BANGLADESH WATER DEVELOPMENT BOARD

PROJECT COMPLETION REPORT: IMED-04/2024

Name of the Project : **Feasibility Study for Integrated Water Resources Management for the Left Bank of Jamuna River System (Phase-1)**

PROJECT PERIOD: May 2022-April 2024

Directorate of Planning-I

Bangladesh Water Development Board

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

PROJECT COMPLETION REPORT (PCR): IMED 04/2024 (Revised)

A. PROJECT DESCRIPTION

01.	Name of the Project	:	Feasibility Study for Integrated Water Resources Management for the Left Bank of Jamuna River System (Phase-1) (Project code- 224357100)
02.	Administrative Ministry/Division	:	Ministry of Water Resources (MoWR)
03.	Executing Agency	:	Bangladesh Water Development Board (BWDB)
04.	Planning Commission Sector/Division		Environment, Climate Change and Water resources
05.	Type of Project (Investment/Technical/Feasibility Study): Feasibility Study		
06.	Location of the Project (As per Project Document):		

Sl. No	Division	District	City Corporation/ Municipality/Upazila
01	Mymensingh	Jamalpur	Dewanganj,Islampur,Madarganj,Sarishabari

07. Estimated Cost, Implementation Period and Approval: (In Lakh Taka)

Subject	Approved Estimated Cost				Implementation Period	Date of Approval	Approved by
	Total	GOB (Foreign Exchange)	PA (RPA)	Self-finance			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Original	481.14	481.14			May, 2022-April, 2023	22.05.2022	Ministry of Water Resources
1st No Cost Extension (If Applicable)					May 2022-April 2024	27.02.2023	Ministry of Water Resources

08. Objective of the Project

Overall objective:
The main objective of this study is to innovate appropriate technology for the protection from frequent monsoon flooding in the left bank areas of River Jamuna in Jamalpur district considering climate change impacts, water conveyance capacity and morphological change of Jamuna river. The detailed feasibility study will emphasize on the necessity for construction of a flood control embankment/Flood Wall in the Left Bank of Jamuna River in Jamalpur district along with appropriate and adequate number of interventions (water control structures/drainage structures etc.) complying with Sustainable Development Goals (SDGs).

Specific Objectives (in bullets):
Mathematical Modelling (Component-1):

- To conduct a study for protection of people and livelihood of Jamalpur district and adjacent area against frequent monsoon flooding and to increase community resilience considering climate change impacts;

- Stabilization of left bank of Jamuna River by providing suitable interventions;
- Identification of the historical erosion trend and extent of erosion prone / vulnerable locations at the study area and to provide necessary measures;
- Investigation of the feasibility of flood control embankment or flood wall along with drainage facilities to establish connectivity or any other interventions in the left bank of Jamuna river of Jamalpur district;
- To prepare appropriate alignment of flood control embankment/flood wall and to identify location of water control structures / drainage structures, and to design in details for each intervention;
- Detail design and layout of required interventions to protect Jamalpur district from frequent flooding;
- Prepare study recommendations for inclusion in DPP for the subsequent investment project;
- To estimate the detail cost of the project including economic and financial analysis to acquire the extended project outcomes;

Environmental and Social Impact Study (Component-2):

- To conduct a detailed Environmental and Social Impact Assessment (ESIA) for proposed interventions;
- Identification, quantification and evaluation the potential environmental consequences so that the impacts before implementation of the project & impacts of the projects are highlighted;
- Establishment the environmental and social baseline conditions of the specified project;
- To determine Mouza wise land acquisition volume and recommendations for avoiding Land Acquisition hazards;
- Preparation of Resettlement Action Plan.
- Assess environmental and social impacts of proposed project interventions;
- Prepare an Environmental Management Plan (EMP) which should include mitigation measures, enhancement measures, compensation measures and an environmental monitoring plan.
- Asses the project with respect to Environmental Sustainability, Climate Resilience and Disaster Risk and find the ways for reducing/mitigating negative impacts.

09.Background of the Project (In brief):

Bangladesh is a riverine deltaic country. Numerous rivers flow through this country like a net and fall into the Bay of Bengal. There are 57 transboundary rivers in the country. The rivers flowing in this country mainly belong to 3 river systems (Basin based) known as Ganga-Padma, Brahmaputra-Jamuna and Surma-Kushiyara-Meghna. Among them, the Brahmaputra-Jamuna River system flows through Bangladesh via China and India, joins the Meghna River and falls into the Bay of Bengal. The Brahmaputra River enters at the Kurigram district of Bangladesh from Assam, India. It came to Kurigram and Gaibandha districts and came to Dewanganj Upazila of Jamalpur district and was divided into two parts. A stream/channel called Old Brahmaputra is flowing eastwards in Jamalpur, Mymensingh, Gazipur and Kishoreganj districts. The other stream/channel named Jamuna flows to the south and passes through the districts of Jamalpur, Tangail, Manikganj, Bogra, Sirajganj etc.

Jamalpur district is a flood prone area. Dewanganj, Islampur, Madarganj and Sarishabari Upazilas of Jamalpur district are situated on the left bank of Jamuna river. During the monsoon season, the water level in Jamuna river exceeds the danger level and floods occur in Jamalpur district almost every year.

As a result, flood hazards occur almost every year in the adjoining Melandha and Bakshiganj Upazillas along with the four mentioned Upazilas. Although there is a flood control embankment (also known as BRE embankment) from Kurigram to Sirajganj on the right bank of Jamuna river, there is no effective or integrated flood control embankment on the left bank of Jamuna river, specifically in Jamalpur district. Earlier, there was a flood control embankment named Harindhara-Hargila embankment at Dewanganj and Islampur upazilas of Jamalpur district but it has already disappeared in the riverbed. In this situation, the left bank of Jamuna river in Jamalpur district area as described above remain unprotected during the monsoon season. As a result, floodwaters enter the locality causing severe flood hazrds as soon as the water level exceeds the danger level.

The river Jamuna is a Braided River having multiple active channels. River Jamuna carries about 7350 lakh tons of sediment every year. Rapid morphological changes took place in the Jamalpur district area of the river Jamuna. In recent times, huge siltation has been observed in Sanandbari, Kholarbari Char and Futanibazar under Dewanganj Upazila and from Kulkandi Hardpoint of Islampur Upazila to Guthail Hardpoint, Kajla etc. As a result, the conveyance capacity of Jamuna river has declined significantly. Due to this, during the monsoon season, the water level of the river suddenly crosses the danger level and flood situation is arising.

As a result of siltation in the river Jamuna due to the effects of climate change, the river bed is gradually rising and water conveyance of the river is decreasing alarmingly. In fact, the Highest Water Level (HWL) and flood duration in the Jamuna river in Jamalpur district has been increasing in recent times. In the recent floods of 2017, the Highest Water Level in Bahadurabad Point was a new record of 21.16 m PWD flowing 166 cm above the Danger Level (DL 19.50 m PWD). In the year 2020, water flowed 129cm above danger level. Even in the year 2021, water flowing 66cm above danger level causes flood. In this context, construction of an effective and sustainable flood control embankment/dam from Dewanganj to Sarishabari Upazila on the left bank of Jamuna river in Jamalpur district is very essential. The representatives of all levels including the concerned MPs of the flood prone Upazilas and the people have strongly demanded to take necessary steps in this regard. Honorable Minister of State for Religious Affairs, Government of the People's of Bangladesh Mr. Faridul Haque Khan, MP; Honorable State Minister for Information Dr. Murad Hasan, MP; Honorable Chairman of Parliamentary Committee of Jute and Textiles Ministry Mr. Mirza Azam, MP; and Honorable Chairman of Parliamentary Committee on Ministry of Planning Mr. Abul Kalam Azad, MP requested to take necessary steps for the construction of flood control embankment. On the initiative of the Deputy Commissioner, Jamalpur, a meeting was held on 26/08/2021 with the participation of all the Members of Parliament of the district, Upazila Chairman, District Administration and District and Upazila level government officials, political leaders and journalists. The meeting directed to take necessary steps including completion of in-depth feasibility study for the construction of flood control embankment on the left bank of Jamuna River.

10.Major Activities:

Major activities of Component-1 are as follows:

a. Collect and review of existing data, satellite images, maps, information and relevant available study reports, literatures, and publications.

b. Historical water level data analysis to know the water level range for different period, seasonal variation, maximum and minimum water level etc.

c. Field visit, reconnaissance survey and local stakeholder consultation about the flooding height, inundation area, erosion-deposition pattern etc.

d. Carry out topographic features survey..

e. Analysis of the drainage congestion and flooding extent in Jamalpur district.

f. Analysis of time series bathymetric chart and satellite images.

g. Analysis of flood level and development of flood maps for existing and after project implementation conditions;

h. Analysis of comprehensive design parameter;

i. Assessment of hydrological and morphological condition and develop hydrological and morphological model of the study area for Jamuna River.

j. Identify the existing drainage route map for study area and identifying the problems, constraints of quick dispatching of flood in pre-monsoon season and efficient drainage in post monsoon.

k. Hydrological and Morphological analysis and assessment of erosion vulnerability and sedimentation to assess the trends of morphological changes at the potential sites in terms of erosion and deposition of the Jamuna River including their tributaries/distributaries (if needed) using data, images, and state of art water modelling.

l. Layout/location and detail design for different options and interventions;

m. Costing with phasing and economic analysis considering agriculture, industry, fisheries, shipping, and city development/urbanization sector for the forecasting year 2041 and to achieve Sustainable Development Goals (SDGs) and implement Bangladesh Delta Plan (BDP)-2100.

Major activities of Component-2 are as follows:

a. Environmental Management and Monitoring Plan (EMMP) which should include Mitigation Plan, Enhancement Plan, Compensation Plan, and Environmental Monitoring Plan;

b. Environmental and Social Impact Assessment study report;

c. Recommendation for bio-diversity conservation within the study area;

d. Assessment of the quality of the surface water, ground water, river bed sediment and soil sample of the study area;

e. Detail land reclamation plan of study area;

f. Mouza wise Land Acquisition Plan;

g. Resettlement Action Plan;

h. Land use and landscape plan for future socio-economic development;

i. Afforestation plan or other biological interventions to protect accreted land;

j. Assessment report with respect to Environmental Sustainability, Climate Resilience and Disaster Risk and ways for reducing/mitigating negative impacts;

k. Any other, as deemed to be necessary, in compliance with the Scope of Works.

11. Reasons for Revision (if applicable): ***Not applicable***

11.1 Reasons for No-Cost Time Extension (if applicable):

- 1st time No-Cost Time Extension

In case of IWM, more time was required for additional field investigation survey, detail design of structures, stakeholder consultation, coordination among different organizations, preparation of reports. In case of CEGIS, the preparation and the finalization of the interventions list and locations, their design, model output were prerequisites for the ESIA study. But, the delivery of the above-mentioned items was delayed as the finalizations of the interventions and their detailed design had undergone various levels of stakeholder sharing and acceptance. Therefore, the ESIA consultant team required additional times to complete the study successfully.

12. Financing Arrangement (Source-wise):

12.1 Status of Loan/Grant

a) Foreign Financing: N/A

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	
						Original	Revised
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

b) GOB:

Total amount	Loan	Grant	Cash Foreign Exchange
(1)	(2)	(3)	(4)
481.14		481.14	

c) Self-finance/Equity: N/A

Total amount	Self-finance	Equity	Cash Foreign Exchange
(1)	(2)	(3)	(4)

12.2 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
(1)	(2)	(3)	(4)	(5)	(6)	(7)

12.3 Reimbursable project Aid (RPA): N/A

Source (s)	RPA Amount		Amount	Amount	Amount	Remarks
	As per Project Document	As per Agreement	Spent	Claimed	Re-imbrued	
(1)	(2)	(3)	(4)	(5)	(6)	(7)

B. IMPLEMENTATION POSITION

13. Implementation Period:

Implementation Period as per Project Document		Actual implementation	Time Over-run (% of original implementation period	Remarks
Original	Latest Revised			
(1)	(2)	(3)	(4)	(5)
May 2022-April 2023 (12 months)	May 2022-April 2024 (24 months)	May 2022-April 2024 (24 months)	100.00 %	Detailed design of infrastructures, focus group discussions, coordination between various organizations, organizing workshops for environmental and social impact assessment of the proposed infrastructure required additional time.

14. Cost of the Project:

Description	Estimated Cost		Actual expenditure	Cost over-run (% of original cost)	Remarks
	Original	Latest revised			
(1)	(2)	(3)	(4)	(5)	(6)
Taka	481.14		422.45	-12.20%	
Total	481.14		422.45		

15. Information regarding Project Director (s):

Name, Main Designation & Grade. Mobile Number (From Beginning)	Full time (Yes/No)	Part time (Yes/No)	Responsible for more than one project	Period		Remarks
				Joining	Transfer	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Md. Sultan Mahmud Executive Engineer (Civil) Directorate of Planning-1 BWDB, Dhaka Grade-5 (43000 to 69850)	No	Yes	Yes	29/08/2022	03/05/2023	
Md. Shariful Alam Executive Engineer (Civil)(CC) Directorate of Planning-1 BWDB, Dhaka Grade-6 (35500 to 67010)	No	Yes	Yes	03/05/2023	Till date	

16. Personnel:

16.1 Personnel of Project implementation Unit (PIU): N/A

Sl. No.	Name of Post (Grade)	Approved Strength	Employed during Implementation
(1)	(2)	(3)	(4)

* There was no provision of additional manpower in the approved PFS for conducting the project. So, existing officers and staffs of the Project Director's office i.e. Officer of the Superintending Engineer (Civil), Directorate of Planning-1, BWDB executed the project.

16.2 Personnel Required after the Project Completion: N/A

Sl. No.	As Proposed in Project Document (PD)		Recruited (Yes/No)	If not recruited explain reason and latest status
	Name of Post	Number		
(1)	(2)	(3)	(4)	(5)
Total=				

17. Training (Foreign/Local): N/A

Category	Sl. No.	No. of Days/Weeks/Months (D/W/M), Batch & Participants					
		As in Project Document			Achievement		
		D/W/M	Batch (s)	Participants(s)	D/W/M	Batch (s)	Participants(s)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Local Training							
Sub Total=							
Foreign Training							
Sub Total=							
Total=							

(PD= Project Document)

18. Component-wise Progress (As per latest approved Project Document):

Name of Component	Unit	Quantity	Estimated Cost (Taka in Lac)					Actual Progress (Taka in Lac)				
			Total	GOB	PA	Self-finance	Others	Total	GOB	PA	Self-finance	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(a) Revenue:												
1. Feasibility Study (Mathematical Modelling) (Local Professionals 47.00 Man-month)	MM	-	304.23	304.23	-	-	-	261.25	261.25	-	-	-
2. Feasibility Study (ESIA Study) (Local Professionals 33.5 Man-month)	MM	-	170.91	170.91	-	-	-	160.33	160.33	-	-	-
3. Domestic travel expenses	LS	-	1.00	1.00	-	-	-	0.31	0.31	-	-	-
4.Honorarium	LS	-	3.00	3.00	-	-	-	0.56	0.56	-	-	-
Sub-total (Revenue)			**479.14**	**479.14**	-	-	-	**422.45**	**422.45**	-	-	-
(b) Capital												
5. Computers and accessories	LS	-	2.00	2.00	-	-	-	0.00	0.00	-	-	-
Sub-total (Capital)			**2.00**	**2.00**	-	-	-	**0.00**	**0.00**			-
Total a+b (Revenue+ Capital)			**481.14**	**481.14**	-	-	-	**422.45**	**422.45**			-

19. Procurement of Transport (in Nos.): Not Applicable

Type of transport	Number as per Project Document	Number Procured with date	Transferred to Transport Pool with date	Transferred to O & M with date	Condemned/ damaged with date	Returned or transferred to following project	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Car							
Jeep							
Microbus							
Minibus							
Bus							
Pick-up							

Type of transport	Number as per Project Document	Number Procured with date	Transferred to Transport Pool with date	Transferred to O & M with date	Condemned/ damaged with date	Returned or transferred to following project	Remarks
Truck							
Motor - Cycle							
By-cycle							
Speed Boat							
Launch							
Others with name							

20. Project Consultant (s) (Local/Foreign):

Name of the Field	Approved man month		Actual man month utilized	Number of Deliverables		Remarks
	As per Project Document	As per contract		As per Project Document	Actual	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
a) Local:						
Mathematical Model Study as Component-1 (Consultant-IWM)	46	46	35	4	4	Inception Report, Interim Report, Draft Final Report, Final Report
Environmental and Social Impact Study as Component-2. (Consultant-CEGIS)	35	35	35	4	4	Inception Report, Interim Report, Draft Final Report, Final Report
b) Foreign:						

21. Infrastructure/Erection/Installation Tools & Equipment: Not Applicable

Description	Quantity (as per project document)	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)

22. Procurement of Goods, Works and Services:

22.1 Information on packages:

a) Total number of packages as per Project Document: 3 (Goods- 1 nos. Works- 0 Services 2 nos.)

b) Total number of packages procured: 2 (Goods- 0 nos. Works- 0 Services 2 nos.)

c) Reason for not procuring (if any): Due to having an error in economic code in the PFS, Capital item computers could not be bought.

d) Number of packages for which the estimated cost is more than 1% of the estimated cost of the project: (Goods- 0 nos. Works- 0 Services 0 nos)

22.2 Detailed Package-wise information of Goods, Works and Services (For each case the highest 50 (fifty) packages) (Please use the format as in Annexure-I (a), I(b) and I(c))

C. FINANCIAL AND PHYSICAL TARGET AND PROGRESS

23. Original and Revised Financial Provision and physical Target (as per Project Document):

Financial Year	Financial provision & physical target as per original Project Document						Financial provision & physical target as per latest revised Project Document					
	Total	GOB	P.A.	Self-finance	Others	Physical %	Total	GOB	P.A.	Self-finance	Others	Physical %
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2022-23	481.14	481.18				100%						

24. Revised ADP allocation and progress:

Financial Year	Revised Allocation & target						GOB Release	Expenditure & physical progress						Unspent* GoB Released
	Total	GOB	P.A.	Self-Finance	Others.	Physical %		Total	GOB	P.A.	Self-Finance	Others.	Physical %	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11	(12)	(13)	(14)	(15)= 8-10
2022-23	160.00	160.00				43.83%	159.75	159.48	159.48				38.44%	0.27
2023-24	302.00	302.00				61.56%	275.00	262.97	262.97				61.15%	12.03

*Attach the Proof for Reconciliation of Unspent GOB Released
**To determine the physical quantity, use the formula as in the circular of Planning Division

D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT

25. Project objective, Actual achievement and Reason for shortfall (if any):

Objectives as per Project Document	Actual achievement	Reasons for shortfall (if any)
Hydrological and Morphological Model Study		
To conduct a study for protection of people and livelihood of Jamalpur district and adjacent area against frequent monsoon flooding and to increase community resilience considering climate change impacts.	A detailed flood and drainage modelling study has been conducted for present as well as considering climate change Impact for the proposed interventions. Chapters 04 and 05	
Stabilization of left bank of Jamuna River by providing suitable interventions.	Mathematical modeling approach has been applied to test three possible scenarios i.e., full flood embankment, partial road cum embankment and no embankment condition along with necessary bank protection measures supplementary to completed and ongoing bank protection projects in the left bank of Jamuna River. Chapters 04	
Identification of the historical erosion trend and extent of erosion prone /	The erosion prone reaches of Jamuna River (Left bank) and Old Brahmaputra River (Right	

vulnerable locations at the study area and to provide necessary measures.	bank) have been identified through morphological modelling, assessment of bank line shifting, field investigation and consultation with O & M Office, BWDB, Jamalpur. Necessary bank protection with detailed design for the proposed reaches have been provided in this report. Chapter 04	
Investigation of the feasibility of flood control embankment or flood wall along with drainage facilities to establish connectivity or any other interventions in the left bank of Jamuna River of Jamalpur district.	Detailed investigation of feasibility of flood control by full or partial embankments, drainage improvement by dredging of khals and offtake management along with necessary interventions (bank protection, surface drainage outlets) have been assessed through scenario simulations. Chapters 04 and 10	
To prepare appropriate alignment of flood control embankment/flood wall and to identify location of water control structures / drainage structures, and to design in detail for each intervention.	Same as above. Chapters 04 and 10	
Detail design and layout of required interventions to protect Jamalpur district from frequent flooding.	Detailed design of proposed project interventions including bank protection, dredging and offtake management have been provided in this report. Chapters 10 and Volume-III	
Prepare study recommendations for inclusion in DPP for the subsequent investment project.	A detailed study findings has been prepared including selection of options, evaluation of proposed interventions through a multi-criteria assessment of the project. Chapter 10 & 11	
To estimate the detail cost of the project including economic and financial analysis to acquire the extended project outcomes.	In this mathematical modelling study report, all the proposed interventions and their economic and financial analysis have been addressed properly. Chapter 06.	
ESIA Study		
To conduct a detailed Environmental and Social Impact Assessment (ESIA) for proposed interventions;	A detailed Environmental and Social Impact has been assessed for the proposed interventions. Chapters 08 and 09	
Identification, quantification, and evaluation of the potential environmental consequences so that the impacts before implementation of the project & impacts of the projects are highlighted;	The potential environmental consequences of the proposed interventions have been properly assessed and provided in this report. Chapters 08 and 09	
Establishment of the environmental and social baseline conditions of the specified project;	Environmental and Social baseline conditions have been properly established based on primary and secondary data and information. Chapter 5	
To determine Mouza-wise land acquisition volume and recommendations for avoiding Land Acquisition hazards;	There is no provision for land acquisition as per the feasibility study conducted by IWM, hence not conducted.	
Preparation of Resettlement Action Plan.	Same as above.	

Assess environmental and social impacts of proposed project interventions;	Environmental and Social Impact has been assessed for the proposed project interventions. Chapters 08	
Prepare an Environmental Management Plan (EMP), which should include mitigation measures, enhancement measures, compensation measures, and an environmental monitoring plan.	A detailed EMP has been prepared including mitigation measures, enhancement measures, compensation measures and an environmental monitoring plan for the sustainable development of the project. Chapter 09	
Asses the project with respect to Environmental Sustainability, Climate Resilience, and Disaster Risk and find ways for reducing/mitigating negative impacts.	In this ESIA study report, all the issues have been addressed properly. Chapter 10.	

E. BENEFIT ANALYSIS

26. Annual Out-put: ***Not Applicable***

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)

27. Cost/Benefit: ***Not Applicable***

Item	Estimated	Actual
(1) Benefit cost ratio of the project: (i) Financial (ii) Economic		
(2) Internal Rate of Return: (i) Financial (ii) Economic		

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

F. MONITORING AND AUDITING

29. Monitoring: ***Not Applicable***

Name & Designation of the inspecting official	Date	Identified Problems	Recommendations
1	2	3	4
a) IMED:			
b) Ministry/Agency:			
c) Others: (Please specify)			

30. Auditing during and after Implementation:

a. Internal Audit: ***No Audit Conducted***

Period of Audit	Date of submission of Audit Report	Sl. No.	Major findings/objections and Money involved	Whether objections resolved or not (if not, mention status)
1	2	3	4	5
Total findings/objections and Money involved=				

b. External Audit:

Period of Audit	Date of submission of Audit Report	Sl. No.	Major findings/objections and Money involved	Whether objections resolved or not (if not, mention status)
1	2	3	4	5
05/12/2024 – 15/12/2024	Yet to be Submitted		The official findings have not been submitted yet.	-
Total findings/objections and Money involved=				

G. POST-PROJECT REMARKS

31. General Observations/Remarks on the Project

31.1 Background

Jamalpur district is a flood prone area. Dewanganj, Islampur, Madarganj and Sarishabari Upazilas of Jamalpur district are situated on the left bank of Jamuna river. During the monsoon season, the water level in Jamuna river exceeds the danger level and floods occur in Jamalpur district almost every year. As a result, flood hazards occurring almost every year in the adjoining Melandha and Bakshiganj Upazillas along with the four mentioned Upazilas. Although there is a flood control embankment (also known as BRE embankment) from Kurigram to Sirajganj on the right bank of Jamuna river, there is no effective or integrated flood control embankment on the left bank of Jamuna river, specifically in Jamalpur district. Earlier, there was a flood control embankment named Harindhara-Hargila embankment at Dewanganj and Islampur upazilas of Jamalpur district but it has already disappeared in the riverbed. In this situation, the left bank of Jamuna river in Jamalpur district area as described above remain unprotected during the monsoon season. As a result, floodwaters enter the locality causing severe flood hazrds as soon as the water level exceeds the danger level.

As a result of siltation in the river Jamuna due to the effects of climate change, the river bed is gradually rising and water conveyance of the river is decreasing alarmingly. In fact, the Highest Water Level (HWL) and flood duration in the Jamuna river in Jamalpur district has been increasing in recent times. In the recent floods of 2017, the Highest Water Level in Bahadurabad Point was a new record of 21.16 m PWD flowing 166 cm above the Danger Level (DL 19.50 m PWD). In the year 2020, water flowed 129cm above danger level. Even in the year 2021, water flowing 66cm above danger level causes flood. In this context, construction of an effective and sustainable flood control embankment/dam from Dewanganj to Sarishabari Upazila on the left bank of Jamuna river in Jamalpur district is very essential. On the initiative of the Deputy Commissioner, Jamalpur, a meeting was held on 26/08/2021 with the participation of all the Members of Parliament of the district, Upazila Chairman, District Administration

and District and Upazila level government officials, political leaders and journalists. The meeting directed to take necessary steps including completion of in-depth feasibility study for the construction of flood control embankment on the left bank of Jamuna River.

There is a need to solve the issues of flooding in Jamalpur district. Under these circumstances this study has been taken for developing suitable technologies to protect the left bank areas of the Jamuna River in the Jamalpur district from regular monsoon flooding. The study proposed some recommendations to tackle these issues.

31.2 Justification/Adequacy

A technical committee has already been formed from the Board to construct a flood control embankment cum road on the left bank of the river Jamuna in Jamalpur district. The initial alignment of the embankment has already been determined, necessary surveys have been completed and the design of the embankment has been prepared. According to the initial alignment of flood control embankment made and accordingly field level survey data, the design of the embankment has been prepared from Design Circle-1 with Drawing No- DWG NO.:Emb/Left Bank / Jamuna River / 2405, Date: 07-10-2020. Crest width of the embankment is 6.00m, Slope 1: 3 on the country side and Slope 1: 3 on the river side and total length is 106 km. Bay's resources have been earmarked for afforestation and community gathering on the river banks of the embankment. The embankment is to be constructed from Pollakandi Bridge to Baushi Bridge in Sarishabari in Dewanganj Upazila will also be used as an important road for communication. Moreover, water control structure has to be constructed in about 23 places in the alignment of the embankment. Among them, Flushing Structure in Dewanganj, Madarganj and Islampur Upazilas and Drainage cum Flushing Structure in Sarishabari Upazila have been identified at the field level.

About 106 km flood control embankment is required from Pollakandi Bridge in Dewanganj Upazila of Jamalpur District to Baushi Bridge in Sarishabari Upazila. Moreover, construction of the embankment will require large scale land acquisition. Initially, the proposed project cost appears to be over Taka 100 crore. Moreover, according to the Environmental Conservation Regulation 1998 (ECR-98), flood control embankment is in Red category and clearance from the Department of Environment will be required for the implementation of the project. Detailed Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) must be completed for clearance. Overall, a detailed feasibility study needs to be done by the consulting firm for the preparation of project proposal (DPP).

Linkage with Sustainable Development Goal (SDGs)

Goals of SDGs	Targets to be attained under the project
Goal 3: Ensure healthy lives and promote well-being for all at all ages	The project will help to promote mental health; prevent and treat substance abuse; and reduce illnesses and deaths from hazardous chemicals and pollution.
Goal 6: Ensure availability and sustainable management of water and sanitation for all	The project will help to ensure safe and affordable drinking water; end open defecation and provide access to sanitation and hygiene, improve water quality, wastewater treatment and safe reuse, increase water-use efficiency and ensure freshwater supplies, implement Integrated Water Resources Management, protect and restore water-related ecosystems.
Goal 11: Make cities and human settlements inclusive, safe, resilient, and sustainable	The project will help to sustainable urbanization; protect the riverside cities' cultural and natural heritage; reduce the adverse effects of natural disasters; reduce the environmental impacts of cities; provide access to safe and inclusive green and public spaces. Besides, it is important for strong national and regional development planning; to implement policies for inclusion, resource efficiency and disaster risk reduction.
Goal 13. Take urgent action to combat climate change and its impacts	The project will strengthen resilience and adaptive capacity to climate-related hazards and natural disasters along with integrate climate change measures into national policies, strategies and planning

Linkage with Bangladesh Delta Plan-2100

Goals of BDP-2100	Targets to be attained under the project
BDP-2100 Specific Goals Goal 1: Ensure safety from floods and climate change related disasters Goal 3: Ensure sustainable and integrated river systems and estuaries management Goal 4: Conserve and preserve wetlands and ecosystems and promote their wise use Goal 6: Achieve optimal and integrated use of land and water resources	The output of the project will direct by providing technical information to plan investment project that will reduce/alleviate riverside people from frequent flooding. The project is a parts and parcel of sustainable and integrated river management plan. It conserves and preserve the wetlands and ecosystem of riverine area and promote their efficient use. Finally, it will point of compass for optimization use of land and water resources.

31.3 Objectives

The study has been completed successfully to attain the prime objective that was to innovate appropriate technology for the protection from frequent monsoon flooding in the left bank areas of River Jamuna in Jamalpur district considering climate change impacts, water conveyance capacity and morphological change of Jamuna river. The detailed feasibility study emphasized on the necessity for construction of a flood control embankment/Flood Wall in the Left Bank of Jamuna River in Jamalpur district along with appropriate and adequate number of interventions (water control structures/drainage structures etc.) complying Sustainable Development Goals (SDGs).

31.4 Project revision with reasons: ***Not Applicable***

32. Rationale of the project Rationale of the project with respect to Concept, Design, Location and Timing

Jamalpur district, located on the left bank of the Jamuna river, is prone to floods, with the Melandha and Bakshiganj Upazillas, Dewanganj, Islampur, Madarganj and Sarishabari Upazilas of Jamalpur district experiencing flood hazards almost every year. Despite the existence of a flood control embankment on the right bank, there is no effective or integrated one on the left bank of the river, specifically in Jamalpur district. The Harindhara-Hargila embankment, which was previously in place, has disappeared in the riverbed. This leaves the left bank of the river unprotected during the monsoon season, causing severe flood hazards.

Climate change has led to siltation in the river Jamuna, causing the river bed to rise and water conveyance to decrease. The Highest Water Level (HWL) and flood duration in the Jamuna river in Jamalpur district have increased in recent times. In 2017, the Highest Water Level in Bahadurabad Point was a new record, flowing 166 cm above the Danger Level. In 2020, water flowed 129 cm above the danger level, and in 2021, water flowed 66 cm above the danger level, causing floods.

In view of the above, BWDB decided to conduct a detailed feasibility study for integrated water resources management for the left bank of Jamuna River system.

33. Brief description on planning and financing of the project and its applicability (Consider the following issues):

34.1 Project Identification

The project is being taken to develop suitable technologies to protect the left bank areas of the Jamuna River in the Jamalpur district from regular monsoon flooding while taking into account the effects of climate change, the river's changing morphology, and water conveyance capacity. The Jamuna River's water level rises above the danger level during the monsoon season, and floods practically always occur in the Jamalpur area. On the right bank of the Jamuna River, from Kurigram to Sirajganj, there is a flood

control embankment. However, on the left bank of the Jamuna River, notably in the district of Jamalpur, there is no integrated or efficient flood control embankment. As a result, the river's water level abruptly rises above the danger level during the monsoon season, creating the possibility of flooding. The river bed is gradually rising and the river's water conveyance is alarmingly declining as a result of siltation in the Jamuna caused by climate change. This affects the normal social and economic activities of the people of the project area severely. Under this circumstance, the project is identified for implementation.

34.2 Project Preparation

To achieve Bangladesh Delta Plan 2100 Goals (Goal no-1, 3,4 & 6), it is essential to reduce/alleviate riverside people from frequent flooding. The project is a parts and parcel of sustainable and integrated river management plan. It conserves and preserve the wetlands and ecosystem of riverine area and promote their efficient use. Finally, it will point of compass for optimization use of land and water resources.

In view of these above stated reasons it is demand of time to prepare an integrated water resources management plan for the left bank of Jamuna River system.

34.3 Appraisal

Departmental Project Evaluation Committee (DPEC) meeting held on 06/04/2022 at Ministry of Water Resources (***Annexure-1***).

34.4 Credit Negotiation: ***Not Applicable***

34.5 Credit Agreement: ***Not Applicable***

34.6 Credit Effectiveness: ***Not Applicable***

34.7 Loan Disbursement: ***Not Applicable***

34.8 Loan Conditions: ***Not Applicable***

34.9 Project Approval: Approved by Honorable State Minister, MoWR on 22/05/2022 (***Annexure-2***)

34.10 Others(specify): ***Not Applicable***

34. Analysis of the post- implementation situation and result of the project (Consider following issues): ***Not Applicable for this study project***

34.1 Whether the beneficiaries of the project have clear knowledge about the Target/Objectives of the project.
34.2 Programme for use of created-facilities of the project
34.3 O & M Program of the project.
34.4 Impact of the project (Direct & Indirect)
34.5 Transfer of Technology and Institutional Building through the project.
34.6 Employment generation through the project.
34.7 Possibility of Self employment.
34.8 Possibility of Women-employment opportunity.
34.9 Women's participation in development.
34.10 Probable Impact on Socio-Economic activity.
34.11 Impact on environment.
34.12 Sustainability of the project.
34.13 Contribution to poverty alleviation/reduction.
34.14 Opinion of the public representatives, local elite, local administration, teachers, religious leaders, women's representatives etc.
34.15 Contribution of Micro-credit programs and Comments on overlapping with any NGO activities.

35. Problems encountered during Implementation (with duration & steps taken to resolve those) (Consider following issues):

35.1 Project management: ***Not Applicable***
35.2 Project Director: ***Not Applicable***
35.3 Land Acquisition: ***Not Applicable***
35.4 Procurement: ***Not Applicable***
35.5 Consultancy: ***Not Applicable***
35.6 Contractor: ***Not Applicable***
35.7 Manpower: ***Not Applicable***
35.8 Law & Order: ***Not Applicable***
35.9 Natural calamity: ***Not Applicable***
35.10 Project financing: ***Not Applicable***
35.11 Allocation and release: ***Not Applicable***
35.12 Design formulation/approval: ***Not Applicable***
35.13 Project aid disbursement and re-imbursement: ***Not Applicable***
35.14 Mission of the development partners: ***Not Applicable***
35.15 Time & Cost Over-run: 1st time No-Cost Time Extension was required for conducting this study. In case of IWM, more time was required for additional field investigation survey, detail design of structures, stakeholder consultation, coordination among different organizations, preparation of reports. In case of CEGIS, the preparation and the finalization of the interventions list and locations, their design, model output were prerequisites for the ESIA study. But, the delivery of the above-mentioned items was delayed as the finalizations of the interventions and their detailed design had undergone various levels of stakeholder sharing and acceptance. Therefore, the ESIA consultant team required additional times to complete the study successfully

35.16 Project Monitoring: ***Not Applicable***
35.17 Delay in Decision: ***Not Applicable***
35.18 Transport, Training: ***Not Applicable***
35.19 Approval and Others: ***Not Applicable***

36. Remarks & Recommendations of the Project Director:

The main objective of this study is to innovate appropriate technology for the protection from frequent monsoon flooding in the left bank areas of River Jamuna in Jamalpur district considering climate change impacts, water conveyance capacity and morphological change of Jamuna river. The detailed feasibility study emphasizes on the necessity for construction of a flood control embankment/Flood Wall in the Left Bank of Jamuna River in Jamalpur district along with appropriate and adequate number of interventions (water control structures/drainage structures etc.) complying Sustainable Development Goals (SDGs).

The study has been framed to attain its objectives through two components: Mathematical Modelling Component and ESIA Component. Under Mathematical Modelling Component, detailed hydro-morphological analysis of the concerned area was done through mathematical modelling. Based on the outputs of the mathematical modelling, project interventions have been proposed including selection of options, evaluation of proposed interventions through a multi-criteria assessment of the project. Through this component of the study, necessary bank protection measures supplementary to completed and ongoing bank protection projects in the left bank of Jamuna River have been suggested with detailed design. Under ESIA Component of the project, detailed environmental and social impact assessment (ESIA) has been completed to analysis the impact of the proposed interventions on the environment and the society of the project area. Through this component of the study, environmental and social baseline conditions have been properly established, a detailed EMP has been prepared and environmental sustainability, climate resilience, and disaster risk have been analyzed.

The project planning followed a participatory bottom-up approach with due consideration to the local needs and underlying principles of IWRM. Water management issues and problems have been identified through field visit, discussion with local people and field survey. Remedial measures are devised with due analysis supported by mathematical modelling technology.

The proposed project is technically feasible, socially acceptable, environmentally sustainable and economically viable. The study suggests implementing the following project components:

- Construction of riverbank protection works in a total of 11.91 km (7.46 km at 3 locations in left bank of the Jamuna River, 2.54 km at 2 locations in the right bank of the Old Brahmaputra River, 1.9 km at 2 locations (0.9 km each at both banks) in the offtake of Alai Dadvangha River).
- Rehabilitation of existing bank protection work at 4 places around 400 meters of existing riverbank protection in the left bank of the Jamuna River.
- Construction of a Steel frame Bailey Bridge with protection of abutments in the offtake of the Alai-Dadvanga River which will be implemented by LGED.
- Construction of protection works (bulkhead & u/s toe protection by CC block and Geobag) in Hargila cross bar.
- Re-excavation of Bangshi Khal in a length of 10.8 km.

The technical report i.e., the feasibility study report has been prepared according to specific format of Planning Commission. On the Environmental and Social Impact Assessment report has been prepared according to the Terms of Reference approved by the Department of Environment.

Finally, all the objectives and scopes have been accomplished under this study project. The design, cost estimate and ESIA have been conducted through the project. The feasibility study has shown that the project is technically feasible, environmentally friendly, socially acceptable, and economically viable. So, the DPP of the investment project would be finalized for implementation of the proposed physical components based on the findings of this study project.

Date...04-03-2025.....

Md. Shariful Alam
Executive Engineer (Civil)
Directorate of Planning-1
BWDB, Dhaka.

Signature and seal of the Project Director

37. Remarks/Comments of Agency Head:

The overall objective of the project is to innovate appropriate technology for the protection from frequent monsoon flooding in the left bank areas of River Jamuna in Jamalpur district considering climate change impacts, water conveyance capacity and morphological change of Jamuna river. It is expected that implementation of the project based on the study outcomes would also improve the livelihood and the socio-economic condition of the area. In addition, the project will generate a significant number of employment opportunities during implementation and post project conditions. However, to get the maximum benefit and to ensure sustainability of the implementation project, suggestions and recommendations based on the feasibility study should be followed accordingly. BWDB will take necessary steps to prepare the DPP of the physical project as early as possible.

Date.....

Signature and seal of Agency Head

(A.K.M. Tahmidul Islam)
ID No. 660715001
Director General
BWDB, Dhaka.

38. Remarks/Comments of the Secretary/Senior Secretary of the Ministry/Division:

The study has been completed successfully and in accordance with the study's recommendations, an investment project will be taken.

Date.....

Signature and seal of Secretary

Annexure-1(a)

Information Related to Procurement of Goods:

Package No.	Description of Procurement Package GOODS	Unit	Quantity	Procurement Method & Type	Contract Approving Authority	Source of Fund	Estimated cost in Lakh BDT	Time code for process	Not used in GOODS	Invite/ Advertise Tender	Tender opening	Tender Evaluation	Approval to Award	Notification of Award	Signing of Contract	Total time to Contract Signature	Time for completion of Contract (Days)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
FJE/G-01	Supply of Laptop	Lot	2	RFQ	PD	GoB	2.00	Planned Dates	N/A	As and when required & according to **Rule** 69 of PPR-2008							15 Days
								Actual Dates		Do not Purchase							
Total (Goods)							**2.00**										

* Please mention Dates for plan and actual
* Deviation in days (difference between plan and actual)
* Plan as per procurement plan described in project document

Annexure-1(b)

Information Related to Procurement of Works:

As per Project Document		Estimated Cost. (Taka in Lac)	Procurement Method	Approving Authority	Date of Tender Invitation	Name of Newspaper	Date of Opening	Date of Approval	Date of NOA	Contract Price & Date	Actual Payment	Date of Completion	
Package No	Description of Pack age											As per Contract	Actual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
		Plan											
		Actual											
		Deviation											
		Plan											
		Actual											
		Deviation											
		Plan											
		Actual											
		Deviation											

This project is a feasibility study project. So, no works are implemented under this project.

* Please mention Dates for plan and actual
* Deviation in days (difference between plan and actual)
* Plan as per procurement plan described in project document

Annexure-1(c)

Information Related to Procurement of Services:

Pack-age No.	Description of Procurement Package SERVICES	Unit	Quantity	Procurement Method & Type	Contract Approving Authority	Source of Fund	Estimated cost in Lac BDT	Time code for process	Advertise EOI	Issue of RFP	Technical Proposal opening	Technical Proposal Evaluation	Financial Proposal Opening & Evaluation	Negotiation	Approval	Signing of Contract	Total time to Contract Signature	Time for completion of Contract (Days)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*
FJE/CS-01	Consultancy Services for Mathematical Modelling for Integrated Water Resources Management and Construction of Necessary Interventions at the Left Bank of Jamuna River in Jamalpur District	Lot	1	SSS	ADG (Planning, Design and Research), BWDB	GoB	304.23	Planned Dates	-	16-05-2022	13-06-2022	15-06-2022	19-06-2022	21-06-2022	23-06-2022	30-06-2022	46	305
								Actual Dates	-	31-08-2022	13-10-2022	13-10-2022	13-10-2022	13-10-2022	15-11-22	12-12-2022	104	505
								Deviation	-	108	123	121	117	115	146	166	58	205
FJE/CS-02	Consultancy Services for ESIA of Proposed Interventions for Integrated Water Resources Management at the Left Bank of Jamuna River in Jamalpur District.	Lot	1	SSS	ADG (Planning, Design and Research), BWDB	GoB	170.91	Planned Dates		16-05-2022	13-06-2022	15-06-2022	19-06-2022	21-06-2022	23-06-2022	30-06-2022	46	305
								Actual Dates		31-08-2022	13-10-2022	13-10-2022	13-10-2022	13-10-2022	15-11-22	12-12-2022	104	505
								Deviation		108	123	121	117	115	146	166	58	205

* Please mention Dates for plan and actual
* Deviation in days (difference between plan and actual)
* Plan as per procurement plan described in project document

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

MINISTRY OF WATER RESOURCE

Bangladesh Water Development Board

Approved
(Muhammad Amirul Haq Bhuiya)
ID No. 66011809
Director General
BWDB, Dhaka.

Mathematical Modelling for Integrated Water Resources Management and Construction of Necessary Interventions at the Left Bank of Jamuna River in Jamalpur District

Volume-I: Final Report

April 2024

IWM
Water Environment & Climate

EXECUTIVE SUMMARY

E.1 Background

Jamalpur district is a flood prone area. Dewanganj, Islampur, Madarganj and Sarishabari Upazilas of Jamalpur district are situated on the left bank of Jamuna River. During the monsoon season, the water level in Jamuna River exceeds the danger level and floods occur in Jamalpur district almost every year. Flooding also occurs almost every year in the adjoining Melandaha and Bakshiganj Upazilas along with the four mentioned Upazilas. A flood control embankment, also known as Brahmaputra Right Embankment (BRE) is existing from Kaunia, Rangpur to Pechakhola, Sirajganj on the right bank of Jamuna River but there is no effective or integrated flood control embankment on the left bank of Jamuna River, specifically in Jamalpur district. Earlier, there was a flood control embankment named Harindhara-Hargila embankment at Dewanganj and Islampur upazilas of Jamalpur district which has already been engulfed by river erosion. In this situation, the left bank of Jamuna River in Jamalpur district area as described above remains unprotected during the monsoon season. As a result, floodwaters enter the locality causing severe flooding whenever the water level exceeds the danger level in the Jamuna. To mitigate the prevailing water management issues, BWDB has taken an initiative to carry out an integrated water resource management study and engaged IWM and CEGIS to provide necessary consultancy support.

E.2 Study Approach and Methodology

This study aims to address determination of erosion prone reaches (locations) along the left bank of Jamuna River and right bank of Old Brahmaputra River, internal flood management strategies and dredging/re-excavation plan of internal rivers/khals under Jamalpur district. The study supported the planners and designers in achieving the proper planning and determining the interventions including design of the project components. It includes the design of riverbank revetment works, dredging of rivers/khals and offtake management of rivers. Mathematical modelling technology (hydrodynamic and hydrologic) using suit of software including MIKE 11, MIKE 21C, HEC RAS 2D has been adopted to simulate the main hydrologic and hydraulic processes; rainfall runoff, flow, velocity, water levels in river system to address the riverbank erosion, sediment transport and prediction of water level & discharge at ungauged locations. The models are developed with satisfactory calibration and validation and applied for various scenarios development.

The hydrology, hydraulics and morphology of the Jamuna River system (all tributaries & distributaries) has been incorporated based on available historical data, and data/information collected from field survey and hydrometric observation. A survey team had been mobilized to the field for conducting the survey soon after the commencement of the study. All the collected data has been analyzed for the requirement of determining model inputs and of gaining understanding of the existing hydrological, hydraulic and morphological conditions of the study area. A software, namely MIKE EVA (of DHI, Denmark) had been used for statistical analysis of flow discharge and water level data. Planform analysis has been carried out with the help of past series of satellite imageries for better understanding of the river planform dynamics. Based on understanding of hydro-morphological characteristics and demand of stakeholders, several options have been formulated for improved water resource management. After multicriteria and risk analysis, a feasible development alternative has been suggested

Mathematical Modelling is a state of art technology and a very efficient tool for water resource management of a hydrological unit. Mathematical models play a vital role especially during planning of a water resource project like scenario simulation, event prediction and optimization of structural intervention, etc. Under this study three types of models have been developed: One-dimensional Model for flood and drainage study, 2D overland flow model for flood inundation modelling and Two-dimensional model for morphological study. Both one dimensional flood model and two-dimensional morphology model have been developed using MIKE software package of DHI where 2D overland flow model has been developed using HEC RAS 2D.

One dimensional hydrological model has been used to simulate rainfall runoff in the catchments as well as stage and discharge in the rivers/khals flowing through the area. 2D overland flow model has been used to generate flood inundation scenario. A two-dimensional morphological model has been developed and applied to analyze riverbank erosion and estimate riverbank protection measures.

E.6 Project Planning

The study team visited intensively the study area several times, reviewed literature, collected data and information from different sources, carried out field survey, discussed with local people as well as officials of BWDB, other government/non-government/autonomous organizations or institutions. The study team has also made assessment of data as well as hydro-morphological process using hydrological, hydrodynamic and morphological modelling.

The study area is floodplains of the Brahmaputra-Jamuna River and the Old Brahmaputra River. The land area is sloping towards south ranging from 20 m MSL in the north and 12 m MSL to the south. Significant rivers flowing through the study area are: Dadbhanga River, Chatal River, and Jhinai River. The Brahmaputra-Jamuna River is the main source of water of the study area. Dadbhanga River and Chatal River are originated from the Brahmaputra-Jamuna River. Jhinai River originates from the Old Brahmaputra River. Both Dadbhanga River and Chatal River meet the Jhinai River in the middle area of the project. The combined flow travels as Jhenai River and again bifurcates as Jhenai River (East branch) and Jharkata River/Chatal South (West branch). A closure has been constructed at the offtake of the Chatal River; thus, no flood water enters to the project area through the Chatal River in monsoon.

The study area gets flood directly from the overbank spill of Jamuna River as well as flood coming through Dhadbhanga River, Chatal River, Jharkata River (Chatal South) and Jhenai River. In an extreme year, the flood takes severe shape and damages a lot. There are few areas where drainage congestion is observed. Bulk of the floodwater drains through the Jharkata River (Chatal South), and partly through the Jhenai River. Flood stays 7-10 days in the northern area (depending on Jamuna River stage). The southern area remains inundated for several months and works as a seasonal wetland.

The northern part of the study area (Dewanganj, Islampur, Melandaha and Madarganj upazila) is not vulnerable to average year flood but highly vulnerable to extreme flood with return period of 5-year and higher. The southwestern part (Sarishabari and Madarganj upazila) of the study area works as seasonal wetlands and is flooded from the Jamuna River almost every year. The southeast part (Jamalpur Sadar upazila) of the study area is not vulnerable to flood. In an average year flood, the flood inundation area (F_2, F_3, and F_4 land) is around 240 sq. km which is 17 % of the total study area. The extent of flood inundation rises up to 32 % and 50 % respectively in

- Rehabilitation of existing bank protection work at 4 places around 400 meters of existing riverbank protection in the left bank of the Jamuna River.
- Re-excavation of Bangsi khal, 10.8 km from its offtake.
- Construction of a steel frame baily bridge over the offtake of the Dadbhanga River.
- Hargila cross bar armoring of head and shank (as spur).

Option-3: Providing flood protection excluding wetland areas, drainage improvement and riverbank erosion protection considering following physical work components:

- Full Flood Protection in northern part of the study area, (with construction of flood embankment 50 km & construction of 11 drainage outlets.)
- Construction of bank revetment works at Jamuna River left bank, 7.46 km at 3 locations and Old Brahmaputra River of 2.54 km at 2 locations and Alai- Dadbhanga River offtake (both side) 1.9 km.
- Rehabilitation of existing bank protection work at 4 places around 400 meters of existing riverbank protection in the left bank of the Jamuna River.
- Re-excavation of Bangsi khal, 10.8 km from its offtake.
- Construction of a steel frame baily bridge over offtake the Dadbhanga River.
- Hargila cross bar armoring of head and shank (as spur).

It is thought that Option-1 will make the entire area free from recurrent flood inundation, increase agriculture production, facilitate road communication, save from flood damage and make relief the local people from suffering due to flood hazard. Along with the stated benefits, the Option-1 is anticipated to add some disadvantages including risk of environmental degradation (loss of water bodies, stress on groundwater with potential of contamination, sedimentation in offtakes and outfall of rivers/khals). Option-1 has disagreement with the present development policy (huge land acquisition and obstructing flowing channels). It has high implementation cost including huge land acquisition. Option-1 is anticipated to induce risk of drainage congestion and reduce capture fish production in the area. The Jamuna is a mighty river, and a Master Plan is under progress for future management of the river including fixation of riverbank line. Thus, *construction of embankment following the existing road along the left bank of the Jamuna River may be an unnecessary expenditure if a different left bank line of the Jamuna River is proposed in the proposed Master Plan.*

Option-3 will reduce flood risk partially in the northern part of the project area but again there will remain challenge of environmental degradation as well as risk of wastage of money due to alignment issue including huge land acquisition challenges.

Sl. NO.	Item of Works
2	Repair/ Rehabilitation of damaged Jamuna River right bank, revetment works 1.75 km in five locations
3	Rehabilitation of damaged part of Shaharabari Spur and Baniajan Spur
4	Re-sectioning of BRE of length 44.48 km (From CH km 98.200 to Ch km 143.000)

The stated assessment is prepared based on field visits and limited technical analysis. Detail analysis is necessary before implementation of them.

E.9 Study Recommendations

The proposed project has been planned addressing measures to protect riverbank erosion and improvement of drainage congestion. After detail investigation with field survey, mathematical modelling, hydro-morphological analysis, stakeholder consultation, the study recommends the following:

1. The proposed project is technically feasible, socially acceptable, environmentally sustainable and economically viable. The study suggests implementing the following project components:

    - Construction of riverbank protection works in a total of 11.91 km (7.46 km at 3 locations in left bank of the Jamuna River, 2.54 km at 2 locations in the right bank of the Old Brahmaputra River, 1.9 km at 2 locations (both banks) in the offtake of Alai-Dadbhanga River).

    - Rehabilitation of existing bank protection work at 4 places around 400 meters of existing riverbank protection in the left bank of the Jamuna River.

    - Construction of a Steel frame belly bridge with protection of abutments in the offtake of the Alai-Dadbhanga River.

    - Construction of protection works (bulkhead & u/s toe protection by CC block and Geobag) in Hargila cross bar.

    - Re-excavation of Bangshi Khal in a length of 10.8 km.

2. The study area is an active floodplain of Jamuna River and Old Brahmaputra River. It is recommended to maintain the existing hydraulic connectivity of the area with the surrounding rivers.

3. The flood water deposits sediment in the low-lying areas which increase fertility, helps in gradual rising of lands. It is recommended to maintain hydraulic connectivity to continue this deposition of sediment in the area.

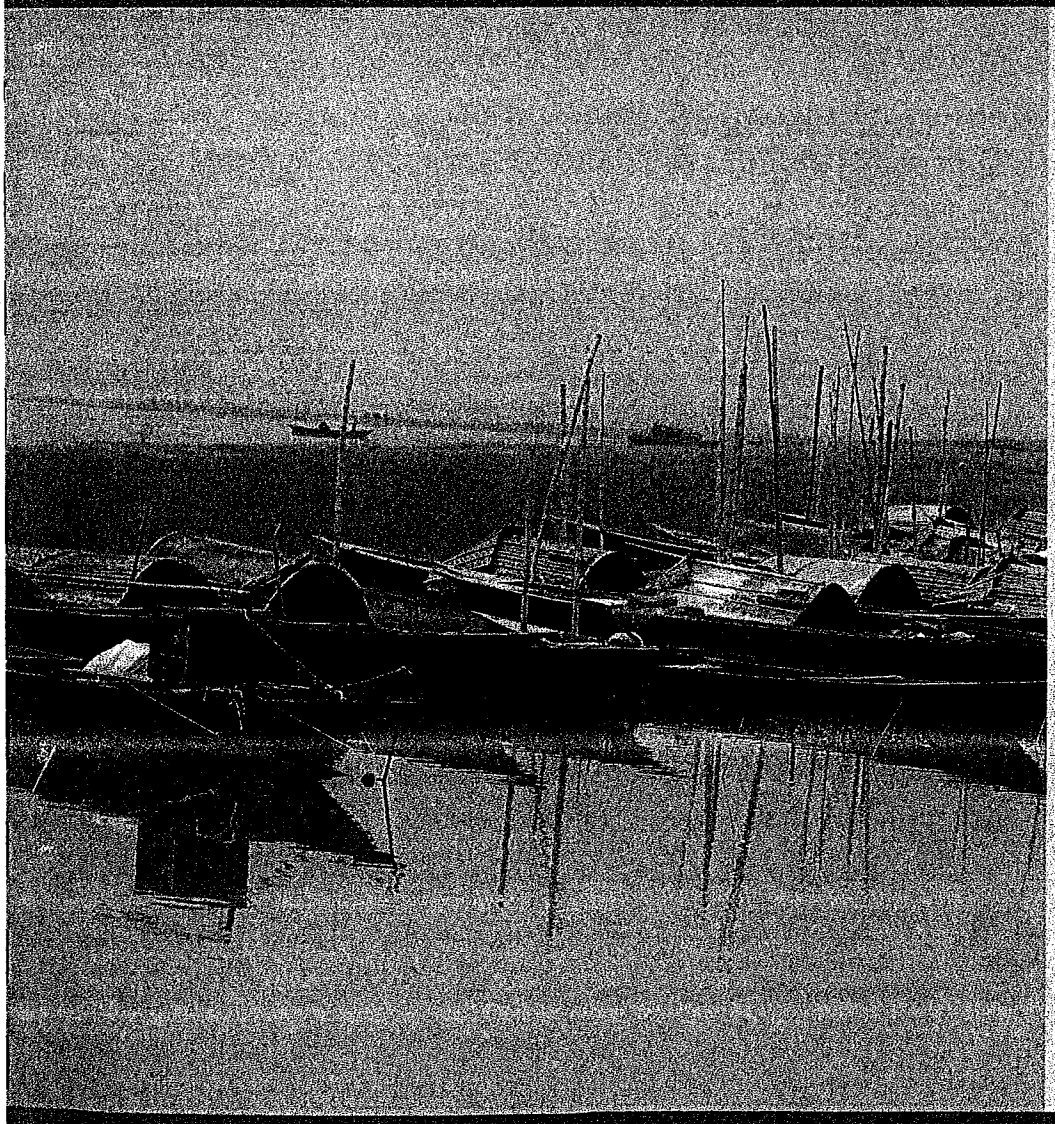
Bangladesh Water Development Board

Approved
For CEGIS
(Muhammad Amirul
ID No. 660
Director
BWDB,

Final Report

on

ESIA of Feasibility Study for Integrated Water Resources Management at the Left Bank of Jamuna River in Jamalpur District



April 2024

CEGIS

Center for Environmental and Geographic Information Services

Executive Summary

The Brahmaputra-Jamuna is one of the major river systems in the GBM basins and one of the most important transboundary rivers in the region. The Brahmaputra-Jamuna River system flows through Bangladesh via China and India, joins the Ganges River, and the combined course named-the Padma after meeting with the Upper Meghna near Chandpur falls into the Bay of Bengal as Lower Meghna.

Jamalpur District is a flood-prone area. Dewanganj, Islampur, Madarganj, and Sarishabari Upazilas of Jamalpur District are situated on the left bank of the Jamuna River. During the monsoon season, the water level in Jamuna River exceeds the danger level, and floods occur in Jamalpur District almost every year. As a result, flood hazards occur nearly every year in the adjoining Melandha and Bakshiganj Upazilas along with the abovementioned four Upazilas (Dewanganj, Islampur, Madarganj and Sarishabari). Although there is a flood control embankment (also known as BRE embankment) from Kurigram to Sirajganj on the right bank of Jamuna River, there is no effective or integrated flood control embankment on the left bank of Jamuna River, specifically in Jamalpur District.

Rapid morphological changes took place in the Jamalpur District area of the Jamuna River. In recent times, colossal siltation has been observed in Sanandbari, Kholarbari Char and Futanibazar under Dewanganj Upazila and from Kulkandi Hardpoint of Islampur Upazila to Guthail Hardpoint, Kajla. As a result, the conveyance capacity of Jamuna River has declined significantly. Due to this, during the monsoon season, the water level of the river suddenly crosses the danger level and flood situation arises.

Hence, BWDB decided to carry out a detailed Mathematical Modelling study and an ESIA of proposed interventions for integrated water resources management at the Left Bank of Jamuna River in Jamalpur District."

The Center for Environmental and Geographic Information Services (CEGIS) has been engaged by the BWDB to conduct the ESIA study for the implementation of the newly identified project titled "ESIA of Feasibility Study for Integrated Water Resources Management at the Left Bank of Jamuna River in Jamalpur District".

Proposed Interventions

The technical study conducted by IWM, recommended for Construction of riverbank protection works in a total of 11.91 km (7.46 km at 3 locations in left bank of the Jamuna River, 2.54 km at 2 locations in the right bank of the Old Brahmaputra River, 1.9 km at 2 locations (both banks) in the offtake of Alai-Dadbhanga River); Rehabilitation of existing bank protection work at 4 places around 400 meters of existing riverbank protection in the left bank of the Jamuna River; Construction of a Steel frame belly bridge with protection of abutments in the offtake of the Alai-Dadbhanga River; Construction of protection works (bulkhead & u/s toe protection by CC block and Geobag) in Hargila cross bar; Re-excavation of Bangshi Khal in a length of 10.8 km.

Environmental and Social Baseline

The water resources system is mainly governed by the Brahmaputra-Jamuna River, Old Brahmaputra River, Jhinai River, Jharkata River and Bangshi River. Besides, several water bodies, such as the Bangshi Khal, Jaluchor khal, Borobaria Khal, Pachbari Khal, Gamara khal, Chorbaria Khal and Sowakur Khal, and Bamui Beel, Takura beel, Khatar Beel, Khorka Beel, Awra Beel, which

- Rehabilitation of nonfunctional sluice gates should be completed without any delay;
- Excavation should be done in deep pool area in the river to rehabilitate fish school;
- Seasonal flooding poses significant threats terrestrial ecosystem that should be considered for finalization of proposed interventions;
- Internal communication network will be improved because of bank protection works to be carried out along the river;
- Re-excavation is required by the local people as it will improve their livelihood condition;
- Land price at the project area will be increased after the completion of the river bank protection work.

Impacts

The land use might be changed due to construction and stockpiling of CC blocks on the agricultural and non-agricultural lands. A total of 45 ha land would be used for block preparation and stockpiling for river bank protection works. Among the land, about 30 ha is agricultural and 15 ha is non-agricultural lands.

Combustion of fossil fuel during operation of vehicles and construction equipment (mixture machine, excavator etc.) will produce gaseous emissions consisting of toxic greenhouse gases such as Carbon Monoxide (CO), Nitrogen Oxides (NOx), Sulfur Oxides (SOx), etc. Besides, fugitive dust will be generated during the movement of vehicles on the land and disposal of re-excavated materials.

Noise would also be generated during re-excavation of river/khal. The generated noise will be added to the ambient noise level. The major receptors of this additional noise will be the workers and professionals. The local community will also be affected by the increased noise level.

Construction wastes would be generated during the production of CC blocks, and bank protection works, such as empty cement bags, litters, residual coarse aggregates, waste concrete, kitchen wastes, WC wastes from labor sheds, etc.

A total of 313 metric tons crops might be lost annually due to production and stockpiling of CC blocks on the agricultural land for river bank protection works of which 180 metric tons will be rice and 133 metric tons will be non-rice. A total of 57 metric tons of HYV Boro crops might be lost annually due to re-excavation of Bangshi khal (10.8 Km) from Jamtoli bridge to Kendua Bridge of Jamalpur Sadar, Jamalpur.

The riverbank protection works would cause significant alterations to the physical condition of the bank habitats e.g., disappearance of current scour holes, and increased water turbidity temporarily. The bankside scour holes serve as vital role for nesting of different types of fish species. The increased turbidity during dumping of geo bags and CC Blocks for bank protection works would decline the Dissolved Oxygen (DO) and pH in water temporarily and poses threats to various aspects of fish life, including respiration, photosynthesis of primary producers, etc. affecting fish food and health.

The fish production of the intervened river nearby the bank protection sites would decrease temporarily due to the effect on the riverine habitat, fish species diversity and fish mortality consequent to riverbank protection works.

Activities like river bank protection works, armoring of the cross bar, re-excavation of river/khal can have substantial impacts on aquatic fauna. These activities often involve altering the natural

constructed around the working area to minimize noise e.g., Timber noise barriers, Acrylic/Perspex noise barriers, sound blankets, etc.

At first the wastes should be segregated into biodegradable and non-biodegradable waste; and put in separate bins. Biodegradable waste or organic waste should be disposed of at the land fill site or gathered for composting and the non-biodegradable waste should be segregated into recyclable and rejected waste.

If possible, CC blocks should be manufactured and stock pilled on fallow or non-agricultural land. If not possible, the farmers should be informed well ahead (before the start of cropping season) not to cultivate any crops on their lands, where CC blocks would be constructed and stockpiled. The compensation should be made for any standing crop damage.

Re-excavation or bank protection works should be avoided during fish spawning period from May to July. If not possible, a confinement area should be built by very minute mesh sized (0.5 cm) net so that small fish and juveniles do not enter into the CC block dumping site.

Awareness should be raised among the local people about wildlife and habitat conservation, so that the relocated wildlife may escape easily and take secured shelter in nearer habitat. Unnecessary disturbance should be avoided beyond the designated construction zones and the breeding season should also be avoided of the sensitive fauna during the construction period.

Bank protection works should be closely monitored and emergency protection work should be conducted, if failure of bank protection is observed. O&M for protection works should be done properly to combat the failure of the bank. There should be stockpile of geo-bag and CC blocks for tackling the emergency situation. Adequate budget should be provided for operation and maintenance of river bank protection work. Maintenance re-excavation of river and khal should be carried out as and when required. Crop land would be saved from river bank erosion. Agricultural extension services should be provided to the farmers and the availability of good quality seeds. Capacity building and awareness-raising of the farmers should be carried out regarding the use of Integrated Crop Management (ICM) and Good Agricultural Practices (GAP) to minimize the usage of chemical inputs.

The cost of implementing the environmental management plan has been estimated as BDT. 25.60 million of which BDT. 18.30 million will be for implementing the mitigation and enhancement measures and BDT. 7.30 million will be for implementing the environmental monitoring plan.

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পানি সম্পদ মন্ত্রণালয়
পরিকল্পনা-২ শাখা

বিষয়: গত ০৬-০৪-২০২২ তারিখে "জামালপুর জেলায় যমুনা নদীর বামতীরে বন্যা নিয়ন্ত্রণ বাঁধ নির্মাণে বিস্তারিত সম্ভাব্যতা সমীক্ষা" শীর্ষক সমীক্ষা প্রকল্পের উপর অনুষ্ঠিত ডিপিইসি সভার কার্যবিবরণী।

সভাপতি	কবির বিন আনোয়ার সিনিয়র সচিব
সভার তারিখ	০৬/০৪/২০২২ খ্রি.।
সভার সময়	বেলা ১১:৩০ ঘটিকা
স্থান	পানি সম্পদ মন্ত্রণালয়ের সভাকক্ষ (ভার্চুয়াল zoom প্ল্যাটফর্মে বিভিন্ন সদস্যগণ সংযুক্ত হয়েছিলেন)
উপস্থিতি	পরিশিষ্ট 'ক'

১। উপস্থিত সকলকে স্বাগত জানিয়ে সভাপতি সভার কার্যক্রম শুরু করেন। সভাপতির আহ্বানে সভাকে অবহিত করা হয় যে, জলবায়ু পরিবর্তনের প্রভাব, পানি পরিবহন ক্ষমতা এবং যমুনা নদীর morphological পরিবর্তন বিবেচনা করে জামালপুর জেলায় যমুনা নদীর বাম তীরবর্তী এলাকা পৌনঃপুনিক বন্যা থেকে সুরক্ষার জন্য উপযুক্ত প্রযুক্তি উদ্ভাবন করাই প্রকল্পের মূল উদ্দেশ্য। প্রস্তাবিত সমীক্ষা প্রকল্পটির প্রাক্কলিত ব্যয় ৪৯৯.০০ লক্ষ টাকা এবং বাস্তবায়ন মেয়াদকাল মার্চ, ২০২২ হতে ফেব্রুয়ারি, ২০২৩ পর্যন্ত।

২। আলোচনার শুরুতে সভাপতি সম্পূর্ণ ব্রহ্মপুত্র-যমুনা নদী সিস্টেম অর্থাৎ কুড়িগ্রাম জেলার রৌমারি থেকে মানিকগঞ্জের দৌলতদিয়া-পাটুরিয়া পর্যন্ত বন্যা নিয়ন্ত্রণ বাঁধ নির্মাণের সম্ভাব্যতা যাচাই এর ওপর গুরুত্ব আরোপ করেন। এজন্য তিনি আলোচ্য প্রকল্পের শিরোনাম পরিবর্তন করে "যমুনা নদী সিস্টেমের বামতীরে সমন্বিত পানি সম্পদ ব্যবস্থাপনার নিমিত্ত সম্ভাব্যতা সমীক্ষা (ফেজ-১)" করার পরামর্শ দেন এবং পরবর্তীতে আলোচ্য প্রকল্পের সমীক্ষা এলাকার ভাটি হতে অর্থাৎ বঙ্গবন্ধু সেতু হতে দৌলতদিয়া-পাটুরিয়া পর্যন্ত বন্যা নিয়ন্ত্রণ বাঁধ নির্মাণের সম্ভাব্যতা যাচাই এর জন্য ফেজ-২ হিসেবে পৃথক সমীক্ষা প্রকল্প গ্রহণ করতে বলেন।

২.১। সভাপতি যমুনা নদীর বাম তীর সুনির্দিষ্টকরণ ও নদীর প্রশস্ততা উপযুক্ত intervention এর মাধ্যমে কমিয়ে ভূমি উদ্ধারের বিষয়টি বিবেচনায় রাখার ওপর গুরুত্বারোপ করেন। এছাড়া যমুনা নদীতে মাছের কুম সনাক্তকরণ এবং কুম রক্ষার জন্য প্রয়োজনীয় সুপারিশ সমীক্ষার কার্যপরিধিতে অন্তর্ভুক্ত করার জন্য নির্দেশ দেন।

২.২। সভায় PFS এ উল্লিখিত জন-মাস এর যৌক্তিকতা এবং প্রকল্প ক্রয় পদ্ধতি বিষয়ে আলোচনা হয়। প্রকল্প এলাকার সমস্যা সমাধানের জরুরি প্রয়োজন বিবেচনায় একক উৎস ভিত্তিক ক্রয় পদ্ধতি অনুসরণ করে পানি সম্পদ মন্ত্রণালয়ের ট্রাস্টি প্রতিষ্ঠান Institute of Water Modelling (IWM) কে হাইড্রোলজিকাল, মর্ফোলজিকাল ও অন্যান্য গানিতিক মডেলিং এবং Center for Environmental and Geographic Information Services (CEGIS) কে পরিবেশগত ও সামাজিক প্রভাব বিশ্লেষণ সম্পাদনের নিমিত্ত নিয়োগের পরামর্শ প্রদান করা হয়। এক্ষেত্রে প্রয়োজনে BUET এবং RRI এর সহায়তা গ্রহণ করা যেতে পারে।

৩। বিস্তারিত আলোচনার পর সভায় নিম্নলিখিত সিদ্ধান্তসমূহ গৃহীত হয়-

৩.১) প্রকল্পের শিরোনাম পরিবর্তন করে "যমুনা নদী সিস্টেমের বামতীরে সমন্বিত পানি সম্পদ ব্যবস্থাপনার নিমিত্ত সম্ভাব্যতা সমীক্ষা (ফেজ-১) নির্ধারণ করা হলো।

২০) উপপ্রধান, পরিকল্পনা-১ অধিশাখা, পানি সম্পদ মন্ত্রণালয়
২১) উপসচিব, পরিকল্পনা-২ অধিশাখা, পানি সম্পদ মন্ত্রণালয়
২২) মাননীয় প্রতিমন্ত্রীর একান্ত সচিব, প্রতিমন্ত্রীর দপ্তর, পানি সম্পদ মন্ত্রণালয়
২৩) মাননীয় উপমন্ত্রীর একান্ত সচিব, উপমন্ত্রীর দপ্তর, পানি সম্পদ মন্ত্রণালয়
২৪) উপসচিব, পরিকল্পনা-৫ শাখা, পানি সম্পদ মন্ত্রণালয়
২৫) উপসচিব, পরিকল্পনা-৩ শাখা, পানি সম্পদ মন্ত্রণালয়
২৬) উপসচিব, পরিকল্পনা-৬ শাখা, পানি সম্পদ মন্ত্রণালয়
২৭) উপসচিব, উন্নয়ন-৩ শাখা, পানি সম্পদ মন্ত্রণালয়
২৮) সিনিয়র সহকারী সচিব, পরিকল্পনা-৪ শাখা, পানি সম্পদ মন্ত্রণালয়
২৯) সিনিয়র সহকারী সচিব, পরিকল্পনা-১ শাখা, পানি সম্পদ মন্ত্রণালয়
৩০) নির্বাহী প্রকৌশলী, পরিকল্পনা-১ পরিদপ্তর, বাংলাদেশ পানি উন্নয়ন বোর্ড, পানি ভবন, ৭২ গ্রীন রোড, ঢাকা।
৩১) সিনিয়র সচিবের একান্ত সচিব, পানি সম্পদ মন্ত্রণালয়

খায়রুন নাহার
উপসচিব

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পানি সম্পদ মন্ত্রণালয়
পরিকল্পনা শাখা-০২
বাংলাদেশ সচিবালয়, ঢাকা।

নং- ৪২.০০.০০০০.০৪০.১৪.০১২.২১-১৫৪

তারিখঃ ০৮ জ্যৈষ্ঠ, ১৪২৯
২২ মে, ২০২২

প্রেরক : খায়রুন নাহার
উপসচিব

প্রাপক : চীফ একাউন্টস এন্ড ফিন্যান্স অফিসার
পানি সম্পদ মন্ত্রণালয়
২য় ১২তলা ভবন, সেগুনবাগিচা, ঢাকা।

বিষয় : "যমুনা নদী সিস্টেমের বামতীরে সমন্বিত পানি সম্পদ ব্যবস্থাপনার নিমিত্ত সম্ভাব্যতা সমীক্ষা (ফেজ-১)" শীর্ষক সমীক্ষা প্রকল্পের প্রশাসনিক অনুমোদন।

আমি নিম্নস্বাক্ষরকারী নির্দেশক্রমে "যমুনা নদী সিস্টেমের বামতীরে সমন্বিত পানি সম্পদ ব্যবস্থাপনার নিমিত্ত সম্ভাব্যতা সমীক্ষা (ফেজ-১)" শীর্ষক অনুমোদিত সমীক্ষা প্রকল্পের প্রশাসনিক অনুমোদন জ্ঞাপন করছি। প্রকল্পটির অনুমোদিত মোট ব্যয় ৪৮১.১৪ লক্ষ (চার কোটি একাশি লক্ষ চৌদ্দ হাজার) টাকা, যার শতভাগ জিওবি অনুদান।

২। প্রকল্পটির অনুমোদিত বাস্তবায়ন মেয়াদকাল মে, ২০২২ হতে এপ্রিল, ২০২৩ পর্যন্ত।

৩। অনুমোদিত প্রকল্পের অঙ্গ ও অংগভিত্তিক ব্যয় নিম্নরূপঃ (লক্ষ টাকা)

ইকনমিক কোড	কাজের দফা	পরিমাণ	ব্যয় (লক্ষ টাকা)
ক)	**রাজস্ব খাত**		
৩২৫৭১০১	কন্সালটেন্সি ম্যাথমেটিক্যাল মডেলিং এর জন্য	৪৭ জন মাস	৩০৪.২৩
৩২৫৭১০১	কন্সালটেন্সি ESIA এর জন্য	৩৩.৫ জন মাস	১৭০.৯১
৩২৪১১০১	অভ্যন্তরীণ ভ্রমণ ব্যয়	-	১.০০
৩১১১৩৩২	সম্মানী	-	৩.০০
	রাজস্ব ব্যয়ের উপমোট:		**৪৭৯.১৪**
খ)	**মূলধন খাত**		
৪১১২৩১০	কম্পিউটার ও আনুষঙ্গিক	-	২.০০
	মূলধন ব্যয়ের উপমোট:		**২.০০**
	মোট ব্যয় (ক+খ):		**৪৮১.১৪**

৪। প্রত্যেক পাতায় স্বাক্ষরিত অনুমোদিত PFS এক প্রস্থ এতদসংগে পরবর্তী ব্যবস্থা গ্রহণের জন্য প্রেরণ করা হলো।

সংযুক্তিঃ প্রত্যেক পাতায় স্বাক্ষরিত অনুমোদিত PFS (এক প্রস্থ)।

22/5/2022
(খায়রুন নাহার)
উপসচিব
ফোনঃ ৫৫১০০৯৫৮

(অপর পৃষ্ঠায় সদয় দ্রষ্টব্য)

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পানি সম্পদ মন্ত্রণালয়
পরিকল্পনা শাখা-০২
বাংলাদেশ সচিবালয়, ঢাকা।

নং- ৪২.০০.০০০০.০৪০.১৪.০১২.২১-৪২

তারিখঃ ১৪ ফাল্গুন, ১৪২৯
২৭ ফেব্রুয়ারি, ২০২৩

প্রেরক : খায়রুন নাহার
উপসচিব

প্রাপক : চীফ একাউন্টস এন্ড ফিন্যান্স অফিসার
পানি সম্পদ মন্ত্রণালয়
২য় ১২তলা ভবন, সেগুনবাগিচা, ঢাকা।

বিষয়ঃ "যমুনা নদী সিস্টেমের বামতীরে সমন্বিত পানি সম্পদ ব্যবস্থাপনার নিমিত্ত সম্ভাব্যতা সমীক্ষা (ফেজ-১)" শীর্ষক সমীক্ষা প্রকল্পের ব্যয় বৃদ্ধি ব্যতিরেকে বাস্তবায়ন মেয়াদ বৃদ্ধির প্রশাসনিক অনুমোদন।

আমি নিম্নস্বাক্ষরকারী নির্দেশক্রমে "যমুনা নদী সিস্টেমের বামতীরে সমন্বিত পানি সম্পদ ব্যবস্থাপনার নিমিত্ত সম্ভাব্যতা সমীক্ষা (ফেজ-১)" শীর্ষক সমীক্ষা প্রকল্পের ব্যয় বৃদ্ধি ব্যতিরেকে বাস্তবায়ন মেয়াদকাল ০১ (এক) বছর (মে, ২০২২ হতে এপ্রিল, ২০২৩ এর পরিবর্তে মে, ২০২২ হতে এপ্রিল, ২০২৪ পর্যন্ত) বৃদ্ধির প্রশাসনিক অনুমোদন জ্ঞাপন করছি।

০২। প্রকল্পটির অনুমোদিত মোট ব্যয় ৪৮১.১৪ লক্ষ টাকা (সম্পূর্ণ জিওবি)।

০৩। প্রকল্পটির অনুমোদিত বাস্তবায়ন মেয়াদকাল ০১ মে, ২০২২ হতে ৩০ এপ্রিল, ২০২৪ পর্যন্ত।

(খায়রুন নাহার)
উপসচিব
ফোনঃ ৫৫১০০৯৫৮

সদয় অবগতি ও প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য অনুলিপি (জ্যেষ্ঠতার ক্রমানুসারে নয়):

১। সিনিয়র সচিব, জনপ্রশাসন মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
২। সিনিয়র সচিব, অর্থ বিভাগ, অর্থ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা **(দৃঃআঃ উপ-সচিব বাজেট-১৯)**।
৩। সদস্য, সাধারণ অর্থনীতি বিভাগ, পরিকল্পনা কমিশন, শের-ই-বাংলা নগর, ঢাকা
৪। সদস্য, কার্যক্রম বিভাগ, পরিকল্পনা কমিশন, শের-ই-বাংলা নগর, ঢাকা।
৫। সচিব, বাস্তবায়ন পরিবীক্ষণ ও মূল্যায়ন বিভাগ, শের-ই-বাংলা নগর, ঢাকা।
৬। সদস্য, কৃষি, পানি সম্পদ ও পল্লী প্রতিষ্ঠান বিভাগ, পরিকল্পনা কমিশন, শেরে বাংলা নগর, ঢাকা।
৭। অতিরিক্ত সচিব (উন্নয়ন), পানি সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা **(দৃঃআঃ উপসচিব উন্নয়ন-৩ শাখা)**।
৮। মহাপরিচালক, বাংলাদেশ পানি উন্নয়ন বোর্ড, পানি ভবন, ৭২ গ্রীন রোড, ঢাকা।
৯। তত্ত্বাবধায়ক প্রকৌশলী, পরিকল্পনা-১ পরিদপ্তর, বাংলাদেশ পানি উন্নয়ন বোর্ড, পানি ভবন, ৭২ গ্রীণ রোড, ঢাকা।

সদয় অবগতির জন্য অনুলিপিঃ

১। মাননীয় প্রতিমন্ত্রী মহোদয়ের একান্ত সচিব, পানি সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
২। মাননীয় উপমন্ত্রী মহোদয়ের একান্ত সচিব, পানি সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
৩। সচিব মহোদয়ের একান্ত সচিব, পানি সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
৪। অতিরিক্ত সচিব (পরিকল্পনা) মহোদয়ের ব্যক্তিগত কর্মকর্তা, পানি সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
৫। উপসচিব (পরিকল্পনা-১ অধিশাখা) মহোদয়ের ব্যক্তিগত কর্মকর্তা, পানি সম্পদ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা
৬। সংশ্লিষ্ট/মাস্টার নথি।