

BANGLADESH WATER DEVELOPMENT BOARD

**PROJECT COMPLETION REPORT: IMED-04/2003 (Rev)**

Name of the Project: **Protection of the Rajshahi Cadet College and adjacent important establishment from the erosion of the Padma River (Inter Items Cost Adjustment).**

PROJECT PERIOD: JULY 2015 TO DECEMBER 2017.

DIVISION : RAJSHAHI O&M DIVISION, BWDB, RAJSHAHI.
CIRCLE : RAJSHAHI O&M CIRCLE, BWDB, RAJSHAHI.
ZONE : RAJSHAHI O&M CIRCLE, BWDB, RAJSHAHI.

Government of the People's Republic of Bangladesh
Ministry of Planning
Implementation Monitoring and Evaluation Department.

PROJECT COMPLETION REPORT: IMED 04/2003 (REVISED)

A. PROJECT DESCRIPTION:

- 01. Name of Project** : Protection of the Rajshahi Cadet College and adjacent important establishment from the erosion of the Padma River (Inter Items Cost Adjustment)
- 02. Administrative Ministry/ Division** : Ministry of Water Resource
- 03. Executing Agency** : Bangladesh Water Development Board.
- 04. Location of the Project** : Upazila – Charghat, District : Rajshahi.
- 05. Object of the Project** :

Main objectives of the project are as follows:

- Safeguard Rajshahi Cadet College, Sarda and Important Establishment from vulnerability of the river erosion.
- Protect valuable immovable public and private properties approximate total worth of **Tk. 32370.00 lakh** including all establishment of Rajshahi Cadet College, 7 Km Local Metalled Road, 7 Km Flood Control Embankment, many markets, hat-bazars, schools, colleges, mosque, madrasas, huge mango gardens, bridges, culverts and many public & private houses agriculture lands dispersed at Sarda & Yousufpur area of Charghat upazilla in Rajshahi district by implementation of protective work as well as maintenance of existing protective work along the left bank of the Padma/Ganges River at Sarda and Yousufpur.
- Stabilize part of Ganges left bank at Sarda and Yousufpur by implementing of the project.

06. Estimated Cost :

(In Lakh Taka)		
	Original	Inter-Items Cost Adjustment
a) Total	8678.66	8678.66
b) Taka	8678.66	8678.66
c) Foreign Currency	-	-
d) Project Aid	-	-
e) RPA	-	-

07. Date of Approval :

PCP	DPP
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- a) Original : - 06/10/2015
- b) Inter-Item Adjustment : - 06/12/2017



08. Implementation period :

	Date of Commencement	Date of Completion
a) Original	July, 2015	December, 2017
b) Inter-Item Cost Adjustment	July, 2015	December, 2017
c) Actual	July, 2015	December, 2017

09. Financial Agreement (source wise):

9.1 Status of Loan / Grant:

a) Foreign Financing :

Source(s)	Currency as per Agreement	Amount in US\$ (Million)	Nature (Loan/Grant Supplier's credit)	Date of Agreement	Date of Effectiveness	Date of Closing	
1	2	3	4	5	6	7	8

..... Not Applicable.....

b) GOB:

(In Lakh Taka)

Total Amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
8678.66	-	8678.66	-

Utilization of Project Aid: (Source wise)

(In Million)

	Total Amount		Actual Expenditure		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.....

Reimbursable Project Aid (RPA)

(In Lakh Taka)

RPA Amount		Amount Spent	Amount claimed	Amount Reimbursed	Remarks.
As Per DPP	As per Agreement				
1	2	3	4	5	6

..... Not Applicable.....

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B. IMPLEMENTATION POSITION

01. Implementation Period :

Implementation Period as per DPP		Actual Implementation	Time Over Run (% of Original Implementation Period)	Remarks
Original	Inter-Items Cost Adjustment			
1	2	3	4	5
July 2015 to December 2017.	July 2015 to December 2017.	July 2015 to December 2017.	Nil	Project implementation had been completed within the original approved DPP period.

02. Cost of the Project:

Description	Estimated Cost		Actual Expenditure	Cost Over-run (% of original cost)	Remarks
	Original	Inter-Items Cost Adjustment			
1	2	3	4	5	6
Total	8678.66	8678.66	8014.13	-	Completed full length with inter items cost adjustment..
Taka	8678.66	8678.66	8014.13	-	
PA	-	-	-	-	

03. Project Personnel: Project work has been completed by the existing manpower of BWDB.

Sanctioned strength as per PP	Manpower employed during execution	Status of the existing Manpower			Manpower Employed	
		Manpower requirement for O&M as per PP	existing Manpower for O&M	Others	Male	Female
1	2	3	4	5	6	7
Officer(s)						
Staff(s)						
Total						

..... Not Applicable.....

04. Training of project Personnel (foreign/Local):

Field of Training /Study tour/work shop/ Semunar etc.	Provision as per PP		Actual		Remarks.
	Number of Person	Man- months	Number of Person	Man months	
1	2	3	4	5	6

a) Foreign Nil

b) Local Nil



05. Component wise Progress (As per approved Inter Items Cost Adjustment DPP):

(In Lakh Taka)

Items of work (As per DPP)	Unit	Target (as per Inter Items Cost Adjustment DPP)		Actual Progress		Reasons for deviation (±)
		Financial	Physical (Quantity)	Financial	Physical (Quantity)	
1	2	3	4	5	6	7
1. Revenue Components						
i) Petrol & Lubricant	1 Item	5.00	item	4.98	item	N/A
ii) Printing & Publication	1 item	2.00	item	1.22	item	
iii) Stationery, Seal, Stamps	1 item	2.00	item	2.00	item	
iv) Honoriam/Fee/Remuneration	1 item	5.00	item	2.26	item	
v) Survey & Investigation	1 item	3.00	item	2.99	item	
vi) Computer Accessories	1 item	2.00	item	2.00	item	
vii) Repair of Transport and Vehicles (2 no.s)	1 item	3.00	item	3.00	item	
Revenue Components Sub-Total		22		18.45		
2. Capital Components						
i) Rehabilitation of existing damaged River Bank Protection Work	Meter (m.)	3613.06	1200.00 m.	3605.85	1200.00 m.	Full length with inter items cost adjustment.
ii). River Bank Protection Work	Meter (m.)	4791.04	1080.00 m.	4389.83	1080.00 m.	
Capital Components Sub-total		8404.10		7995.68		
Physical Contingency		84.04	-	-	-	
Price Contingency		168.52	-	-	-	
Grand Total		8678.66		8014.13		

06. Information Regarding Project Director(s):

Name & Designation with pay scale.	Full time	Part time	Responsible for more than one Project	Date of		Remarks.
				Joining	Transfer	
1	2	3	4	5	6	7
1.Mir Mosharrof Hossain Superintending Engineer 50000 - 71200	Full time	-	Yes	03-12-2015	31-12-2017	

07. Procurement of Transport (in nos.):

Type of Transport	Number as per DPP	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
Car		} Nil				
Jeep						
Minibus						
Bus						
Pick-up						
Truck						
Motor Cycle						
By-Cycle						
Speed Boat						
Speed Boat						
Launch						
Other with name						

Signature

08. Procurement of Goods, Works and Consultancy Service.

Goods & Works of the Project costing above Tk. 100.00 lakh and Consultancy above Tk. 50.00 lakh.

(in lakh taka)

Description of procurement (goods/work/consultancy) as per Bid document	As per Inter Items of Cost Adjustment DPP	Contract value	Tender/Bid/Proposal		Date of completion of works /services and supply of goods.	
			Invitation date	Contract signing/LC opening date	As per contract	Actual
1	2	3	4	5	6	7
1. Rehabilitation work of existing damaged river bank protection work of the left bank of the Padma river form Km. 57.970 to Km. 58.315 = 345 m. in front of Rajshahi Cadet College, Sarda in Upazilla-Charghat, District-Rajshahi. (RCC-01)	1194.25	1194.25	29/12/15	24/03/16	28/12/17	28/12/17
2. Rehabilitation work of existing damaged river bank protection work of the left bank of the Padma river form Km. 58.315 to Km. 58.585 = 270 m. in front of Rajshahi Cadet College, Sarda in Upazilla-Charghat, District-Rajshahi. (RCC-02)	1019.35	1019.35	29/12/15	22/03/16	28/12/17	28/12/17
3. Rehabilitation work of existing damaged river bank protection work of the left bank of the Padma river form Km. 58.585 to Km. 58.885 = 300 m. in front of Rajshahi Cadet College, Sarda in Upazilla-Charghat, District-Rajshahi. (RCC-03)	785.71	785.71	29/12/15	24/03/16	27/07/17	27/07/17
4. Rehabilitation work of existing damaged river bank protection work of the left bank of the Padma river form Km. 58.885 to Km. 59.170 = 285 m. in front of Rajshahi Cadet College, Sarda in Upazilla-Charghat, District-Rajshahi. (RCC-04)	638.55	638.55	29/12/15	27/03/16	27/07/17	27/07/17
5. River bank protection work of the left bank of the Padma river at Yousufpur form Km. 59.170 to Km. 59.530 = 360 m. in Upazilla-Charghat, District-Rajshahi. (YP-01)	1579.62	1504.77	07/04/16	23/08/16	29/06/17	29/06/17
6. River bank protection work of the left bank of the Padma river at Yousufpur form Km. 59.530 to Km. 59.890 = 360 m. in Upazilla-Charghat, District-Rajshahi.(YP-02)	1560.84	1490.24	07/04/16	16/08/2016	29/06/17	29/06/17
7. River bank protection work of the left bank of the Padma river at Yousufpur form Km. 59.890 to Km. 60.250 = 360 m. in Upazilla-Charghat, District-Rajshahi.(YP-03)	1625.72	1545.01	07/04/16	22/08/2016	16/07/17	16/07/17

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

Name of the field	Approved man month		Actual man month utilized	Remarks
	As per DPP	As per contract.		
1	2	3	4	5

a) Foreign Nil

b) Local Nil

09. Construction / Erection / Installation Tools & Equipment :

Description of items	Quantity (As per DPP)	Quantity procured with date	Transferred to O&M with date	Deposed off as per rule with date	Balance	Remarks
1	2	3	4	5	6	7

..... Not Applicable

C. FINANCIAL AND PHYSICAL PROGRAMME:

1. (a) Original and revised schedule as per DPP.

(In Lakh Taka)

Financial year	Financial Provision & Physical target as per original DPP				Financial Provision & Physical target as per approved inter item cost adjustment DPP.			
	Total	Taka	PA	Physical %	Total	Taka	PA.	Physical %
1	2	3	4	5	6	7	8	9
2015-16	1884.70	1884.70	-	21.72	799.33	799.33	-	9.21
2016-17	3284.68	3284.68	-	37.85	6467.73	6467.73	-	74.52
2017-18	3509.28	3509.28	-	40.43	1411.60	1411.60	-	16.27
Total	8678.66	8678.66	-	100.00	8678.66	8678.66	-	100.00

1. (b) Revised ADP allocation and progress:

(In Lakh Taka)

Financial year	Revised Allocation & Target				Taka release	Expenditure & physical progress.			
	Total	Taka	P.A.	Physical %		Total	Taka	P.A.	Physical %
1	2	3	4	5	6	7	8	9	10
2015-16	800.00	800.00	-	9.22	799.33	799.33	799.33	-	11.58
2016-17	6470.00	6470.00	-	74.62	6467.73	6467.73	6467.73	-	81.03
2017-18	1400.00	1400.00	-	16.16	782.25	747.07	747.07	-	7.38
Total	8670.00	8670.00	-	100.00	8049.31	8014.13	8014.13	-	99.99

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D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT:

Objective as per DPP	Actual achievement	Reasons for shortfall, if any.
Main objectives of the project are to safeguard the Rajshahi Cadet College, Important Establishment and also provide an extended river bank erosion and flood protection coverage against cumulatively increased erosion and floods of the Ganges/Padma River to an area of 2000 ha lands in Charghat upazillas of Rajshahi District by rehabilitation of existing damaged River Bank Protection works for a length of 1.200 km and implementation of 1.080 km River Bank Protection works along the left bank of the Padma River which would:	DPP proposed 1200m existing damaged river bank protection work had been rehabilitated and extended river bank protection of length 1080m has also been completed in time. These work has been safing and sound Rajshahi Cadet College and its establishments and also arrested extended river bank erosion about gross area 3250 ha, net area 2000ha lands in Charghat Upazilla of Rajshahi District. So, by implementation of 1200m rehabilitation protection work and 1080m new protective work saved Rajshahi Cadet College and its establishments from the erosion of Ganges river.	No Shortfall found.
Protect valuable immovable public and private properties approximate total worth of Tk. 32370.00 lakh (as table 1.1 of E) (Viz. 1 No Rajshahi Cadet College, 7 Km Local Metalled Road, 7 Km Flood Control Embankment, many markets & hat/bazaar, Schools & Colleges, Mosque & Madrasa, Huge Mango Gardens, Bridges and Culverts and many public & private Homes/Houses and Many Important Establishment etc.) and huge valuable agriculture & settlement lands dispersed at Sarda & Yousufpur area in Charghat Upazilla of Rajshahi District by the proper implementation & maintenance of improved river bank protective works along the left bank of the Padma River.	By proper completion of the works under DPP the immovable and movable public and private properties of worth approximate Tk. 32370.00 lakh (as table 1.1 of E) including 200ha valuable agriculture land and homesteads dispersed in Charghat Upazilla of Rajshahi District.	
Stabilize left bank of the Padma River and thereby protecting shifting of main course of the river, resulting in protection of loss of lands at Sarda and Yousufpur in Charghat Upazillas.	By completion of the extended length of protective work and rehabilitation of existing protective work, the left bank of Ganges river at Sarda & Yousufpur areas of Charghat Upazilla has been stabilized and protected the shifting of bank by arresting the course of flow of the river.	



E. BENEFIT ANALYSIS :

1. Annual Out-put:

Items of out-put	Unit	Estimated quantity expected at full capacity	Actual quantity of out-puts during the 1 st year of operation at full capacity (or during real production for newly completed project)
1	2	3	4
Metalled Road (Regional & Local)	km.	7.00	7.00
Bridge/Culvert (Large/Medium/ Small)	nos	2	2
Flood Control Embankment.	km.	7.00	7.00
Primary School (Permanent Establishment)	nos	5	5
High School (Permanent Establishment)	nos	4	4
Cadet College (Permanent Establishment)	nos	1	1
Girls High School (Permanent Establishment)	nos	1	1
Mosque (Pucca & Temporary)	nos	4	4
Office Building (Government/Semo-Govt.)	nos	7	7
Eidgah	nos	2	2
Madrasa	nos	2	2
Mango Gardens (Trees+Lands)	nos	5	5
Agricultural Lands	hac.	200	200
Houses : Pucca/Permanent	nos	150	150
Houses : Kucha/Temporary	nos	350	350
Electrical Transmission Lines	km.	7.00	7.00
Border Out Post (BOP)	nos	1.00	1.00
Hat Bazar	nos	4.00	4.00
Small Industries	nos	4.00	4.00

02. Cost / Benefit :

Item	Estimated	Actual
(1) Benefit cost of the project		
(i) Financial	1.23	It will be evaluated later by concern directorate of BWDB.
(ii) Economic	1.47	
(2) Internal rate of return		
(i) Financial	15.79 %	
(ii) Economic	19.41%	

03. Please give reason for shortfall, if any, between the estimated and actual benefit: N/A.

F. MONITORING AND AUDITING.

01. Monitoring:

Name & Designation of the inspecting official	Date of inspection	Identified Problems	Recommendations
1	2	3	4
(a) Ministry / Agency :			
1. Md. Shahriar Alam, MP - Ministry of Foreign Affairs Bangladesh.	Several Times	Not found	
2. Md. Siddique Rahman, DG, IMED	20/10/2016	ক্যাডেট কলেজের গেট বরাবর নতুন ঘাট নির্মাণের ব্যবস্থা থাকলেও বর্তমানে তার প্রয়োজনীয়তা না থাকায় নতুন ঘাট নির্মাণ না করে বিদ্যমান পুরাতন ঘাটটি মেরামত করা যেতে পারে বলে অভিমত ব্যক্ত করেন।	নির্দেশনা অনুযায়ী নতুন ঘাট নির্মাণ না করে বিদ্যমান পুরাতন ঘাটটি যথাযথভাবে মেরামত হয়েছে।
3. Mohammad Jahangir Kabir, DG, IMED.	19/10/2017		
4. Mahmudur Rahman, Director, JRC.	27/09/2017	Not found	
5. Montu Kumer Biswas, Joint Chief, MoWR.	Several Times	Not found	
6. Mohommod Ali , Chief Engineer, North-Western Zone, BWDB, Rajshahi .	Several Times	Not found	
7. Mir Mosharrof Hossain , Superintending Engineer / Project Director , Rajshahi O & M Circle, BWDB , Rajshahi.	Many Times	Not found	
8. Moha. Sahidullah Kaiser, System Analyst, MoWR.	27/09/2017	Not found	
9. Md. Mahamudul Hasan, Assistant Director, IMED.	10/10/2016	Not found	
10. Abu Usuf Mohammad Rasal, Senior Assistant chief, MoWR.	Several Times	Not found	

02. Auditing during and after Implementation:

2.1. Internal Audit:

Period of Audit	Date of submission of Audit Report.	Major findings/ objections	Whether objection resolved or not.
1	2	3	4
-	Not yet audited.	-	-

2.2. External Audit:

Audit Period	Date of submission of Audit Report.	Major findings/objections	Whether objection resolved or not.
1	2	3	4
08/02/2018-17/02/2018	Not yet submitted.	-	-

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G. DESCRIPTIVE REPORT :

01. General Observations / Remarks of the Project on:

1.1. Background:

Bangladesh is about 147570 square kilometer with a population of about 133.50 million. The country serves as the drainage route of about 1.72 million square kilometer area of India, Nepal, Bhutan, China and Bangladesh. About 80% of the land of the country is in flood prone of three major rivers of the region, the Ganges, the Brahmaputra and the Meghna. About 50% of the land lies within + 8 meter PWD from the mean sea level. River bank erosion has been considered as one of the most devastating natural hazards in delta alluvial lands of Bangladesh.

The Project area is located at Sarda & Yousufpur in Charghat Upazilla of Rajshahi district along the left bank of the Ganges/Padma River. Ganges Left Bank Flood Protection Embankment and consequently the area have been seriously threatened by continued bank erosion at several segments of the bank of which most vulnerable; such as, at Sarda & Yousufpur areas. The flood water onrush of the river, Ganges causes erosion in almost each year with resultanting havoc of both lives and properties in the vicinity of the vast affected areas. During the last few years the Ganges/Padma swallowed a huge area of lands at many locations of left bank in Charghat Upazilla including several important establishments, like; school, collage and mosque/mandir, private & public homes etc. It has also disrupted communication as well as drainage and flood control facilities of some areas. At a few locations the river is very close to the important infrastructures and establishments i.e. Rajshahi Cadet College. If the erosion is allowed to continue further, the consequence could be devastating. Under this circumstances, erosion affected peoples, local elites, public representatives, honorable MP's, local administration were repeatedly being requested BWDB authority & Ministry of Water Resources to undertake immediate implementation of sustainable River Training Work at those erosion affected areas & thereby ensuring safety and security of lives and properties of the proposed project area. Since the economic and social consequences of the present approach in dealing with the problem may not be acceptable in the long-term, the Government of Bangladesh through BWDB had been conducted the River Training Studies/Hydraulic Modeling Study of the Ganges-Padma River for the most threatened/vulnerable reaches to seek a long-term strategy for the protection of Left Bank. BWDB appointed Institute of Water Modeling (IWM) to make Hydraulic Modeling Study for the Protection of Embankment from Rajabari to Baliaghata against Erosion of the Ganges-Padma River in Godagari Upazilla of Rajshahi District. It comes out from the study that revetment type of protection measure with provision for post construction monitoring may be taken up. An adaptive approach of bank protection could be followed in this regard. It involves identification of the priority bank protection and its implementation. Need for the subsequent work would then be determined based on the river responses to the already constructed work. The model study covers predication of consequences of such partial measures that could be further fine-tuned by inclusion of updated field data. Accordingly recommendations have been made by the IWM study group to protect the left bank by construction of Bank Revetment Work.



Besides, BWDB authority constituted a Technical Committee by order of it's secretariat vide memo no. বাপাউবো(সচি)/পরি-১/বিবিধ-৩/২০০২(৬ষ্ঠ খন্ড)/১৬৪ তারিখ: ১০-১১-২০১৩ খ্রিঃ to devise the best option of river bank protection work, ascertain the necessity of works on priority basis, preparation of approved design with cost estimate & preparation of recommendations with justifications for erosion protection work at most vulnerable locations of Sarda areas of Rajshahi District. Accordingly, Technical Committee prepared their report under title, “ঐতিহ্যবাহী রাজশাহী ক্যাডেট কলেজ, সারদাকে পদ্মা নদীর ভাংগন হতে রক্ষা প্রকল্পের সম্ভাব্যতা যাচাইয়ের লক্ষ্যে কারিগরী প্রতিবেদন” with conducting several times field visits, making interaction with the erosion affected peoples, local public representatives & elite persons, honorable MP's & local administrations, reviewing physical existence of River Training Structures on the left bank of the Padma River, constructed earlier & their performance records. The Technical Committee ultimately opined on rehabilitation of existing damaged bank revetment work as the best option for sustainable river bank erosion protection work at those above stated vulnerable location. **The trans-boundary line of Bangladesh and India at the project area is going through the Padma/Ganges river that has been shown in Bangladesh map. Besides, the prominent flow of the river of Padma at the area is running along the left bank of Bangladesh side. So, the river is deeper at the project area along Bangladesh side. There is no Char within the project area in between the left bank line in Bangladesh side & trans boundary line. In this circumstances, there was hardly scope dredging the river at the project area. Due to tranboundary line through the river, dredging option was not considered in DPP.** The members of the Committee reviewed the latest river morphology & hydrological data of the project areas; and accordingly on that basis approved design has been prepared by the concern design office of BWDB & accordingly cost estimate prepared and supplemented in the Technical Report. The Report has been approved by the BWDB authority and the BWDB field office has been asked to prepare and submit Development Project Proforma/Proposal (DPP) for “ঐতিহ্যবাহী রাজশাহী ক্যাডেট কলেজ, সারদাকে পদ্মা নদীর ভাংগন হতে রক্ষা প্রকল্প” (Protection of the Historical Rajshahi Cadet College, Sarda from the erosion of the Padma River)” by the Board. Accordingly, this DPP was prepared and submitted to the Board for taken further necessary action, the DPP was forwarded to MoWR by the Board. The Project Review Committee's meeting was held on 24.06.2014 at MoWR. The Project review committee was reached the followings decisions:

- The Project Name should be changed.
- 0.280 km River Bank Protection should be included into the DPP.
- For approval, the DPP should be forwarded to the Planning Commission.

Under the above stated circumstances, this DPP costing Tk. 5179.70 lakh was prepared and submitted to the Board which was forwarded to MoWR by the Board. The Project Review Committee's meeting was held on 30.09.2014 at MoWR. The Project review committee was reached the followings decisions:

- Justification of the proposed rehabilitation work in the DPP should be shown.
- For approval, the DPP should be forwarded to the Planning Commission.

Showing justification of the proposed rehabilitation work in the DPP had been forwarded to the Planning Commission through MoWR. The Project Evaluation Committee's (PEC) meeting was held on 23.04.2015 at Planning Commission. The Project Evaluation committee (PEC) was reached the followings decisions:

- Yearly budget allocation in the DPP should be justified with MTBF's budget.

- 700 meter bank revetment work should be included in this DPP excluding from the DPP named as “Bank protection project along the border area at Khanpur, Khidirpur, Yousufpur & Chor Majardia BOP under Rajshahi district to protect from the erosion of the Padma River”.
- What kinds of materials used for rehabilitation & revetment work in this DPP should be described.
- WARPO clearance should be enclosed. Also necessary data, taken activities, technical recommendation should be incorporated in the recast DPP according to the WARPO's decision.
- Constitution and terms of reference of Progress Monitoring Committee, Project Steering Committee, and Project Evaluation Committee should be specified in the DPP with necessary budget allocation.
- The Project period should be specified from April, 2015 to December, 2017.

According to the decisions of the Project Evaluation committee (PEC), this DPP has been re-casted. Also, the outline design is performed during study phase following the general criteria and conditions outlined in BWDB's "Standard Design Criteria". Physical work shall be implemented following the approved design which should be updated before physical implementation on the basis of latest river morphology & hydrological data. For preparation of this DPP, approved design has been prepared based on present river morphology & hydrological data by Design Circle-6, BWDB, Dhaka. Accordingly cost-estimate of physical work has been prepared following the approved design and as per specifications & rates incorporated in the current schedule of rates effective for the FY 2014-15 of works of Rajshahi O&M Circle.

Finally, a DPP costing **Tk. 8678.66 lakh** has been prepared and submitted herewith for onward approval of the competent authority and approved by ECNEC vide memo no. 20.00.0000.411.14.027.15-410 Dated:09-11-2015.

1.2. Justification / Adequacy:

The project is justified as the background stated above prompted BWDB to take up the project for implementation.

1.3. Objectives:

Main objectives of the project are to safeguard the Rajshahi Cadet College, Important Establishment and also provide an extended river bank erosion and flood protection coverage against cumulatively increased erosion and floods of the Ganges/Padma River to an area of 2000 ha lands in Charghat upazillas of Rajshahi District by rehabilitation of existing damaged River Bank Protection works for a length of 1.200 km and implementation of 1.080 km River Bank Protection works along the left bank of the Padma River which would:

- Safeguard the Rajshahi Cadet College, Sarda and Important Establishment from vulnerability of the river erosion/flood hazards.

- Protect valuable immovable public and private properties approximate total worth of Tk. **32370.00 lakh** (Viz. 1 No Rajshahi Cadet College, 7 Km Local Metalled Road, 7 Km Flood Control Embankment, many markets & hat/bazaar, Schools & Colleges, Mosque & Madrasa, Huge Mango Gardens, Bridges and Culverts and many public & private Homes/Houses and Many Important Establishment etc.) and huge valuable agriculture & settlement lands dispersed at Sarda & Yousufpur area in Charghat Upazilla of Rajshahi District by the proper implementation & maintenance of improved river bank protective works along the left bank of the Padma River.
- Stabilize left bank of the Padma River and thereby protecting shifting of main course of the river, resulting in protection of loss of lands at Sarda and Yousufpur in Charghat Upazillas.

1.4. Project revision with reasons:

The project has been implemented as per original approved DPP.

02. Rationale of the project in respect of Concept, Design, Location and Timing:

It comes out from the study that revetment type of protection measure with provision for post construction monitoring may be taken up. An adaptive approach of bank protection could be followed in this regard. It involves identification of the priority bank protection and its implementation. The need for the subsequent work would then be determined based on the river responses to the already constructed work. The model study covers predication of consequences of such partial measures that could be further fine-tuned by inclusion of updated field data.

Detailed Cost-Estimate for physical interventions of the project for implementation of the proposed 1080 Meter bank protective works as recommended by the Technical Committee Report and included under this approved Development Project Proposal (DPP) has been prepared on the basis of approved design vide drawing no.NWZ/4(B)-4594 dated 16/04/2007 and later on reviewed during phasewise implementation of physical work on the basis of latest river morphology and current Schedule of Rates of Rajshahi O & M Circle, BWDB , Rajshahi .

03. Brief description on planning and financing of the project and its applicability.

Project Identification:

The Project is located along the left bank of the Ganges/Padma River of Charghat Upazilla in Rajshahi District.

Project Preparation:

Rajshahi Cadet College was threatened due to the erosion of the Padma/Ganges left bank and existing protective work was damaged by this reason. Besides, the adjacent area of the college, Yousufpur was also gone under river erosion threat. To mitigate these problems and to save the homesteads, immovable and movable properties of worth Tk. 32370.00 Lakh, a technical committee was formed vide BWDB memo no. BWDB(Secr)/Plan- 1/Mis-3/2002(6th)/164 dated 10/11/2013 to produce a report by necessary feasibility in respect of social, economical & environmental impact, safety of properties & infrastructures and also

sustainability. This Project has been taken on the basis of this technical committee report. Inter Items Cost Adjustment of the Project was done in accordance of a decision given by DPEC meeting of MoWR vide memo no.42.00.0000.041.014.06.14-377 dated 27/11/2017 as per revised approved design of the Project.

Appraisal:

The appraisal of the Project not yet be done.

Credit Negotiation:

Not Applicable because of GoB funded Project.

Credit Agreement:

Not Applicable because of GoB funded Project.

Credit Effectiveness:

Not Applicable because of GoB funded Project.

Loan Disbursement:

Not Applicable because of GoB funded Project.

Loan Conditionality:

Not Applicable because of GoB funded Project.

Project Approval:

The project was approved by ECNEC on 06/10/2015.

Others (if any):

Did not arise.

04. Analysis of the Post Implementation situation and result of the Project.

4.1. 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 created facilities are directly being given to the stakeholders i.e. the movable and immovable properties are safed from the erosion of the river by implementation of the Project.

4.3. O&M Programme of the project:

Post Project recurrence of O&M works shall be arranged from regular O&M budget allocation.

4.4. Impact of the project

4.4.1. Direct:

- Protection of major educational institutions, Rashahi Cadet College and its establishment with its adjacent area about 200ha land with movable and immovable properties of worth 32370.00 lakh have been ensured from the erosion of Ganges/Padma river.

4.4.2. Indirect:



- Safety of human livelihood and properties.
- Safely protected rootlessness of people of the locality by ensuring stableness of their homesteads.
- Improvement of socio-economic condition.

4.5. Transfer of Technology and Institutional Building through the project:

Did not arise as because of GoB funded Project.

4.6. Employment generation through the project:

A significant numbers of skilled & unskilled labours were engaged during the construction period and also a number of employment will be created by incurrent O&M work of the Project.

4.7. Possibility of Self employment:

Existing commercial hat bazar were protected from the erosion of the river that is why new business outlet, shops, commercial centers are being established along this bank which creates self-employment.

4.8. Possibility of women- employment opportunity:

The local destitute women are employed by the new business centre as well as women entrepreneurs evolve in the area.

4.9. Women's participation in development:

Women's participations has significantly been added in development Projects.

4.10. Probable Impact Socio- Economic activity:

A huge land and homesteads with permanent structures have been saved from the river erosion which positively impact on socio-economic condition and also upholds the activities.

4.11. Impact on environment:

By protection of land and homesteads from the bank erosion, the rootlessness of the people of the localities has been stopped. So, environment has been sustained and developed.

4.12. Sustainability of the project:

The project is sustainable but periodic maintenance has to be done regularly.

4.13. Contribution to poverty alleviation/reduction:

- Huge public & private movable and immovable properties of worth Tk. 32370 lakh dispersed around the said erosion prone area of the river bank have been saved that acts to reduce poverty of the area.
- It generated employment of labours during the construction of the Project as well as will create new employment opportunity during periodic maintenance by regular O&M budget allocation. Besides, new employment access will be opened by newly established market, outlets, business centre along the stable river bank.
- Natural security of river bank has been restored.

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

The public representatives, local elites, local administration, teachers, religious leaders, women's representatives wanted the Project that is why they have positive approach to this Project.

4.15. Contribution of Micro-credit programmed and Comments of overlapping with any NGO activities: Not Applicable.

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

- | | |
|---|---|
| 5.1 Project Management - | 5.12 Project and disbursement and reimbursement.- |
| 5.2 Project Director- | 5.13 Mission of the development partners.- |
| 5.3 Land Acquisition – Did not arise. | 5.14 Time & cost over-run.- |
| 5.4 Procurement – | 5.15 Project Supervision / Inspection.- |
| 5.5 Consultancy – | 5.16 Delay in Decision.- |
| 5.6 Contractor – | 5.17 Transport – |
| 5.7 Manpower – | 5.18 Training – |
| 5.8 Law & Order – | 5.19 Approval – |
| 5.9 Natural calamity – | 5.20 Others – |
| 5.10 Project financing, allocation and release.- | |
| 5.11 Design formulation/approval – Design of of the Project have been formulated by Design circle -IV, BWDB, Dhaka and approved by Chief Engineer, Design, BWDB, Dhaka. | |

06. Remarks & Recommendations of the Project Director:

Main objectives of the project were to safeguard the Rajshahi Cadet College and its establishment, important other installation and also provide an extended river bank erosion and flood protection coverage ensuring against cumulatively increased erosion of the Ganges/Padma river which was threatening the embankment and lands of about 2000 ha in Charghat upazillas of Rajshahi district. The objectives have also been achieved by rehabilitation of existing damaged bank protection works of length 1.200 km. and implementation of 1.080 km. newly bank protection works along the left bank of the Padma/Ganges river at Sarda & Yousufpur. Due to implementation of the Project, physical safety and security among the people of the Project area have been developed, resulting enhance investment to build up new houses and commercial areas which became positive impacts on agriculture production and extended business. These all are being caused to enhance the employment opportunity and trim down poverty.



By implementation of the project in time of approved DPP, the land of the area has been secured. So, tendency of land less people has also been stopped at the area. Due to stable bank, new business of retail outlets, grocery shops, hat, bazar, market etc. are being established along the bank which created sustainable employment of the local people.

The Ministry of Water Resources (MoWR) has been engaged in all programs relating to water sector development and management though LGED is being done small scale irrigation projects & water development related work. BWDB under MoWR will continue to deal with flood management, drainage improvement, large scale irrigation, erosion protection, land reclamation from the sea, integrated coastal zone management, river flow augmentation, sharing of water from cross border rivers, wetland conservation, reduction of food and income poverty of the relatively poor sections of the community through local participation of the people and coordinated programs of all the ministries cross cutting water as resource and as livelihood resort.

Attaining Millennium Development Goals (MDGs) was expired in 2015 and starts Sustainable Development Goal (SDG) which will continue upto 2030 that is the prime aim of the Government of the People's Republic of Bangladesh. There are other Bangladesh Development Goals which have to be achieved through Poverty Reduction Strategy. So, Water Sector has a vision for development and management of Water Resources over medium and long term. Bangladesh Water Development Board (BWDB) is being worked to achieve these goals related to water sector to create water as a prime resources in the country. The vision for water resources sector has been indicated in the declaration of the National Water Policy document of GOB (1999). Visions, incorporated in the document are as follows:

"Ensuring continued progress towards fulfilling the national and MDG goals of development through acquisition of water resources, optimizing its various use, managing resources for poverty reduction and sustainable development for securing their lives and properties from water related disasters".

Bangladesh has already achieved Developing Country in this year and targets to achieve mid income country within 2021 and Developed Country by 2041. So, MoWR has been engaged to achieve the Government visions and goals to ensure the water related sustainable development. Thus water related sustainable development is being done by BWDB under MoWR to achieve SDG.

As water is a cross cutting resource, its use is broad-based. Water is a resource on the one hand and a mainstay of livelihoods on the other. So, the goal is not confined within the water sector alone, it extends deep into the livelihoods functions of water (e.g. agriculture, fisheries, health, land reclamation, environment etc. including disasters and climate change). All of these have direct or indirect implications for poverty reduction.


River bank erosion was increasing cumulatively at project area and adjacent of Project upstream and downstream of the executed river bank protection works, making the same endangered for its existence. Due to this, measures has been under taken for implementation of this protective measures in this erosion prone areas under separate Development Project Proposal (DPP). By implementation of protective work under the Project the bank erosion has completely arrested and secured the land erosion by the river.



Recommendations:

To ensure people inhabitation along the banks of the rivers, river training has to be done immediately by conservative approach i.e. bank is to be stabilized by protective work and flow of the river is to be limited within a specific area by dredging and dredging/ spoil earth should be kept in such a way that not be gone back in river. The dredging spoil earth may be arrested by doing protective work which helps to achieve new land i.e. land reclaim will be used to establish newly economic zones.

BWDB has already completed a significant length of bank under protection and starts dredging of rivers but spoil earth management not up to the mark that should be emphasize. The remaining large length is still to be protected by river training measures.


24/4/18
Mir Mosharraf Hossain
Project Director
and
Superintending Engineer
Rajshahi O & M Circle
BWDB, Rajshahi

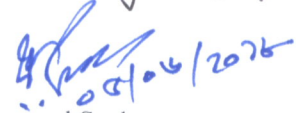
Date

Signature and Seal of the Project Director / Manager.

07. Remarks/ Comments of Agency Head.

This project provides safeguard to Rajshahi Cadet college, its adjacent area in Sarda, & some erosion-prone areas of Chaughat upazilla against left bank erosion of Padma river. Implementation of 1080 meter new bank protection works & rehabilitation of 1200 meter existing bank protection works under this project have arrested erosion threat of 2000 Ha area 200 Ha of agricultural lands, enormous public & private establishments (combined worth 323.70 crore taka) have been saved by implementing this project. Thus this can be regarded as a successful project.

Date.....


Signature and Seal.
(Md. Mahfuzur Rahman)
Director General
BWDB, Dhaka.

08. Remarks/Comments of the officer in-charge of the Ministry / Division.

Date.....

Signature and Seal.

