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FAP-20

Government of the People's Republic of Bangladesh

Ministry of Irrigation, Water Development and Flood Control

Bangladesh Water Development Board

53

Flood Plan Coordination Organization

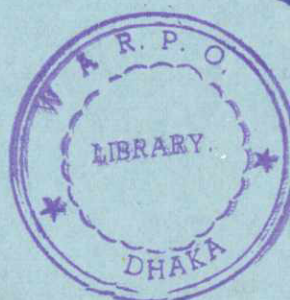
# COMPARTMENTALIZATION PILOT PROJECT (FAP 20)

BN-595  
A-733

## STATUS REPORT : TANGAIL AND SIRAJGANJ

(As per 31st May 1994)

JUNE 1994



Euroconsult/Lahmeyer International/Bangladesh Engineering & Technological  
Services/House of Consultants

under assignment to

DIRECTORAAT GENERAAL INTERNATIONALE SAMENWERKING  
Government of the Netherlands

and

KREDITANSTALT FÜR WIEDERAUFBAU  
Federal Republic of Germany

Government of the People's Republic of Bangladesh  
Ministry of Irrigation, Water Development and Flood Control  
Bangladesh Water Development Board  
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Federal Republic of Germany



**Office of the  
PD/Superintending Engineer  
Compartmentalization Pilot Project  
BWDB, Tangail**

Memo No. *PD/CPP/P-8/650*

Date: 2-6-94

To  
The Chief Engineer  
Central Zone  
WDB, Dhaka

Sub: **Status Report (As per 31st May), June 1994**

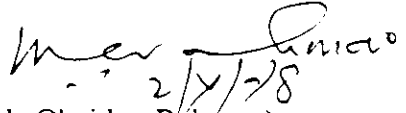
Sir,

I have the honour to submit herewith the Status Report June 1994 on the Compartmentalization Pilot Project, FAP-20, for favour of your kind information and disposal. The report has been prepared based on the progress made as compared to the Integral Planning and Detailed Cost Estimate Report which in turn was based on the Interim Report of Tangail (October 1992) and Sirajganj (June 1993).

The report will be used as reference, to facilitate the work of the Donor Appraisal Mission.

Yours obediently,

Enclo:        Status Report 2 copies  
              Distribution list

  
(Md. Obaidur Rahman)  
PD/Superintending Engineer  
Compartmentalization Pilot Project  
BWDB, Tangail.

Memo No.

date:

Copy with 2 copies of Status Report to Chief Engineer, FPCO for favour of kind information & necessary action.

Copy Team Leader, FAP 20 for information & necessary action.

~~(Md. Obaidur Rahman)  
PD/Superintending Engineer  
Compartmentalization Pilot Project  
BWDB, Tangail.~~



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## INTRODUCTION

In this report the updated status of the various relevant activities in the Tangail and Sirajganj CPP has been described. Its content is regarded as background information for the Donor Appraisal Mission (6-13 June 1994), as a follow-up of the Donor Mission of October 1993. All CPP-activities since then have been based on the Memorandum of Understanding between GOB and Donors, as signed on October 27, 1993.

The **"Integral Planning and Detailed Construction Cost Estimate: Tangail & Sirajganj"** report is considered the basis for appraisal in terms of achievable time frame and related realistic cost estimates. The **"Quarterly Progress Report No.11"** is considered the basis of an assessment by the Donors of the progress of the physical works in the Tangail CPP. The first report was sent by FPCO to the Donors in January 1994. The second in April 1994. It goes without saying that the progress upto May 31st has been updated in this report.

The status of the following items have been described: MoU, Physical Interventions, Consultations, Water Management, Agriculture, Fisheries, Environmental Issues, WID Activities, Institutionalisation, Training and Mitigation Measures.

A list of Technical Notes and Working Papers, published since January 1994 has been annexed.

## Status Report : Memorandum of Understanding

The Memorandum of Understanding as signed by the MIWDFC and the Donors on 27 October 1993 stipulated a number of actions to be carried out. In this part of the Status Report the various actions will be described referring to the **Conclusions** of the MoU.

### D) Conclusions

23. In view of the delays and constraints the mission has identified in Tangail and in view of the fact that it is unclear how long the project will take to complete these works and what the total costs will be, it is not possible to appraise the proposals for Sirajganj at this time.

*The phasing and costing, based on realistic assumptions and endorsed by the BWDB have been described in the "Integral Planning and Detailed Cost-Estimate for Tangail and Sirajganj" report, which was submitted by FPCO to the donors early January 1994. It is expected that Donors will give their reaction during the forthcoming appraisal mission.*

24. The current performance of the project would be a reason for withdrawal by both donors. In order to accelerate the speed of implementation to an acceptable level and to make the project eligible for continued funding by DGIS and KfW, the MIWDFC accepts the following actions and procedural changes:

- (a) by November 15, 1993 all items of the revised TAPP that are relevant to the Tangail compartment will be approved by GOB and the relevant contributions by BWDB will be available;

*Meanwhile the revised TAPP has been approved on March 12, 1994. This late approval has caused delays in a number of actions.*

- (b) the project will concentrate its attention and efforts on the Tangail compartment;

*Indeed over the past 7 months the Project has focused its main efforts on Tangail. In Sirajganj the activities were restricted to relevant surveys, consultations, environmental surveys and the preparation of design criteria for the 1994-95 construction season. Some designs have been prepared by the Design Office and related land acquisition proposals submitted.*

- (c) the project will draw up a schedule (resulting in starting construction on site early October of each year) and corresponding cost estimate for the Tangail compartment by November 15, 1993 and for the Sirajganj compartment by 31 December 1993;

*The implementation schedule and cost estimate for Tangail was submitted in November 1993 and re-submitted at the end of December together with the Sirajganj schedule and cost estimates.*



- (d) the project will establish a scheme for the comprehensive long term planning of implementation with a clear definition of actions and responsibilities by 31 December 1993 to be endorsed by GOB;

*The comprehensive long term planning of implementation were part of the Integral Planning Report. Although approved by the BWDB, endorsement by GOB is solicited by approval of this document by the Technical Committee.*

- (e) in addition to the quarterly progress reports the donors will be adequately informed on the progress of the project by monthly status reports on the planning, preparation and implementation of construction activities. Furthermore, a project steering committee will be established with representatives of BWDB, FPCO, consultants and the Netherlands Embassy.

*In addition to the Quarterly Progress Reports, monthly status reports are being submitted. Moreover activities in the past have been described in the Annual Reports 1992 and 1993. The Project Steering Committee has been established in December 1993 and has met four times.*

- (f) the project will start with the preparation of land acquisition as soon as a construction site is finally determined. BWDB will find a legally and socially acceptable solution for quicker land acquisition;

*Land acquisition proposals are being submitted to the departments concerned as above and as per rules and regulations. However, the GOB is making some procedural changes for land acquisition to facilitate timely acquisition and to give benefits to the land owners.*

- (g) proposals for appointments of new staff member will be approved or rejected by GOB within 3 weeks after submission. Although it is recognized that the total TA component requires the MIWDFC approval, changes within the existing budget for TA will only require approval by the Netherlands Embassy and FPCO, to allow for the necessary flexibility;

*A number of new staff members have been approved recently. It is expected that remaining requests for approval will follow soon as per revised TAPP.*

- (h) BWDB will make available to the project an annual budget item of 5 million Taka for "minor construction works" that can be used without prior approval to allow the project to accommodate local unforeseen requirements. Only an ex-post explanation and justification of the use of that budget will be required.

*Reference is made to the approval of this budget in the minutes of the meeting of the Steering Committee (separate letter) (10 May 1994). The necessary arrangement will be made for this in the budget for 1994-95.*

25. Upon signing this Memorandum of Understanding, the mission will recommend to their respective headquarters to continue financing the Tangail compartment of the project. Although the mission originally proposed a time-scenario where the next donor review mission in October 1994 would advise on the appraisal of Sirajganj, it is now proposed, following the explicit request by FPCO, to field such a review mission at an earlier date in order not to loose momentum in Sirajganj. After a careful consideration, the mission agreed to recommend fielding such a mission in June 1994 pending the following conditions:

- (a) implementation of all actions and procedural changes as described above;

*Nearly all actions have been (or soon will be) implemented. Reference is made to the status of the list of actions as mentioned in Table 1.*

- (b) all the design criteria for the construction season 1994-1995 will be finalized by the project;

*All design criteria for the construction season 1994-1995 have been finalized and submitted, both for the Tangail and Sirajganj compartments.*

- (c) the budget item mentioned under 24(h) will be incorporated in the annual budget for the fiscal year 1994/1995;

*See 24(h).*

- (d) a formal commitment by GOB to reconstruct, retire and maintain the BRE in the area of the envisaged Sirajganj compartment.

*This commitment was reconfirmed by the BWDB in the Steering Committee meeting held on 10 May (separate letter).*

Table 1: Status of main actions in relation to CPP

31 May 1994

ISSUES	REQUIRED ACTION	RESPONSIBILITY	DATE	STATUS
Confirmation Review Mission	Confirmation of recommendations in MoU. Signed 27/10/93	Management DGIS/KfW	March 1994	Done
Revised TAPP	Approval	MIWDFC Planning Commission	November 1993	Done (12 March)
Ownership CPP	Commitment Executing Agency	BWDB/MIWDFC	November 1993	Done
Sirajganj Interim Report	Appraisal	Review Committee	April 1994	Open
Integral Planning and Revised Cost-Estimates Reports	Approval	Review Committee Technical Committee	June 1994 June 1994	Open Open
Land Acquisition	Shorten procedures	BWDB/DC/Ministry of Land	ASAP	Open
Approval Procedures T/A Staff	Shorten procedures for approval	FPCO/MIWDFC	November 1993	Start has been made
Implementation Sirajganj Compartment	Appraisal recommendation	DGIS/KfW	June 1994	Open
Cost Estimates	Construction schedule and related cost-estimates for Tangail and Sirajganj CPP	CT/PT (preparation) BWDB (endorsement)	December 1993	Done
Reporting	Annual Reports 92, 93 Progress Reports: Quarterly Monthly (construction)	CT (CPP) CT/PT (CPP) PT/CT (CPP)	January 1994 As from 1st Quarter'94 As from January'94	Done Done Done
Project Implementation Monitoring	Establishment of Project Steering Committee	BWDB	November 1993	Done
Minor Construction Works	Annual budget item of Tk.50 lakh for minor construction works as from FY 1994/95	BWDB	April 1994	Done
BRE	Commitment for reconstruction, retirement and maintenance along the Sirajganj CPP	BWDB	May 1994	Done
Surveys	Field data : for Tangail : for Sirajganj		March 1994 March 1994	Almost completed Done
Water Management	Overall Water Management Tangail Sirajganj	CT (CPP) CT (CPP)	May 1994 December 1994	Open Done
	Detailed Watermanagement SC 9, 10 and 11	CT (CPP)	May 1994	Done
Design Data	Tangail construction season '94/95 Sirajganj construction season '94/95	CT (CPP) CT (CPP)	May 1994 May 1994	Done Done
Institutionalization	1. CPP Steering Committee Tangail 2. SCWMC 9, 10, 11, Tangail 3. WUG's 9, 10, 11, Tangail	FPCO CPP CPP	March 1994 April 1994 April 1994	Open Partly Done
Interdepartmental Cooperation	Formalizing Government order Responsibility/task Thana District level officer(s)	FPCO+ rel. Dhaka Agencies	ASAP	Open
Training Abroad	1. Appointing two high level officers MDF Course 2. Composition AIT group	FPCO/BWDB/ MIWDFC	March 1994 March 1994	Done In process

## Status Report : Physical Interventions

### Planning - Tangail and Sirajganj

#### Tangail

The time schedule as stipulated in the "Integral Planning and Detailed Construction Cost Estimate: Tangail & Sirajganj", submitted in December 1993/January 1994 has been endorsed by the BWDB.

According to that planning, the following information is required;

Cluster	Activity Stipulated	Program (31-05-1994)
Cluster 1A (peripheral structures, including main inlet)	design criteria to be submitted, November '93	submitted
Cluster 1B (SC 9, 10, 11)	design criteria to be submitted, November '93 compilation May '94	submitted
Cluster II (SC 5-8, 17)	design criteria to be submitted, May '94	submitted
Cluster III (SC 1-4)	design criteria to be submitted, October '94	submitted

#### Sirajganj

An overall planning and design features document for the Sirajganj compartment has been submitted. Furthermore, a final alignment of the Ichamati embankment has been completed for 90% of its length. The final alignment will be made available after the concluding at SC-8 will be held, scheduled for June 1994. Design criteria have been submitted and approved for the embankment on the northern side of the compartment.

Design criteria for Cluster 1B (SC 1-3) has been submitted according to the approved time schedule. Cluster II (SC 5-7) is in preparation.

## **Construction implementation Tangail**

The clusterwise implementation monitoring exercise for May 1994 is performed on the same basis as the physical progress procedure explained in the Quarterly Progress report No.11 ( January - March 1994 ) and the Monthly Progress report for April 1994.

Cluster 1A ( peripheral interventions and main inlet ) showed only a slight improvement since the April 1994 analysis. The previous report indicated a substantial progress attained since March 1994. The reduced rate of progress for the month of May 1994 is due to a number of factors. The main item in this cluster consists of the main inlet at the Lohajang. Slow progress was reported there due to organizational problems of the contractor.

It is expected that the progress for June 1994 can be raised to approx 210 Lakh Taka, although only for the main inlet substantial progress can be expected. The rather controlled conditions under which the main inlet is under construction allows for this expectation (construction pit). However, the targeted progress of 229 Lakh Taka for the end of June 1994 will most probably not be attained.

The physical progress for Cluster 1B ( subcompartment 9, 10 and 11) has clearly not responded to its fast rate reported in the March-April period. Although the total sum for end of May has equalized the expected progress set for June 1994, it is not according to the expectations which were expressed in the beginning of the construction season. The fast pace of progress in the previous months could not be sustained. Main problems are that there were a number of land acquisition constraints which were not foreseen, and the slow kickoff of implementation activities in the beginning of the construction season. Assumptions are that any further progress cannot be expected due to the start of the monsoon. Main regulators in Santosh, Bangabari and Kagmari are not completed and therefore do not allow for substantial testing of this part of the compartment.

Cluster II did show reasonable progress although serious constraints existed in one of the construction sites near the Lohajang river ( District regulator ). In case less severe rains occur, it will still be possible to complete the District outlet and also make substantial progress with the Rasalpur inlet. It is not expected that the progress can substantially be raised although the target has been exceeded by far.

Cluster III had a substantial boost in progress in comparison with the April 1994 figures. The progress could have been substantial if there would have been no major constraints in the groundwater ( Bhatkura and Jalfai regulator ).

## **General conclusion**

Although the Integral Planning Report has been endorsed by the BWDB in December 1993/January 1994, it is obvious that the adopted time frame for implementation schedule for the Tangail compartment has not been fully supported by the institutional and procedural framework in which CPP is embedded.



The total physical progress as indicated in Figure, and Tables 2-5 reflects that a total of 600 Lakh Taka ( status 31 May 1994), an expected progress of 700 Lakh Taka ( for 30 June 1994) will be achieved as compared to a target set of approx. 750 Lakh Taka ( for 30 June 1994).

In general, a figure of an achievement of approx 80% of the target would undoubtedly give an indication of a strong commitment from the implementing agency. However, this is only one cornerstone of the overall analysis. The commitment of CPP to reach a completed stage (physical implementation) in FY 95-96 requires a rigid performance in the planning and implementation of the physical interventions; it also requires that the staggered implementation of the physical interventions is accompanied by a network of institutional and organizational arrangements to make CPP sustainable, viable and feasible. This requires a testing of the compartmentalization concept in a number of clusters according to their physical intervention program. It was stipulated in various documents that substantial testing of Subcompartment 9, 10 and 11 ( Cluster I B ) would be a basic cornerstone in combination with the main inlet regulator of the compartmentalization development at this stage of the project cycle. Conclusion can be drawn that this testing CAN NOT be done in a "substantial way" in 1994 due to lack of completion of a number of crucial structures in Cluster IB.

However, the completion of the infrastructural and institutional activities in subcompartment 9 will allow testing.

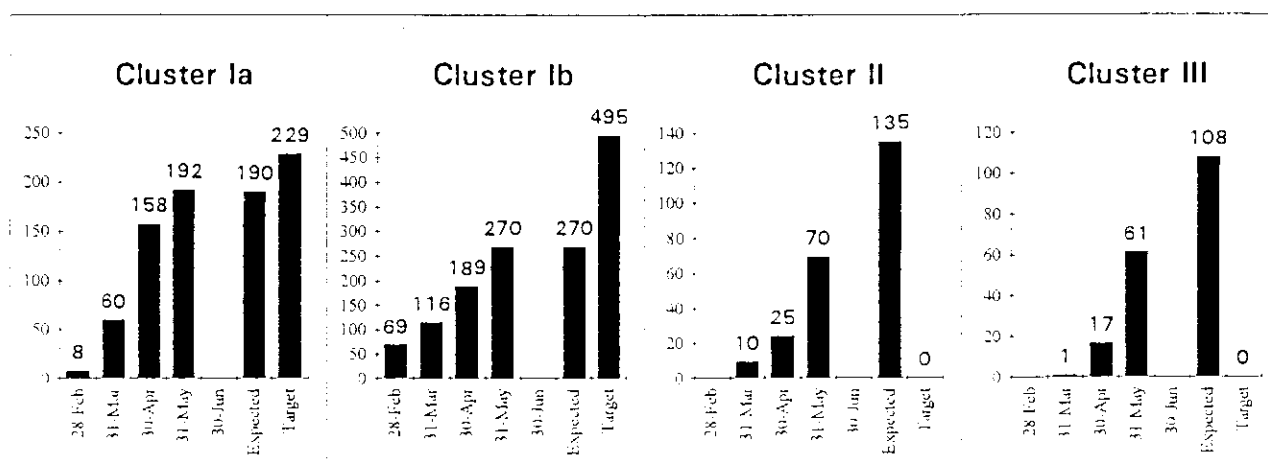
It should be stated again that submission of design criteria in a timely fashion to the Design authorities is not the only basis for a timely release of approved design data and subsequent tender procedure. Assigning too much weight and importance to this sole aspect hampers and diffuses a clear picture in other relevant problem areas. Although the time schedule for submitting the design criteria has been forwarded, it is felt that solving other major problems with the contractors, quality control of implementation progress and a timely and swiftly executed procedure for land acquisition are all part of the prerequisites. Each of those may become a major constraint and thereby hampering, or ultimately blocking the implementation process.

### **Suggestion**

The commitment of implementing a certain allocated budget for physical implementation requires a strong and undivided commitment from CPP. Any deviation or non-compliance with project requirements in this multi-disciplinary setting will immediately backfire and put the project's prospectives below from what was feasible. In particular, prime care should be taken that land acquisition procedures start immediately after the location of the interventions has been fixed.

Figure 1: Construction Progress Tangail Compartment, FY 93-94

all amounts in Lakh Taka



cluster	28-Feb	31-Mar	30-Apr	31-May	30-Jun	Expected*	Target
Ia	8	60.4	157.7	192.4	-	190	229
Ib	69	115.5	188.7	269.6	-	270	495
II	0	9.5	24.5	69.7	-	135	0
III	0	1	16.8	61.7	-	108	0
Total	77	186.4	387.7	593.4	-	703	724

\* Expected progress represents progress based on evaluation of current construction data and presently available implementation capacity towards June 1994

**Table 2: Detailed breakdown construction progress for end of March, April, May 1994 and expected and target progress for June 1994; CLUSTER IA (Base Cost, Lakh Taka)**

Sl.No.	DESCRIPTION	Progress 31-3-94*		Progress 30-4-94		Progress 31-5-94		Expected Progress 30-6-94		Target Progress 30-6-94	
		No	Lakh Taka	No.	Lakh Taka	No.	Lakh Taka	No	Lakh Taka	No	Lakh Taka
1	Regulator( large )	5	47.5	5	124.0	5	155.4	5	100	5	185
2	Modification	1	0.6	1	0.6	1	0.7	1	2	1	5
3	Minor Regulator							-	-	-	-
4	Bridge/ culvert							-	-	-	-
5	Excavation of khal	1	0.3	1	3.0	1	4.5	1	4	1	7
6	Upgrading embankment	3	12.0	3	30.0	3	31.8	3	44	3	14
7	Closure of breaches							-	-	-	-
8	Improving access road							-	-	-	-
9	River bank protection			0	0	0	0	0	40	1	18
10	Fishery renovation							-	-	-	-
11	Construction of Meeting place										
12	Mitigation measures										
13	O&M during construction										
14	Water retention										
<b>TOTAL</b>		10	60.4	10	157.7	10	192.4	10	190	11	229

\*) According to table 4.3, Quarterly Progress Report No.11 (Jan-March 1994)

**Table 3: Detailed breakdown construction progress for end of March, April, May 1994 and expected and target progress for June 1994; CLUSTER IB (Base Cost, Lakh Taka)**

Sl.No.	DESCRIPTION	Progress 31-3-94*		Progress 30-4-94		Progress 31-5-94		Expected Progress 30-6-94		Target Progress 30-6-94	
		No	Lakh Taka	No	Lakh Taka	No	Lakh Taka	No	Lakh Taka	No	Lakh Taka
1	Regulator( large )	3	48	3	63.6	3	78.2	3	86	3	105
2	Modification	-	-	-	-	-	-	-	-	8	2
3	Minor Regulator	7	34	9	44.3	9	84.7	10	60	11	155
4	Bridge/ culvert	-	-	4	4.9	7	15.1	10	15	14	63
5	Excavation of khal	1	0.5	3	2.6	3	7.21	11	13	12	37
6	Upgrading embankment	4	18	5	37.4	5	38.1	5	44	5	78
7	Closure of breaches	0	0	0	0	0	0	1	1	1	0
8	Improving access road	1	15	1	35.9	1	35.9	1	51	1	41
9	River bank protection	-	-	-	-	-	-	-	-	-	-
10	Fishery renovation	-	-	-	-	-	-	-	-	2	2
11	Construction of Meeting place									2	-
12	Mitigation measures									-	10
13	O&M during construction									-	-
14	Water retention									1	2
<b>TOTAL</b>		<b>16</b>	<b>115.5</b>	<b>25</b>	<b>188.7</b>	<b>28</b>	<b>269.6</b>	<b>41</b>	<b>270</b>	<b>58</b>	<b>495</b>

\* ) According to table 4.4, Quarterly Progress Report No. 1 (Jan-March 1994)

**Table 4: Detailed breakdown construction progress for end of March, April, May 1994 and expected and target progress for June 1994; CLUSTER II (Base Cost, Lakh Taka)**

Sl.No.	DESCRIPTION	Progress 31-3-94*		Progress 30-4-94		Progress 31-5-94		Expected Progress 30-6-94		Target Progress 30-6-94	
		No	Lakh Taka	No	Lakh Taka	No	Lakh Taka	No	Lakh Taka	No	Lakh Taka
1	Regulator( large )	1	1.0	1	5.4	1	27.2	1	45	0	0
3	Minor Regulator	1	0.50	1	5.1	1	10.4	1	13	0	0
5	Re-excavation of khali	1	8	1	12.0	1	15.6	1	17	-	-
9	River bank protection	-	-	1	2.0	1	16.5	1	60	-	-
TOTAL		3	9.5	4	24.5	4	69.70	4	135	-	-

**Table 5: Detailed breakdown construction progress for end of March, April, May 1994 and expected and target progress for June 1994; CLUSTER III (Base Cost, Lakh Taka)**

Sl.No.	DESCRIPTION	Progress 31-3-94*		Progress 30-4-94		Progress 31-5-94		Expected Progress 30-6-94		Target Progress 30-6-94	
		No	Lakh Taka	No	Lakh Taka	No	Lakh Taka	No	Lakh Taka	No	Lakh Taka
1	Regulator( large )	2	1	2	11.3	2	56.2	2	95	-	-
9	River bank protection	-	-	1	5.5	1	5.5	1	13	-	-
TOTAL		2	1	3	16.8	3	61.7	3	108	-	-

\*) According to table 4.5 and 4.6, Quarterly Progress Report No.11 (Jan-March 1994)



### Status Report : LCS at Work

At the time of reporting for the quarterly report (31/3/94/) only five LCS's were engaged. Now twenty one LCS's are working in six different sites where they have been allocated part of the work (except Rampal khal & Ramdebpur embt.). The site allocated to LCS with detailed information is presented in Table 6.

Formation and implementation of work though LCS has faced number of problems. The major ones are :

- Land acquisition not completed before work start
- Insufficient support provided by BRDB the affiliating agency to help the development of LCS
- Delays in disbursing the mobilization advance
- Delays in issuing the detailed work order
- Delays in approving the running bill as per progress of work
- For women schemes dewatering items were included
- Allocation of work in the name of LCS without preliminary formalities such as training etc.
- Non-cooperation of NGOs

The present situation of LCS and progress is detailed in Table 7. Number of the problems highlighted above have been minimized though the land acquisition could not be speeded up and the payment delays according to progress is yet to be solved.

Considering the CPP objectives involving LCS, the achievement of earth work done through LCS's is far below target.

The objective of the CPP was to perform 30 to 50% of earth work through LCS, of which 50% for women LCS.

This year the total volume of earth work was 457057 m<sup>3</sup> from which 46413 m<sup>3</sup> (10%) was undertaken by LCS of which 6139 m<sup>3</sup> (13%) was done by women LCS.

The overall performance of LCS will be further monitored to detail the bottleneck which hampered a broader extent and the necessary amendments to improve the work through LCS will be formulated once the working season is over.

Table 6: Site allocated to LCS

Name of work reserved for LCS by XEN	Site feasible for LCS	No. of LCS selected	Name of LCS	Training imparted date	Date of work start	Remarks
Reexcavation of Rampal Khal	Y	3	Bousha-1 BSS Bousha-2 BSS Khanpur BSS		24-4-94 17-4-94 17-4-94	Land acquisition problem. LCS not formed as per guidelines.
Reexc. of Dithpur Khal	N					
Reexc. of Distriet Khal (Partly)	Y	3	Sarutia BSS Kagmara MBSS Enayetpur MBSS	9-3-94 Do Do	29-3-94 23-3-94 23-3-94	
Reexc. of Binnyafair Khal (Partly)	Y	2	Porabari BSS Charabari BSS	9-3-94 Do	23-3-94 23-3-94	
Reexc. of Singerkona link canal	N					Land acquisition problem
Do	N					Do
Reexc. of Jugini Khal	N					Do
Reexc. of Khanpur borrowpit	N					Do
Reexc. of Dhalan link canal	N					Do
Lohajang river mouth cutting	N					Do
Embt from Dhalan P. School to Binnyafair sluice (Partly)	Y	4	Alishakanda BSS Dighulia BSS Kalipur BSS Bepari Para MBSS	19-4-94	04-5-94 24-5-94 26-5-94 25-5-94	LCS not formed as per guidelines. "DO"
Embt from Pichuria to Gala Bazar (Partly)	Y	4	Gala BSS Galarchar BSS Pichuria North BSS Pichuria South BSS	19-4-94 Do Do Do	29-5-94 29-5-94 24-5-94 24-5-94	
Embt from Ramdebpur to Rasulpur reach	Y	5	Kagmara BSS Kakua BSS Loutjana BSS Jugini BSS Takermuria BSS	19-4-94 Do Do	06-5-94 13-5-94 08-5-94 06-5-94 06-5-94	LCS not formed as per guidelines.
Embt from Gala to Rasulpur (Partly)	N					Land acquisition problem.
Total		21		2		

Table 7: LCS situation and progress

Work site location	LCS names	Start work	Work volume m <sup>3</sup>	Contract amount Tk.	Amount disbursed	progress eye estimate	Progress report from XEN
Binnafair Khal Re-excavation	Barabaria BSS	22/3	2886	75617	26000	100	90
	Charabari BSS	22/3	2668	69344	28593	100	90
District Khal Re-excavation	Kagmara MBSS	22/3	2399.17	57755	22480	100	60
	Enayetpur MBSS	22/3	2170.80	53144	20500	100	90
	Saratia BSS	22/3	1711.29	40778	10195	100 (of the 50 meter)	65
Pichuria - Gala Embankment	Gala BSS	29/4	2619.24	68000	26000	100	95
	Pichuria W/S BSS	28/4	2330.43	73000	26300	100	95
	Pichuria North BSS	24/4	2481.54	76000	26500	100	96
	Galarchar BSS	23/4	2298.88	63000	23500	100	90
Ramdebpur - Rasulpur Embankment	Tekermuria BSS	10/5	2274	92000	21126	40	40
	Laujana BSS	08/5	2508	97300	22336	55	50
	Kagmara BSS	05/5	2634	92551	21162	60	55
	Jugini BSS	05/5	2192	80000	18744	70	70
	Kakua BSS	13/5	2414	88000	20312	55	60
Rampal Khal Re-excavation	Bausha-1 BSS	24/4	2859	74676	52000	55	55
	Bausha-2 BSS	17/4	2155	69876	38000	60	60
	Khanpur BSS	17/4	2167	55600	27800	60	55
Dalan Pry - Binnafair embt	Kalipur BSS	26/5	1321.28	52000	-	75	-
	Dighulia BSS	24/5	1415.41	53000	-	80	-
	Alisakanda BSS	04/5	1338.17	47000	10000	95	50
	Bepari para MBSS	25/5	1569.91	55000	13777	50	-
Total			46413.12	1401069			

### **Status Report: People's Participation and Consultation Meetings - Tangail and Sirajganj**

In the process of people's participation, the first phase i.e. Needs Assessment Survey is fully completed in both compartments. The results of the needs assessment were covered in the Interim Report of Tangail, September '92 and Sirajganj June '93. This first phase found out the perception of the different interest groups about the existing water management related situation, the problems and ideas about potential solutions. The output was used by the planning team to draw up a number of alternative options with initial design.

The second phase was to confront the initial design with the local people; interest group wise area wise and in different sequences to achieve full involvement of the overall population concerned.

The progress of consultation varies in the two compartments because in both compartments initial work did not start at the same time and also because the consultation is done gradually cluster wise according to hydrological setup. In addition to adjust the planning of interventions, consideration on the possible progress of implementation is given. This factor was important when planning the consultation meetings because usually people very much agreed to participate in the discussions about possible improvements because they believe in the seriousness of this new type of approach including a quick implementation.

The project would loose credibility if the consultation meeting are organized 2-3 years before construction starts. Therefore, in order not to raise unnecessary expectation the consultation is planned one year before the construction starts.

To date the consultation process is programmed in relation to the clusters planned for implementation.

In Tangail, some delays occurred in starting consultation in cluster IV according to integral planning because some staff member got engaged in organizing WUG in cluster 1B. The consultation will now start in June 94 and is planned to be completed in September as per schedule.

In Tangail, which includes four clusters inside the project area, the progress is as follow:

	<b>Construction start</b>	<b>Status of consultation</b>
Cluster IA	92-93	Completed in 1993
Cluster IB	93-94	Completed in 1993
Cluster II	93-94	Completed in 1993-94
Cluster III	94-95	Completed in 1993-94
Cluster IV	94-95	To start in June 1994

The details of consultation progress is given in Table 8.

In Sirajganj the situation follows the same trend as of Tangail.

	<b>Construction start</b>	<b>Status of consultation</b>
Cluster IA	94-95	Completed in 1994
Cluster IB	94-95	Completed in 1993
Cluster II	95-96	Completed in 1993-94
Cluster III	95-96	To start in December
Cluster IV	95-96	To start in December

For cluster IA which concerns in the peripheral embankment, a series of village community meetings (10 nos) were held along the Ichamati River on the western side of the compartment to finalize the alignment.

The details of consultation are presented in Tables 8 and 9.



Table 8: Status of consultation meeting in Tangail Compartments (Till 31 May '94)

Cluster No.	Initial meeting with different interest groups										Follow-up and combined meetings			Remarks
	No. of meetings conducted					No. of participants attended					No. of meetings conducted	No. of participants attended		
	F	W	LL	Fh.	Total	F	W	LL	Fh.	Total				
I, B	3	3	3	3	12	170	340	68	116	694	8 (5)	182 (42)		
II	15	14	12	3	44	699	780	461	67	2007	7 (2)	141 (45)	2 combined meetings were held later due to activities against FAP	
III	7	7	6	2	22	195	482	338	88	1103	4	138	No follow-up meetings were conducted	
IV	4	3	3	1	11	193	159	160	16	528	--	--	Only initial meeting held in one sub-compartment full consultation to start in June	
Adjacent areas	1	2	2	1	6	30	100	44	32	206	--	--		
Total	30	29	26	10	95	1287	1861	1071	319	4538	19 (7)	461 (87)		

Figures in the parenthesis include follow up meeting only.

F = Farmers  
 W = Women  
 LL = Landless  
 Fh. = Fishermen

Table 9: Status of consultation meeting in Sirajganj Compartments (Till 31 May '94)

Cluster No.	Initial meeting with different interest groups										Combined meetings			Village community meeting on ILE *		Remarks
	No. of meetings conducted					No. of participants attended					No. of meetings conducted	No. of participants attended	No. of meetings attended	No. of participants attended		
	F	W	I.L.	Fh.	Total	F	W	I.L.	Fh.	Total						
IA (Peripheral)													10	364	Meetings on Western side	
IB	8	8	5	4	25	544	321	449	71	1385	3	70				
II	10	10	9	4	33	311	434	400	86	1231	2	131				
III	2	2	3	1	8	151	58	88	13	310	--	--			Only initial meetings to discuss the choice of option	
IV	1	1	1	1	4	22	16	46	15	99	--	--			"DO"	
Adjacent areas	3	2	3	3	11	63	137	156	70	426	--	--			"DO"	
Total	24	23	21	13	81	1091	966	1139	255	3451	5	201	10	364		

\* ILE = Ichamati Left Embankment

F = Farmers

W = Women

I.L. = Landless

Fh. = Fishermen

## Status Report : Water Management

### Tangail

The compartmentalization concept can be visualized by testing of the watermanagement system in practice. The detailed design as laid out for SC 9, 10 and 11 is in the phase of implementation and consequently a fine-tuned watermanagement plan is required to be able to test the concept.

The current watermanagement information for SC 9, 10 and 11 is based on the principle of chawks, which are the smallest hydrological units in the physical environment. Based on a detailed inventory of available chawks, the information is merged with details on both agriculture and fisheries, which ultimately results in recommendations for:

- (1) Maximum pre-monsoon waterlevels
- (2) Minimum monsoon waterlevels
- (3) Optimum (desired) waterlevels
- (4) Maximum monsoon waterlevels

The mainstay is to merge the individually determined waterlevels, to waterlevels which can be attained on a catchment area basis. This catchment area (called **system**) merges a number of chawks together such that this system, in principle has independent inlets and outlets. The inlets allow peripheral water to enter the system, while the outlet allows excess water to be drained from the area.

A number of different situations have been distinguished for determining waterlevels (system-wise), in SC 9, 10 and 11. A detailed water management monitoring plan is being prepared for the 1994 monsoon season.

Gradually, the detailed watermanagement plans for the following Clusters (II, III and IV) are to be developed in concordance with the implementation schedule. The detailed watermanagement plan for SC 9, 10 and 11 is described in WP 94/04.

### Structure operation modelling

For the Tangail compartment structure operation guidelines are now being developed at FAP-25. A start has been made with a detailed schematization of the cluster of sub-compartments 9, 10 & 11 (upto chawk level), especially for fine-tuning structure operation and to develop structure operation guidelines.

The general operational requirement comes from agriculture and fisheries and the water level requirements have been calculated for each chawk. For modelling purposes also the average field levels of the chawks have been supplied.

The proposed khals and structures have been included in the detailed part of the model. The chawks have been combined with the cross-section profiles as additional storage, obtained from the average field level and chawk areas and was supplied by FAP-20.

Apart from the main inlet, peripheral inlet and Lohajang outlet structures, the designed internal water control structures have been included in the model to be able to maintain the required water levels in the chawks.

To be able to operate the main inlet and the combined weir/gated structures in the model, a new controlled structure module has been developed for the MIKE11 program.

### **Sirajganj**

For the Sirajganj compartment, a comprehensive report (first draft) is prepared where the general design features are explained. Clusterwise detailed watermanagement reports are under preparation. Cluster 1B (SC 1, 2 and 3) detailed design features has been furnished according to the time schedule stipulated in Integral Planning Report.

## **Status Report : Agriculture**

### **Crop map**

An updated agricultural map of Tangail has been prepared utilizing the information from photo-contour map, physical verification and land use survey.

A repeat landuse survey in both Rabi & Kharif seasons of 1993 is completed. This survey updates data on crop areas, crop types, irrigation facilities etc. This survey covers each chawk of sub-compartments.

### **Irrigation survey**

An 'Irrigation Survey' of the project area entailing the DTWs, STWs, LLPs and other mode of existing irrigation systems and their coverages, groups, ownerships, equipments, rentals, problems etc. has been completed. A final report of this survey is available.

### **Crop demonstration programme**

Crop demonstration is a core work in on-farm development procedure for implementing the production plan and water management system. In a joint CPP-DAE collaborative effort, 28 crop demonstrations were made with the cultivation BR22 in the monsoon of 1993. This programme was a success. Details are reported in a technical note. A total of 50 crop demonstrations are planned for the monsoon of 1994 with HYVs BR11, BR22 and BR23.

### **Chawk characterization**

A chawk is the smallest unit of crop land demarcated with physical barriers such as existing roads, periphery of settlement area etc. The compartment itself is composed of several sub-compartments. Sub-compartments may consist of one or more unit of several chawks called system. A chawk is identified with a system. Each chawk will eventually become an unit of on-farm development and system as unit for water management.

Chawks of Tangail compartment have been identified and coded. Water level requirements for both pre-monsoon and monsoon are calculated. Farmers WUGs are now being formed on chawk basis.

### **Test of crop suitability under developed water management system**

A part of sub-compartment 9, 10, 11 i.e. water management of system 1 will be operable in the monsoon season of 1994. Land will now be suitable for higher yielding monsoon crop. A total of six test plots are now being established to assess the impact of newly developed water management system on crop suitability.



## **Establishment of agricultural monitoring**

Agricultural monitoring is a part of the Economic Impact Assessment of the project. For this, a crop monitoring frame is planned to measure :

- cropped area and cropping patterns
- yields
- intensity of input use
- farm gate costs of input and prices of output

With the implementation of water management interventions, the plan is to select 250 permanent plots for regular monitoring throughout the life of the project and beyond. Base data collection on these plots of sub-compartments 9, 10 and 11 have already been completed.

## **Cooperative activities**

A close involvement with the District Technical Committee (DTC) Agriculture of Tangail is maintained. This committee represents all agricultural related offices of the district with additional representation from farmers, NGOs, input dealers etc. Similar involvement with the DTC, Sirajganj is yet to be initiated.

The Department of Agricultural Extension (DAE) is involved in irrigation survey and crop demonstration programmes, described above.

## **Deferrals & constraints**

The DAE is the main Govt. organisation for agricultural development of the area. Deputy Director, who heads the district office, is member of the present Extended Project Team as per Govt. order and of the proposed Steering Committee. Involvement of Thana level officers and specially Block Supervisors in CPP activities, in general, lacks approval of the Agricultural Ministry. This official Govt. order will simplify a number of procedural complexities. Correspondance has already been initiated.

## **Status Report : Fisheries**

Special Fisheries Study (SFS) is a 2 year study which started in April 1992. Results are now being analysed and planned to be presented in a seminar in July, 1994. The SFS dealt with the following studies:

### **Catch assessment**

Catch in the area is assessed by the 'catch per unit effort' method at seven different locations.

Beel	:	Juginidaha beel at SC 9
		Ghatak Bari beel at SC 11
		Gharinda beel at SC 3
River	:	The Lohajang river.
Canal	:	Gaiza Bari at SC 11
		Sadullahpur at SC 7

The weight of the fish catch from the different beels, different fishermen and different gears are taken in every fifteen days. Gear in operation is surveyed every seven days. These data are collected from the field and introduced in dBASE. Data collection is completed. The analysis is going on.

### **Reproductive behaviour of beel dependent fish**

To know the time and the stimulating factor for spawning of beel fish, a reproductive behaviour study was conducted. For the purpose, seven beel fish (Koi, Shing, Taki, Baim, Gutum, Puti, Kholisha) common in these area, are selected. This is done by Gonado-Somati Index (G.S.I). Every month 100 Nos. for each species were collected from the above mentioned beels. Fish are opened, eggs are weighed, G.S.I. are calculated.

With this result of the G.S.I., the water level and water temperature of each beel are also recorded every day. Rainfall data are collected from secondary source. It has been indicated that the reproduction of 'Puti' is triggered by an increase in water level of more than one meter above minimum dry season water level.

### **Hatchling migration**

A detailed study on hatchling migration in the Tangail CPP area is now completed. The period of migration study starts as soon as the river water enters the area and continues till water flows through the river (Lohajang).

For the study, 3 (three) spots have been identified:

- a) Lohajang River at Khorda Jugini where surface and bottom migration in day and night time, and at the middle and side of the river are studied (for bottom sampling iron frame is used)
- b) Gaizabari Canal for lateral migration (top, bottom, day and night)
- c) Sadullahpur same as Gaiza Bari.

The hatchlings are collected, sorted, identified and then analyzed. The water velocity is measured with flow metre. This study identified bottleneck in the hatchling recruitment in the project area. Proposal to restore & remove sand rim from the main migration route could not be implemented because of land acquisition problems.

#### **Pond survey for aquaculture survey**

A detailed survey on pond aquaculture in the CPP area is also in progress. The survey accumulates information on status of the pond, ownership status, physical condition and production of the pond, socio-economic status of the pond owner etc. The willingness of the pond owner regarding culture and the assistance asked by them are also registered. Survey results are being used to draw up a semi-intensive aquaculture extension programme under mitigation measures for fisheries.

## **Status Report : Environmental Issues**

Status of the environmental activities are described below and actual progress against the planned schedule for each of the activities are shown in Table 10.

### **Surveys and studies**

Homestead Vegetation & Social Forestry : This survey work has been started in January and February 1994 in Tangail and Sirajganj compartments, respectively. Field level data collection on existing plantation status in the selected homesteads and all roads and embankments have been completed in April 1994. All the collected data are now being processed and at the same time plantation maps for all the individual subcompartments are also being prepared. More information on future plantation programmes by different Government and Non-Government organizations are now being investigated. All these works are expected to be completed by August 1994 and the draft report on this survey will be prepared in October, 1994.

Environmental Pollution : This survey was started in September 1993 for CPP areas in Tangail & Sirajganj, and the draft report has been completed by the end of May 1994. Results of survey indicated surface water and groundwater pollution due to ammonia, iron, oxygen demanding materials and coliform bacteria. Soil contamination with trace amounts of residual organochlorine pesticide has also been detected. Draft report on this survey has been circulated for comments and the final report is due by June 1994.

Ecological Survey : This survey work for Sirajganj compartment has been contracted out in January 1994. Reconnaissance field survey and field data collection for the dry season have been completed in February 1994 and March 1994, respectively. Data are being collected on species diversity, population status and ecological importance of the available flora and fauna along an east-west transect covering at least 10% of the project area. All types of terrestrial and aquatic habitats such as highland homestead, river bank, road and embankment, agricultural land, homestead forest, inundated homestead, river channel, perennial and seasonal beel, canal, etc. are being covered in this survey. Wet season data collection has been rescheduled to carry out during August-September, 1994 and draft final report is to be presented by October 1994.

Studies for the EIA & draft EIA : EIA for Tangail has been completed in December 1992. For Sirajganj, a preliminary EIA has been made in the Annex 6 of the Draft Interim Report in June 1993. The final EIA will start during Oct.-Nov., 1994, after the submission of Draft Final Report on ecological survey, and is scheduled to complete before October 1995.

### **Resources management interventions**

Integrated Pest Management (IPM) : The IPM training programme has been initiated in April 1994 in cooperation with the FAO, Dhaka and the DAE, Tangail. The first training has started in chawk 4A of subcompartment 10. A total of 36 farmers have successfully completed their first session of training for a period of 8 hours. The same training will continue for more 22 hours in next 7 sessions covering in two cropping seasons. An elaborate IPM training programme has also been discussed to cover the total project area and is expected to start by the end of 1994.

# 10. STATISTICS OF ENVIRONMENTAL ACTIVITY IN THE CPP SHOWING ACTUAL PROGRESS VERSUS PLANNED SCHEDULE AS IN THE INTEGRAL PLANNING

TABLE 10: STATUS OF ENVIRONMENTAL ACTIVITIES IN THE GULF BROWARD COUNTY WATERSHED			Component		1994												1995				1996				1997				1998				Progress/Status		Remarks
Activities	Component		S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	I	II	III	IV	I	II	III	IV	I	II	III	IV	Upto May 1994				
Surveys and Studies Ecological Survey	S		1.2	1.2	2	2	2.4	4	-	1	2	2.4	5.6	2	2	4.5	6															40%	Progress is satisfactory and the work is expected to complete as per the revised schedule.		
Homestead Vegetation & Social Forestry/Homestead and Embankment Plantation	T		1.2	1.2	2	2	2.4	4	5.6																							70%	Field survey could not be completed as scheduled due to more time requirement, than it was estimated earlier, for counting species and number of plants. All plants above 10 years of age have been recorded in this survey and this took about one week time for each subcompartment. Started as scheduled but target could not be achieved due to the same reason as in Tangail compartment.		
Environmental Pollution	T		1.2	1.2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	95%	Started and completed one month ahead of the planned schedule.		
Wetland Conservation	S		1.2	1.2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	95%	Same as above		
Urban Health	T		1.2	1.2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	NYS	Delayed due to TAPP approval Will be contracted out soon after FPCO approval. Planning schedule will be revised during finalisation of the contract.		
																																	NYS	Same as above	
																																	NYS	Same as above	
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## Status Report : Women in Development

### Introduction

Since October 1993 (the last status report) activities which involved women, were mainly concentrated in the Tangail compartment, in SC 9, 10 & 11.

In the CPP Working Paper 94/03: 'Women's Involvement in CPP Activities', ideas, experiences and information on the past household surveys and consultation meetings have been reflected upon. The scope for future involvement of women in the implementation and O&M phases of the project are elaborated on. This document gives the outline for the WID activities in CPP.

### Status of activities

- Start has been made to **integrate the 'women in development'** activities in all project components rather than to keep it as a separate discipline. Practically this means that each group, Engineering, Socio-Economics and Bio-Resources has to be aware of a gender sensitive approach in its activities. A **gender methodology planning training** has taken place in which most of the consultant and project team staff participated.

- In the ToR of CPP it was acknowledged that an increasing number of women require wage labour for the subsistence of their households. In the Needs Assessment women also expressed their wish to be involved in income earning activities within the project. The construction programme of CPP gives scope for landless women (and men) to be involved in earth works. 30 - 50 % of all earth works undertaken are reserved for **Labour Contracting Societies (LCS)**, of which at least 50 % is planned for women. This year this percentage has not been reached.

Three women LCS groups (originating from MSS groups of BRDB) could be organized. They have been given earth work for re-excavating part of a khal. The work of two groups has been finished but is awaiting final measurement by the BWDB, before final payment can take place.

- Due to the non-cooperation of some NGOs, the women **Water User Groups (WUG)** representatives from the three SCs have been chosen from the groups of Grameen Bank and BRDB. All the five meetings (1 in SC9; 2 each in 10 & 11) have been completed. The attendance of women in the meetings was satisfactory.

However, recently the SC-boundaries have been changed to better fit with the different catchment areas. Therefore, female representatives for the SCWMC have to be re-elected. This is currently ongoing.

Female representatives have been elected for SC 9 as per new boundary.

- A discussion is going on concerning the relevance of a single **'women' interest group**. Especially related to the WUG-concept this idea is reviewed. Activities are undertaken to assess the possibilities of involving women in the farmers, the fishermen and the landless interest groups.

- The scope of involving women in **Embankment Maintenance Groups (EMG)** in CPP is now under consideration. The EMG is to take care of the maintenance of newly rehabilitated embankments. This preparation is actively done in cooperation with System Rehabilitation Programme.
- The library has been updated with articles on relevant WID issues. They are categorized in methodology, experience in other projects&programmes, position of Women in Bangladesh/ Islam Society.
- The input of the WID short term consultant, who is now present in the project, will also cover a full review of the WID activities in CPP.

## Status Report : Institutional and Training

### Introduction

Development in the field of Institution building and training received serious re-organization and re- adjustment activities due to introduction of **systems** approach in between SCWMC and the WUGs. This new concept has also changed the Sub Compartmental boundaries and resulted re- anchoring the already formed institutions into the new destinations. Understanding the systems and practical implications of these took considerable time to obtain mandatory decision on the issue. On the 17th of May, 94, the Project Director, in a meeting has consented to follow the systems for hydrological management unit and the re- adjusted Sub Compartment boundaries for SC 9, 10 and 11, for all practical reasons.

This paper describes progress only in the Tangail Compartment. Nothing significant has been taken up in Sirajganj beyond the activities reported in the Annual Report 1993.

Engaging the supporting agencies, both Govt. and Non Govt., and activating those for practical works in the field was found not so easy task. Due to lack of clear instructions from the department concerned, it was not possible to activate those in full scale. Sudden stand from the NGOs not to cooperate with CPP has further made the situation difficult, specially in the Socio Economic section.

However, following the CPP guidelines for institutional settings for different level, different beneficiaries, organization of field level institutions were tried to be formed.

### Institutionalization: conceptual frame and strategies

- Different approaches to try in Compartments/ Sub-compartments, proposed by POE and discussed further in FPCO have not come into concrete result. Status of the issue stands with no change as reported in the Annual Report 1993.
- Strategy for formation of Water Use Groups covering all the beneficiary groups has been outlined in June 1993. Following this strategy group formation is almost complete in SC 9, 10 and 11.
- Methodologies for formation of LCS(Landless Contracting Societies) has been prepared and approved by the BWDB in December 93. Considering the organizational strength of Grameen Bank and willingness of the women groups as well as the Bank people, a separate guideline may well be developed to activate GB and its organizational force to achieve CPP objectives.
- A separate guidelines for EMG is under process to engage the women groups and create employment procedure for them. Like LCS, SRP guidelines will be followed for EMG, taking into account an evaluation of ongoing schemes of road maintenance by other agencies such as CARE, UP, NGO's etc.



### GO/NGO cooperation: role & responsibilities

- Roles and responsibilities of the related GOB departments, as identified and proposed from CPP still suffers procedural formalities for approval by the competent authority.
- Roles and responsibilities of the NGOs formulated in the project document had no scope to share among the NGOs themselves in the construction phase. Beginning of 1994 was rather a trial period to involve the NGOs in the implementation but it resulted in a negative answer ( except BRAC and Grameen Bank).
- Result of the recent negotiation of the involvement of the organizations in the project have showed that, Grameen Bank as the poor people's bank organization is well established and has extended their activities in all the SCs. Most of the landless and women cooperatives belong to this organization. In absence of the general non cooperation of other NGOs, it was found not difficult to organize women meetings only with the GB clientele.

### Institutional setting: people's forum/management avenue

- **Steering Committee**  
The initial shape proposed was modified several times and has now been in question from the higher authority in terms of justification and functions. The Ministry has proposed to anchor the functions of the steering committee with the normal District Coordination Committee - DCC. It is very important to note that, the SCWMCs when will be in action this year will need regular advise and counselling from the PSC(in absence of CWMC) and that's why it is urgently emphasized to settle the formation of such representative committee at Compartment level. The next couple of months will be a key period to decide the management top body/ board formation.

### Water User Groups:

Clear agreement has yet not been made with DAE to allow their Block Supervisors to act as the organizer for forming the Water User Groups. However, contacting the local authorities of DAE, it was tried to engage them at a limited scale and the BSs were present in the organizing meetings of farmers Chawk committee .

**Farmers Water User Groups:** Following the CPP strategy paper, formation of Farmer Water User groups have been completed in SC 9, 10 and 11, Tangail. In total 26 groups would be in action in these prioritized three Sub- Compartments.

Experience from the field, while forming the Farmers Committee, in general found enthusiastic and encouraging. It was possible to better explain the project than previously. The crop demonstration for the farmers last year has tremendously increased the interest of the farmers in the project activities and they have showed increasing interest to be involved in the planning and implementation. Though it was not possible to list 100% of the farmers owning plots in different chawks, more than 90% was admitted by the farmers to be correct. Union parishads were involved to let the farmers inform of the Water Committee formation meetings and that did work. All most all the bari (households) were represented in the meetings.

**Fishermen Water User Groups:** To institutionalize the interest of the fishermen community within the project area, it was felt necessary to carry out a detailed survey of the professional fishermen in the area. All the professional fishermen families have been surveyed in SC 9, 10 and 11. All the fishermen were called in 3 separate meetings in the SCs and 6 representatives of the fishermen groups were selected (for SC 9, 10 and 11).

**Women Water User Groups:** Due to the non cooperation of NGOs recently, it was not so easy to organize women meetings to select women representatives. However, with the great help of Grameen Bank, BRAC and BRDB, all the 5 meetings planned for three SCs have been completed. Women in their meetings have selected their representatives for three SCs.

**Water User Groups for Landless:** All the planned meetings with the landless groups of BRDB and GB have just been completed in SC 9, 10 and 11 and representatives have been selected for SCWMC.

### Sub compartmental water management committee (SCWMC)

Base work for formation of the SCWMCs is the formation of Water User Groups. It is expected to form three SCWMCs in SC 9, 10 and 11, in the first week of June 94. The detail water management plan would be discussed in the first training session for the SCWMCs to be organized in July 1994. Representation of the women beneficiaries of the project, at SCWMCs are advocated to be increased per SC. For details of the proposal, reference is made in the Women Involvement in CPP, working paper 02/94.

### Training

- TARD (Technical Assistance for Rural Development), a training development NGO has designed the training packages for the WUGs and the Field Coordinators of CPP, DAE, NGO and BRDB. Training programmes were scheduled for April and May 94 but due to unavoidable circumstances it could not be held.
- BARD, Comilla is in contact to organize, design a course for the Steering Committee members. Implementation of the same course needs policy agreement on the steering committee issue.
- AIT, Bangkok has been in contact to design a course comprising **Integrated rural development** for the relevant department heads at district level including BWDB officials (the course is scheduled for mid August 94). Approval on the same and necessary action is expected from the MIWDFC.
- 4 field staff members have recently been recruited for Special Fishery Studies and under gone 2 days class room training and 7 days field training at MAEP, Mymensingh.
- Approximately 164 male and 48 female pond owners have been given 1 day orientation training on pond culture fishery as a part of the fishery mitigation plan during this quarter.

- 4 female and 22 male Group leaders and Asst. Group leaders of the LCSs, 8 Inspectors of BRDB have been called for a two days orientation training. Socio Consult, a professional firm has imparted the training as part of their contract. On the job training is on going for other members of the groups.

#### Seminar/workshop/study tours

- A 2 days brainstorming session was organized and conducted with all the consultants and BWDB project officers to plan and prepare action plan for future. Immediate problems of the project were identified, probable solutions were recommended and the overall organizational priorities were set up as the outcome.
- Need for workshop/ seminar/ meetings, for the whole year, were identified and scheduled with time frame and forwarded to FPCO for approval (local and national level).

#### Institutional survey, Tangail

Detail institutional survey covering the GO/ NGO institutions in the project area has been updated. The survey result shows that there are 5 Non Governmental Organizations organizing landless and women groups mostly in the Tangail project area. These five NGOs are SSS, BURO- Tangail, BRAC, Nijera Kori and Grameen Bank. These NGOs have so far organized and working with 325 male and 1557 female groups consisting 2,167 male and 10,219 female members. Remarkable finding is that, the GB alone organized and provide supports to 66% for male and 52% women members of the total NGO coverage in the project area (details of NGO coverage will be available in forthcoming working paper). It is therefore, recommended to encourage GB groups more and actively to be involved in the CPP non structural intervention process along with BRDB groups. The following tables will be enough to explain the coverage of GB for example in # SC 9, 10 and 11:

**Landless male groups and members:(as per old SC boundary)**

ORG.	SC 9		SC 10		SC 11		Total	
	Groups	Members	Groups	Members	Groups	Members	Groups	Members
BURO	2	10	0	0	0	0	2	10
SSS	2	7	0	0	0	0	2	7
GB	6	30	16	80	20	100	42	210
BRAC	0	0	0	0	0	0	0	0
BRDB	0	0	1	20	7	162	8	182
Total	10	47	17	100	27	262	54	409

**Landless female groups and members:(as per old SC boundary)**

ORG.	SC 9		SC 10		SC 11		Total	
	Groups	Members	Groups	Members	Groups	Members	Groups	Members
BURO	15	65	0	0	9	45	40	111
SSS	60	201	13	375	4	116	73	691
<b>GB</b>	<b>153</b>	<b>765</b>	<b>112</b>	<b>560</b>	<b>82</b>	<b>410</b>	<b>347</b>	<b>1735</b>
BRAC	10	86	11	79	3	21	24	186
BRDB	2	69	2	60	2	95	6	224
Total	240	1195	138	1074	100	687	490	2947

An intensive survey was carried out to make inventory of all the **professional fishermen** in SC 9, 10 and 11. Survey result shows that there are 44 families consisting of 259 family members in SC 9, 19 families consisting of 90 family members in SC 10 and only 9 family consisting of 44 family members live in SC 11.

**Progress monitoring**

To report on the gradual development of the Institutional and training aspects, quarterly progress monitoring system has been developed. Achievement as per plan, over and under achievement including explanation will be reported from now on ward. First attempt, following the same was made in the quarterly report No. 11 covering Jan - March 1994.

## Status Report : Mitigation Measures

One of the aims of the CPP is to adequately mitigate areas and sectors which are negatively impacted by the proposed interventions of the project. Mitigation measures have been proposed so far for the following sectors, fisheries, boat navigation, impact areas of the Tangail compartment including refuge sites. Measures proposed have the logic in comprehensive in-depth studies in each sector.

### Fisheries

In-depth study : A comprehensive 2-year 'Special Fisheries Study' looked into aspects of catch assessment, reproductive behaviour of beel dependent fish, hatchling migration route and aquaculture status within the project area (Details are in Status Report : Fisheries).

Impact: Based on the above study, the at present fish production is estimated at 522 tons/year. In a project situation of construction main inlet at the Lohajang river, peripheral regulators and other minor regulators will result in a loss for water or fishing area within the compartment and estimated to incur a loss of 97 tons of fish production annually.

Habitat	At present situation	With project interventions	With project + Mitigation
River	44	44	44
Beel	127	57	57
Floodplain	183	156	213
Pits and Derelict ponds	26	26	26
Aquaculture	142	142	287
Total	522	425	627

Measures: With the implementation of fisheries mitigation measures described below, the project aims to mitigate this loss. It is estimated that with additional activities on floodplain fisheries, implementing Beel concept and through development of aquaculture, these losses will not only be mitigated but an additional 105 tons of fish production can be obtained annually.

- A. Increased natural recruitment : The objective is the restoration and facilitating the migrating route for the riverain species to the floodplain. To get an enhanced projection in the floodplain, the culture based fisheries are designed where fingerlings are released. However, the increased recruitment is possible naturally. The findings of the hatchling migration study shows that the peak level of hatchling in the Lohajang river varies between 0.5 to 1.5/m<sup>3</sup> in 1992 and 1993. A peak level of 6 to 7 hatchlings/m<sup>3</sup> could be expected in 1993 if the densities in the Dhaleswari river and timing of peak are taken in to an sand rim, siltation of the bed of the Lohajang

river from Paikmuri to Ramdebpur are probably the cause. Proposal to re-excavate this section was delayed due to land acquisition procedures.

- B. Aquaculture extension programme (Tangail compartment) : To ensure estimated production of 287 tons/year instead of the present 142 tons/year through aquaculture, an extensive extension programme has been drawn. It is planned that ponds of the whole Tangail compartment will be brought under this programme in three years in line with the schedule of physical development.

The three different major steps of this programme are :

Motivation : The aquaculture extension programme starts with motivation programme among the targeted pond owners before real operation for pond preparation. Owners of standard ponds, known already from the inventory, are called in a village meeting place. Pond owners are explained regarding the programme and the package i.e. availability of both training and credit support. The pond owners are provided with cost and benefit analysis for their ponds. During the motivation programme a list of the participating pond owners interested trainees are made.

Training : The project has developed a training programme. To provide them with the technical know how of scientific culture, the pond fish farmers are provided by training at the pond site. Their training is conducted by the trained extension worker and the fisheries biologists.

Establishment of credit support : The important bottleneck in the development of aquaculture in the project area seems to be lack of credit support. A proposal for the establishment of credit facilities has been agreed on by the Janata Bank. Janata Bank has agreed to provide credit to the pond owners against guarantee money provided from the project. DOF will be cooperating in loan appraisal.

- C. The beel concept : The protection of reproductive area of 'Beel' fish in order to guarantee recruitment of this group. Results of the Special Fishers Study indicated that the reproduction of Puti (*Puntius sophore*) is triggered by an increase in water level in the beel and that a water level rise of more than one meter is needed. It is proposed to maintain this water level rise in the beel through the introduction of a sill level which is 1.5 m above the average minimum dry season water level.

Beel	Minimum dry season WL (m)	Desired pre-monsoon WL (m)
Jugini Beel	8.85	10.45
Krishnapur Beel	8.85	10.25
Ghatakbari Beel	8.70	10.50
Baro Beel	8.70	9.50

Introduction of beel concept will allow the beel dependent fish to reproduce in time and thereby guarantee the recruitment of beel dependent species to the floodplain.

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## Boat navigation

In-depth study : A detailed boat traffic survey of major navigation routes was conducted. Two of them are via Lohajang river and Sadullapur khal. These routes are operative only during monsoon season. Construction of main inlet is proposed over Lohajang river and a peripheral regulator on the Sadullapur khal.

Impact : The minimum daily boat movement is 65-70 on Lohajang and Sadullahpur routes. The volume of cargo and business items carried by the boats for marketing is also quite significant. A considerable number of people is also engaged in boat plying profession. Without mitigation measures, boat navigation may be hampered.

### Measures:

- The vent size of the main inlet is kept 3 m wide enough for passing of small boats
- All the gates will be kept open till mid-July or later depending on the flooding situation of the year
- Improvement of road connecting the main inlet and the Tangail town.
- Improvement of alternative access road such as Ramdebpur - Jugini hat - Tangail road has been done
- Construction of mooring places for loading and uploading of cargo
- Training of professional boatmen to trades of their choice.

## Tangail adjacent areas including refuge sites

Areas adjacent to Tangail compartment have been subdivided into six smaller units, E1 through to E7 excluding E5. E1 has recently been incorporated within the compartment. E2, E3 and E4 are northern and E6 and E7 are southern sub-compartments.

In-depth study : A model simulation has been performed to measure the impact on adjacent areas on the assumption that all the peripheral control structures are closed, Gala Khal is re-excavated and land elevation on 1964 map is exact.

### Impact : From model simulation, the following can be concluded :

- The highest rise of waterlevel is in the area just upstream of the compartment (0.40 to 0.50m). A higher flood gives a relatively lower rise in waterlevel. The latter phenomenon is found for all areas.
- The impact on the Pungli floodplain is considerable. At the confluence of the Pungli with the Gala khal a raise of 0.30 to 0.35 m is found. The rise in waterlevel extends up to some 10 km in up- and downstream directions with normal slope.
- The impact on the Dhaleswari river is modest; ranging from 0.05 to 0.07 m while the effect extends about 10 km in up- and downstream direction.
- There is no effect on the waterlevels on the southern boundary.

In the E2, E3 and E4, the impact of the interventions is as follows:

## Impact of Flood depth on area E2, E3 and E4

Area		Water level m. PWD	Gross Flooded area in hectares					Total
			F0	F1	F2	F3	F4	
E2	WOP	12.35	12	121	447	263	34	877
	WP	12.50	2	69	441	331	34	
E3	WOP	12.00	116	274	174	0	0	564
	WP	12.20	10	144	392	18	0	
E4	WOP	12.60	35	331	164	19	7	556
	WP	12.82	6	258	258	27	7	

The E2 and E3 are the most severely affected areas. The average level rise in these areas is around 20 cm.

Proposed measures:

Refuge sites : After a thorough investigation, physical survey and consultation with local people including Chairmen of the area, a total of 17 refuge sites have been recommended for development.. Refuge sites will be used as shelter space in the event of water level rise as observed in the model simulation. Refuge sites are proposed for construction in the FY 1994-95 under the FFW programme of the O&M Division of the BWDB.

Sub-compartment development:

Area E2: Control or regulation in the mouth of the Bara Basalia khal along with the embankment. The existing road will used for this purpose.

- Gala side existing road needs to be raised. The sill level of the homestead in between the Gala khal and the road to be raised.
- The village roads to be raised.
- Necessary inputs to be provided to put the tubewells in flood-free locations.
- People of the area be informed about the increased water level in advance so that they can prepare themselves to face the flooding situation.

Area E3: Control or regulation on the entry point (northern side, near Ghosher Gagarjan)

- Re-excavation of Basuria khal (as suggested by some local people) to drain excess water from Lohajang to Pungli via Choto Basalia branch of Gala khal may be undertaken after a detailed survey.



**Area F4: Control over the Chowdhury Malancha khal**

- Raising of existing road along the Lohajang river.
- Raising the homestead level (which remains outside the existing road).
- Raising of the road from Mirpur to Ramdebpur (via Chitkibari) may be considered.
- The Chitkibari beel bank be raised (as required) and developed (with fishery and afforestation programme) to turn it into a common property resource for the area.

**Development of new compartments**

The best mitigation measure for adjacent areas will be to develop those areas as new water management-compartments. This is now being discussed and definite area delineation of adjacent compartments will be available shortly. Areas previously considered for Mogra - Gala and Kamar Naoga projects can be proposed as new compartments for possible consideration.

# Annex 1: Construction programme and progress upto May/94 Cluster IA (peripheral control)

## CONSTRUCTION PROGRAMME & PROGRESS UP TO MAY/94. CLUSTER I-A (PERIPHERAL CONTROL)

Sl. No.	Item of works.	Unit	Qty	Approx. Cost (Lakh Tk.)	Sc. I L.P.	Tender Amount (Lakh Tk.)	Physical Target up to 30.6.94	Progress upto 31.5.94 Physical	Financial	Remarks.
1	2	3	4	5	6	7	8	9	10	12
01.	Construction of Regulator:									
i)	Inlet at Jugini - (5-vents)	No.	1	200.0	L.P.	197.44	0-70%	52%	67.58	
ii)	Inlet at Sadullapur (1-vent)	No.	1	58.3	7	57.60	0-50%	8%	-	
iii)	Inlet at Rasulpur - (1-vent)	No.	1	38.8	7	36.88	0-50%	66%	22.10	
iv)	Inlet Baruka - (1-vent)	No.	1	39.0	14	30.57	0-50%	29%	2.25	
v)	Inlet Suruj - (1-vent)	No.	1	30.0	1	30.97	0-50%	69%	19.33	
	Sub Total:	No.	5	366.1		353.40			111.26	
02.	Modification									
a.	Closure of Culvert:									
	b. Raising Sill Level Culvert.									
	c. Modification of sluice.									
i)	Bara Belta	No.	1	2.4	12	0.69	0-100%	100%	0.55	
ii)	Indra Belta	No.	1	2.4	12		0-100%	100%		
	Sub Total:	No.	2	4.8		0.69			0.55	
03.	Minor Regulator (CDO/Weir) Control structure:									
04.	Bridge/Culverts/Pipe culverts/ Irrigation Pass/Drainage									
05.	Excavation/Re-excavation of canal	Km.	1.94	7.1	16	7.51	0-100%	70%	3.06	
i)	District khal									
	Sub Total:-	Km.	1.94	7.1		7.51			3.06	
06.	Upgrading of Compartmental Embankment.									
A. 1)	New Construction.									
i)	Rasulpur to Salina	Km.	0.50	6.0	17	69.46	20-20Km.	70%	47.58	The 20 km target including the quantity of cluster I-B of sl no.6
ii)	Dapnagar to Nathkhola	Km.	1.45	17.6	1					*2.20 Km. Carried Over Work.
A. 2)	Resectioning									
i)	Rasulpur to Salina	Km.	1.85	31.0	17					
	Sub Total:	Km.	5.80	54.6		69.46			47.58	

CONSTRUCTION PROGRAMME & PROGRESS UP TO MAY/94.  
CLUSTER I.A (PERIPHERAL CONTROL)

Sl. No.	Item of works.	Unit	Qty	Approx. cost Lakh Tk.	Sc. #	Tender Amount Lakh Tk.	Physical Target up to 30.6.94	Progress upto 31-5-94 Physical	Financial	Remarks.
1.	2.	3	4	5	6	7	8	10	11	12
B.	Construction of Sub-Compartmental Embank.			0.00						
07.	Closure of Breach.			0.00						
08.	Improving Access Road:			0.00						
	Sub-Total:-			0.00						
09.	River Bank protection									
	1) Guni Kishore:	No	1	18.0	13	-	-	-	-	Work will be done through FFW in 94-95 by BWDB.
	Sub- Total:	No	1	18.0						
10.	Fishery Renovation work:			0.0						
11.	Construction of Meeting place: (Building)			0.0						
12.	Mitigation Measures			0.00						
13.	O&M during Construction			0.0						
14.	Water Retention: Model Work:			0.0						
	Grand Total:-			496.0		521.12			162.45	

CONSTRUCTION PROGRESS & PROGRESS UP TO MAY/94  
CLUSTER I-B (SUB-COMPONENT 9,10,11)

Sl. No.	Item of works.	Unit	Qty	Approx. Cost (Lakh Tk.)	Beel #	Tender Amount (Lakh Tk.)	Physical Target up to 30.6.94	Progress upto 31.5.94 Physical	Financial	Remarks.
11	2	1	1	5	1	6	7	10	11	12
<b>01. Construction of Regulator:</b>										
i)	Outlet at Dighuria (1-vent) Ro.	1	20.7	1	18.67	15-100%	99%	16.28		
ii)	Inlet at Khorda Jugini (1-vent) Ro.	1	28.0	3	25.45	75%-100%	100%	25.57		Carried over work.
iii)	Outlet at Kargari (1-vent) Ro.	1	56.3	11	50.00	0-100%	02%	27.78		
Sub total:		No.	3	105.0		34.12		69.63		
<b>02. Modification</b>										
a. Closure of culverts.										
On the embankment between Lohajang floodplain & Se # 11 at										
i)	Satia Ro.	2	0.5	11						Not taken up for want of detail plan.
ii)	Bhabanipur Patuli Ro.	2	0.5	11						
b. Raising Sill level culvert:										
i)	Rakhit Batia Ro.	2	0.6	11	12					
ii)	Sontosh Ro.	2	0.6	11	12					
Sub Total:		No.	8	2.2						
<b>03. Minor Regulator(CDO/Weir)Control structure at</b>										
i)	Daruya Choudhury Ro.	1	11.6	9	11	9.54	45-100%	100%	9.46	
ii)	Dighulia (1) Ro.	1	12.4	11	9.65	15-100%	100%	10.24		
iii)	Sontosh Ro.	1	35.0	11	56.80	0-100%	01%	23.00		
iv)	Krishnapur over Jugini khal Ro.	1	12.0	9	10.78	0-100%	40%	1.20		
v)	Beel Baghil Ro.	1	12.0	9	4.39	0-100%	65%	2.00		
vi)	Eidgh Mandan Ro.	3	12.0	9	9.05	0-100%	20%			
vii)	Bhangbata Ro.	1	12.0	11	24.00	0-100%				Kept postponed till Nov/94 for late approval of design.
viii)	Dighulia(2) Ro.	1	12.0	11	11.93	0-100%				Work could not be started for non availability of land.
ix)	Rampal - Ro.	1	12.0	10	10.81	0-100%	80%	5.88		
x)	Outlet of Singerkona beel Ro.	1	12.0	10	11.61	0-100%	72%	5.77		
xi)	Chillabari Ro.	1	11.9	11	16.51	15-100%	98%	9.42		
Sub-Total		No.	11	154.9		170.06		65.97		

\* This amount will be increased for change of design.

CONSTRUCTION PROGRAMME & PROGRESS UP TO MAY/94.  
CLUSTER I:B (SUB COMPARTMENT 9,10,11)

Sl. No.	Item of works.	Unit	Qty	Approx. cost (Lakh Tk.)	Sc. #	Tender Amount (Lakh Tk.)	Physical Target up to 30.6.94	Progress upto 31.5.94: Physical	Financial	Remarks.	
1	2	3	4	5	6	7	8	9	10	11	12
04. Bridge/Culvert/Pipes/Irrigation Pass/Drainage Pipe:											
A1)i) Over Singerkona Damya											
	Chowdhury Khal	No.	1	10.0	10.11	5.14	0-100%	15%	-	-	-
	ii) Alisa Kanda	No.	1	1.0	1.0	0.92	0-100%	-	-	-	Work just started.
	iii) Fatehpur Anechola road	No.	1	1.0	1.0	0.99	0-100%	-	-	-	do-
	iv) Chowbari	No.	1	1.0	1.0	3.67	0-100%	60%	-	-	-
	v) Over Chillaabari khal at Paeo Kaniha	No.	1	12.0	1.0	-	-	-	-	-	Deferred for want of design criteria.
	vi) Over Gaizebar khal near Sontoshbari	No.	1	12.00	1.0	-	-	-	-	-	Design not yet received.
	vii) Over Birnafair khal	No.	1	12.0	1.0	-	-	-	-	-	do-
	viii) Choto Birnafair	No.	1	6.0	10.11	9.81	0-100%	25%	-	-	-
	ix) Charpara	No.	1	6.0	1.0	8.16	0-100%	90%	2.80	-	-
	x) Sepura	No.	1	6.0	1.0	3.82	0-100%	-	-	-	Public consultation needed to start the work.
	xi) Sarutia	No.	1	6.0	1.0	1.50	0-100%	95%	-	-	-
	xii) Dighulia	No.	1	6.0	1.0	-	-	-	-	-	Deferred for non submission of design criteria.
	xiii) Birnafair	No.	1	0.5	1.0	1.05	0-100%	90%	0.44	-	-
	xiv) Fatehpur	No.	1	0.5	1.0	1.17	0-100%	25%	-	-	-
A2. i) Irrigation Pass											
		No.	4	4.0	4	-	-	-	-	-	Deferred for late design.
Sub Total :		No.	13	84.0	-	36.18	-	-	3.24	-	-
05. Excavation/Re-excavation of Canal											
	i) Jugini khal	Km.	4.30	3.8	9	3.42	1.60km	20%	0.26	-	-
	ii) Singerkona-Damya Chowdhury kl.	Km.	1.94	3.0	10.11	4.27	1.95km	-	-	-	Land problem.
	iii) Birnafair khal-Dhaleswari	Km.	1.80	4.8	10	3.94	1.75km	50%	1.03	-	-
	iv) Link canal from Singerkona beel to Birnafair khal Via Bara beel	Km.	1.00	6.0	10.11	4.91	3.00km	-	-	-	Land problem
	v) Fatehpur khal	Km.	3.00	6.0	10.11	-	-	-	-	-	Deferred due to change of plan.
	vi) Link canal from Dhalan beel to Singerkona beel	Km.	1.00	1.0	10	-	-	-	-	-	Need public consultation.
	vii) Khanpur Borroopit -	Km.	1.00	2.0	11	-	-	-	-	-	Deferred for non availability of land.
	viii) Sarutia khal	Km.	1.50	3.0	1EP	-	-	-	-	-	do-
	ix) Dithpur khal	Km.	0.56	1.6	9	1.31	0.55km	-	-	-	Not started due to land problem
	x) Rampal khal	Km.	1.10	3.0	10	2.83	1.10km	83%	1.21	-	-
	xi) Charpara khal	Km.	0.80	0.5	11	0.36	0.80km	-	-	-	Postponed for shifting of alignment.
	xii) Dighulia khal-	Km.	1.00	2.0	11	-	-	-	-	-	Deferred.
Sub Total:		Km.	18.50	36.7	-	21.06	-	-	2.50	-	-

CONSTRUCTION PROGRAMME & PROGRESS UP TO MAY/94.  
(CLUSTER I-B (SUB COMPARTMENTS 9,10,11))

Sl. No.	Item of works.	Unit	Qty	Approx. cost Lakh Tk.	Sc. 81 Amount Lakh Tk.	Tender	Physical Target up to 30-6-94	Progress upto 31-5-94 Physical	Financial	Remarks.	
1	2	3	4	5	6	7	8	9	10	11	12
06. Upgrading of Compartmental Embankment:											
A.1) New Construction											
i) Fatehpur advanced embankt.	Km.	2.30		27.6	10						
A.2) Resectioning											
i) Randeupur to Silimpur--	Km.	5.50		20.5	9,10						Progress shown in the cluster
ii) Randeupur to Rasulpur--	Km.	5.90		22.5	8,9						1A Sl.No.06 This Qty.(13.70) is included in the 20.20Km. target shown in 1A. Sl. No. 6.
Sub-Total:		Km.	13.70	70.6							
B. Construction of Sub-Compartmental Embankment:											
B.1 (old) Dithpur to Main-Inlet Jugini	Km	2.4		5.6	9	10.00	2.44km	65%		5.60*	
B.2 Pardighulia to Sarutia	Km.	0.75		2.0	11	6.95	0.50km	30%			
07. Closures of Breach.											
i) On Krishnapur-Khana Sharif Rd.	No.	5		0.30	9						Deferred.
08. Improving Access Road-											
i) Road from Dithpur to Shibpur	Km.	3.2		55.2	9	51.36	3.20km	90%		44.14	
09. River Bank Protection											
10. Fishery Renovation work											
	LS.	1		11	9,10,11						
11. Construction of Meeting Place(Bldg)LS											
	LS	1		11							Deferred due to non availability of land.
12. Mitigation Measures:											
i) At Kagnari Regulator site (Morring place)	No.	1		10	11						Plan not yet finalized.
ii) At Shibpur (Mooring place)	No.	1		10	9						
Sub-Total						68.32				49.74	
13. O&M During Construction											
	L.S	0		0	9,10,11						Not required this year.
14. Water Retention Model Work											
i) Sub-Compartment # 9,10, & 11	L.S	1		1.0	9,10,11						System design not yet finalized.
Grand Total:-				605.0		389.74				191.08	

\* Payment made during 1992-93.

PROGRAMME & PROGRESS OF ADDITIONAL WORKS  
( NOT INCLUDED IN CLUSTER I:A & I:B )  
UPTO 31-5-94.

Sl. No.	Item of works.	Unit	Qty	Approx. cost Lakh Tk.	Sc.#	Tender Amount Lac Tk.	Physical Target up to 30-6-94	Progress upto 31-5-94 Physical	Financial	Remarks.
1	2	3	4	5	6	7	8	10	11	12
1.	Dist. H.Q. Regulator	Nos.	1	49.00	8	54.38	0-50%	58%	25.09	
2.	Nagar Jalpai Regulator	Nos.	1	49.00	4	54.61	0-50%	61%	21.22	
3.	Bathkura Regulator	Nos.	1	49.00	2	53.05	0-50%	50%	18.13	
4.	Salina Regulator	Nos.	1	15.00	7	11.61	0-100%	94%	6.85	
5.	Sadullapur Khal.	Km.	6.90	22.30	7-6-b	17.04	100%	100%	11.60	
6.	River Bank Protection:									
i)	at Pach Betor:	No	1	60.00	5	86.18	0-100%	45%	26.43	
ii)	at Par-dighulia-	No.	1	10.00	16	15.23	0-100%	58%	4.05	
Total				254.30		292.10			113.37	

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**Annex 2: Technical notes and working papers**

The non-structural output of the project will comprise of a series of Reports, Guidelines and Manuals (CPP ToR, page 6). Annual Report (1993) of the CPP contains a complete list of publications. An updated list of publications till May 1994 is available. Publications during January - May 1994 are listed below:

**TECHNICAL NOTES**

TN 94/01	Refuge Site Identification Survey	January 1994
TN 94/02	Boat Traffic Survey	February 1994
TN 94/03	Crop Demonstration Programme in SC 9, 10, 11 of Tangail	April 1994
TN 94/04	Proc. of Workshop on Gender Planning Methodology; Training Session	May 1994
TN 94/05*	Environmental Pollution Survey	May 1994
TN 94/06	Planning and Design Features, Tangail Compartment (in preparation)	
TN 94/07*	Institutional Setting in SC 9, 10, 11 of Tangail	May 1994
TN 94/08*	Planning and Design Features, Sirajganj Compartment	May 1994

**WORKING PAPERS**

WP 94/01	Aquaculture Extension Programme: Proposal for Establishment of a Credit System for Fish Pond	January 1994
WP 94/02	The Aquaculture Extension Programme: Action Plan including inventory of ponds for SC 9, 10, 11	February 1994
WP 94/03	Women's Involvement in CPP Activities	April 1994
WP 94/04	Water Management SC 9, 10 & 11: Tangail Compartment (2 volumes: Vol.1, Text Vol.2, Figures/Annexures)	May 1994

**GUIDELINES DOCUMENTS**

GD-02*	Guidelines on People's Participation in the Planning and Design Phase of Compartments	May 1994
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**OTHERS**

Quarterly Progress Report No.11 (Jan-March 1994)	April 1994
Construction Program 1993-94: Design Criteria; Cluster 1B, Tangail Compartment (Compilation)	May 1994
Construction Program 1994-95: Design Criteria; Cluster II, Tangail Compartment	May 1994
Construction Program 1994-95: Design Criteria; Cluster III, Tangail Compartment	May 1994
Construction Program 1994-95: Design Criteria; Cluster IB, Sirajganj Compartment	May 1994

\* Draft available.



