32	50	71	307	152	129	67	93	107	12(24.4)
1984	35	33	33	33	30	27	26	24	24	21	22	27	42	373	108	58	169	168	19(1.4)
1985	34	30	26	29	31	27	19	22	32	36	47	39	72	43	149	135	216	109	18(6.3)
1986	34	33	31	29	26	25	23	21	21	24	31	40	50	41	33	25	19	21	19(25.3)
1987	23	22	19	17	12	10	11	26	18	13	17	43	43	16	17	54	52	40	3(8.3)
1988	35	30	27	27	31	28	29	33	25	27	37	50	43	109	242	126	59	127	19(14.4)
1989	43	41	39	36	35	36	32	31	29	32	23	38	39	43	49	60	129	63	22(17.4)
1990	32	33	29	26	26	27	38	29	97										14(22.3)
Discharge (Q)																			Annual Min (Q)
Max	43	41	39	36	35	36	32	34	97	80	86	70	307	373	242	251	251	266	Max 22
Mean	26	24	23	21	20	19	19	18	23	25	30	32	58	93	87	110	114	119	Min 2
Min	9	8	7	7	6	6	6	5	5	5	4	7	6	7	15	13	19	21	

Ten Daily Averages Discharge (M3/sec)

Station : 110 Cornilla (River : 43 Gumti-Burinadi) (2)

Station : 110 Cornilla

Period	Jul			Aug			Sep			Oct			Nov			Dec			Remarks
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Year																			Annual Q Min and Date
1969																			
1970	52	171	244	137	127	90	70	65	71	135	54	57	42	42	26	22	18	15	372(26.7)
1971		NA			NA			NA			NA			NA			NA		NA
1972	31	86	132	140	122	163	82	43	41	43	30	16	13	12	12	11	9	9	241(21.8)
1973	154	107	172	182	143	93	64	61	71	88	52	46	87	101	75	40	50	26	425(12.5)
1974	308	235	364	165	143	187	270	213	179	201	109	92	54	42	44	38	27	24	422(30.7)
1975	29	220	361	322	146	172	195	196	163	117	166	69	96	80	41	33	27	23	552(29.7)
1976	377	365	181	179	201	224	153	129	79	73	56	51	35	29	29	23	21	20	464(3.7)
1977	213	185	140	85	123	129	111	108	69	121	90	58	63	43	34	27	23	21	439(2.6)
1978	194	173	192	156	103	119	161	124	132	124	74	49	37	33	31	29	27	24	504(27.6)
1979	176	139	88	62	98	212	109	148	104	91	62	37	29	25	40	51	26	23	370(21.8)
1980	22	49	115	88	95	117	96	191	176	117	66	70	40	31	28	26	26	25	274(16.9)
1981	190	117	135	107	69	93	64	86	60	53	38	31	28	27	27	26	28	29	281(4.7)
1982	69	55	53	310	135	75	92	145	104	60	56	40	34	41	33	30	35	34	488(5.8)
1983	285	116	88	553	387	279	161	110	101	109	126	89	51	46	43	39	38	38	1,160(6.8)
1984	113	272	195	166	156	158	159	231	149	96	71	67	44	36	39	38	38	34	657(14.5)
1985	184	228	120	120	111	151	99	78	86	90	63	52	43	36	35	37	38	35	562(10.7)
1986	74	37	133	93	70	69	71	78	144	191	105	43	53	71	36	28	26	26	246(3.10)
1987	35	60	167	212	75	261	146	86	176	104	72	63	44	54	43	45	39	35	582(28.8)
1988	420	305	191	127	293	261	315	250	174	150	129	106	67	62	57	52	52	47	653(9.7)
1989	238	115	101	113	62	51	69	87	81	138	246	90	57	47	38	37	35	31	450(10.10)
1990																			
Discharge (Q)																			Annual Min (Q)
Max	420	365	364	653	387	279	351	250	179	201	246	106	96	101	75	52	52	47	Max 1,160(6/8) 1985
Mean	167	160	167	184	139	153	131	128	110	111	88	59	48	45	37	33	31	27	Min 241(21/8) 1972
Min	22	37	53	62	62	51	64	43	41	43	30	16	13	12	12	11	9	9	

Ten Daily Averages Discharge (M3/sec)

Station : 114 Jibanpur (Gumti Bri.) (River : 43 Gumti - Burinda) (1)

Period	Jan			Feb			Mar			Apr			May			Jun			Remarks
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Month																			Annual Q Min and Date
1969																			
1970	10	9	9	8	7	11	8	7	6	8	13	11	5	8	24	34	43	56	3(15.5)
1971	9	8	7	7	5	5	4	4	3	NA	NA			NA		NA	NA		3(24.3)
1972		NA		NA			NA			11	7	9	12	7	20	12	44	66	6(26.4)
1973	7	6	5	4	4	4	13	5	3	3	3	21	72	156	91	109	137	116	3(26.3)
1974	14	13	11	9	7	6	5	5	10	54	13	3	56	62	37	180	74	184	1.4(29.4)
1975	13	12	12	11	9	9	7	6	4	2	13	11	4	17	37	125	71	28	1.2(14.4)
1976	11	10	7	7	4	4	5	7	9	2	19	7	10	72	46	56	315	86	0.1(10.4)
1977	20	20	19	16	15	16	13	9	7	38	109	59	93	71	106	193	104	160	5(30.3)
1978	15	15	16	15	14	13	12	12	12	16	25	29	28	69	217	238	258	215	11(19.3)
1979	23	22	22	22	19	22	20	16	20	12	15	13	31	17	14	17	61	45	9(28.4)
1980	24	20	20	22	20	19	25	19	16	15	17	21	66	124	71	114	77	51	14(9.4)
1981	27	28	25	24	24	18	32	49	43	36	57	57	37	80	70	97	47	50	16(1.3)
1982	22	24	24	21	20	20	19	18	16	NA	NA			NA		NA	NA		NA
1983		NA		NA			NA			NA	46	68	169	153	NA	NA	NA	92	15(31.3)
1984	24	22	22	23	24	24	23	22	21	19	19	23	38	145	109	69	NA	NA	18(6.4)
1985	26	24	28	31	20	15	14	14	31	37	49	35	58	70	113	108	123	91	13(10.3)
1986	29	31	30	26	23	22	22	21	20	20	26	39	49	42	37	21	21	17	8(10.6)
1987	26	24	19	13	12	13	14	24	15	10	17	40	50	29	19	42	37	39	5(7.4)
1988	29	26	26	24	24	26	31	38	28	21	29	29	26	108	213	137	80	88	20(15.4)
1989	33	34	32	29	28	28	24	23	20	26	23	25	33	32	40	47	109	55	18(13.5)
1990	28	27	24	22	21	24	33	23	79										18(11.2)
Discharge (Q)																			Annual Min (Q)
Max	33	34	32	31	28	28	33	49	79	54	109	68	169	156	217	258	315	215	Max 20(15.4, 1988)
Mean	21	20	19	18	16	16	17	17	19	19	28	28	47	47	74	74	94	85	Min 0.1(10.4, 1976)
Min	7	6	5	5	4	4	4	4	3	2	3	3	5	7	14	12	21	17	

Ten Daily Averages Discharge (M3/sec)

Station : 114 Jibanpur (Gumti Bri.) (River : 43 Gumti-Burnadi) (2)

Period	Jul			Aug			Sep			Oct			Nov			Dec			Remarks
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Year	Annual Q Min and Date																		
1969																			
1970	101	137	100	85	149	195	137	109	90	50	42	29	19	17	15	13	12	11	328(25.6)
1971	48	99	137	125	134	103	77	67	64	46	63	51	34	29	17	14	12	10	180(26.7)
1972		NA			NA	NA		NA			NA			NA			NA		NA
1973	45	67	89	100	91	117	60	46	38	32	24	13	10	10	10	9	8	7	164(19.7)
1974	98	92	107	127	96	85	65	58	74	68	50	39	46	55	47	29	37	19	269(11.5)
1975	201	183	232	235	178	136	132	125	115	112	75	62	38	26	26	25	18	15	255(24.6)
1976	17	67	213	176	124	140	136	176	140	95	127	59	59	44	22	23	20	15	365(29.7)
1977	275	223	121	116	115	165	105	89	57	53	46	41	27	22	18	15	13	14	617(3.7)
1978	166	145	128	89	142	120	128	120	77	104	64	38	44	34	26	19	16	16	315(2.6)
1979	171	148	174	161	124	147	144	111	124	111	63	45	37	31	28	26	24	23	535(20.6)
1980	140	118	73	64	95	191	87	149	109	94	64	37	24	20	26	39	24	23	316(22.8)
1981	40	68	108	84	71	106	116	151	153	107	63	71	40	33	46	36	27	25	210(17.9)
1982	160	130	153	102	85	94	81	80	56	41	34	30	26	26	26	23	22	22	196(3.7)
1983		NA			NA	NA		NA			NA			NA			NA		NA
1984	113	85	69	122	126	110	95	88	89	83	88	82	63	62	60	46	33	26	188(6.5)
1985	NA	NA	100	128	143	102	88	109	100	93	65	66	42	42	44	42	39	35	181(13.5)
1986	120	130	97	94	81	107	84	64	67	60	43	39	32	30	32	35	36	30	187(26.5)
1987	71	41	91	64	53	58	79	82	103	125	86	56		NA		28	29	28	142(3.10)
1988	52	93	131	122	80	102	102	78	118	103	69	47	36	44	31	28	31	33	163(27.7)
1989	118	118	104	94	111	118	123	102	79	88	97	98	51	39	43	50	41	37	258(25.5)
1990	98	96	85	123	64	52	65	95	75	72	164	88	55	39	38	34	34	31	241(12.10)
Discharge (Q)	Annual Min (Q)																		
Max	275	223	232	235	178	195	144	149	124	125	164	98	63	62	60	50	41	37	Max 617(3/7) 1976
Mean	113	113	122	116	109	118	100	100	91	84	70	52	36	32	29	28	25	22	Min 142(3/10) 1986
Min	17	41	69	64	53	52	60	46	38	32	24	13	10	10	10	9	8	7	

