IMED: 04/2003(Revised)



## BANGLADESH WATER DEVELOPMENT BOARD

PROJECT COMPLETION REPORT

IMED FORM NO.: 04/2003 (Revised)

NAME OF PROJECT:

PROTECTION OF CHANDPUR IRRIGATION PROJECT FROM THE EROSION OF THE MEGHNA RIVER (1ST PHASE,

REVISED)

DIVISION

ECHANDPUR O&M DIVISION, BWDB, CHANDPUR

CIRCLE

CHANDPUR O&M CIRCLE, BWDB, CHANDPUR

ZONE

8 NORTH-EASTERN ZONE, BWDB, CHANDPUR.

#### Government of the People's Republic of Bangladesh Ministry of Planning Implementation Monitoring and Evaluation Division

PROJECT COMPLETION REPORT: IMED 04/2003(Revised)

#### A. PROJECT DESCRIPTION:

01. Name of the Project

: Protection of Chandpur Irrigation Project from the erosion

of the Meghna river (1st Phase, Revised).

02. Administrative Ministry/Division

: Ministry of Water Resources

03. Executing Agency

: Bangladesh Water Development Board

04. Location of the Project

: Charbhairabi under Haimchar upazilla, District- Chandpur

05. Objective of the Project

The main objective of the project is to protect the embankment of Chandpur Irrigation Project and to safeguard the project area which is spread over the part of Chandpur and Lakshmipur district including its agricultural land, homestead, Market, School, College, Madrasha, Mosque, Mondir and road communication from devastating erosion of the Meghna river.

#### 06. Estimated Cost

(In Lakh Taka)

		(III Lanii Tana)
	Original	Latest Revised
(a) Total	4073.90	4480.42
(b) Taka	4073.90	4480.42
(c) Foreign Currency	-	•
(d) Project Aid	-	-
(e) RPA	-	-

07 Date of Approval : PCP DPP

(a) Original

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14-09-2006

(b) Latest Revised

30-01-2008

08. Implementation

	Date of Commencement	Date of Completion		
(a) Original	01-07-2006	30-06-2009		
(b) Latest Revised	01-07-2006	30-06-2009		
(c) Actual	01-07-2006	30-06-2010*		

<sup>1(</sup>one) year time extension from 01-07-2009 to 30-06-2010 is approved by Ministry of Water Resources vide Memo. No. পাসম/পরি-শা-৪(৭)/ ২০০০/৪১৪, তারিখ ঃ ২১/০৬/২০০৯.

- 09. Financing Arrangement (Source-wise)
- 9.1 Status of Loan/Grant
- a) Foreign Financing

, ,	Amount in Nature		Date of	Date of	Date of Closing		
	as per Agreement	US\$ (Million)	(Loan/Grant/ Supplier/s/ credit)	Agreement	Effective- ness	Original	Revised
1	2	3	4	5	6	7	8

## b) GOB:

(In lakh Taka)

and the second s			(III lakii Taka)
Total amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
4480.42	-	4480.42	•

## 9.2 Utilization of Project Aid : (source wise)

(In million)

Source (s)	Total amount		Actual ex	cpenditure	Unutilized Amount	
	In US\$	In Local currency	In US\$	In Local currency	In US\$	In Local currency
1	2	3	4	5	6	7
			Not applicable			

### 9.3 Reimbursable Project Aid (RPA):

(In lakh Taka)

R P A Amount		Amount	Amount	Remarks
As per Agreement		Claimed	re-imbursed	
2 .	3	4	5	6
	•		Agreement 2 3 4	Agreement 2 3 4 5

## 01. Implementation Period:

Implementation	Period as per DPP	Actual	Time Over-run (%	Remarks
Original	Latest Revised	Implementation Period	of original implementation period)	
1	2	3	4	5
2006-2009	2006-2009	2006-2010	33.33%	

## B. IMPLEMENTATION POSITION

## 02. Cost of the Project:

(In lakh Taka)

	Estimated Cost		Actual	Cost over-rum	Remarks
Description	Original	Latest revised	expenditure	(% of original cost)	
1	2	3	4	5	6
TOTAL	4073.90	4480.42	4296.08	5.45	
TAKA	4073.90	4480.42	4296.08	5.45	
PA					

#### 03. Project Personnel:

Sanctioned	Manpower	Status o	f the existing ma	npower	Manpower Employed		
strength as per DPP	employed during execution	Manpower requirement for O&M as per DPP	Existing manpower for O&M	Others	Male	Female	
1	2	3	4	5	6	7	
Officer (s)	7	7	7		7		
Staff (s)	14	14	14		14	A THE RESIDENCE OF THE PROPERTY OF THE PERSON OF THE PERSO	
Total:	21	21	21		21		

<sup>\*</sup> The project is implemented by he existing manpower of BWDB. No separate manpower is engaged for the project.

## 04. Training of Project Personnel (Foreign/Local):

Field of	Provision	as per DPP	Ac	Remarks	
Training/ Study tour/workshop/ Seminar etc.	Number of person	Man-months	Number of person	Man-months	
1	2	3	4	5	6
a. Foreign			Not applicable		
b. Local	COMPANIE CONTRACTOR OF THE CON		Not applicable		

Items of work	Unit		per DPP)		Progress	Reasons for
(as per PP)		Financial	Physical (Quantity)	Financial	Physical (Quantity)	deviation (±)
1	2	3	4	5	6	7
Survey & investigation	L.S	2.00	1 item	1.99	1 item	The physical progress is equal to the targeted quantity as per DPP. But the financial progress is less than the DPP amount due to less quoting amount by the Contractor.
Office Stationary	L.S	3.00	1 item	3.00	1 item	
Repair & maintenance of existing Vehicle with fuel	L.S	8.00	1 item	8.00	1 item	
Photocopier (Speed 35 page per minute)	No	1.50	1 No	1.49	1 No	The physical progress is equal to the targeted quantity as per DPP. But the financial progress is less than the DPP amount due to less quoting amount by the Contractor.
Computer with Printer P-4	No	1.00	1 No	1.00	1 No	
Leveling Machine with staff, stand & Plane table	No	1.00	1 No	0.99	1 No	The physical progress is equal to the targeted quantity as per DPP. But the financial progress is less than the DPP amount due to less quoting amount by the Contractor.
Motor Cycle (125 CC)	No	5.00	3 Nos	5.00	3 Nos	
River Bank Protection from km. 72.174 to km. 74.874=2700m	m	4274.92	2700 m	4274.61	2700 m	The physical progress is equal to the targeted quantity as per DPP. But the financial progress is less than the DPP amount due to less quoting amount by the Contractor.
O&M during construction	m	10.00	2700 m			This Item of DDP was not required and no expense was incurred.
Sub-Total	and the second s	4306.42		4296.08		
Cost escalation=		174.00	1 item			
Total =		4480.42		4296.08		

## 06. Information regarding Project Director (s):

Name & Designation with pay	Full time	Part	responsible for	Da	ite	Remarks
Scale		time	more than one project	ne Joining Transfer		
1	2	3	4	5	6	7
Mr. Md. Shahidur Rahman Superintending Engineer Scale: 29000-35600/=	Full time	-	Yes	28-11-04	12-12-07	
Mr. Md. Hafizur Rahman Superintending Engineer Scale: 29000-35600/=	Full time	=	Yes	12-12-07	07-01-10	
Mr. Reazuddin Ahmed Superintending Engineer Scale: 29000-35600/=	Full time	•	Yes	07-01-10	Till today	

## 07. Procurement of Transport (In Nos.):

Type of transport	Number as per D.P.P	Procured with date	Transferred to Transport Pool with date	Transferred to O&M with date	Condemned/ damaged with date	Remarks
1	2	3	4	5	6	7
Motor Cycle	3 Nos	March/09				

## Equipment: Survey Instrument.

Type of transport	Number as per D.P.P	Procured with date	Transferred to Transport Pool with date	Transferred to O&M with date	Condemned/ damaged with date	Remarks
1	2	3	4	5	6	7
Leveling Machine with Staff, Stand etc.	1 set	March/09				

## 08. Procurement of Goods, Works and Consultancy Services:

## O8.1 Goods & Works of the Project costing above Tk. 200.00 lakh and Consultancy above Tk. 100.00 lakh

Description of procurement (goods/works/ consultancy as per bid document	Tender/Bid/Proposal Cost (in crore Taka)		Tender/Bid/Proposal		Date of completion of works/ services and supply of goods	
	As per DPP	Contracte d value	Invitation date	Contract signing/L.C opening date	As per contract	Actual
1	2	3	4	5	6	7
River Bank protection work by CC block and Geo-bag as per design & specification from km. 72.174 to km. 72.636 located at Charbhairabi in Haimchar upazilla in the district Chandpur under Chandpur O&M Division, BWDB, Chandpur during the year 2007-2008 (Package No. WD1)	600.00	484.75	28/11/07	20/02/08	22/06/08	30/04/09
River Bank protection work by CC block and Geo-bag as per design & specification from km. 72.636 to km. 73.098 located at Charbhairabi in Haimchar upazilla in the district Chandpur under Chandpur O&M Division, BWDB, Chandpur during the year 2007-2008 (Package No. WD2)	600.00	471.57	28/11/07	20/02/08	22/06/08	30/04/09

Description of procurement (goods/works/ consultancy as per bid document	Cost (in o	id/Proposal crore Taka)		Bid/Proposal	Date of completion of works/ services and supply of goods	
	As per DPP	Contracte d value	Invitation date	Contract signing/L.C opening date	As per contract	Actual
1	2	3	4	5	6	7
River Bank protection work by CC block and Geo-bag as per design & specification from km. 73.098 to km. 73.560 located at Charbhairabi in Haimchar upazilla in the district Chandpur under Chandpur O&M Division, BWDB, Chandpur during the year 2007-2008 (Package No. WD3)	600.00	467.26	28/11/07	20/02/08	22/06/08	30/04/09
River Bank protection work by CC block and Geo-bag as per design & specification from km. 73.560 to km. 73.926 located at Charbhairabi in Haimchar upazilla in the district Chandpur under Chandpur O&M Division, BWDB, Chandpur during the year 2007-2008 (Package No. WD4)	475.00	373.33	28/11/07	20/02/08	22/06/08	29/04/09
River Bank protection work by CC block and Geo-bag as per design & specification from km. 73.926 to km. 74.292 located at Charbhairabi in Haimchar upazilla in the district Chandpur under Chandpur O&M Division, BWDB, Chandpur during the year 2007-2008 (Package No. WD5)	475.00	374.31	28/11/07	20/02/08	22/06/08	30/04/09
River Bank protection work by CC block and Geo-bag as per design & specification from km. 74.292 to km. 74.658 located at Charbhairabi in Haimchar upazilla in the district Chandpur under Chandpur O&M Division, BWDB, Chandpur during the year 2007-2008 (Package No. WD6)	475.00	372.91	28/11/07	20/02/08	22/06/08	29/04/09
River Bank protection work by CC block and Geo-bag as per design & specification from km. 74.658 to km. 74.874 located at Charbhairabi in Haimchar upazilla in the district Chandpur under Chandpur O&M Division, BWDB, Chandpur during the year 2007-2008 (Package No. WD7)	475.00	380.54	28/11/07	20/02/08	22/06/08	28/04/09
Supplementary protection by additional work from km. 72.174 to km. 72.636 as per design and specification in connection with "Protection of chandpur irrigation project from the erosion of the Meghna river (1st Phase, revised)" under Chandpur O&M Division, BWDB, Chandpur during the year 2008-2009 (Package no.SPAW-1)	284.69	205.01	16//11/08	20/01/09	15/06/09	15/06/09
Supplementary protection by additional work from km. 72.636 to km. 73.098 as per design and specification in connection with "Protection of chandpur irrigation project from the erosion of the Meghna river (1st Phase, revised)" under Chandpur O&M Division, BWDB, Chandpur during the year 2008-2009 (Package no.SPAW-2)	296.01	221.96	16//11/08	20/01/09	15/06/09	30/04/09

## 8.2 Use of Project Consultant (s) (Foreign/Local) :

Name of the Field	Approved	man month	Actual man month	Remarks			
	As per DPP	As per Contract	utilized				
1	2	3	4	5			
a) Foreign :	Not applicable						
b) Local :	Not applicable						

#### 09. Construction/Erection/Installation Tools & Equipment :

## C. FINANCIAL AND PHYSICAL PROGRAMME:

## 01. (a) Original and revised schedule as per DPP:

(In lakh Taka)

Financial Year	Financial provision & physical target as per original DPP				Financial provision & physical targe latest revised DPP			arget as per
	Total	Taka	P.A	Physical%	Total	Taka	P.A	Physical%
1			4	5	6	7	8	9
2006-2007	1259.90	1259.90		30.92				
2007-2008	1566.30	1566.30		38.45	3746.29	3746.29	-	83.61
2008-2009	1247.70	1247.70		30.63	734.13	734.13		16.39
2009-2010					**			
Total	4073.90	4073.90		100	4480.42	4480.42		100

## 01. (b) Revised ADP allocation and progress:

(In lakh Taka)

Financial	R	Revised Allocation & target Taka Expenditure & 1			enditure & ph	ohysical progress			
Year	Total	Taka	P.A.	Physical	release	Total	Taka	P.A.	Physical
1	2	3	4	5	6	7	8	9	10
2007-2008	1200.00	1200.00	-	40	1200.00	1192.75	1192.75		35
2008-2009	1975.00	1975.00	-	44.64	1975.00	1974.97	1974.97		52.50
2009-2010	1128.62	1128.62	*	15.36	1128.37	1128.36	1128.36		12.50
Total	4303.62	4303.62		100	4303.37	4296.08	4296.08		100

#### D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT:

Objective as per DPP	Actual achievement	Reasons for shortfall, if any
1.To support sustainable river erosion mitigation in the region.	Supported sustainable river erosion mitigation in the region.	No short fall
2.Safety of assets and natural resources.	2.Provided safety of assets and natural resources.	
3.Environmental enhancement from river erosion hazards.	Improve environmental enhancement from river erosion hazards.	
4.Sustainable socio-economic enhancement.	Improve sustainable socio-economic enhancement.	

#### E. BENEFIT ANALYSIS

## 01. Annual Out-put:

Items of out-put	Unit	Estimated quantity expected at full capacity	Actual quantity of out-put during the 1st year of operation at full capacity (or during, real production for newly completed project)
2700m new protective work located at Haimchar upazilla under Chandpur district for protection of Chandpur Irrigation Project from the erosion of Meghna river.	m	2700 m	2700 m (Physical progress 100% as per schedule)

#### 02. Cost/Benefit:

Item	Estimated	Actual
<ul><li>(1) Benefit cost ratio of the project</li><li>(i) Financial</li></ul>		
(ii) Economic	Not applicable as the F	Project is service type.
(2) Internal Rate of Return		
(i) Financial		
(ii) Economic		

03. Please give reasons for shortfall, if any, between the estimated and actual benefit:

There is no short fall between the estimated and actual benefit.

## F. MONITORING AND AUDITING

## 0.1 Monitoring:

Name & designation of the inspecting official	Date of Inspection	Identified Problems	Recommendations
1	2	3	4
(a) Ministry/Agency: 1. Joint Secretary, Planning Commission	15/05/2009	No Problem was identified during the execution of the Project.	Instructed to complete the project in time.
(b) <u>IMED:</u>	14/02/2010	No Problem was identified during the execution of the Project.	IMED recommended to implement the Project within the stipulated completion time.
(c) Others: (Please specify)  1. Member, Irrigation, Water Resources & Rural Development Institutions Division of Planning Commission	26/02/2010	No Problem was identified during the execution of the Project.	Instructed to complete the project in time.

## 0.2. Auditing during and after Implementation:

#### 2.1 Internal Audit:

Period of Audit	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not
1	2	3	4
		₩ W	— — — — — — — — — — — — — — — — — — —

## 2.2. External Audit:

Audit Period	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not
1	2	3	4
2007-2008	04-12-2008		Resolved
2008-2009	09-02-2010	W 20	Resolved
2009-2010		M ==	

#### G. DESCRIPTIVE REPORT

- 1. General Observations/Remarks of the Project on:
- 1.1 Background

The Chandpur Irrigation Project is one of the most successful FCDI projects of the BWDB. The project is located about 5.00 km. south of Chandpur district Town along the left bank of lower Meghna river which is one of the largest river in the world and carries the combined flow of Padma & upper Meghna river. The project area of 57000 hac. comprises in the 6(six) upazillas viz Chandpur sadar, Faridgonj & Haimchar upazilla in Chandpur district and Lakshmipur sadar, Raipur & Ramgonj upazilla in Lakshmipur district. At the pre-project condition about 1.5 million inhabitants of this area was suffered badly by the severity of floods and drought in almost every year with resultant havoc in human lives and properties and uncertainty in agricultural production. To over come these, Chandpur Irrigation Project was taken up with the multiple objectives/targets of mitigating flood hazards and drought by providing comprehensive FCDI facilities and safety of local dwellers as well as enhancing economic and environmental condition.

The project is surrounded by 100 km. flood protection embankment. The south Dakatia river runs through the middle of the command area and in the northern closure of the river the Charbagadi Pump house and navigation lock with 6(six) pumps having a combined capacity of 34 M³/S (1200 cusec) has been constructed mainly for irrigation but it can also be used for drainage. In the outfall of the south Dakatia river, the Hazimara Regulator and navigation lock has been constructed to drain the excess water from the project. 6(six) small Regulator with 2 vent each having 1.83 m by 1.52 m in size in the peripheral embankment are also being used for drainage purpose. The project commenced in 1972-73 under IDA assistance at a total cost of Tk. 543 million and completed in 1978.

Chandpur Irrigation project implemented by the BWDB has come into being as one of the most potential water management project in Bangladesh. Prior execution of the project annual crop production of this region was 107052 m.ton worth at Tk. 600 million and afterwards its execution crop production accelerated to 356344 m.ton worth at Tk. 2500 million. Cropping intensity also enhanced from 151% at pre-project condition to 234% and this food deficit region has been turned into surplus in food grain production area by virtue of implementation of the project. Moreover implementation of the project created infrastructure by increasing job opportunity to jobless and destitute and other facilities like plantation, communication and planned fishery.

Devastating erosion of the Meghna river has been considered as the main threat of the completed project. The flood control embankment located at the western part of the project area was retired 4 (four) times since its implementation due to severe erosion of the Meghna river. Continuation of the river erosion practices along the embankment at Haimchar upazilla the river has again been engulfed 10.500 km embankment in between km. 72.000 to km. 82.500 making thousand of people homeless. Due to continued river erosion 42.08 km. retired embankment was erected. Lives, properties and natural hazards due to continued severity of erosion of the Meghna river are being effected and completed CIP (Chandpur Irrigation Project) area has been endangered. Therefore 1.5 million inhabitants of the project area panicked and filling insecure now.

There is long standing peoples demand for safety of CIP as well as immovable properties and human hazards from devastating erosion of the Meghna River. The Honorable Prime Minister, Govt. of the People's Republic of Bangladesh committed for early execution of the project. Accordingly a PCP was formulated and processed for approval by competent authority and considered in Pre-ECNEC meeting held on 21-03-2001 in the planning commission. Subsequently as per decision of the Pre-ECNEC meeting Mathematical model study for the project was conducted by IWM in 2003. But the proposed project cost seemed to high for execution by GOB finance solely. Accordingly as per decision of the planning commission on 01-09-2004 a PPP has been prepared and submitted with an estimated cost of Tk. US\$ 88.48 million (Tk. 5132.08 million) for searching potential donors through ERD. This big amount of foreign aid being a long process to be obtained, for immediate solution of the acute erosion problem, a project with an estimated cost of Tk. 1358.58 million for the protection of the river bank at a length of 4166m was prepared and the smae was discussed in the Pre-ECNEC meeting held on 06-08-2006 and the following decision has been taken.

#### 1.2 Justification/Adequacy

Safety of huge immovable properties, valued Tk. 12950.00 million (at current market price) located in the vicinity of affected area Char Bhairabi, will be ensured against proposed investment cost of Tk. 407.39 million. In this context proposed project seems viable as well as cost effective.

Moreover, cost per meter of proposed protective work stand at Tk. 0.286 million that seems as cost effective in comparison with other similar type of projects.

There is a direct relevance of the project to the objectives stated above. Immediate objective of bank protection from river bank erosion and the ultimate objective is the safety of lives & properties and its economic impacts will be fulfilled for improved environmental impacts.

As for its relevance with the water-sectoral objectives, the project is in line with the policy and macro-level plan objectives of GOB for poverty reduction as laid down in present 'Three Years Rolling Investment Programme' prepared as per directives of PRSP (Poverty Reduction Strategy Paper).

#### 1.3 Objectives

The objectives of the project is to provide safety of the flood control embankment of Chandpur Irrigation Project, human lives, properties and improve economic activities by construction of protective works at vulnerable location along the left bank of the Meghna River. Valuable establishments valued Tk.12950.00 million are supposed to be saved by implementation of proposed protective works.

However, the specific objective and targets of the projects are as follows:

- \* to sustain the agricultural land and fisheries development by mitigating the risk of river bank erosion and from embankment breaches;
- \* to contribute to poverty alleviation by ensuring that future economic benefits are achieved;
- \* to improve social and economic conditions of the destitute families living along the embankment;
- \* to provide substantial employment opportunities and cash income for landless, poor and vulnerable people, both women and men, during construction to provide a stable environment for development in areas adjacent to rive banks.

#### 1.4 Project revision with reasons

Proposed revised project comprises 9.97% cost overrun over the original approved DPP cost mainly due to changes in design and enhanced schedule of rates for physical components.

The DPP of the original project costing Tk. 4073.90 lac was finally approved by ECNEC on 14.09.2006.

In the original DPP 1296 m river bank protective work was proposed. In the meantime due to devastating flood of 2007 severe bank erosion increases and extends from 1296m to 2700m. From design point of view the prevailing site condition reveals that execution of 1296 m bank protective work will not be sustainable and may be washed away. So revised design for most vulnerable length of 2700 m, river bank protection is needed to ensure the benefits of the project. Furthermore, in Original DPP only CC block and Geo-textile filter was proposed to use for bank protection. But in the revised DPP CC block, Geo-bags and Geotextile filter is proposed to use to reduce the cost of protective work.

The present market rate of construction materials are significantly increased and correspondingly the schedule rates are also increased. The project commenced in FY: 2006-2007 and schedule completion in FY: 2008-2009 as per Original approved DPP. The cost of physical component were estimated on the basis of July/2004 schedule of rates for Chandpur O&M Circle, BWDB, Chandpur, which necessitated to revise based on enhance July/2006 schedule of rate. Due to above mentioned reason, revision of DPP is needed. As per approved DPP the length of protective works was 1296 m and cost was Tk. 3711.10 lac which is now stands 2700m and cost is Tk. 4274.92 lac.

2. Rationale of the project in respect of concept, Design, Location and Timing.

The progressive bank line shifting of the Meghna river at a length of 10.500 km. located at Haimchar upazilla during last 3(three) years has endangered the existence of Chandpur Irrigation Project covering a gross area of 57000 hac. is spread over in 6(six) upazillas of Chandpur and Lakshmipur district. Annual rate of bank erosion of the river is 100 m to 200 m. Without immediate erosion mitigation measures further retirement of embankment and loss of important establishment and agricultural land cannot be stopped. The proposed project will not only protect the embankment of CIP including its important establishment but also safeguard physical damage and human sufferings.

Failure of the embankment as well as project facilities of the CIP due to river erosion will have social enconomic and environmental impacts and lives and properties of 1.50 million inhabitants of the project area will be severely endangered. At presents 1.296 km. of river bank revetment work should be taken at Char Bhairabi of Haimchar upazilla on priority basis, which are under active erosion. It is anticipated that if the erosion continued huge land including important Govt. and private establishment will be eroded over the next coming year. To save this important project from near ruination due to river erosion, the proposed protective work required to be executed on priority basis. Otherwise substantial losses of properties and infrastructures will be incurred.

In the circumstances, its since rationale to implement erosion mitigation measures at said upazilla on emergency basis and the proposed project proposal has been formulated for erection of protective works on priority location at length of 1.296 km. at Haimchar upazilla.

- 3. Brief description on planning and financing of the project and its applicability.
  - Project Identification:

The project is located along the left bank of the Meghna River.

Project Preparation:

River erosion is the main threat of the Chandpur Irrigation Project. Since its implementation, the flood embankment has so far been retired 5(five) times due severe erosion of river Meghna at Haimchar. The river has engulfed 5000 hectors area within the project and 3000 hectors out side the project. Continuation of the river drosion practies in different location along the embankment of Haimchar Upazilla again 10.500 km flood embankment is seriously threatened. To protect the Chandpur Irrigation Project from the river, this project was launched.

Appraisal:

IWM conducted bathymetric survey and mathematical model study in 2003.

- Credit Negotiation: Not applicable
- Credit Agreement: Not applicable
- ◆ Credit Effectiveness: Not applicable
- ♦ Loan Disbursement: Not applicable
- ♦ Loan Conditionality: Not applicable
- **Project Approval:** The project was approved on 14-09-2006 & subsequent revision on 30-01-2008.
- Others (if any): Nil
- 4. Analysis of the Post-Implementation situation and result of the project:
- Whether the beneficiaries of the project have clear knowledge about the Target/ Objectives of the project:
  Yes.
- 4.2 Programme for use of created-facilities of the project:

The stakeholders are directly taking advantages of the created facilities of the project.

4.3 O & M programme of the project:

Post Project recurrent O&M works will be arranged from the regular O&M allocation .

4.4 Impact of the Project -

#### 4.4.1 Direct:

- Protection of Chandpur Irrigation Project from river bank erosion.
- Safety of public and government owned assets and natural resources of CIP.

#### 4.4.2 Indirect:

- Environmental enhancement from river erosion hazards.
- Sustainable socio-economic enhancement.
- 4.5 Transfer of Technology and Institutional Building through the project:

Not Applicable

4.6 Employment generation through the project:

Employment generation for skilled/unskilled during construction period is about 2.99 lakh man-days.

#### 4.7 Possibility of Self employment:

There are possibilities of self employment as existing commercial and business centers are protected from river bank erosion.

#### 4.8 Possibility of women-employment opportunity:

Yes, there is possibility of women-employment through the project.

#### 4.9 Women's participation in development:

Yes.

#### 4.10 Probable Impact on Socio-Economic activity:

Protecting the river bank erosion, various infrastructures are saved from the erosion. The impact of socio-economic balance in the locality.

#### 4.11 Impact on environment:

Environmental enhancement is achieved through the implementation of the Project. Bank erosion hazards of environment is eradicated.

#### 4.12 Sustainability of the project:

The project is sustainable but requires periodic maintenance.

#### 4.13 Contribution to poverty alleviation/reduction:

The project fulfilled the following benefits in compatible strategic goal i.e., a) reduction of vulnerability to water related disaster, b) manage erosion of major rivers and protect large and small towns of poverty alleviation as per PRS:

- 1) The project ensures immovable properties of total worth of Tk. 129500.00 lac.
- 2) It generated employment for skilled/unskilled during construction period and also in annual O&M phase in project performance. Also better employment access in business tertiary sectors is enhanced.
- 3) Natural security against river bank erosion is resorted.

# 4.14 Opinion of the public representatives, local elite, local administration, teachers, religious leaders, women's representatives etc.

Positive remarks regarding the project.

# 4.15 Contribution of Micro-credit programmes and Comments on overlapping with any NGO activities.

Nor Applicable

5. Problems encountered during Implementation (with duration & steps taken to remove those)

5.1 5.2 5.3 5.4 5.5 5.6	Project Management Project Director Land Acquisition Procurement Consultancy Contractor	5.12 5.13 5.14 5.15 5.16 5.17	Project aid disbursement and re-imbursement Mission of the development partners Time & Cost Over-run Project Supervision/Inspection Delay in Decision Transport
5.7 5.8	Manpower	5.18	Training
5.9	Law & Order Natural calamity	5.19 5.20	Approval Others
5.10 5.11	Project financing, allocation and release Design formulation/approval	5.21	

No problems encountered during implementation of the project regarding the above facts.

### 6. Remarks & Recommendations of the Project Director:

River erosion is the main threat of the Chandpur Irrigation Project. Since its implementation, the flood embankment has so far been retired 5(five) times due to severe erosion of the river Meghna at Haimchar. The river has engulfed 5000 hectors area within the project and 3000 hectors out side the project. Continuation of the river erosion is observed in different locations along the embankment from Ibrahimpur (Chandpur) to Haimchar. The project of 2700 m revetment work, so far have been taken and implemented for the protection of Chandpur Irrigation Project are appropriate and have national priority. Implementing this project river bank erosion problem along this regime of the Meghna River has been mitigated. Valuable land and assets have been saved and environmental sustainability is enhanced from erosion hazards. The lesson learnt from successful completion of this project, in continuation, 2 (two) projects covering the unprotected upstream and down stream of the project length have been approved in the name of "Protection of Chandpur Irrigation Project from the erosion of the Meghna river (Haimchar)" and "Protection of Chandpur Irrigation Project from the erosion of the Meghna river at Ibrahimpur-Sakhua adjacent to Puranbazar of Chandpur district" to mitigate river erosion problem, for protection of total (6.40+4.40) = 10.80 km river bank erosion. Physical works of these two projects have been started and initiatives have also been taken to complete these two projects in time as per DPP to ensure the benefits of all these projects in this area. Otherwise Projects benefits may be hampered. To ensure the implementation of these two ongoing projects in time, sufficient budget allocation as per DPP needs to be ensured.

> (Reazuddin Ahmed) Suscrintending Engineer Chandpur O & M Orde BWD8, Chandpur &

Date :	Signature and seal of the Project Director/Manager
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8.	Remarks/Comments of the officer in-charge of the Ministry/Division		
	Date:	Signature and Seal	