

IMED : 04/2003 (Revised)



## Bangladesh Water Development Board

### PROJECT COMPLETION REPORT

IMED FORM NO. : 04/2003 (Revised)

NAME OF THE PROJECT : PROTECTION OF DHAKA-MAWA- BHANGA-KHULNA NATIONAL HIGHWAY ADJACENT TO HAZI SHARIATULLAH BRIDGE FROM THE EROSION OF ARIAL KHAIR RIVER. (1<sup>ST</sup> REVISED)

NAME OF DIVISION : MADARIPUR O&M DIVISION, BWDB, MADARIPUR.

NAME OF CIRCLE : FARIDPUR O&M CIRCLE, BWDB, FARIDPUR.

NAME OF ZONE : WESTERN ZONE, BWDB, FARIDPUR.

**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 Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah bridge from the erosion of Arial Khan river. (1st Revised)
02. **Administrative Ministry/Division** : **Ministry of Water Resources.**
03. **Executing Agency** : **Bangladesh Water Development Board.**
04. **Location of the Project** : Shibchar Upazila, Madaripur.
05. **Objective of the Project** : The main objective of the project is to protect Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah Highway Bridge and guide bundh & adjacent area from devastating erosion of the river Arial Khan by construction of 1730.00 m bank protective work and dredging of 720.00 m char at upstream of Hazi Shariatullah Highway Bridge.
- To mitigate river bank erosion in vulnerable area.
  - Protect of Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah Highway Bridge and guide bundh.
  - Security of important Geographic location.
  - Safety of assets & natural resources from river erosion hazards.
  - Sustainable socioeconomic & tertiary sectors enhancement.
  - Accelerating other economic activities by developing social infrastructures; and improving the river's stability and providing a more stable environment for development.

06. **Estimated Cost** :

(In lakh Taka)

	Original	Latest Revised
(a) Total	5459.26	6273.48
(b) Taka	5459.26	6273.48
(c) Foreign Currency	0.00	0.00
(d) Project Aid	0.00	0.00
(e) RPA	0.00	0.00

07. **Date of Approval** :

<b>PCP</b>	<b>PP</b>
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(a) **Original** :

**October, 2016**

(b) **Latest Revised** :

**July, 2018**

**(1<sup>st</sup> Revised)**

**08. Implementation Period :**

	Date of Commencement	Date of Completion
(a) Original	July, 2016	June, 2019
(b) 1 <sup>st</sup> Revised	July, 2016	June, 2019
(c) Actual	July, 2016	June, 2019

**09. Financing Arrangement (Source-wise) :**

**9.1 Status of Loan/Grant**

**a) Foreign Financing : Not Applicable**

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

**b) GOB :**

(In lakh Taka)			
Total amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
6273.48	-	6273.48	-

**9.2 Utilization of Project Aid : (Source wise) N/A.**

Source (s)	Total Amount		Actual Expenditure		Unutilized Amount	
	In US \$	In Local Currency	In US \$	In Local Currency	In US \$	In Local Currency
	2	3	4	5	6	7

**9.3 Re-imbursible Project Aid (RPA): N/A.**

R P A Amount		Amount Spent	Amount Claimed	Amount Re-imbursed	Remarks
As per PP	As per Agreement				
1	2	3	4	5	6

## B. IMPLEMENTATION POSITION

### 01. Implementation Period :

Implementation Period as per PP		Actual Implementation period	Time Over-run (% of original implementation period)	Remarks
Original	Latest Revised			
1	2	3	4	5
July,2016 to June,2019	July,2016 to June,2019	July,2016 to June,2019	-	-

### 02. Cost of the Project :

(In lakh Taka)

Description	Estimated Cost		Actual expenditure	Cost over-run (% of original cost)	Remarks
	Original	Latest revised			
1	2	3	4	5	6
<b>TOTAL</b>	5459.26	6273.48	6170.15	(+ ) 13.02%	Due to morphological change, length of river bank protection was increased. Therefore cost of the project increased.
<b>TAKA</b>	5459.26	6273.48	6170.15		
<b>PA</b>	-	-	-		

### 03. Project Personnel : Project work has been implemented by existing manpower of Madaripur O&M Division, BWDB, Madaripur.

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		
1	2	3	4	5	Male	Female
Officer (s)	Existing manpower of the implementing agency were deployed during execution of the project					
Staff(s)						
Total :						

### 04. Training of Project Personnel (Foreign/Local) : No Provision of training in this Project.

Field of Training /Study tour/workshop/Seminar 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	N/A				
b. Local	N/A				

**05. Component-wise Progress (As per latest approved PP) :**

(In lakh Taka)

Sl. No.	Items of work	Unit	Target (as per PP)		Actual Progress		Reasons for deviation (±)
			Financial	Physical (Quantity)	Financial	Physical (Quantity)	
1	2	3	4	5	6	7	8
<b>(a) Revenue Component</b>							
	<b><u>Supplies and Services:</u></b>						
1	Petrol & Lubricant	L.S	10.00	1 item	9.99	1 item	
2	Printing & Publication	L.S	3.00	1 item	3.00	1 item	
3	Stationery, seal, stamp etc	L.S	2.00	1 item	2.00	1 item	
4	Honorarium for Different Committee (PIC, PSC, TEC etc)	L.S	6.00	1 item	4.24	1 item	
5	Mid Term Evaluation & Progress Monitoring Activities	L.S	10.00	1 item	10.00	1 item	
6	Survey and Investigation	L.S	6.00	1 item	5.97	1 item	
	Publicity & Advertisement	L.S	1.00	1 item	0.97	1 item	
	<b><u>Repairs Maintenance and Rehabilitation:</u></b>	L.S					
7	Repair of Motor & maintenance of Vehicles (Jeep 2 Nos., Motor Cycle 5 Nos.)	L.S	8.00	1 item	8.00	1 item	
	<b>(a) Revenue Sub Total</b>		<b>46.00</b>		<b>44.17</b>		
<b>Acquisition of Assets</b>							
	<b><u>Acquisition of Assets:</u></b>						
1	Purchase of Motor Cycle 100 cc (1 no.)	Nos	2.00	1 Nos	1.95	1 Nos	
2	Purchase of Jeep (5 doors, not more than 2500 cc, Made by Pragati)- 1 no.	Nos	72.00	1 Nos	57.55	1 Nos	
3	Multimedia for Power Point Presentation (1 Set)	Set	1.50	1 Set	1.50	1 Set	
4	Purchase of Hand GPS - 1 nos., Leveling machine with tripod and staff -1 set.	Set	1.50	1 Set	1.50	1 Set	
5	Computer (Desktop/Laptop) with Laser Printer & UPS- 5 Sets	Set	4.00	5 Set	4.00	5 Set	
6	Purchase of fish finder -1 no, sieve -1 no and weight machine -1 no	Set	1.50	1 Set	1.50	1 Set	
7	Instant Power Supply (IPS) - 2Nos.	Nos	1.50	2 Nos	1.50	2 Nos	
	<b><u>Construction of Works:</u></b>						
8	River Bank Protection Work Right Bank of Arial Khan River from 0.000m to 750.00m =750.00m, Left Bank of Arial Khan River from 0.00 to 390.00=390.00m and	Meter	5834.05	1730 m	5803.81	1730 m	

Sl. No.	Items of work	Unit	Target (as per PP)		Actual Progress		Reasons for deviation (±)
			Financial	Physical (Quantity)	Financial	Physical (Quantity)	
1	2	3	4	5	6	7	8
	Rehabilitation of protective work along the main Guide Band from 0.000m to 590.00m 390.00m.) Total= 1735.00m						
9	Dredging for removal of submersible char at Arial Khan River (0.720 km.) (Eath Volume: 240171.55 cum)	Km/ Cum	305.43	0.720km/ 240171.55 cum	252.67	0.720km/ 198681.08 cum	
	<b>Capital Sub Total (b)</b>		<b>6223.48</b>		<b>6125.98</b>		
	Total Cost : (a+b) :		<b>6269.48</b>		<b>6170.15</b>		
	(c) Price Contingency Cost (Lum Sum) :		2.00		-		
	(d) Physical Contingency Cost (Lum Sum) :		2.00		-		
	Grand Total (a+b+c+d) :		<b>6273.48</b>	<b>100.00%</b>	<b>6170.15</b>	<b>100.00%</b>	

**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
Abdul Hekim Superintending Engineer, Faridpur O&M Circle, BWDB, Faridpur. pay Scale : 50000-52000- 54080-56250 - 58500-60840-63280 - 65820-68460- 71200	Full time	-	Yes	05-01-17	Till Date	Project director from 05-01-17 to 30-06-19.

**07. Procurement of Transport (in Nos.) : No Provision in this Project.**

Type of transport	Number as per 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
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	

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

**08.1 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 Lakh Taka)		Tender/Bid/Proposal		Date of completion of works/services and supply of goods	
	As per PP	Contracted value	Invitation date	Contract signing/ L.C opening date	As per contract	Actual
1	2	3	4	5	6	7
Protective Work Along the Right Bank of Arial Khan River From km 0.000 to km 0.210 total 210.00 m in C/W Protection of Dhaka- Mawa- Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River Project Under Madaripur O&M Division, BWDB, Madaripur During the FY 2016-2017 (Package No: HSB/W-01/Lot-01/2016-17 & Contract No: W-1/2017/HSB(ID-85327)/561)	576.22	576.22	08-02-17	17-04-17	11-03-18	12-06-18
Protective Work Along the Right Bank of Arial Khan River From km 0.210 to km 0.420 total 210.00 m in C/W Protection of Dhaka- Mawa- Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River project Under Madaripur O&M Division, BWDB, Madaripur During the FY 2016-2017 (Package No: HSB/W-01/Lot-02/2016-17), Contract No: W-1/2017/HSB(ID-85328)/562.	560.09	560.09	08-02-17	16-04-17	31-05-18	30-06-18
Protective Work Along the Right Bank of Arial Khan River From km 0.420 to km 0.560 total 140.00 m in C/W Protection of Dhaka- Mawa- Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River project Under Madaripur O&M Division, BWDB, Madaripur During the FY 2016-2017. (Package No: HSB/W-02/Lot-01/2016-17), Contract No: W-1/2017/HSB(ID-85329)/563	398.06	398.06	08-02-17	16-04-17	31-05-18	30-06-18
Protective Work Along the Right Bank of the Arial Khan River from km. 0.560 to km 0.750 total 190.00 m in C/W Protection of Dhaka-Mawa-Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River Project Under Madaripur O&M Division BWDB Madaripur During the FY 2016-2017 (Package No: HSB/W-02/Lot-02/2016-17), Contract No: W-1/2017/HSB(ID-85330)/564.	564.25	564.25	08-02-17	17-04-17	22-03-18	22-03-18

Description of procurement (goods/works /consultancy) as per bid document	Tender/Bid/Proposal Cost (in Lakh Taka)		Tender/Bid/Proposal		Date of completion of works/services and supply of goods	
	As per PP	Contracted value	Invitation date	Contract signing/ L.C opening date	As-per contract	Actual
1	2	3	4	5	6	7
Protective Work Along the Main Guide-Bund Hazi Shariatullah Bridge from km. 0.000 to km 0.150 total 150.00m at Right Bank of the Arial Khan River in C/W Protection of Dhaka-Mawa-Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River Project Under Madaripur O&M Division BWDB Madaripur During the FY 2017-2018 & 2018-2019 (Package No: HSB/W-03/Lot-01/2017-18), Contract No: W-1/2018/HSB(ID-151738)/1685.	651.02	651.02	12-12-17	12-04-18	15-06-19	15-06-19
Protective work along the Left bank of the Arial Khan River from km. 0.000 to km 0.210 total 210.00 m in connection with protection of Dhaka-Mawa-Bhanga-Khulna national highway adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River project Under Madaripur O&M Division, BWDB, Madaripur During the FY 2016-2017 (Package No: HSB/W-04/Lot-01/2016-17), Contract No: W-1/2017/HSB(ID-85331)/565. date: 09-Apr-2017 for the contract price of Tk. 58515637.977	585.156	585.156	08-02-17	24-04-17	31-05-18	30-06-18
Protective Work Along the Left Bank of the Arial Khan River from km. 0.210 to km 0.390 total 180.00 m in C/W Protection of Dhaka-Mawa-Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River Project Under Madaripur O&M Division BWDB Madaripur During the FY 2016-2017 (Package No: HSB/W-04/Lot-02/2016-17 & Contract No: W-1/2017/HSB(ID-85332)/566)	571.410	571.410	08-02-17	24-04-17	11-03-18	12-06-18
Dredging of Char of Arial Khan River from km 0.000 to km 0.720 total 720.00m in C/W Protection of Dhaka-Mawa-Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River Project at Madaripur District under Madaripur O&M Division BWDB Madaripur During the FY 2017-18 (Package No: HSB/W-05/Lot-01/2017-18 & Contract No: W-1/2018/HSB(ID-146018)/190)	305.429	305.429	12-12-17	12-03-18	28-08-18	30-06-19

Description of procurement (goods/works /consultancy) as per bid document	Tender/Bid/Proposal Cost (in Lakh Taka)		Tender/Bid/Proposal		Date of completion of works/services and supply of goods	
	As per PP	Contracted value	Invitation date	Contract signing/ L.C opening date	As-per contract	Actual
1	2	3	4	5	6	7
Protective Work Along the Main Guide-Bund Hazi Shariatullah Bridge from km. 0.150 to km 0.300 total 150.00m at Right Bank of the Arial Khan River in C/W Protection of Dhaka-Mawa-Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River Project Under Madaripur O&M Division BWDB Madaripur During the FY 2017-2018 & 2018-2019 (Package No: HSB/W-06/Lot-01/2017-18), Contract No: W-1/2018/HSB(ID-151739)/1685.	718.82	718.82	12-12-17	12-04-18	15-06-19	15-06-19
Protective Work Along the Main Guide-Bund Hazi Shariatullah Bridge from km. 0.300 to km 0.440 total 140.00m at Right Bank of the Arial Khan River in C/W Protection of Dhaka-Mawa-Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River Project Under Madaripur O&M Division BWDB Madaripur During the FY 2017-2018 & 2018-2019 (Package No: HSB/W-07/Lot-01/2017-18), Contract No: W-1/2018/HSB(ID-151740)/1687.	606.35	606.35	12-12-17	12-04-18	15-06-19	15-06-19
Protective Work Along the Main Guide-Bund of Hazi Shariatullah Bridge from km 0.440 to km 0.590 total 150.00m at Right Bank of Arial Khan River in Connection with Protection of Dhaka-Mawa-Bhanga-Khulna National Highway Adjacent to Hazi Shariatullah Bridge from the erosion of Arial Khan River Project Under Madaripur O&M Division BWDB Madaripur During the Year 2017-18 & 2018-19 (Package No: HSB/W-08/Lot-01/2017-18 & Contract No: W-1/2018/HSB(ID-151741)/1688	602.38	602.38	12-12-17	12-04-18	15-06-19	15-06-19

**8.2 Use of Project Consultant (s) (Foreign/Local) : Not Applicable**

Name of the Field	Approved man month		Actual man month utilised	Remarks
	As per PP	As per contract		
1	2	3	4	5
a. Foreign	-	-	-	-
b. Local	-	-	-	-

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

Description of items	Quantity (as per PP)	Quantity procured with date	Transferred to O & M with date	Disposed off as per rule with date	Balance	Remarks
1	2	3	4	5	6	7
Not Applicable						

**C. FINANCIAL AND PHYSICAL PROGRAMME :**

**01. (a) Original and revised schedule as per PP :**

(In lakh Taka)

Financial Year	Financial provision & physical target as per original PP				Financial provision & physical target as per latest revised PP			
	Total	Taka	P.A.	Physical %	Total	Taka	P.A.	Physical %
1	2	3	4	5	6	7	8	9
2016-17	1596.40	1596.40	-	29.24%	388.00	388.00	-	6.18%
2017-18	2671.50	2671.50	-	48.94%	3152.35	3152.35	-	50.25%
2018-19	1191.36	1191.36	-	21.81%	2733.13	2733.13	-	43.57%
Total	5459.26	5459.26	-	100.00%	6273.48	6273.48	-	100.00%

**01. (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
2016-17	470.00	470.00	-	14.50%	460.00	387.97	387.97	-	13.50%
2017-18	3301.00	3301.00	-	55.00%	3301.00	3136.21	3136.21	-	56.00%
2018-19	2729.00	2729.00	-	30.50%	2709.80	2645.97	2645.97	-	30.50%
Total	6500.00	6500.00	-	100.00%	6470.80	6170.15	6170.15	-	100.00%

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

Objectives as per PP	Actual achievement	Reasons for shortfall, if any
The main objective of the project is to protect Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah Highway Bridge and guide bundh & adjacent area from devastating erosion of the river Arial Khan by construction of 1730.00 m bank protective work and dredging of 720.00 m char at upstream of Hazi Shariatullah Highway Bridge.	Construction of 1730.00 m bank protective work and dredging of 720.00 m has been achieved, which will protect the Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah Highway Bridge and guide bundh & adjacent area from devastating erosion of the river Arial Khan.	No shortfall
Huge immovable Public and Private Properties, national connectivity, Dhaka-Mawa_khulna-Bhanga highway with estimated total worth of Tk. 22577.00 lakh dispersed in the vicinity of affected area will be saved from the river erosion by implementing both dredging work and protective work under this project.	The immovable public and private properties dispersed in the vicinity of affected area have been saved from the erosion of the river Arial Khan.	

### 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).
(a) Protection of Hazi Shariatullah Highway Bridge	No.	1	1
(b) Protection of Guide Bandh	KM	1.20	1.20
(c) Protection of approach road to the bridge	KM	1.00	1.00
(d) Police Camp	No.	1	1
(e) Land (with properties)	hectare	30.00	30.00
(f) Road	KM	1.00	1.00
(g) Buildings (mosque,house,school)	No	125	125
(h) Land (agrarian)	hectare	100.00	100.00
(i) Army Camp	No	1	1

#### 02. Cost / Benefit :

Item	Estimated	Actual
(1) Benefit cost ratio of the project		
(i) Financial	1.25:1.00	Will be evaluated later by concern project evaluation office of BWDB.
(ii) Economic	1.67:1.00	
(2) Internal Rate of Return		
(i) Financial	16.14%	
(ii) Economic	23.70%	

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

## **F. MONITORING AND AUDITING**

### 0.1 Monitoring:

Name & designation of the inspecting official	Date of Inspection	Identified Problems	Recommendations
1	2	3	4
<b>Ministry / Agency:</b>			
Mid-Term Evaluation committee consisting of 10(ten) members,	02.06.2018		
1) Mr. Montu Kumar Biswas, Joint Chief, Ministry of Water Resource. 2) Mr. Abdul Azim Chowdhury Joint chief (irrigation), Planning Commission 3) Mr. Md. Jane Alam Deputy- Chief, Ministry of water resource 4) Mr. Mohammad Jahingir Kabir Director General, Planing Commision 5) Abdul Hekim, Project Director/Superintending Engineer, Faridpur O&M Circle, BWDB, Faridpur. 6) Mr. Nikhil Kumar Das Deputy-Chief,(Irrigation) Ministry of Water Resource. 7) Partha Protim Saha, Executive Engineer Madaripur O&M Division BWDB, Madaripur. 8) Abu Bokkor Siddik, Executive Engineer Office of Chief Monitoring, BWDB, Dhaka. 9) Mr. Md.Siddikur Rahaman Senior Assistant Chief, Ministry of Water Resource 10) Mr. Md.Rokonuzzaman Senior Assistant Chief, Planning Commission.	to 03.06.2018	No problems identified.	a) Initiative to be taken to complete audit. (Will be done as per recommendation.)
<b>IMED :</b> 1)Lasmi Chakma Asst. Director (Water Resorce), IMED	28-11-17	Heavy river erosion occured at a length of 590.00 m in the nearby guide bandh of the Hazi Shariatullah Bridge due to morphological change.	Additional 590.00m protective work is required. (It has been done as per recommendation).

Name & designation of the inspecting official	Date of Inspection	Identified Problems	Recommendations
1	2	3	4
Others: (Please specify) A.K.M. Momotaz-Uddin Director General, BWDB, Dhaka.	02-12-17	1) No need to implement bank protection work from 750.00m to 1200.00m. 2) There is settlement at a length of 590.00m guide bandh as river erosion occurred.	1) Recommended to implement the eroded portion of guide bandh at a length of 590.00m. (It has been done as per recommendation).
Nazmul-Islam Bhuiyan Senior Asst. Chief, Ministry of Water Resource.	06-10-18	-	-
	08-12-18	1) Unavailability of enough fund.	1) Funds should be released in due time.

## 0.2. Auditing during and after Implementation:

### 2.1. Internal Audit: Not yet conducted.

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

### 2.2. External Audit: Not yet conducted.

Audit period	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not.
1	2	3	4
-	-	-	-

## G. DESCRIPTIVE REPORT

### 1. General Observations/Remarks of the Project (Protection of Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah bridge from the erosion of Arial Khan river. (1st Revised)

#### 1.1 : Background:

During the year 2004-05, 1605.00 m bank protective work was completed at the up-stream of Hazi Shariatullah Bridge at right bank of Arial Khan river in Upazila- Shibchar under Madaripur district by Roads & Highway Department. But the bank protective work was severely damaged for a length of 709.00 m during the devastating flood of 2007. During the year 2009-10, 709.00 m bank protective work was reconstructed by EDDRP-2007 project executed by BWDB.

Due to river morphological change & severe erosion of the river 750.00m protective work is fully damaged at up-stream of Hazi Shariatullah Bridge at right bank of Arial Khan river. Now guide bundh of Hazi Shariatullah Bridge is under threaten position. It appears from the available

hydro-morphological data that the river has been shifted towards south threatening Hazi Shariatullah Bridge, Dhaka-Mawa-Bhanga-Khulna National Highway and other public/private infrastructure of adjacent area. In the proposed project protective work has been considered for a length of 1590.00m ( From meterage 0.00 to 1200.00 =1200.00m in the right bank and meterage 0.00 to 390.00 = 390.00m in the left bank ). Accordingly design has been approved by Design Circle-V, BWDB, Dhaka for implementation of 1.200 km protective work at right bank and 0.390 km at left bank of Arial Khan river at the upstream of Hazi Shariatullah Bridge.

At present Dhaka-Mawa-Bhanga-Khulna Highway is only 100 m away from the right bank of Arial Khan river. Due to river erosion the river is now proceeding towards the Highway. The Communication between Dhaka, the capital city & the other 21(twenty one) districts of south-western region of Bangladesh will be detached if the highway is damaged by river erosion of Arial Khan. This highway will be treated as the approach way of Padma Bridge in the near future.

The honorable Minister of Shipping requested the honorable Minister of Water Resources to take immediate steps for the protection of river erosion of Arial Khan vide his D.O. letter no.- নৌপম/মন্ত্রী-1/2014/974, dated: 21-10-2014. Honorable Minister of Shipping & honorable Minister of Water Resources visited the site on 04-01-2015 & observed the severe river erosion of Arial Khan at the upstream of Hazi Shariatullah Bridge and instructed to the field office of BWDB to submit a DPP as early as possible. Accordingly a technical committee was formed by BWDB on 05-11-2014. The technical committee visited the site, observed the present situation & discussion with local people. After detail investigation, they submitted a report on 30-07-2015 with a recommendation for implementation of protection work for a length of 1.200 km at right bank & 0.390 km at left bank of Arial Khan river at the up-stream of Hazi Shariatullah Bridge. Accordingly DPP has been prepared.

The implementation of the project is scheduled for 3 years. The project will be implemented by the existing manpower of Madaripur O&M Division under overall control & supervision of the Superintending Engineer, Faridpur O&M Circle, BWDB, Faridpur.

After completion of the project repair & maintenance works will be arranged from BWDB's annual O&M budget.

## **1.2 : Justification/Adequacy:**

Bangladesh is a riverine country and bank line erosion of different rivers has been a recurrent effect. River bank erosion in alluvial lands of Bangladesh is a complex and dynamic thrust of nature due to strong onrush of water and major variation in between normal water flow and surges of inflow during monsoon & post-monsoon period in each. The monsoon discharge of the major rivers is so large that there is recurrence of floods every year. Sometimes it becomes very severe and causes immense damages impacted by occurrence of devastating river erosion. This has significant social and economic impacts. The loss of land, crop and property has led to landlessness and impoverishment of thousands of dwellers living within bank lines. The large seasonal variation in river flow results in varying sediment transportation capacity and causes river-bank erosion, migration of river-banks and meandering river channels.

In this context, there have been a growing concern and reassessment of the economic and socio-political benefits of protecting important towns, infrastructure, hats and bazars as well as agricultural land. The issue has been given due importance in the national planned documents for water sector and prioritized strategic locations of river banks have been stressed for phased implementation of river bank protection programme at the apex level. Bangladesh has a long history of combating riverbank erosion. People living and housing alongside the river try to protect the banks against erosion from time immemorial. Diverse methods of bank protection have been developed in the past with considerable regional differences. After the disastrous flood in 1988, the Flood Action Plan (FAP) initiated a number of studies to come up with sustainable and long-term solutions for river training/bank protection in Bangladesh. The activities mostly concentrate on the Brahmaputra/ Jamuna river.

In this backdrop, present project thus proposed to be executed on emergency basis. The overall objective of the project is to reduce environmental degradations & human hazards due to river erosion with ensuring safety of lives & properties around the area. Throughout the erection of proposed bank revetment works, safety of establishments and reduction of human hazards will be ensured against river erosion.

### **1.3 : Objectives:**

The main objective of the project is to mitigate River Bank erosion in vulnerable area. Security of important Geographic location & safety of assets & natural resources from river erosion hazards.

The proposed project has been formulated to meet the following multiple objectives :-

- To mitigate river bank erosion in vulnerable area.
- Protect of Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah Highway Bridge and guide bundh.
- Security of important Geographic location.
- Safety of assets & natural resources from river erosion hazards.
- Sustainable socioeconomic & tertiary sectors enhancement.
- Accelerating other economic activities by developing social infrastructures; and improving the river's stability and providing a more stable environment for development.

### **1.4 :Project revision with reasons:**

The main features of the revision of the project is to inclusion of the project is to inclusion of guide bundh which was damaged during the last flood period. DPP was approved on 25-10-2016. After approval of DPP main guide bundh of Hazi Shariatullah Bridge got damage due to river erosion. But main guide bundh was not included into the project. So a technical committee was formed vide memo no. BWDB(Sec)Part-1/bibidha-3/2017(1<sup>st</sup> part)/74, Date : 22-02-2017 to assess the necessity of work beyond approved DPP.

During field visit the technical committee realized the necessity of the protection of guide bundh which was not included in approved project. According to recommendation of technical committee rehabilitation of guide bundh is included into RDPP.

To accommodate the rehabilitation of guide bundh RDPP had been prepared and approved costing Tk. 6273.48 lakh which is 14.91% more than that of approved DPP.

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

The erosion of Arial Khan river at Madaripur is now under constant threat of very severe erosion for several years. As a result the "Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah bridge" of Madaripur district was under serious threat of river erosion of Arial Khan. The main pupose of the project is to protect Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah bridge from the erosion of Arial Khan river.

A DPP named "Protection of Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah bridge from the erosion of Arial Khan river" was approved by ECNEC meeting held on 25.10.2016. After approval of DPP main guide bandh of the bridge got damaged from river erosion. But main guide bandh was not included in the main project. So a technical committee was formed vide memo no BWDB(Sec)/Part-1/bibidha-3/2017/(1<sup>st</sup> part)/74, Date: 22-02-2017 to assess the necessity of work beyond approved DPP. According to recommendation of technical committee rehabilitation of guide bandh was included into RDPP.

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

### ◆ Project Identification

During flood -2014 severe river erosion took place and due to morphological change 750.00 m protective work at upstream of Hazi Shariatullah bridge was fully damaged. River erosion was proceeding towards the Highway. Dhaka-Mawa-Bhanga-Khulna National Highway was only 100.00 m away from the river bank. The honorable Minister of Shipping requested the honorable Minister of Water Resources to take immediate steps for the protection of river erosion of Arial Khan vide his D.O. letter no.- নৌপম/মন্ত্রী-1/2014/974, dated: 21-10-2014. Honorable Minister of Shipping & honorable Minister of Water Resources visited the site on 04-01-2015 & observed the severe river erosion of Arial Khan at the upstream of Hazi Shariatullah Bridge and instructed to the field office of BWDB to submit a DPP as early as possible.

- ◆ The project is located along the Bank of Arial Khan River at Shibchar upazilla of Madaripur District.

### Project Preparation

Due to the severe erosion problem of the Arial Khan river, Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah bridge and adjacent areas was at high risk. To protect the Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah bridge by constructing permanent protective work of 1730.00 m and dredging of 720.00 m char upstream of Arial Khan river. The prevailing condition of the river erosion was such that it was necessary to construct permanent protective work. Besides this most of the inhabitants of adjacent areas were under in threat of bank erosion and inhabitants of these area had already shifted their houses several times due to erosion problem. Local people became frustrated. The socio-economic condition was deteriorating day by day.

A Technical Committee was formed by the Board vide memo no.- বাপাউবো(সচি)পরি-১/বিবিধ-৩/২০০২(৯ম খণ্ড)/৪৯, তারিখ: ০৪-০৫-২০১৫খ্রি: for study and recommendation to implement the project. The Technical Committee submitted a report on 30July, 2015 with a recommendation to implement the project. As per recommendation of the report present DPP has been formulated and submitted to MoWR. DPP Rationalization Meeting was hold on 28.12.2015 at the MoWR. After that on Ferruary/2016 the DPP was submitted to Planning Commission.

For this reason a DPP named "**Protection of Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah bridge from the erosion of Arial Khan river.**" has been approved by ECNEC meeting held on 25.10.2016.

♦ **Appraisal :**

Appraisal meeting on the project was held on 09.05.2016 at Planning Commission.

PEC meeting was held on 30.05.2016 at Planning Commission.

♦ **Credit Negotiation:** Not Applicable.

♦ **Credit Agreement:** Not Applicable.

♦ **Credit Effectiveness:** Not Applicable.

♦ **Loan Disbursement:** Not Applicable.

♦ **Loan Conditionalities:** Not Applicable.

♦ **Project Approval.**

The project was approved on 25.10.2016 by Planning Minister & revision was approved on July, 2018.

♦ **Others (if any) :** Nill.

**4. 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 stakeholders are directly taking advantages of the created facilities of the project.

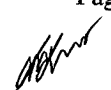
**4.3 O & M programme of the project.**

After completion of the project, maitainance works will be accomplished from regular O&M budget of BWDB.

**4.4 Impact of the project -**

**4.4.1 Direct**

- The main objective of the project is to protect Dhaka-Mawa-Bhanga-Khulna National Highway adjacent to Hazi Shariatullah Highway Bridge, guide bundh & adjacent areas from devastating erosion of the river Arial Khan by construction of 1730.00 m bank protective work and dredging of 720.00 m char at upstream of Hazi Shariatullah Highway Bridge.
- Huge immovable Public and Private Properties, national connectivity, Dhaka-Mawa\_khulna-Bhanga highway with estimated total worth of Tk. 22577.00 lakh dispersed in the vicinity of affected area will be saved from the river erosion by implementing both dredging work and protective work under this project.



#### **4.4.2 Indirect**

- Safety of human livelihood and properties.
- Improvement of socio-economic condition.

#### **4.5 Transfer of Technology and Institutional Building through the project**

Not Applicable.

#### **4.6 Employment generation through the project.**

A large number of skilled/unskilled workers were employed during construction period.

#### **4.7 Possibility of Self employment**

There are possibilities of self employment as existing commercial, industrial and business centres are protected from river bank erosion & the environmental degradation.

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

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

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

Yes.

#### **4.10 Probable Impact on Socio-Economic activity.**

By Dredging and protective work for protecting the river bank , various infrastructures are saved from the erosion. As a result socio-economic balance in the locality is enhanced.

#### **4.11 Impact on environment**

Environmental enhancement is achieved through the implementation of the project.

#### **4.12 Sustainability of the project**

The project is sustainable but requires periodic maintenance.

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

- Huge immovable Public and Private Properties, national connectivity, Dhaka-Mawa\_khulna-Bhanga highway with estimated total worth of Tk. 22577.00 lakh dispersed in the vicinity of affected area will be saved from the river erosion by implementing both dredging work and protective work under this project.
- It generated employment for skilled/unskilled workers during construction period and also in annual O&M phase. Also better employment access in business sector is enhanced.
- Natural security against river bank erosion is restored.

#### **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.**

Not Applicable.

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

5.1	Project Management	5.12	Project aid disbursement and re-imbursment
5.2	Project Director	5.13	Mission of the development partners.
5.3	Land Acquisition	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		

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

**6 : Remarks & Recommendations of the Project Director :**

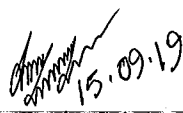
Dhaka-Mawa-Bhanga-Khulna National Highway at Shibchar Madaripur district is under serious threat of river erosion of Arial Khan, which is adjacent to Hazi Shariatullah Bridge of Arial Khan river. The highway and guide bandh of the bridge was likely to be devoured by the river soon, if Preventive measures were not taken immediately. The most affected district by Arial Khan River erosion is Madaripur. Due to morphological change of river course so many houses, trees, mosques and other establishment were engulfed by the mighty Arial Khan River and connectivity of N-8 national highway was at risk. So, in present situation permanent river bank protection work is essential to keep the river bank in position as well as to safe the Dhaka-Mawa-Bhanga-Khulna National Highway from the erosion of Arial Khan river. Protective work of 1730.00 m and dredging work of 720 m has been done. The Quantity and Quality Sand filled Geo-bags, CC blocks etc. were ensured by Task force committee of BWDB and concerned authority, BWDB's. Volume of Dredging was measured by IWM, Task force Committee and Department Jointly. During the Implementation period of the project, members of different committees visited project site and gave their opinion which help the implemantation of the project within project period. Project was implemented properly followed respective Design, Drawing and Specification.


After the successful implementation of this project, the Dhaka-Mawa-Bhanga-Khulna National Highway and guide bandhs of the Hazi Shariatullah Bridge is safe and secure. The socio-economic condition of the people has been temporarily improved. Scope of new jobs & employments have been created. The safety of human livelihood and properties have also been improved.

**Recommendation:** Proper monitoring and Maintenance dredging are required for to ensure the main river course to be kept in position. Permanent protective work at temporary protected area are required to ensure the permanent protection/sustainability of the bank. Other wise the benefit of the project might be hampered.

Date : .....

Signature and seal of the Project Director/Manager

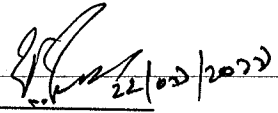
  
(Partha Pratim Saha)  
Executive Engineer  
Madaripur O&M Division  
BWDB, Madaripur.

  
(Abdul Hekim)  
Superintending Engineer  
Faridpur O&M Circle  
BWDB, Faridpur.  
&  
Project Director

**7. Remarks/Comments of Agency Head**

The main focus of the project is to protect the Dhaka-Mawa-Bhanga-Khulna national highway from devastating erosion of Arial Kha River. By constructing river bank protection work and river dredging, the highway is protected thus ensuring nation connectivity. Also, immovable public and private properties estimated worth 225.75 crore taka dispersed in the vicinity of the protected area have been saved from erosion. So, this project brings success to the nation.

Date : .....

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

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

Date :

Signature and Seal