

**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. 02**

FOR

OCTOBER - DECEMBER 2015

Prepared by:

ISPMC

Institutional strengthening and
project management consultant

Joint venture

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22 February 2016

To
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Project Director,
Flood and River Bank Erosion Risk Management Investment Program
152/3/B Bir Uttam, Kazi Nuruzzaman Road, panthopath, (Green Road),
Firoz Tower, (12th Floor) Dhaka-1205, Bangladesh.

Subject : **Submission of Quarterly Progress Report No. 02
October – December 2015**

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

Dear Sir:

Please find enclosed our Quarterly Progress Report No. 02 for the period October to December 2015. This report has been prepared in close discussion with your office, using information available in the Development Project Performa, and considering the Facility Administration Memorandum. The final report is based on our draft report submitted to you on 01 February 2016 (Re: ISPMC – FRERMIP-076), and our discussion in your office on 18 February 2016.

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 ISPMC team with contributions, assistance and cooperation of the Bangladesh Water Development Board (BWDB).
Sincerely,

JV Northwest Hydraulic Consultants – Euroconsult Mott MacDonald

(Knut Oberhagemann)
Team Leader
cc: Office file;

DISTRIBUTION LIST (Not according to Seniority)

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11. Executive Engineer, SMO, BWDB, Tangail
12. Executive Engineer, SMO, BWDB, Manikganj

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
CEGIS	-	Center for Environmental and Geographic Information Services
DDM	-	Department of Disaster Management
DPP	-	Development Project Performa
EKN	-	Embassy of the Kingdom of the Netherlands
GOB	-	Government of Bangladesh
GON	-	Government of The Netherlands
ha	-	hectare
km	-	Kilometre
JICA	-	Japan International Cooperation Agency
Mil	-	Million (1,000,000)
INGO	-	Implementation Non-Government Organization
ISPMC	-	Institutional Strengthening and Project Management Consultants
MIS	-	Management Information Systems
MoDM	-	Ministry of Disaster Management
MoWR	-	Ministry of Water Resources
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
ToR	-	Terms of Reference
UNDP	-	United Nations Development Programme
USD	-	United States Dollars
WARPO	-	Water Resources Planning Organization

TABLE OF CONTENTS

	Page
Forwarding Letter	
Distribution List	
Table 1 Project Progress at a Glance	
Abbreviations	i
Table of Contents	ii
1. INTRODUCTION	1
1.1 Background	1
1.2 The Project	1
1.3 Overall Progress	2
1.4 This Report	3
2. PROJECT ACTIVITIES.....	3
2.1 INTRODUCTION	3
2.2 PROJECT ASSET IMPLEMENTATION	3
2.2.1 Introduction	3
2.2.2 Design Activities.....	4
2.2.3 Tendering Activities	5
2.2.4 Implementation Activities.....	5
2.3 OTHER PROJECT ACTIVITIES	6
2.3.1 Supporting Studies.....	6
2.3.2 Inception Report	7
2.3.3 River Study	8
2.3.4 Environmental Management	10
2.3.5 Resettlement Services	11
2.3.6 Livelihood Development.....	11
2.3.7 Community-Based Flood Risk Management.....	12
2.3.8 Management Information Systems (MIS).....	12
3. ADMINISTRATIVE ARRANGEMENTS.....	13
3.1 Establishment of Project Office.....	13
3.2 Important Events.....	13
4. FINANCIAL ARRANGEMENTS	14
4.1 Statements of Expenditure	14
5. ISSUES FOR DISCUSSION AND AGREEMENT	14
5.1 Compliance with Covenants.....	14
5.2 Concerns regarding Draft Inception Report.....	14
5.3 Extension of Revetment at Chauhali	15
5.4 PMO Under-Staffing	15
6. REFERENCES	15

FIGURES

Figure 1: Project Location Map

TABLES

Table 1	:	Project Progress at a Glance
Table 2	:	ADB Categorization
Table 3	:	Design Progress Summary
Table 4	:	Tendering Progress Summary
Table 5	:	Implementation (Physical) Progress Summary
Table 6	:	Status of Supporting Studies
Table 7	:	PMO Proposed and Actual Staffing

Appendix-A	:	Work Program Summaries
Table A-1	:	Proposed Changes to Physical Progress Computation
Table A-2	:	Project Program Summary
Table A-3	:	Project Cost Summary
Table A-4	:	Cost by ADB Financial Category
Table A-5	:	DPP Components and Estimated Cost Summary

Appendix-B	:	Work Program Details
Table B-1	:	Design Progress Details
Table B-2	:	Tender Progress Details
Table B-3	:	Implementation Details, by Contract
Table B-4	:	Project Program, by Contract
Table B-5	:	Disbursement Summary by Contract
Table B-6	:	Disbursement Summary by Application

Appendix-C	:	Administrative Details
Table C-1	:	Utilization of Consultant Person-months

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 17 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 in the reach from Bangabandhu (Jamuna) Bridge to Chandpur.

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 subsequent 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, however without further geotechnical analysis. The embankment height has also been increased by 0.30 m to accommodate the expected effects of climate change.
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 with more focus on generalized investigations.

The loan for Project 1 of the Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP) was signed on 14 August 2014, and the contract with the main consultant (ISPMC) was signed on 8 September 2015. 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**) until June 2019. Subsequent projects will extend the protected reaches using designs adjusted to current riverbank erosion conditions and considering the possibilities to reclaim lost floodplain land.

FRERMIP will provide a more secure and improved livelihood for people living 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).

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

Under Project 1, about 20 km of riverbank protection¹ and 23 km of flood embankments (rehabilitation and new; refer to the Project Map, **Figure 1**) will be implemented.

Project outputs will also include community capacity development for flood risk management activities and sustainable operation and maintenance (O&M) of infrastructure required for flood and erosion risk management. There is also a livelihood enhancement component for project-affected people.

The project will result in an improved knowledge base and enhanced institutional capacity in sustainable asset management, and better strategic management of the main rivers. 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) and US dollars (USD).

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 9%. The overall financial progress is 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 project implementation database.

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**². 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 around 20 km due to changes in the river morphology between feasibility study and work start.

² The original ADB template for computing project progress as defined in Appendix 5 of ADB's Facility Administration Manual (Ref. 1) was modified because it omitted key activities and gave excessive weight to the construction of civil works.

1.4 This Report

Quarterly Progress Report No. 2 covers the period 01 October to 31 December 2015. The report describes activities carried out during the quarter, which primarily included pre-construction and construction activities, and preparation of the inception report.

A project implementation database has been developed to monitor project implementation and facilitate preparation of this Quarterly Progress Report (QPR).

2. PROJECT ACTIVITIES

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. During the reporting period, implementation commenced for several large goods and civil work contracts.

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. Preparation of the Terms of Reference (ToR) for most Supporting Studies (Section 2.3.1) has been started, and project implementation monitoring activities have commenced.

The current status of implementation activities are discussed in the following sections, and detailed and summary tables are provided in **Appendices A & B**.

2.2 PROJECT ASSET IMPLEMENTATION

2.2.1 Introduction

Tables A-2 and A-3 show the type, number and total cost of assets currently included in the program, by the implementing agency. A total of 24 Km of embankment worth Tk 935 Mil (including associated structures), and 15 km of riverbank revetment worth Tk 2,227 Mil (plus Tk 1,080 Mil for geo-bags) are included in the current work program as defined in the Development Project Performance (DPP). 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 7693 Mil (Goods Tk 1388 Mil, Services Tk 1381 Mil and Works Tk 3595 Mil, plus Tk 1329 Mil of additional assets included in the DPP). The total savings to date between the estimated contract values from the DPP Procurement Plan and the current bid values is BDT 431Mil or over \$US 5.4 Mil³.

Every project asset and contract has been tied to a specific Expenditure Category as defined in the table on page 68 of the DPP (Ref. 4; reproduced in **Table 2**). This categorization will allow the database to easily monitor implementation and financial progress of each category item. **Table B-4** identifies which contracts have been assigned to each Expenditure Category. 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**)

³ Savings from the following contracts: 3 Geobag Supply, 4 Revetment, and ISPMC Services.

or DPP Components (**Table A-5**).

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 INGO BWDB
	D3 INGO 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. Detailed designs for all revetment works in Manikganj and Tangail SMOs were subsequently prepared 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 reviewed by Design Circle 2. The alignment of the embankment has not been changed but the embankment height has been raised by 0.3 m to accommodate the effects of climate change. Associated structures (e.g. road and regulators) will be designed once the embankment design has been finalized. It is expected that all embankment and regulator designs will be completed in time for inclusion in the FY16/17 construction program.

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 Collected/Submitted			Design under Process	
		Hydrology	Survey	Geotech	Design	Drawings
Koitola SMO	12	10	5	0	0	0
Manikganj SMO	4	3	3	3	3	3
Tangail SMO	2	2	2	2	2	2
Totals	18	15	10	5	5	5

2.2.3 Tendering Activities

To date, all tender documents have been prepared, floated and evaluated by the BWDB PMO. Starting in the reporting quarter, the ISPMC has assisted the PMO by preparing ToRs for many of the Supporting Studies (Section 2.3.1).

Three material contracts (supply of geo-bags worth Tk 1,002 Mil) have been awarded. One major service contract (ISPMC services worth Tk 1018 Mil) has been awarded, and another service contract (Resettlement Plan Implementation) has been received and evaluated by BWDB, and sent to ADB for their concurrence. Five civil works contracts (riverbank revetments worth Tk 1903 Mil) have been floated and 4 have been awarded.

A summary of tendering progress, by primary component, is given in **Table 4**. Tender progress details, on an individual contract package basis, are given in **Table B-2**. This table does not include all contracts defined in the DPP, only those where contractual procedures have been started.

Table 4 Tendering Progress Summary

Component	Contract Value (BDT Mil)	Tender Floated	Tender Received	Notice of Award Issued
Goods; B: Materials	1,002	3	3	3
Goods; C: Vehicles & Equipment	2	1	1	1
Services; D: Consulting Services	1,040	3	3	2
Services; G: Program Management	0.5	3	3	3
Works; A: Civil Works	1,903	5	5	4
Totals	3,948	15	15	13

2.2.4 Implementation Activities

Significant implementation activities were initiated during the quarter. There are a total of 13 ongoing and completed contracts (5 small and 8 large) worth an estimated Tk 2,936 Mil. The 3 ongoing goods contracts for supply of geo-bags had progress worth Tk 200 Mil during the quarter. By the end of next quarter, those 3 contracts are expected to be essentially complete with a projected cumulative progress of Tk 989 Mil.

The 2 ongoing civil works contracts for riverbank protection in Chauhali had physical progress worth Tk 46 Mil during the report quarter, and projected progress worth Tk 135 Mil is expected by the end of the next quarter. Three additional riverbank protection, 2 at Harirampur and 1 at Zaffarganj, are

expected to start early next quarter.

The major ongoing project service expenses include the ISPMC contract and the BWDB PMO office operation and salaries.

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

Table 5: Implementation (Physical) Progress Summary

Component	On-going & Complete Contracts	Best Estimate of Cost (BDT Mil)	Cumulative Progress to Date (BDT Mil)	Projected Progress to Next Qtr. (BDT Mil)	Financial Progress (BDT Mil)
Goods; B: Materials	3	1,002	200	989	88
Goods; C: Vehicles & Equip.	1	2	2	2	2
Services; D: Consult. Service	2	1,023	66	147	5
Services; G: Program Mngt.	3	1	1	1	1
Works; A: Civil Works	2	774	46	135	77
eXtra; G: Program Mngt.	2	133	44	51	1
Totals	13	2,936	359	1,325	174

Notes: The Cumulative and Projected columns show values of physical progress, while the Financial column show reimbursed amounts.

2.3 OTHER PROJECT ACTIVITIES

2.3.1 Supporting Studies

As specified in the DPP, there are a total of nine supporting studies (service contracts) funded under FEREMIP to help implement and expedite all project outputs. Normal government tendering procedures will apply to these supporting studies. Implementation non-government organizations (INGOs) or consulting firms will eventually be engaged to complete these supporting studies.

ToRs are currently being developed by the ISPMC for several of these supportive studies. These ToRs typically include the study objectives, scope of work, personnel requirements (job descriptions and responsibilities), time schedule and a cost estimate. The status of these studies is summarized in Table 6.

Due to the normal arduous, but necessary, government contractual oversight procedures, it is unlikely that any INGO/Consultants will be selected before July 2016 for the seven Support Studies with ToRs currently under preparation.

Table 6: Status of Supporting Studies

Pkg.	Study Name	Present Status
S-02	Resettlement Plan Implementation	Contract evaluation complete, and sent to ADB for concurrence.
S-03	Livelihood Development Services	ToR preparation is in progress.
S-04	Community-based Flood Risk Management (CbFRM) Services	ToR complete, and ADB concurrence under process.
S-05	Participatory O&M Support Services	ToR preparation is in progress.
S-06	Multi-beam Echo-Sounder Purchase	ToR preparation is in progress.
S-07	Erosion Prediction Services	ToR preparation is in progress.
S-08 & 09	MIS Development Services: Flood Risk Assessment and O&M Methodology	ToR preparation is in progress.
S-10	Environmental Management Services: Fish Sanctuary Development Bio-diversity and Aquaculture Program	ToR preparation is in progress. ToR submitted to PMO for review.

2.3.2 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 provides a comprehensive ‘roadmap’ on how the consultant intends to perform its duties. The report details the tasks to be completed and outputs to be delivered over the next three years.

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. preliminary master plan for river management
5. land recovery and river training piloting schemes

The main inception report consists of a relatively short (60 page) main report followed by an extensive set of annexes which provide details on all project components, and extensive background information.

The report references available background information, data collected during the inception phase, and activities conducted during the inception period. It also reviews the performance of existing river training works and explains how understanding about river processes has evolved since the 1994 BRE Master Plan. The project is then defined spatially, temporally, administratively, and with relevance to other Government initiatives. The report explains the scope of analyses as defined in the ToR and provides information on the proposed Work Plan, Delivery Schedule and staffing. A summarized description of each task and sub-tasks are presented, with extensive details available in Annex A. A summary of background information and data is provided in Annex B. The composition and responsibilities of key experts is provided in Annex C.

A final draft Inception Report was distributed to all concerned stakeholders at the end of November 2015. A national workshop on the draft Inception Report was held on 9 December 2015 and was attended by senior members from the Ministry of Water Resources, BWDB, ADB, and Embassy of the Kingdom of the Netherlands (EKN), as well as a distinguished list of technical specialists from BWDB, other Government organizations, plus the consulting and academic communities.

The business session stimulated considerable discussion. The major concern voiced by a number of parties was that the inception report should more strictly follow the ToR, although Annex A3, and specifically Table 1, shows that all ToR activities have been accommodated under the new proposed project structure.

The consultant is currently compiling a list of all stakeholder comments and plans to issue a final Inception Report early in the next quarter which will satisfy all remaining concerns.

2.3.3 River Study

Once the Inception Report has been finalized early next quarter, the execution of the River Study will be able to proceed unabated with the preparation of the long-term river stabilization plan, a framework for preparing long-term sector road map, and the preliminary river management master plan. In addition, pilot works (structural measures) worth around US\$5 Mil⁴ will be initiated to reclaim or improve the fertility of floodplain land (chars) along medium/small rivers. These main deliverables will be accompanied by a number of technical notes.

The main focus of FRERMIP is the river stabilization. The preliminary master plan study focusses on feasible activities directly resulting from river stabilization and training. Close interaction is essential between river training/stabilization and the master planning. A master plan requires details about the main river after river stabilization in order to plan for water uses and other potential economic activities. River stabilization planning will likely come up with a number of options. Final recommendations will be made only after considering the constraints of existing water uses and development options suggested by the master plan.

The main components to be considered and studied are discussed below:

River Training

Issues to be studied include:

- the effect of narrowing the river on upstream water levels
- the river corridor and planform; answering the question whether the future river is capable of discharging large design floods
- the impact of river management on the sensitive char environment and char inhabitants
- how to maintain or improve the performance of important tributaries and distributaries

River bank erosion is the dominant risk along the main rivers: Jamuna, Padma, Lower Meghna. However, along the Upper and Lower Meghna, river navigation is the most important issue and will be studied in detail through the Dhaka-Chittagong Multi-modal Transport Corridor Development Project, financed by World Bank with around US\$ 400 Mil which is expected to start during 2016.

Flood Embankments

Flood embankments are currently at risk of being eroded away by the shifting river channels. Once the main river is controlled, new improved embankments can be constructed, which in addition to providing flood protection can also serve as transportation routes. However, it is important that gates and fish passes are strategically incorporated into the flood embankments, to prevent the separation of the floodplain environment from the river. Recent research suggests that wide embankments are necessary to guard against seepage failure, which needs to be considered in the

⁴ According to the EKN, the MoWR and Donors recently agreed with the Project Director to allocate additional financing to the pilot study, in part through variations of ongoing work contracts.

embankment design. Roads may be accommodated on the embankment landside, and social forestry may be accommodated on its landside slope.

Land Reclamation

Reclaimed land is obviously an important generator of economic benefits. In particular, land close connection to navigation routes, where a river port can be established will be very attractive to industries. Government has a strong focus at the industrialization of new reclaimed land. This notwithstanding it remains important to plan for preservation of the unique riverine ecosystem, and this valuable source of fish and recreational area.

Water Resource Management

During the Inception workshop, the Minister and the Secretary, Ministry of Water Resources emphasized on the integration of Delta Plan Studies with the FRERMIP Study. In response to this request, a series of meetings were held with Delta Plan team members in December 2015 to share data and coordinate planning approaches. A joint workshop organized by Delta Plan and FRERMIP is proposed during the next quarter to promote integration.

During the reporting quarter, hydro-morphological data (water level, discharge, bathymetry) for the Main Rivers and the three major offtakes (Old Brahmaputra, Dhaleswari and the Arial Khan) have been collected, or will be procured early in the next quarter.

Offtakes and Distributaries

Improved performance of offtakes and their distributaries is a major potential benefit of the river training. The Dhaleswari System with its multiple offtakes will be the focus of the study, but also the Old Brahmaputra and Arial Khan will be included to some extent. After main river stabilization, offtake performance can be improved to provide adequate dry season flow and sufficient flood flow capacity. With proper design these offtakes may provide improved navigation, fisheries, and water quality in the rivers around Dhaka while restricting suspended sediment loads that can restrict conveyance capacity.

Pilot Works

The conditions at the land reclamation pilot works site downstream of Chauhali, originally proposed by the PPTA in 2013, have changed considerably due to the development of a cutoff channel. A closure would be required and that is too expensive to implement under the pilot works program (BDT 380 Mil or around US\$5 Mil is available for the pilot works). Hence shorter land recovery pilot works downstream of Chauhali are being considered now. In addition, the ToR specifically requests for piloting with structures which have to be located along medium/small rivers. Because of current fund limitations, the second test with land reclamation pilot works initially planned (under the PPTA) for Harirampur cannot be implemented. Moreover, upon closer inspection, pilot testing at Harirampur might not have been particularly feasible. Latest information from the EKN indicates that more funding will be allocated towards pilot works.

The inception report includes a tentative time schedule for the pilot works. It is suggested that the type and location of the pilot works can be finalized during the next quarter, and that construction can be done during the 2016-2017 dry season.

Regional Planning and Social Development

Secondary information on regional planning in Bangladesh has been collected and assessed. Initial meetings have been held with the Center for Environmental and Geographic Information Services (CEGIS) and Urban Development Directorate (UDD) to obtain spatial data and plans regarding regional planning and development control.

Secondary information has been collected on the social impacts from previous water development projects, including Flood Action Plan (FAP) studies. Other social development activities initiated include:

- Stakeholder mapping
- Identification of key informants
- Planning of meetings with key stakeholders
- Preparation of a survey questionnaire format for people living on char land

During next quarter, baseline data will be gathered from the Bangladesh Bureau of Statistics (BBS), additional meetings will be held with key stakeholders, and Focus Group meetings will be planned.

Environmental Studies

Preparations for the Strategic Environmental Assessment (SEA) have been started: GoB and ADB requirements were reviewed, a tentative SEA outline was prepared and a list of required information was developed. The SEA will proceed in February 2016, once the study area and stabilization scenarios have been finalized. This will be followed by assessing land use, habitats and socio-economic characteristics in the study area, and identifying existing spatial plans and expected impacts resulting from the considered river stabilization options.

Outcomes

The deliverables from the River Study will provide input for preparing the Project II feasibility study. Milestones will include regular round table discussions with stakeholders based on technical notes, and the August 2016 workshop which will present outcomes from this initial process.

2.3.4 Environmental Management

In order to assist the BWDB and PMO in guiding and monitoring the implementation of FRERMIP, the environmentalists had meetings with the Chief Planning, BWDB and the Project Director (PD), PMO, and it was agreed that monitoring of implementation of the existing Environmental Management Plan (EMP) will be conducted with the templates provided in the Environmental Impact Assessment (EIA) prepared during the PPTA (February 2014). It was also agreed to conduct monitoring of EMP implementation on a quarterly basis, at least initially. Preparation for monitoring of EMP implementation at Chauhali started in December 2015.

The ToR for the biodiversity baseline and fish sanctuary study, included in the EIA, was discussed at length with potential contractors and other interested parties, and was amended as per current needs. The finalized ToR was submitted to the PMO for approval in December 2015, and now needs approval from ADB. It is expected that the ToR approval, bidding and contracting process will not be completed before mid-2016. Meanwhile, the team's Fisheries Specialist has, at the request of the PMO, started the review of the regulator design along the Kaijur-Verakhola-Baghabari embankment, to make these suitable for year-round fish movements.

One PMO Executive Engineer will be responsible for environmental management and will work closely with the ISPMC's environmentalists in monitoring EMP implementation. Environmental clauses in contractor's contracts will be reviewed. Environmental management training needs for BWDB and contractor personnel will be assessed. The first training course on EMP implementation is planned for February-March 2016. A first round of monitoring of EMP implementation at Chauhali will be conducted in January 2016, and repeated in March-April. By that time, EMP monitoring at Zaffarganj and Harirampur will also commence.

2.3.5 Resettlement Services

The Resettlement Framework and Plan prepared during the PPTA (December 2013) was reviewed. The international and national Resettlement Specialists prepared Inception Report, Annex A5.1: Resettlement Plan, Land Acquisition Activities. The proposed resettlement plan focuses on planning activities that require immediate attention, and necessary actions required to start monitoring. A visit was made to the ongoing Chauhali riverbank protection work and a report was written on observed conditions and the steps to be followed to satisfy ADB's social safeguards policies regarding Involuntary Resettlement.

Meetings were held with the PMO to discuss the appointment of an INGO that will be responsible for implementation of all resettlement activities. The tender for Resettlement Services was floated on 09 June 2015, received on 09 July 2015. It has now been reviewed by BWDB and has been sent to ADB for their concurrence. It is expected that this tender will be awarded early next quarter. During the meetings with PMO, the procedures to be followed and the urgency to start the activities quickly were discussed.

During the next quarter, the following activities will be initiated to expedite resettlement of affected persons under Project I:

- Supervise the INGO during implementation of the Resettlement Plan ahead of the embankment construction along the Jamuna and Hurrasagor Rivers (23 km) for Phase-1
- Cooperate in land acquisition and resettlement activities for Chauhali, Zaffarganj and Harirampur riverbank protection areas (if required), with the INGO during implementation phase

2.3.6 Livelihood Development

The documents related to Livelihood Development prepared during the PPTA (December 2013) were reviewed. Livelihood Development activities overlap with several other project components, particularly those related to Resettlement Plans, Community based Flood Risk Management, and Community based Operation and Maintenance (O&M). Livelihood Development issues were discussed with other project team members to coordinate common planned activities; in particular the socio-economic survey.

The international and national Social Development Specialists prepared Inception Report, Annex A5.2, Social Development /Livelihood Support. This annex identifies and discusses social development issues including the Income and Livelihood Restoration Program (ILRP), and the Gender Action Plan (GAP). It reviewed survey tools developed to make the Livelihood Development Program more gender sensitive and focus on social development. The format for the proposed socio-economic survey questionnaire was reviewed and finalized.

The Social Development Specialists met with PMO personnel to review the proposed Livelihood Development activities, and the processes required to deliver support to the most vulnerable households.

The ILRP will target poor and vulnerable groups, including poor female-headed households. The ILRP will include human resource development and occupational skill development training, and subsequent credit support for undertaking suitable Income Generating Activities (IGA) as well as small businesses. The main objective of the ILRP will be to improve or, at least restore, the income and livelihood of all project affected people.

Future activities will include engaging a national Livelihood Development INGO experienced in livelihood to conduct a 'demand study' which is first required to design and implement an

appropriate livelihood program.

The ToR for the Livelihood Development support study will be prepared next quarter. Under this study, an INGO will be engaged to implement the ILRP. In future, the Social Development Specialists will supervise and assist the INGO in the implementation of community capacity enhancement programs.

2.3.7 Community-Based Flood Risk Management

The ToR and cost estimate for the INGO that would implement the Community-based Flood Risk Management (CbFRM) Support Study has been prepared, and ADB concurrence is under process. It is expected that ADB will approve the INGO ToR early next quarter and that formal tendering procedures will then commence.

The national and international CbFRM Specialists contributed to the preparation of the Inception Report by writing Annex A3: Flood Risk Management. The work under this component has been divided into two parts: Community-based and Regional Flood Risk Management.

Under the CbFRM subcomponent, a network of coordinated, trained and equipped community disaster management units (CDMUs) will be formed and organized. These groups will help prepare local disaster risk assessments, and flood preparedness and mitigation plans. During flood events, CDMU members would perform actual monitoring and mitigation duties under the supervision of BWDB and DDM officials.

Under the Regional Flood Risk Management subcomponent, the international CbFRM specialist will develop a Regional Flood Forecasting Response Plan based on BWDB Flood Forecasting predictions and including specific people to be contacted and specific actions to be taken by those people. If the proposed alternate study under the MIS Supporting Study is approved, the international CbFRM specialist would also supervise and assist the Consultant selected for that study entitled “Flood Risk Assessment and O&M Methodology” (Section 2.3.8).

The format of the multipurpose socio-economic baseline survey questionnaire has been finalized. The socio-economic survey will provide necessary baseline data for a number of project subcomponents including: Livelihood Development, Gender Action Plan, and community based O&M, as well as CbFRM. As requested by ADB, the survey will be conducted using computer tablets with a customized database interface to improve efficiency and quality. This survey questionnaire was developed by the national CbFRM Specialist, with inputs from other concerned ISPMC specialists. It is proposed that the survey be jointly funded under the CbFRM and Livelihood Development sub-components. The survey will be implemented only after INGOs for those sub-components have been selected.

The Department of Disaster Management (DDM) is to provide office accommodation for the national CbFRM Specialist to promote close communication and cooperation between the BWDB, DDM and the ISPMC. Accommodation space is not yet available, but is expected to be available starting in February 2016.

2.3.8 Management Information Systems (MIS)

Under the MIS component, two databases are currently under development, and a ToR for an alternative MIS Support study is being prepared. The international MIS Specialist also wrote the Inception Report Annex A1: Details on MIS Activities which defines the project MIS framework, and proposed initiatives under the MIS component.

A working prototype version of the River Survey Database interface has been developed which currently includes for four tools: survey point elevations, river cross-sections, river longitudinal sections, and sediment areas and volumes. More tools will be developed next quarter including one to identify the river thalweg. An international intern will arrive in mid-February for a three month research project. Together with one of the ISPMC's river morphologists, they will use the River Survey Database to analyze a specific river reach to help predict future morphologic changes. These research results will be used during future training workshops to illustrate the functionality and utility of the River Survey Database.

A project implementation database has been developed to monitor project implementation and facilitate preparation of the QPR. The database monitors design, tendering, physical implementation, and financial activities. The database accommodates all project goods, services and works so that it can more comprehensively monitor all project activities. It can produce detailed tables showing progress on an individual contract or asset basis, and can also produce similar summary tables. Using cross-link tables, it is possible to produce tables that display ADB Financial Categories or DPP Components.

As specified in the DPP, it was originally intended to develop an asset management system (AMS) under the project. However, an identical AMS is presently being implemented under the River Management Improvement Program (RMIP) which has six times the budget allocated under FRERMIP. Rather than duplicate the RMIP AMS (Ref. 5), it is proposed to use available funds under the MIS Support Study to implement a necessary prerequisite 'Flood Risk Assessment and O&M Methodology Study' which will benefit the AMS for both FRERMIP and RMIP, as well as other BWDB projects. This alternate Support Study would assess and quantify the consequences and likelihood of failure of BWDB project assets. It would provide the methodology, inputs and parameters necessary to fully utilize the functionality of the proposed risk-based AMS being developed under RMIP. The proposed methodology would be consistent with the Delft-FIAT (Flood impact assessment tool) currently being developed in Bangladesh under the Delta Plan.

3. ADMINISTRATIVE ARRANGEMENTS

3.1 *Establishment of Project Office*

By mid-December, construction had been completed at the second ISPMC office, located in the same building (just one floor above) as the BWDB PMO Office: 13th Floor, Firoz Tower, 152/3/B Bir Uttam, Kazi Nuruzzaman Road (Green Road), Dhaka-1205. The office is too small to accommodate all ISPMC personnel, but starting early next quarter, key ISPMC Main Team personnel will be based at the Green Road Office. The ISPMC River Study Team will continue to reside at the original Banani Office: House 45 (2nd Floor) Road 27, Banani, Dhaka.

Table C-1: Utilization of Consultant Person-Months details the time spent by all international and national specialists to the end of the reporting quarter. A total of 11 international specialists expended 15 person-months (p-m), and 16 national specialists expended 31 p-m, up to the end of the reporting period.

3.2 *Important Events*

An ADB Mission was held for FRERMIP between 23-November and 10-December 2015. The mission was headed by Ms. Natsuko Totsuka, Senior Water Resources Specialist. Other team members included: Ms. Liza Domingo, Associate Project Analyst, and Mr. Bhuneshwar Sah, Infrastructure Specialists (GIS). During the ADB Mission, team members met with senior officials from the Ministry of Water Resources (MoWR), BWDB, DDM, Water Resources Planning Organization (WARPO),

Embassy of the Kingdom of the Netherlands (EKN), World Bank, United Nations Development Programme (UNDP), Japan International Cooperation Agency (JICA), CEGIS, and ISPMC. Ms. Totsuka also attended the National Workshop on the Draft Inception Report.

The National Workshop on the Draft Inception Report held on 09 December 2015. The workshop was attended by several senior members from MoWR, BWDB, ADB, and EKN, as well as a distinguished list of technical specialists from BWDB, other government organizations, plus the consulting and academic communities.

The welcoming itinerary included the following:

Welcome Address: Mr. A M Aminul Haque, Project Director, FRERMIP, BWDB

Presentation of Draft Inception Report: Knut Oberhagemann, Team Leader, ISPMC, FRERMIP

Remarks from Development Partners: Mr. Oleg Tonkonojenkov, Deputy Country Director, ADB, and Mr. Carel-de Groot, First Secretary, EKN

Address by Special Guests: Dr. Zafar Ahmed Khan, Secretary, MoWR; and Mr. Md. Narul Islam Bir Protik, M.P., Honourable State Minister, MoWR

Address by Chief Guest: Barrister Anisul Islam Mahmud M.P., Honourable Minister, MoWR

Address by Chairperson: Mr. Md. Ismail Hossain, Director General, BWDB

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 help verify figures provided by the PMO. These bill values could also be used to determine total reimbursement by ADB Financial Category or by DPP Component.

Financial disbursement details on an individual contract basis are shown in **Table B-5**. The table shows the total amount paid to the contractor/NGO/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 reimbursement amounts paid by ADB in both BDT and US\$. 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, three applications have been reimbursed by ADB. The total amount of all the bills is Tk 173.92 Mil (US\$2.11 Mil) or 2.1% 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 *Concerns regarding Draft Inception Report*

As mentioned previously in Section 2.3.2, there was a perception that the draft Inception Report had not exactly followed the ToR, although Annex A3, and specifically Table 1, shows that all ToR activities have been accommodated under the new proposed project structure.

The consultant is currently making modifications to the Inception Report that will demonstrate that it complies with or exceeds the scope of work as defined in the ToR. A revised Inception Report is expected to be issued early in the next quarter.

5.3 Extension of Revetment at Chauhali

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

5.4 PMO Under-Staffing

15 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. During the reporting quarter, one Superintending Engineer joined and one Executive Engineer left the PMO, and one Sub-Divisional Engineer was promoted to Executive Engineer.

Table 7 Proposed and Actual PMO Staffing

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

Source: DPP

6. REFERENCES

1. ADB, 2014: Facility Administration Manual, Bangladesh: Multitranches 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 Multitranches 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

Flood and Riverbank Erosion Risk Management Investment Program – Project 1

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

FIGURES

Figure 1: Project Location Map

TABLES

Appendix-A	:	Work Program Summaries
Table A-1	:	Proposed Changes to Physical Progress Computation
Table A-2	:	Project Program Summary
Table A-3	:	Project Cost Summary
Table A-4	:	Cost by ADB Financial Category
Table A-5	:	DPP Components and Estimated Cost Summary
Appendix-B	:	Work Program Details
Table B-1	:	Design Progress Details
Table B-2	:	Tender Progress Details
Table B-3	:	Implementation Details, by Contract
Table B-4	:	Project Program, by Contract
Table B-5	:	Disbursement Summary by Contract
Table B-6	:	Disbursement Summary by Application
Appendix-C	:	Administrative Details
Table C-1	:	Utilization of Consultant Person-months

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 INGO 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