FRERMIP
Flood and Riverbank Erosion Risk Management Investment Program

Bangladesh Water Development Board
Asian Development Bank

Flood and Riverbank Erosion Risk Management Investment Program – Project 1

ADB Loan No. 3138-BAN(SF)

Institutional Strengthening and Project Management Consultants (ISPMC)

QUARTERLY PROGRESS REPORT NO. 01

FOR

JULY – SEPTEMBER 2015

Prepared by:

ISPMC
Institutional strengthening and project management consultant

Joint venture
nhc northwest hydraulic consultants
Mott MacDonald

PROJECT OFFICE
House 45 (2nd Floor)
Road 27, Banani
Dhaka 1213, Bangladesh
Phone 0088 (0) 2 986 1194
Email ahmad.sajid@mottmac.com

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Flood and Riverbank Erosion Risk Management Investment Program

Mr. A. M. Aminul Haque
Addl. Chief Engineer/Project Director
FRERMIP, BWDB, Dhaka
Bangladesh

Reference No. PMO 44
15 December 2015

Subject : **Submission of Quarterly Progress Report No. 01 July – September 2015**

Reference: **As per Institutional Strengthening and Project Management Consulting Services Contract, Clause 9 (i), Page 35**

Dear Sir:

Please find enclosed our first Quarterly Progress Report No. 01 for the period July to September 2015. This first version has been prepared in close discussion with your office, using information available in the Development Project Performa, and considering the Facility Administration Memorandum.

The quarterly progress report documents the current status of project and progress made during the reporting quarter. When required, it identifies changes to the key assumptions and possible risks to project implementation. This report was prepared by Northwest Hydraulic Consultants with contributions, assistance and cooperation of the Bangladesh Water Development Board (BWDB).

We look forward to comments from BWDB, ADB and others on this report.

Yours sincerely,

Knut Oberhagemann
Team Leader

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Development Partners:

13. Country Director, BRM, ADB, Sher-e-Bangla Nagar, Dhaka
    (Attn.: Mr. Zahir Uddin Ahmad, PIO; 2 copies)

15. Embassy of the Kingdom of the Netherlands, Gulshan, Dhaka

ABBREVIATIONS AND ACRONYMS

ADB (BRM)	-	Asian Development Bank (Bangladesh Resident Mission)
BDT	-	Bangladesh Taka
BWDB	-	Bangladesh Water Development Board
CbFRM	-	Community-based Flood Risk Management
CDMU	-	Community Disaster Management Unit
DDM	-	Department of Disaster Management
DPP	-	Development Project Performa
GOB	-	Government of Bangladesh
GON	-	Government of The Netherlands
ha	-	hectare
km	-	Kilometre
Mil	-	Million (1,000,000)
ISPMC	-	Institutional Strengthening and Project Management Consultants
MIS	-	Management Information Systems
MoDM	-	Ministry of Disaster Management
MoWR	-	Ministry of Water Resources
NGO	-	Non-Government Organization
O&M	-	Operation and Maintenance
PD	-	Project Director (BWDB and DDM)
PMO	-	Project Management Office (BWDB)
PMU	-	Project Management Unit (DDM)
PPTA	-	Project Preparatory Technical Assistance
QPR	-	Quarterly Progress Report
RNE	-	Royal Netherlands Embassy
SMO	-	Sub-Project Management Office
USD	-	United States Dollars

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1. INTRODUCTION

1.1 *Background*

The people in Bangladesh are often detrimentally affected by flooding and riverbank erosion along its four main rivers: Jamuna, Ganges, Padma and Meghna. Over 5,000 hectares (ha) of floodplain land is lost annually due to riverbank erosion, affecting over 100,000 people. The risk associated with flooding and riverbank erosion increases with the growth of the population, and the high population density of Bangladesh restricts the scope for moving people away from disaster prone areas. Riverbank erosion increasingly threatens embankments required for flood protection. The threat of flooding and riverbank erosion discourages investment and leads to lower economic growth in riverine areas. Effective riverbank erosion and flood protection management is essential for the economic growth and poverty reduction in affected areas.

Starting in 2004, geotextile bag revetments were used to protect the Pabna and Meghna-Dhonagoda Irrigation Projects from riverbank erosion. Between 2004 and 2011, this protection method was used along 30 km of the lower Jamuna River. Following a feasibility study completed in December 2013, the Government of Bangladesh (GOB) and Asian Development Bank (ADB) agreed to continue riverbank protection, stabilizing river reaches and potentially reclaiming floodplain land lost since the 1960s.

The Project Preparatory Technical Assistance (PPTA) implemented from 2012 to 2013 provides the key concept for FRERMIP and is documented in the Final Report, Feasibility Study, 2013 (Ref. 6). While overall the PPTA report has been followed in ADB and GOB documents some components have changed significantly:

1. While the BWDB design office followed the tentative length of riverbank protection works established during the feasibility study, it changed the design by increasing the element weight and by increasing the quantities per linear meter of riverbank protection. It is understood that the embankment design volume has also been increased.

2. ADB and GOB agreed to reduce the proposed river stabilization study substantially in order to process the loan faster. Now less than 50% of resources and time are provided to the study, which will result in much reduced in-depth investigations.

The loan for Project 1 of the Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP) was signed on 14 August 2014. This first project constitutes the beginning of three successive projects (tranches) to be implemented over a period of around ten years. The first project will provide structural and non-structural flood and riverbank erosion risk management measures in three high priority subproject areas (**Figure 1**). Subsequent projects will extend the protected reaches using designs adjusted to current riverbank erosion conditions and considering the possibilities to reclaim lost floodplain land.

The expected impact of FRERMIP will be improved livelihoods of people in the areas along the main rivers of Bangladesh. The outcome of the program will be reduced flood and riverbank erosion risks in the subproject reaches.

1.2 *The Project*

The project has three funding partners, two international donors, plus the local counterpart: Asian Development Bank (ADB), Government of Netherlands (GON) and Government of Bangladesh (GOB).

As of the end of the reporting quarter, the project scope and implementation arrangements have not changed from those outlined in the ADB Report and Recommendation of the President (Ref. 2). The anticipated outputs of the project are still to provide:

1. flood and riverbank erosion risk mitigation functioning at priority river reaches
2. a strengthened institutional system for flood and riverbank erosion risk management
3. an operational program management system

The focus of the first output will be on both structural and non-structural flood and riverbank erosion risk mitigation measures, including riverbank revetments, flood embankments, community capacity development for sustainable operation and maintenance (O&M) of infrastructure required for flood and erosion risk management, and livelihood enhancements for project-affected people.

The first project will provide about nearly 20 km of riverbank protection[1], 23 km of flood embankments (rehabilitation and new), and associated non-structural activities (Refer to the Project Map, **Figure 1**). The project will result in an improved knowledge base and institutional capacity in sustainable asset management, and strategic management of the main rivers, including safeguard monitoring capacity. The project will actively promote a sound and sustainable program management system which will facilitate the implementation process.

Table 1, placed at the beginning of the report, provides a summary of project information including salient reference data, estimates of project assets and physical progress, and a reimbursement summary in Bangladesh Taka (BDT). In future, if ADB could provide exchange rates for each reimbursement application, a running total in USD could also be included.

It is expected that all project outputs for Project-1 can be fully achieved by the scheduled closing date of 30 June 2019.

1.3 *Overall Progress*

The overall weighted physical project progress is presented in **Table 1** and shows that the progress achieved to the end of the reporting period is around 7%. The overall financial progress is only 0.1 %[2]. The progress was computed by identifying major project activities and assigning a weighting factor to each which quantifies the time/effort/resources required to complete the individual tasks. Progress for some of the activities are qualitative in nature, while others can be measured directly from the database presently being developed to facilitate and expedite project implementation (refer to **Appendix D-1**).

The ISPMC reviewed the ADB template of proposed activities for computing project progress as defined in Appendix 5 of ADB's Facility Administration Manual for the project (Ref. 1). The proposed template omitted a number of key activities (capacity strengthening, and preparations for Project - 2), and seemed to give excessive weight to the construction of civil works. A revised set of primary and secondary activities (components) and a new set of weighting factors proposed by the ISPMC are shown in **Table A-1** which is to be reviewed and approved by BWDB and ADB before final acceptance. For convenience of the reviewer, the table includes a column showing the previous ADB weighting factors as well as the new proposed (ISPMC) weighting factors.

[1] The length of protection work has increased from 15 to 20 km due to a natural river process between feasibility study and work start.

[2] This value excludes the ISPMC staff and operation costs, and PMO staff cost which will be added starting next quarter.

1.4 *This Report*

Quarterly Progress Report No. 1 covers the period 01 July to 31 September 2015. The report describes activities carried out during the quarter, which have primarily been pre-construction tasks completed by the BWDB PMO, and preparation of the inception report and other initial implementation support services by the ISPMC.

A project implementation database has been partially developed to monitor project implementation and facilitate preparation of this Quarterly Progress Report (QPR). Details regarding the development of this database are included in ***Appendix D-1***.

2. PROJECT ACTIVITIES / ACHIEVEMENTS

2.1 *Introduction*

The BWDB FRERMIP Project Management Office (PMO) started functioning in April 2014. Since that time, the office has been engaged in tender preparation, floating and evaluation activities associated with project goods, services and works. Work Orders for some of these contracts have recently been awarded and implementation will start during the next quarter. A small number of contracts have already been fully implemented, and final bills have been paid for two small contracts. The current status of these implementation activities are discussed in this section and detailed and summary tables are given in **Appendices A & B**.

A contract with the Institutional Strengthening and Project Management Consultants (ISPMC) was signed on 08 September 2015. Since that time, the consultant has been primarily engaged with the preparation of the Project Inception Report, and with the establishment of their office and staff. In addition, work has also commenced on the Community based Flood Risk Management (CbFRM) and the Management Information System (MIS) activities.

2.2 *Progress of Project Assets*

2.2.1 Introduction

The Project comprises a combination of assets and contracts. An ‘asset’ can be defined as an item of value to the project. There are three classes of assets: works, goods, or services. A contract is simply an agreement to construct, supply or provide an asset. A single asset (e.g. a long embankment) can be constructed under a number of separate contracts. Conversely, a number of dissimilar assets (e.g. a short embankment with a road and a number of appurtenant structures) from the same class, may be combined under a single contract. Design and O&M activities only refer to works, not goods or services. Tendering progress is most easily expressed on a contract basis. Implementation progress could be measured either on an asset or a contract basis.

Tables A-2 and A-3 show the type, number and total cost of assets currently included in the program, by implementing agency. A total of 24 Km of embankment worth Tk 934 Mil (includes associated structures), and 15 km of riverbank revetment worth Tk 2271 Mil (plus Tk 995 Mil for geo-bags) are included in the current work program. Similar details on an individual contract basis are provided in **Table B-4**. This detailed table also shows that the best estimate of final cost for all project assets currently identified is Tk 7653 Mil (Goods Tk 1304 Mil, Services Tk 1381 Mil and Works Tk 3639 Mil, plus Tk 1329 Mil of additional assets included in the Development Project Performa (DPP).

Every project asset and contract will be tied to a specific Expenditure Category as defined in the table on page 68 of the DPP 4 (Ref. 4; reproduced in **Table 2**). This categorization will allow the database to easily monitor implementation and financial progress of each category item. Using cross-link tables that connect these category items (and Asset Types) with other financial indicators it is relatively easy to produce tables which show project progress based on ADB Financial Categories (**Table A-4**) or DPP Components (**Table A-5**). Similarly, it is anticipated that the database will be able to calculate the physical progress values for certain components in **Table 1**.

Table 2 ADB Categorization

	Primary	Secondary
A	Civil Works	A1 Embankment Works
		A2 Riverbank Protection Works
		A3 Emergency & Adaptation
		A4 Pilot Land Recovery
B	Materials	B1 Geotextile, Civil Works
		B2 Geotextile, Emergency
C	Vehicles & Equipment	C1 Vehicles
		C2 Office Equipment
		C3 Survey Equipment
		C4 DDM Office Equipment
D	Consulting Services	D1 ISPM
		D2 NGO BWDB
		D3 NGO DDM
		D4 Survey & Investigation
E	Capacity Development	E1 BWDB Training & Study
		E2 DDM Training
		E3 MIS Development
F	Land Acqn & Resettlement	F1 Land Compensation
		F2 Resettlement Benefits
G	Program Management	G1 Staff Salaries BWDB
		G2 Office Operations BWDB
		G3 Office Operations DDM
		G4 BWDB River Surveys

2.2.2 Design Activities

Feasibility level designs for all civil works in the current Project-1, were prepared during the Project Preparatory Technical Assistance (PPTA) study (Ref. 6) completed in December 2013. This initial design work included the collection of all required data, and an estimate of cost. Designs for all revetment works in Manikganj and Tangail SMOs were subsequently reviewed and finalized by BWDB Design Circle 1 in August 2014.

The design work for all embankments, and associated roads and regulators, in Koitola SMO are currently being redesigned by Design Circle 2. Recent river erosion has necessitated changes to the original embankment alignment. It will likely take considerable time (up to 3 months) before the alignment can be finalized. Associated structures (e.g. road and regulators) cannot be designed until the embankment alignment has been finalized.

A summary of the design progress is given in **Table 3** and details for each individual asset are available in **Table B-1**.

Table 3 Design Progress Summary

Recipient Executing Agency	Total Designs	Design Data			Design Process	
		Hydrology	Survey	Geotech	Design	Drawings
Koitola SMO	11	10	5	0	0	0
Manikganj SMO	3	3	3	3	3	3
Tangail SMO	2	2	2	2	2	2
Totals	**16**	**15**	**10**	**5**	**5**	**5**

2.2.3 Tendering Activities

Tenders have been floated and received for 15 contracts worth an estimated Tk 3908 Mil, and work orders have been issued for 11 contracts. Three material contracts (supply of geo-bags worth Tk 918 Mil) have been awarded; the last one in late September. One major service contract (ISPMC services worth Tk 1018 Mil) was awarded in early September. Five civil works contracts (riverbank revetments worth Tk 1947 Mil) have been floated and 2 were awarded in late September. The remaining 6 contracts were relatively minor goods and service contracts.

All tender documents have been prepared, floated and evaluated by the BWDB PMO.

A summary of tendering progress, by financial primary component and executing agency, is given in **Table 4.** Tender progress details, on an individual contract package basis, are given in **Table B-2.**

Table 4 Tendering Progress Summary

Financial Primary Component	Contract Value (BDT Mil)	Tenders Floated	Tenders Received	Work Orders Issued
Goods; B: Materials	918	3	3	3
Goods; C: Vehicles & Equipment	2	1	1	1
Services; D: Consulting Services	1,040	3	3	2
Services; G: Program Management	0	3	3	3
Works; A: Civil Works	1,947	5	5	2
Totals	**3,908**	**15**	**15**	**11**

2.2.4 Implementation Activities

Implementation activities during the quarter were relatively minor, except for the ISPMC contract and ongoing BWDB operation expenses. In future, ISPMC implementation progress, as for all service contracts, will be measured as a portion of money spent to date compared to total contract value. As the ISPMC contract has just recently been initiated, no estimate of money spent during September is currently available. The summary and detailed implementation tables have been included primarily to show the intended format of the QPR.

A summary of implementation progress, by financial primary component and executing agency, is given in **Table 5.** Implementation progress details, on an individual contract package basis, are given in **Table B-3.**

Table 5: Implementation Progress Summary

Financial Primary Component	On-going & Complete Contracts	Best Cost (BDT Mil)	Progress to Date (BDT Mil)	Financial Progress (BDT Mil)
Goods; C: Vehicles & Equipment	1	2	2	2
Services; D: Consulting Services	1	5	5	5
Services; G: Program Management	3	0	0	0
eXtra; G: Program Management	1	50	10	1
Totals	**6**	**57**	**17**	**8**

2.3 *INCEPTION REPORT*

The primary activity performed by the ISPMC during the reporting quarter was the preparation of an Inception Report for the project. The inception report will provide a comprehensive 'roadmap' on how the consultant intends to perform its duties. The report will detail the tasks to be completed and outputs to be delivered over the next three years.

The report will start off by describing lessons learned from previous and on-going river training activities in Bangladesh and elsewhere. A summary of findings will be presented, together with an assessment on how these findings can be used directly in the present project.

The inception plan will develop a revised comprehensive work program and staffing schedule based on current and more detailed information regarding proposed river training works, specific skills required and available resources.

Specific major project activities detailed in the inception plan include:

1. institutional capacity strengthening
2. preparation of Project-2
3. long term river stabilization and training plans
4. master plan for river management
5. land recovery and river training piloting schemes

Under the project, the institutional capacity of BWDB and DDM will be strengthened. The knowledge base for flood and river management will be improved through training, study tours and MIS development. Project management implementation activities will be supported including construction supervision. Community-based, participatory O&M and flood risk management groups will be formed, trained and supported.

Preparations for Project-2 will include technical and social field surveys based primarily on studies carried out for the PPTA report finalized in December 2013, but will be updated as required. The feasibility study will evaluate impacts of morphology changes, environmental and socio-economic impacts. It will also provide basic designs for assessment of the technical and economic feasibility. The economic feasibility will be linked to the overall feasibility of the long-term river training/narrowing project. After approval, the preparations will enter into the detailed design phase. Detailed design reports and drawings will be prepared for all proposed civil works including cost estimates and draft bid documents. Documentation required for loan processing will also be developed.

A long-term strategy for river stabilization and a river training plan will be developed. This strategy will consider all potential impacts and necessary safeguards. Hydraulic and morphologic analyses

will be prepared for the Jamuna-Meghna and Jamuna-Padma-Ganges confluences. An economic justification and investment strategy will be developed.

A preliminary strategic master plan for river management will be developed. This plan will provide:

1. establishment of a knowledge base for the river studies
2. plan for improvements of offtakes and distributary flows
3. assessments of present and future uses
4. assessments of costs and benefits of the river training
5. plan of interventions
6. need for future studies

Land recovery and river training piloting schemes will be implemented. Specific tasks include site selection, design, contractual procedures and construction supervision, plus subsequent monitoring and assessment.

It is intended that the inception report will include four annexes: background papers, river data, MIS and administrative issues. The background papers will include: existing river infrastructure, river morphology, hydrology and flooding, navigation, water quality, agriculture, fisheries, and socio-economy. River data will include: bathymetric, hydrometric and sediment data, plus satellite images. The MIS annex will discuss the various ongoing and planned MIS initiatives to be implemented during the project.

2.4 *COMMUNITY-BASED FLOOD RISK MANAGEMENT*

The terms of reference (TOR) for a NGO service contract to support the community-based O&M and flood risk management component (CbFRM) has been prepared and sent to the DDM PMU office for their review and necessary action.

The NGO would recruit, train and equip Community Disaster Management Units (CDMUs), who would actively participate in subsequent flood monitoring, migration and relief efforts as directed by BWDB and DDM. The CDMUs will also help to prepare: participatory flood risk maps, flood risk assessment reports, and flood preparedness and mitigation plans. It is intended that these CDMUs could also eventually participate in routine O&M activities, and receive some remuneration for their services.

Under ‘Social Forestry’, the NGO would coordinate plantation of both fruit and timber trees on the land protected by embankment, plus the planting of vetiver grasses on the embankment slopes to help stabilize the soil against erosion.

As part of a broader baseline survey, the NGO would collect and analyze data required to measure flood risks. This data would be used to generate maps showing population densities, vulnerable communities, land-use, and locations of critically important infrastructures (e.g. flood shelters and hospitals).

As part of a campaign to promote flood risk management activities, the NGO would periodically organize large community events. These community events may include folk songs, popular drama, and field shows. The purpose of these events would be to disseminate information on flood disaster management procedures and to recruit new members for the CDMUs.

2.5 *MANAGEMENT INFORMATION SYSTEMS*

Work has started on the MIS component. At present two database systems have been identified: a river survey database, and a project implementation database. An asset database which was originally considered for the project has been deferred, due to the recent initiative by the World Bank to fund a very comprehensive and innovative Asset Management System under its River Management Improvement Program, which may include parts of the FRERMIP area (Ref. 5). The tender documents for this Asset Management System will be received on 15 October 2015.

The river survey database will store river bathymetric data and will allow users to extract and display data that illustrate geomorphic changes over time. Three specific tools have been identified: one that displays bathymetric elevations at specific points, one that displays river cross-sections along a specific line, and one that displays contour areas and volumes for a specific map shape. Considerable work has been done on the formulation phase of this database, and programming its interface. The type of database will be finalized after consultation with concerned BWDB departments. It is intended that this application would be housed on a separate external server and eventually be available on-line to users with proper log-in access.

The project implementation database would be used to monitor project implementation and facilitate preparation of the QPR. The database would monitor design, tendering, physical implementation (construction for civil works), O&M and financial activities. The database would include goods, services and works contracts so that it can more comprehensively monitor all project activities (refer to **Appendix D-1**).

3. ADMINISTRATIVE ARRANGEMENTS

3.1 *Establishment of Project Office*

By the end of the reporting period, just 3 weeks after signing the consultancy contract agreement, the ISPMC had successfully established their first project office. By that time, the ISPMC had fielded 5 international specialists, 8 national specialists, 1 technical support staff, and 5 office support staff. The available project personnel are detailed in the Utilization of Consultant Person-Months table (**Table C-1**). **Figure 2** presents a revised Staffing Schedule as per the consultancy contract, which details proposed inputs of all ISPMC technical personnel on a monthly basic.

The second ISPMC office will be opened near the BWDB Design Office along Green Road, in the same building and just one floor above the BWDB PMO Office.

3.2 *Important Meetings*

The only key meeting that took place during the reporting quarter was the signing of the ISPMC contract between BWDB and the Consultant representatives on 08 September 2015.

The meeting was attended by several senior BWDB officials including the Director General, Additional Director General Western Region, Additional Director General Planning, Chief Engineer Planning, Project Director PMO-FRERMIP, and Superintending Engineer PMO. Senior officials were also available from both Joint Venture partners: Northwest Hydraulics Consultants Ltd. and Mott MacDonald.

4. FINANCIAL ARRANGEMENTS

4.1 *Statements of Expenditure*

Using the project implementation database, the ISPMC will track amounts paid to contractors and consultants for project works, goods and services. This will provide verification for figures provided by the PMO Accounts Officer.

Financial disbursement details on an individual contract basis are shown in **Table B-5.** The table shows the total amount paid to the contract/consultant plus the distribution for each funding partner: ADB, GON and GOB. A summary of reimbursement applications for all disbursements (goods, services and works) is shown in **Table B-6.** This table also shows the total amount claimed and the individual amounts paid by each of the funding partners. Tables that show details of each individual bill by contract or application are also available, if and when required, to verify these two summary tables.

To date, two applications have been processed and forwarded for reimbursement by ADB: one for services and the other for goods. The total amount of all the bills is Tk 8.20 Mil, or 0.1 percent of the total available project funds.

5. ISSUES FOR DISCUSSION AND AGREEMENT

5.1 *Compliance with Covenants*

The consultant has reviewed all particular covenants contained in the Loan Agreement, Program Agreement, and Grant Agreement (Ref. 3) and has identified no evidence to suggest that the BWDB (or ISPMC consultant) have violated any of the covenants.

5.2 *Extension of Revetment at Chauhali*

Based on recent river survey results, the revetment work at Chaulhali (under Tangail SMO) needs to be extended due to erosion concerns. By mid-October, the Team Leader ISPMC will issue a Memo to the Project Director detailing the concern and requesting inclusion of this work under Project-1.

5.3 *PMO Under-Staffing*

12 months after signing the loan agreement, the establishment and staffing of the BWDB PMO has not yet been completed. **Table 6** shows the proposed and actual staffing for senior personnel in the PMO:

Table 6 Proposed and Actual PMO Staffing

Position	Proposed[1]	Actual
Project Director	1	1
Superintending Engineer	2	1
Executive Engineer	4	1
Sub-Divisional Engineer	2	2
Assistant Engineer	2	1

Source: DPP

This understaffing is exacerbated by a decision by ADB to allow only PMO to perform all necessary tendering procedures. Even small tenders require an inordinate amount of effort by PMO both in document preparation and subsequent contract evaluation because of necessarily strict but arduous

oversight procedures. If smaller tenders could be offloaded to the concerned SMO, this would reduce the work required by the PMO significantly.

6. REFERENCES

1. ADB, 2014: Facility Administration Manual, Bangladesh: Multitranche Financing Facility - Flood and Riverbank Erosion Risk Management Investment Program, 2014 June

2. ADB, 2014: Report and Recommendation of the President to the Board of Directors, Proposed Multitranche Financing Facility People's Republic of Bangladesh: Flood and Riverbank Erosion Risk Management Investment Program, 2014 June

3. ADB, 2014: Loan Agreement, Program Agreement, and Grant Agreement; Flood and Riverbank Erosion Risk Management Investment Program – Project 1, between the People's Republic of Bangladesh and Asian Development Bank, 2014 August 14

4. BWDB, 2014: Development Project Proposal, Flood and Riverbank Erosion Risk Management Investment Program – Tranche 1, 2014 May

5. BWDB, 2015: Request for Proposals, RFP No.: RMIP/BWDB/S-25, Selection of Consulting Services for: Development and Operationalization of Asset Management System of Brahmaputra Right Embankment under River Management Improvement Program, Phase-I, 2015 September 15

6. NHC, 2013: Project Preparatory Technical Assistance 8054 BAN, Main River Flood and Bank Erosion Risk Management Program, Main Report, 2013 December

FIGURES

TABLES

Table A-1 Proposed Changes to Physical Progress Computation

Primary	Secondary	Weight	
		ISPMC	ADB[1]
1. Establishment & Recruitment	1.1 PMO Establishment and Staffing	2	4
	1.2 ISPMC Consultants Recruitment	2	4
	1.3 NGO Recruitment	2	2
2. Implementation; Project-1	2.1 Detailed Design	2	1
	2.2 Tender Documents Preparation	6	1
	2.3 Tendering and Contract Award	6	8
	2.4 Land Acquisition and Resettlement	8	5
	2.5 Project Management	6	6
	2.6 Physical Completion of Works	32	46
	2.7 Financial Disbursements	4	4
3. Knowledge Base & Capacity	3.1 Knowledge Base & Tech. Studies	4	4
	3.2 CBFRM Activities	6	4
	3.3 MIS Project Mgmt Module	4	5
4. River Stud/Piloting/Master Plan	4.1 Long-term stabilization study	4	4
	4.2 Land recovery piloting	2	2
5. Preparation; Project-2	5.1 Feasibility Study; Project-2	6	0
	5.2 Detailed Design; Project-2	4	0
Totals		**100**	**100**

Note 1. Source: FRERMIP ADB Facility Administration Manual; Appendix 5

Appendix-D
Other Topics of Interest

D-1 Project Implementation Database

D-1 Project Implementation Database

The project implementation database will provide a sound and sustainable program management system which will monitor and facilitate the implementation process.

During the preparation of the Quarterly Progress Report No. 1, the initial phase of the project implementation database has already been developed. The project implementation database is not entirely new. Much of its functionality came from two previous ADB funded BWDB projects: Knulna-Jessore Drainage Rehabilitation Project (KJDRP), and Secondary Towns Integrated Flood Protection Project, Phase-II (STIFPP-II). However, the database has already been significantly enhanced to better monitor all project implementation progress.

The basic database elements are assets and contracts. An 'asset' can be defined as any item of value (benefit) to the project. There are three classes of assets: works, goods or services. A contract is simply an agreement to construct, supply or provide an asset. A single asset (e.g. embankment) can be constructed under a number of separate contracts. Conversely, a number of dissimilar assets (e.g. 3 regulators, a road and an embankment), from the same class, may be combined under a single contract. Design and O&M activities only refer to works, not goods or services. Tendering progress is most easily expressed on a contract basis. Physical implementation progress could be measured either on an asset or a contract basis. By handling all project assets (works, goods and services), the database can monitor every aspect of project implementation progress (e.g. the purchase of project vehicles, or the services by a NGO).

The project implementation database currently monitors design, tendering, physical implementation (construction for work assets) and financial activities. In future, the functionality of the construction and financial modules will be enhanced, and a new operation and maintenance (O&M) module will be added for work assets. These additional modules are still under development so details regarding their functionality have not yet been finalized.

The construction module could use information from the ISPMC construction supervisor daily log book at each construction site to monitor construction progress and quality on a daily basis. Construction progress could include: materials received, stored and used, availability of equipment and labour, and tasks performed. The cumulative progress for each work item could be measured and weighted to obtain an overall progress for the asset. In addition to construction progress, these daily logs could also contain details regarding quality assurance procedures: safety and environmental issues; materials storage facilities, visual quality and test results; checklists and inspections performed; minutes held and actions taken; and variance tracking.

The project database already monitors financial progress on an individual contract bill basis. Every asset and contract has been tied to a specific set of project financial components. These financial components have also been cross-linked to other financial indicators used by ADB and the DPP. Additional functionality may be identified in future by the ISPMC Financial Management specialist. This could include measuring physical progress against financial targets as identified in the BWDB Annual Development Programme (ADP), or possibly comparing construction physical progress details to corresponding bill amounts.

The O&M database module could calculate required levels of asset monitoring and O&M activities based on hazard-risk principles (how to best reduce overall risk). This system could reduce O&M costs, make better use of available O&M funding, identify assets with a high probability of failure and a high consequence of failure, provide an impartial, transparent and rational procedure for requesting O&M funding, and make BWDB authorities more accountable for asset performance.

The project implementation database can produce detailed tables showing progress on an individual contract or asset basis, and can also produce similar summary tables that are based on the same data set, thus ensuring that summary project costs and program tables are always consistent with the detailed tables. The database also contains a number of sophisticated algorithms to help ensure that data is consistent, logical and complete.

Every project asset and contract has been tied to a specific item in the ADB categorization. This categorization allows the database to easily monitor implementation and financial progress of each category item. Using cross-link tables that connect these category items (and asset types) with other financial indicators (cost categorizations) it is relatively easy to produce tables that display ADB Outputs or DPP Components. Similarly, it is anticipated that the database will be able to calculate the physical progress values for certain components.

The project program, as defined in the database, currently includes all assets and contracts (Goods, Services and Works) identified in the Development Project Performa (DPP) Procurement Plan. The program also includes additional costs, such as BWDB training, salaries and operation costs, plus land compensation and resettlement benefits, extracted from the DPP table on page 68 (Detailed Cost estimates by Expenditure Category). The value of these defined assets and contacts reflects the best available estimate of cost; either the: final bill value, bid value, tender estimate, or the DPP preliminary estimate.

Most of the progress tables in QPR Section 2, and all tables in Appendices A and B are produced by the project implementation database. Reviewers are encouraged to provide feed-back on the database output tables so that it can better serve the needs of both BWDB and ADB.

For quality assurance, the database will initially be operated and maintained by the ISPMC's Dhaka office, but will rely heavily on inputs from BWDB PMO and SMO Divisions, plus ISPMC's own construction supervisors for design, contractual, physical implementation and financial progress values. The intent is that the database would eventually be available on an internal server which could be accessed by designated ISPMC and PMO personnel with proper access to that server.

The database uses Microsoft Access and its supporting programming language, Visual Basic for Applications (VBA). Microsoft Access is widely used and easily supported. It has special tools to easily develop new forms and reports, and if required, to debug the application. Run-time versions of the software are available on-line free of charge which would allow users to access all database functionality and modify the database data but not its interface. Alternatively, users could purchase Microsoft Access and have full access to all database functionality.