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. 08

FOR

APRIL-JUNE 2017 (Revised)

Prepared by:

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FRERMIP
Flood and Riverbank Erosion Risk Management Investment Program

Reference:
ISPMC – FRERMIP
411
09 Oct 2017

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To
Mr. A M Aminul Haque,
Project Director,
Flood and Riverbank Erosion Risk Management Investment Program
152/3/B Bir Uttam, Kazi Nuruzzaman Road, Panthopath,
Firoz Tower, (12th Floor) Dhaka-1205, Bangladesh

Subject : **Submission of Quarterly Progress Report No. 08 April-June 2017 (Revised).**

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

Dear Sir,

Please find enclosed Quarterly Progress Report No. 08 (Revised) for the period April to June 2017 for the Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP) – Project 1. In close discussion with your office, the financial tables in **Appendix-A** and **Appendix-B** of this report have been revised and updated.

Yours sincerely,
JV Northwest Hydraulic Consultants – Euroconsult Mott MacDonald

Knut Oberhagemann
Team Leader

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As per enclosed Distribution List

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    (Attn.: Mr. Zahir Uddin Ahmad, PIO; 2 copies)

15. Embassy of the Kingdom of the Netherlands, Gulshan, Dhaka
    (Attn.: Mr. Pieter de Vries)

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
CEGIS	-	Center for Environmental and Geographic Information Services
DG	-	Director General
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	-	Kilometer
Mil	-	Million (1,000,000)
IWM	-	Institute of Water Modeling
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
SMO	-	Sub-Project Management Office
ToR	-	Terms of Reference
USD	-	United States Dollars
JVT	-	Joint Verification Team
DC	-	District Commissioner
LA	-	Land Acquisition
GRC	-	Grievance Redress Committee
PAP	-	Project Affected People
ID	-	Identification
PVAT	-	Property Valuation Assessment Team

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Table 1 Progress at a Glance

Table 1 Project Progress at a Glance

1. Basic Data

ADB Loan Agreement Number	3138-BAN(SF)
ADB Grant Agreement Number	0396-BAN(EF)
Project Name	Flood and Riverbank Erosion Risk Management Investment Program - Project 1
Country	Bangladesh
Borrower	People's Republic of Bangladesh
Executing Agency	Bangladesh Water Development Board
Implementing Agency	Department of Disaster Management

2. Financing

Modality and Sources	Projects ($ million)			Amount ($ million)
	I	II	III	
Asian Development Bank (ADB)	65	100	90	255
Government of The Netherlands (GON)	15.3	0	0	15.3
Government of Bangladesh (GOB)	23.3	45.3	34.8	103.4
Total	103.6	145.3	124.8	373.7

3. Milestones

Milestone	Date of		
	Approval	Signing	Effectiveness
ADB Loan Agreement	2014 June 27	2014 August 14	2014 August 15

Milestone	Project		
	I	II	III
Estimated Completion Date	2019 June 30	2021 December 31	2023 June 30

Milestone	Date
Last ADB Review Mission	5-7 June 2017

4. Assets and Physical Progress

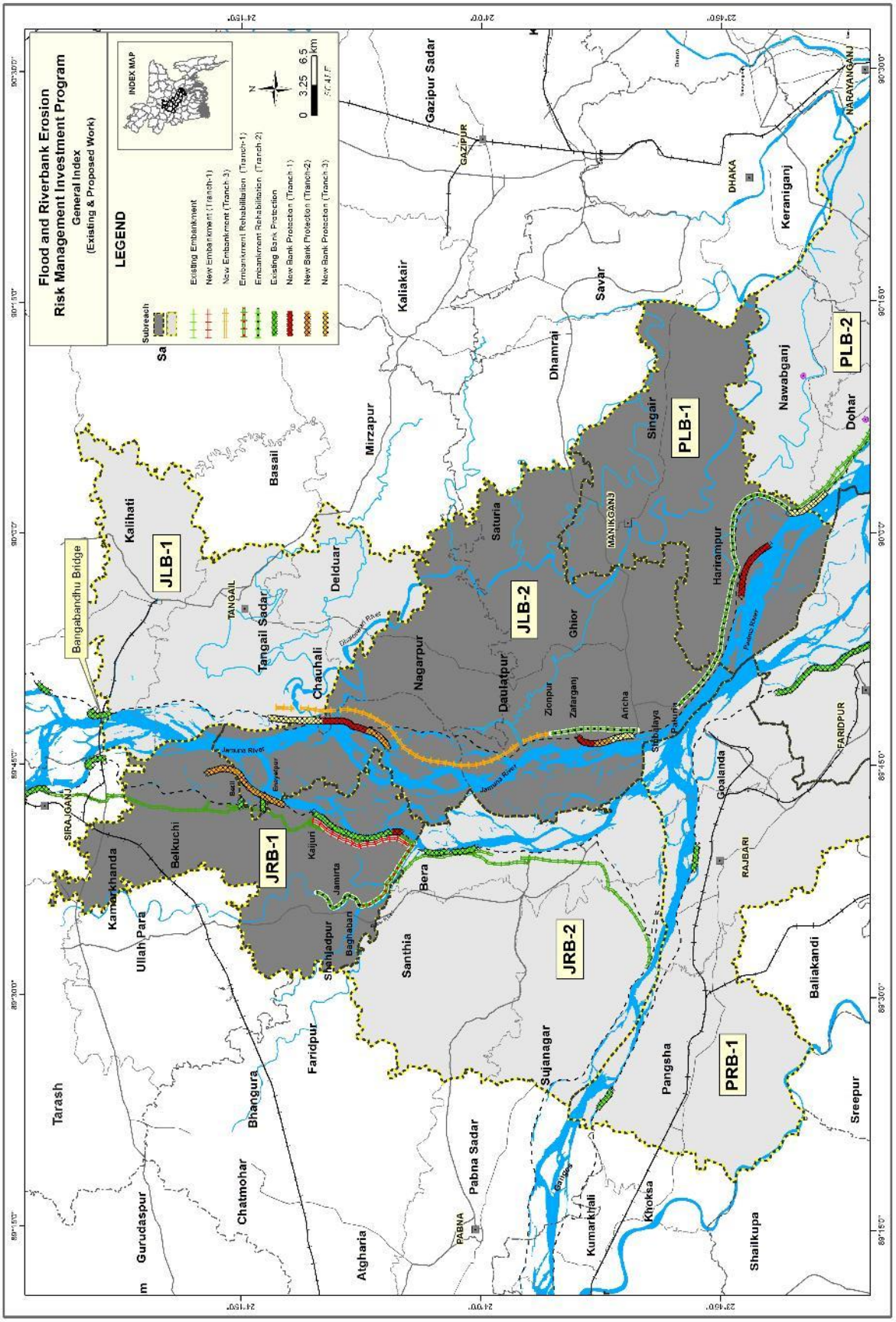
Proposed Project Assets	Goods	Services	Works	eXtra	Total	Available
Project Program Best Estimate (Tk Mil)	1388	1381	3595	1329	7693	8286

Primary Component	Secondary Component		Assigned Weight (%)	Progress Actual (%)	Progress Weighted (%)
1. Establishment & Recruitment	1.1	PMO Establishment and Staffing	2	100	2
	1.2	ISPMC Consultants Recruitment	2	100	2
	1.3	NGO Recruitment	2	50	1
2. Implementation; Tranche-1	2.1	Detailed Design	2	100	2
	2.2	Tender Documents Preparation	6	65	4
	2.3	Tendering and Contract Award	6	60	4
	2.4	Land Acquisition and Resettlement	8	60	5
	2.5	Project Management	6	75	5
	2.6	Physical Completion of Works	32	80	26
	2.7	Financial Disbursements	4	50	2
3. Knowledge Base & Capacity	3.1	Knowledge Base & Tech. Studies	4	60	2
	3.2	CBFRM Activities	6	30	2
	3.3	MIS Project Mgmt Module	4	10	0
4. River Study, Piloting & Master Plan	4.1	Long-term stabilization study	4	90	4
	4.2	Land recovery piloting	2	25	1
5. Preparation; Project-2	5.1	Feasibility Study; Project-2	6	40	2
	5.2	Detailed Design; Project-2	4	0	0
Totals			**100**		**63**

5. Financial Progress

Financial Indicator	BDT Million	US$ Million	% of Total
Estimated Project Cost (Source: DPP Page 1	8,196	103.57	100
Physical Progress	5,076	63.5	61
PMO Expenditures	4,544	56.7	55
ADB Disbursement	3,768	48.08	45
Total Reimbursement	3,283	41	40

Figure 1 Project Location Map



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 55,000 people[1]. 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 systematically to protect long reaches of the Pabna Irrigation and Rural Development Project (PIRDP) and Meghna-Dhonagoda Irrigation Project (MDIP) against riverbank erosion. Between 2004 and 2011, this protection method was used along 17 km of the lower Jamuna River and some 11 km around the MDIP. Geobag revetments were incorporated into the Guideline for Riverbank Protection approved by BWDB in 2010. Following a feasibility study completed in December 2013, the Government of Bangladesh (GOB) and Asian Development Bank (ADB) agreed to continue riverbank protection for more systematic river stabilization along the lower Jamuna and upper Padma rivers including reclaiming floodplain land lost during the widening process 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.** 5). The ADB Facility Administration Memorandum, June 2014 (**Ref.** 1) is the key document prescribing the loan objectives and procedural details.

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. The first 17km of riverbank protection, concentrating on the critical underwater part, were completed during the dry season 2015/16. This first project lays the foundation for systematic river stabilization supported by FRERMIP over three successive projects to be implemented over a period of around ten years. The first project, scheduled to be completed in June 2019, will provide structural and non-structural flood and riverbank erosion risk management measures in three high priority sub-project**.** Subsequent projects will extend the protected reaches with the goal to substantially stabilize the lower Jamuna and parts of the Padma River, based on an adaptive approach with designs adjusted to changing river conditions.

FRERMIP will contribute to provide a defined boundary between river and floodplain, and thus contribute to a more secure and improved livelihood for people living along the main rivers of Bangladesh, which will trigger faster economic growth and accelerate poverty reduction. The outcome of the program will be reduced flood and riverbank erosion risks in the sub-project reaches.

[1] Provided by Dr. M. Sarker based on his River Study Technical Note 2: Holistic River Morphology Analysis for the Brahmaputra River System

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 fundamentally changed from those outlined in the ADB Report and Recommendation of the President (**Ref.** 2), with the exception of the postponement of some activities due to the reduction of available project financing. 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, 17.8 km of riverbank protection[2] 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 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).

Delays in the bidding process for key work contracts, namely 23 km of embankment construction, requires that Project-1 will be extended by a minimum of one construction season, until June 2019. The Project Management Office (PMO) has revised the current DPP to this end, which was approved by the Ministry of Water Resources on 15 June 2017. The adjustment also addresses the reduced loan funds by reducing or cancelling individual activities and increasing to budget to actual resettlement and construction cost. The PMO expects that the modified Project outputs can be fully achieved by the original scheduled closing date of 30 June 2019.

1.3 *Overall Progress*

The Project-1 has been very successful in building riverbank protection during the dry season 2015/16. The progress during 2016/17 dry season is also satisfactory. In total, 18 km riverbank protection (underwater with temporary or permanent wave protection above low water level) has been substantially completed, however with some issues of the permanent wave protection at Chauhali, which will potentially require a major design change.

The overall weighted project progress is presented in **Table 1** and shows that the progress achieved to the end of the reporting period is around 63%. 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. Compared with the total estimated projected cost, the physical progress is 61%, PMO expenditure 55%, ADB (plus GON) disbursement 45%, and total reimbursement 40%.

[2] The length of protection work has increased from 15 to 18 km due to changes in the river morphology at Chauhali and Harirampur between the feasibility study and work start.

1.4 *This Report*

Quarterly Progress Report No. 8 covers the period 01 April to 30 June 2017. The report describes activities carried out during the quarter, which included primarily project implementation, river study, and feasibility study activities.

2. PROJECT ACTIVITIES

2.1 *INTRODUCTION*

The BWDB FRERMIP Project Management Office (PMO) started functioning in April 2014. That office was initially engaged in preconstruction and procurement activities, and since November 2015 with construction activities at three sites (through two Sub-Project Management Offices (SMOs). At the end of the second construction season, a total of 18 km of riverbank protection has been constructed under the project: 7.2 km at Chauhali, 2.0 km at Zaffarganj and 8.8 km at Harirampur. During the reporting period, construction activities resumed at all three sites as follows:

(i) Chauhali: the work concentrated on repair works associated with failures of the upper slope, and the construction of 5km of permanent wave protection. No adaptation work or strengthening of the apron, launched over several kilometers typically around 15m vertically could be done due to this priority. The work was extended in downstream direction to provide emergency protection at Solimabad, while there was insufficient capacity to extend the work also in upstream direction. At the end of the reporting quarter Solimabad downstream works and repair work were both incomplete and are intended to be continued in July.

(ii) Zafarganj: the underwater work was completed and the above water work started. The area of the school requires special attention, as the school should be removed due to a high risk of sudden catastrophic failure, the administrative process of which will require some time.

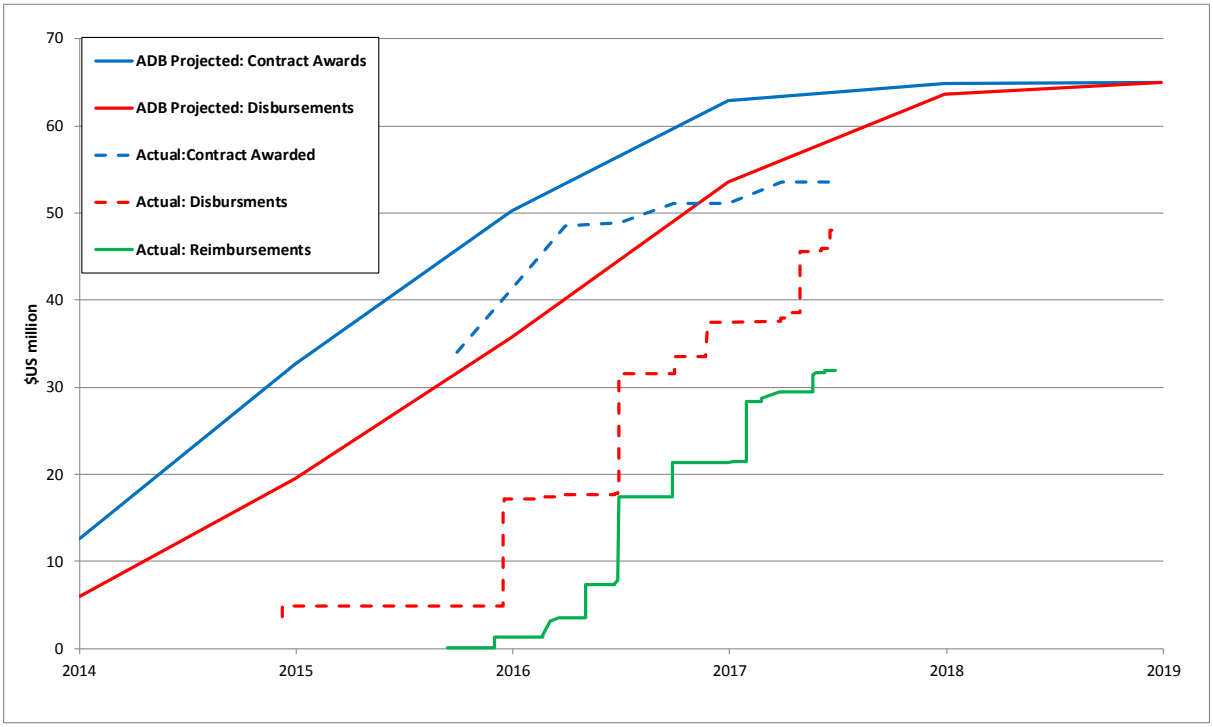
(iii) Harirampur: slope failures of the upper slope, associated with the failure of the temporary wave protection have been repaired to a large extent with some 30% of the works remaining incomplete at the end of the reporting quarter.

The Institutional Strengthening and Project Management Consultants (ISPMC) have been working since September 2015 and has completed the following activities: prepared the Project Inception Report, supported overall project management and capacity building activities, advised on design and construction issues, and prepared the terms of reference for several supporting studies. A strategic framework on river stabilization has been submitted in May 2017, summarizing the more detailed work of River Stabilization Study and Initial River Management Master Plan. The results of the Study Team have been presented at a National Workshop on 7 December 2016 and will be finalized after additional team resources will become available through the first variation order formalizing changes identified during project inception. The River Study Task Team plans to complete a total of nearly 40 Technical Notes, which will form annexes to the study work. The ISPMC team has completed the preliminary site selection for Project-2, identifying the specific subproject areas and physical works, conducting a preliminary economic analysis, and compiling necessary information required for the feasibility study. The related report has been submitted in May 2017. The feasibility study is expected to be completed after additional resources become available through the first contract variation.

The status of implementation activities in the reporting quarter is discussed in the following sections, and summary and detailed tables are provided in **Appendix-A** and **Appendix-B**, respectively. The

history of contractual awards and disbursements as projected by ADB and as actually achieved is shown in **Figure 2,** along with actual total reimbursements. The graph has not been corrected for the expected reduction in loan amount from US$ 65 to around 58 million.

Figure 2 Contract, Disbursement and Reimbursement History, ADB Loan



2.2 *PROJECT ASSET IMPLEMENTATION*

2.2.1 Introduction

Tables A-1 and A-2 show the type, number and total cost of assets currently included in the program. The cost of the proposed 23 Km of embankment (plus associated structures) has recently been revised to BDT 1,221 million based on detailed cost estimates from the PMO and the Koitola SMO (**Table A-5**). The 18 km of riverbank revetment included in the current work program is expected to cost BDT 1,886 million, plus BDT 1,112 million for geo-bags. Details on 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 BDT 8,194 million (Goods BDT 1,399 million, Services BDT 1,233 million and Works BDT 3,532 million, plus BDT 2,081 million of additional assets included in the DPP).

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-3**) or DPP Components (**Table A-4 and A-5**). Note that **Table A-5** also contains the revised DPP.

The PMO has spent around BDT 2,293 million during the 2016/17 fiscal year, BDT 563 million under Revenue Categories, and BDT 1,731 million under Capital Categories. The Capital Categories are mostly related to the ongoing riverbank protection works at Chauhali and Zafarganj and Harirampur, and land acquisition for the embankment in Koijuri (subproject JRB-1). Some photos of implementation work are attached in **Appendix-G.** The total cost of the project is revised under the Revised DPP, reducing the available US$ amount from 65 million to 58 million.

2.2.2 Design Activities

Design details, pertaining to the work of the BWDB design circle, for each individual asset are available in **Table B-1**.

The ISPMC has made crucial comments on the proposed tender designs and technical specifications for the remaining 23km of embankment works in view of completeness of the combination of design drawings and specifications and alternative, cost effective work methods. After discussion between PMO and ADB during the June mission, it was decided to proceed with the time critical bidding process without changes and to improve the documents during contract negotiations prior to contract award.

The ISPMC assisted the PMO in proposing repair strips for Chauhali and Harirampur in the areas of slope failures during the preceding flood season, based on systematic diving investigations since March 2017. Apart from a professional diving team fielded intermittently, member of the ISPMC undertook diving investigation at Chauhali on 19 February, 22 March, 6 May, and 4 June, and at Harirampur on 1 April and 14 June. Additionally, slope failures occurred during the completion of the permanent wave protection, from 2 May, which were investigated immediately and the ongoing repair works were adjusted on a case to case basis. Repair works in response to slope failures continues at the end of the reporting quarter. The BWDB has formed a committee to assess the cause of the slope failure on 4 July 2017. The committee members include two professors from BUET.

The ISPMC recommended to implement adaptation works at Chauhali and Harirampur to strengthen the launched apron, in places over more than 30m slope length and 15m in vertical height. The recommendation was based on the 2016 flood season survey and subsequently available dry season surveys. In addition, the maximum depth of launching and the dry season river bed was also considered that fundamentally determined the implementation methodology. Given the concentration on repair works, adaptation works will be deferred to the 2017/18 dry season.

2.2.3 Bidding Activities

No major contracts have been awarded during this quarter. The 5 tenders for construction of the Koitola embankment that were received in the previous quarter have been abandoned and will be retendered during the upcoming quarter. PMO and ADB agreed to use government e-tendering.

A summary of tendering progress, by primary component, is given in

Table 2. Bidding progress details, on individual contract package basis, are given in **Table B-2.** These tables only include new contracts for the 2016/17 fiscal year.

Table 2 2016/17 Tendering Progress Summary 2016/17 Fiscal Year

Component	Expression of Interest Received	Tender Notice	Tender Received	Notice of Award Issued
Goods; B: Materials	na	1	1	0
Goods; C: Vehicles & Equipment	na	0	0	0
Services; D: Consulting Services	1	0	0	0
Works; A: Civil Works	na	5	5	0
Totals	**1**	**6**	**6**	**0**

na – not applicable

2.2.4 Implementation Activities

Chauhali: The permanent slope protection works and repair works continued through the reporting quarter at Chauhali. 92% of the total number of CC blocks were cast up to June 2017 and the overall progress was 95%. The CC block pitching for the slope protection work was completed by the end of April along 5 km of bank line. CC block pitching work on the shoulder of the bank line were done along approximately 4.2 km length, the rest is expected to be completed during the next dry season. Repairing through geo-bag dumping works was carried out at Chauhali during this quarter and around 82% was completed.

Several slope failures of the newly built permanent protection work occurred. To this end several repair strips, consisting of systematically dumped geo-bags under water were implemented (in total 18) by 30 June 2017. Geo-bags for this activity were received through an additional contract (G4), signed on 27 February 2017 with the first bags received at the site on 28 February at Chauhali. In addition, geotechnical investigations were undertaken through the BWDB Groundwater Hydrology Division 2. The results will be used for reassessing the slope stability of the upper slope, prior to commencing more systematic reconstruction works. Additional riverbank protection works was started in May 2017 at Solimabad, downstream of Chauhali. Here, approximately 2km are at the risk of further erosion prior to closing the channel as planned during the follow-on Project-2. The status of the repair work, based on the latest river survey from 1 July is presented in **Appendix-D.**

Zafarganj: Permanent slope protection work was carried out throughout this quarter. 100% of the total number of CC blocks under Package W-08 was cast during this quarter and the overall progress has been 95%. Around 1.9 km of CC block pitching on the slope was done along the bank line and around 1.6 km of laying was done on the shoulder of the bank line. The rest of the work is deferred until the next dry season. Zafarganj faced no major construction issues during this quarter.

Harirampur: Adaptation work was carried out during this quarter at Harirampur on the temporary bank protection work that was built during the last dry season. Out of 237,788 no. of geo-bags, 215,738 (90%) geo-bags were placed on the damaged slope until June 2017. Eroded pockets under water, being some 3m deep were covered through systematic dumping since June 2017. In total, some 14 dumping strips have been defined out of which 8 strips were completed by 30 June 2017. Given the importance of the dumping for the overall stability of the riverbank protection, the work is planned to be completed in July. **Table 3** shows the implementation progress summary, including all on-going (new for FY 2016/17 and carry-over contracts) and completed contracts. The best estimate has been updated per the revised DPP. Details on an individual contract basis are available in **Table B-3**.

Table 3 Implementation (Physical) Progress Summary

Component	On-going & Complete Contracts	Best Estimate of Final Cost (BDT Mil)	Value of Cumulative Progress to Date (BDT Mil)	Projected Cumulative Progress to Next Qtr. (BDT Mil)
Goods; B: Materials	4	1,328	1,275	1,293
Goods; C: Vehicles & Equip.	5	46	46	46
Services; D: Consult. Service	6	1,212	661	777
Services; G: Program Mngt.	1	8	3	3
Works; A: Civil Works	11	3,493	1,768	1,842
Totals	**27**	**6,098**	**3,751**	**3,960**

2.2.5 Environmental Management

The next EMR report covering the period of January-June 2017 is due for submission to ADB by 31 July 2017.

The second round of EMP compliance monitoring for season 2016-2017 by the ISPMC for Chauhali and Zafarganj site was conducted on 11 April and 17 and 24 April respectively. The third round was conducted by ISPMC for Zafarganj and Chauhali on 18 and 20 June, respectively.

Field visits were undertaken to monitor fisheries impacts of the project interventions along with other fisheries related field investigations. After a first visit to Chauhali on 28-30 March 2017, two more trips followed during the reporting period: on 3-4 May 2017 to Hurasagar, and on 7-8 June 2017 to Jafargonj. As only revetments have been done to contain bank erosion in the visited sites, the impacts of the revetment on the fisheries have been studied.

During the site visits the following aspects of fisheries have been checked:
- production base (habitat/ecosystem)
- productivity (production potential)
- production (rate of yield)
- producers (say, fishers)
- production system (paraphernalia & method)
- production disposal (marketing)

Preliminary analysis shows that there have been changes in all aspects of fisheries along the bank line due to the revetment. After a yearlong systematic study, a report on the fisheries impacts of the intervention will be prepared.

Input-wise, during the reporting period the international Environmental Expert did not travel to Bangladesh as missions have been put on hold until the Contract Variation Order No. 1 is concluded.

2.2.6 Resettlement Services

During this quarter 87 cheques were handed over to 87 Affected Persons in Zafarganj (out of 88) as Resettlement Benefit. The local government institutions representatives (Upazila Chairman and UNO of Shibalaya, Chairman and Male/Female Ward Member of Local Union Parishad) and CRO from PMO/FRERMIP were present during the distribution of cheques. Before this payment, one AP had died so his cheque was handed over to his inheritors after finalization of succession certificate by the Court. There was one claim for a public toilet constructed by LGED which needs DC office's finalization of ownership before payment. Some Photographs of APs receiving cheques are seen below.

The Resettlement Plan (RP) of Zafarganj for 600m has been approved by ADB in this quarter and work is ongoing to ensure Resettlement Benefit to the eligible APs. ADB commented on the RP of Zafarganj for the 1.4km reach. This RP was then corrected and submitted for approval to ADB. The corrected version has been approved in this quarter. The Resettlement Plan (RP) of Chauhali has also been approved by ADB in this quarter and work is ongoing to ensure Resettlement Benefit to the eligible APs. Identification of affected persons and Joint Verification of affected households were completed during this quarter in Chauhali. The project prepared and approved estimates of resettlement benefits. Bills for resettlement benefits were then prepared and submitted to Regional Accounting Center (RAC) of Dhaka. The Resettlement Plan (RP) of Harirampur is being prepared and the updated RP for construction of Koijuri embankment is also in progress accommodating ADB's comments on draft RP. Both the RPs will be completed early next quarter and submitted to ADB for

approval. A proposal for administrative approval for land acquisition at Harirampur is in the Ministry of Water Resources during this quarter. Required fund for Zafarganj site was placed to Deputy Commissioner (DC) of Manikgonj against land acquisition cost approved by him.

Figure 3 Resettlement Activities

Figure 4 Resettlement Activities

During this quarter, a ADB Safeguard Mission visited the project during 3 to 11 May 2017. The Mission started with a meeting participated by PMO officials, ISPMC and the INGO. Chief Resettlement Officer (CRO) of PMO briefed the progress of resettlement activities with a power point presentation. He also made available all relevant files to the Mission with a summary sheet so that the Mission would have an overview of work progress. The Mission along with PMO officials and ISPMC members visited the riverbank protection works at Chauhali, Zafarganj and Harirampur and also the site for construction of Koijuri embankment. Meetings were organized in each site with APs who received the compensation and some APs who are still in the process of receiving compensation. After end of the field visits the Mission Leader shared his views with PMO and ISPMC. During the quarter, the replacement of National Resettlement Specialist has been approved and the new Specialist started working, which helped to increase the regular supervision from ISPMC and provide support to PMO as and when needed.

Table 4 Resettlement Activities

Sites	Resettlement Activities	Progress During Current Quarter	Projected Progress During Next Quarter
Chauhali	Riverbank Protection Resettlement Impacts	▪ Completion and approval of final RP from ADB ▪ Information campaign continued ▪ Issuance of ID cards to PAPs ▪ Process of payment of resettlement grants to PAPs	▪ Information campaign continued ▪ Payment of resettlement grants to PAPs
Zafargonj	Riverbank Protection Resettlement Impacts	▪ Completion and approval of final RP from ADB ▪ Information campaign continued ▪ Issuance of ID cards to PAPs ▪ Payment of resettlement grants for 1.4km to PAPs completed ▪ Process of payment of resettlement grants to PAPs for 6.00m	▪ Information campaign continued ▪ Payment of resettlement grants to PAPs ▪ Planning for CCL payment
Harirampur	Riverbank Protection Resettlement Impacts	▪ Completion of land surveys ▪ Preparation of draft RP ▪ Planning payment of resettlement benefits	▪ Submission of LA proposal for 6.00m ▪ Submission of RP ▪ Information campaign
Koijuri to Baghabari, Shahjadpur of Sirajganj	▪ Embankment Construction Resettlement Impacts ▪ Resettlement Site Preparation ▪ Relocation of PAP	▪ Updating of RP ▪ ID cards under preparation ▪ Continued information campaign ▪ Formation of Safeguard Committees completed (JVT, PVAT, GRC)	▪ Planning for CCL payment ▪ Submission of updated RP ▪ Continuing information campaign ▪ ID cards issued

2.2.7 Livelihood Development

The main objective of the Income Livelihood Restoration Plan (ILRP) is to improve, or at least restore, the income and livelihood of all project affected people.

ToR for the component is now lying with ADB for approval for more than a year. However, it remains essential to recruit an INGO for implementing the ILRP under the Livelihood Development support study. The initial Livelihood Development ToR dated 22 February 2016 was revised and resubmitted to the PMO on 25 May 2016, and subsequently forwarded to ADB for their concurrence. The last ADB Mission committed to approve or send comments on the draft ToR of the livelihood package by 20 December 2016, which unfortunately has not happened.

Gender and Development

On 16 April 2017, a meeting was held with the PD in the ADB BRM office with the Project Director on the progress of Gender Action Plan (GAP) in the project. After discussion of the plan in details the

expressed concern on the current ADP approved GAP and requested the project to submit a separate section in the QPRs from the reporting quarter. BRM also requested to include and ADB prescribed reporting format of GAP as an Annexure in the following QPRs. It came out during the discussions that some items of GAP (Activity A1-1, A1-2; A3-1; C-1) have been changed during last Review Mission but those have not been reflected in the existing GAP. It is understood from BRM discussions that as part of ADB process it has been done in HQ after last Review Mission. As such the project now needs a revised approved version of GAP to follow the ADB's reporting format and prepare report on Gender for each QPR.

A One-day course on "Gender Awareness Training for BWDB Officials, PMO and ISPMC" was held on 31 May 2017. This is the first batch of training on gender under this project. The Project Director inaugurated the course and ADB's Social Development and Gender Specialist Ms. Nasheeba Selim attended as Resource Person. Social Development and Gender Specialists (The International and National both) of ISPMC also attended as Resource Persons and Team Leader of ISPMC closed the course through a speech. The main contents of the course were:

- Briefing on FRERMIP activities, implementing strategy and Importance of women-friendly design of physical structures required for the project
- Importance of gender mainstreaming in FRERMIP activities
- National and International Policy Commitments of GOB in Gender Mainstreaming
- Concept of Gender Equality and Equity
- Gender Action Plan of FRERMIP
- ADB's Gender Strategy and Action Plan
- Importance of implementation and reporting of project's Gender Action Plan (GAP).

A total of 32 (25 female and 7 male) participants attended the course where 24 female Engineers attended from BWDB design and other sections. Their designations ranged from Superintending Engineers to Assistant Engineers. This initial course focused on conceptual clarity and policy commitments of government and ADB. The participants were very much attentive and they suggested organizing a "3-5 days course on Gender in Water Management" with a field trip to project sites so that they can have an overview of the project as well as how to mainstream gender in water management.

Details progress Gender Action Plan (GAP) is annexed in **Appendix-E** as per ADB requirement.

2.2.8 Flood Risk Management

Community-Based Flood Risk Management (CbFRM)

During the last ADB mission a project review meeting at DDM participated by the Project Manager, ISPMC, mission leader, BRM representative and Project Director was held where the following decisions were made;

- Funds for PIU equipment and operation expenditures should be transferred to DDM's designated project accounts by middle of June.
- Equipment procurement through 'Shopping' is allowed by collecting minimum 3 quotations followed by comparative evaluation and awarding. However, to avoid any deviations between PMU and ADB regarding the procurement, PIU is asked to submit the collected quotations with notices to PMO for forwarding and concurrence by ADB prior to awarding. It does not mean that the process for procurement following shopping method should be withheld until ADB's concurrence is available. These formalities can proceed concurrently.
- Quarterly Project Report (QPR) inputs of CbFRM should be shared with PM before sending it for publication by ISPMC.

- Target is to engage the NGO before the end of this calendar year.
- Coordinate with the resettlement component to know the specific number and locations of the Project Affected Peoples (PAPs) of the main component, executed by BWDB, who should also be addressed by CbFRM component, as part of community awareness activities for flood risk mitigation in the project areas.

As per the above decisions, funds for both PIU equipment and operation expenditures have been disbursed to PIU separate accounts in a local bank, and procurement of equipment has already been completed following the suggested steps and procedures. Furthermore, this part of QPR was shared with the Project Manager before finalization and concerted efforts are in force to recruit the NGO by end of the current calendar year together with necessary coordination with the resettlement component. With respect to NGO recruitment, it should be mentioned that the ADB's comments on NGO shortlisting, submitted earlier through Submission Form 1, was thoroughly reviewed during the last mission. This was followed by resubmission with all necessary clarifications through PMO to BRM for further review. It is expected that ADB will soon approve the NGO shortlisting report followed by issuing the RFPs to the shortlisted NGOs.

2.3 *OTHER PROJECT ACTIVITIES*

2.3.1 Supporting Studies

According to the revised DPP, there are seven different service contracts for supporting studies. The status of all support studies is summarized in **Table 5.**

Table 5 Supporting Studies

Pkg.	Study Name	Present Status
S-02	Resettlement Plan Implementation	Resettlement INGO signed contract with BWDB on 16 March 2016, and work is ongoing. ADB conducted a review of the resettlement progress through a staff consultant.
S-03	Livelihood Development Services	ToR submitted to PMO on 25 May 2016. ADB concurrence under process. According to the last Aide Memoire the PMO will submit an updated version of draft TOR based on the final RPs and coordination with the CbFRM package by 15 July 2017.
S-04	CbFRM Services	EOI received on 26 April 2016, and evaluation under process. A list of six shortlisted firms was resubmitted addressing ADB comments.
S-05	Multi-Beam Eco Sounding Survey	A demonstration survey was performed in October-November 2016. ToR being reviewed based on the results of the demonstration survey.
S-06	Erosion Prediction Services	CEGIS is conducting the study. A dissemination seminar on riverbank erosion was conducted by CEGIS on the 24th May 2017 in the CIRDAP.
S-07	Asset MIS	The finalized Asset MIS ToR was submitted to the PMO on 12 February 2017. The Asset MIS ToR would complement the existing SIMS (Inventory and Mapping Database) system by adding a much-needed Risk-based O&M Module. The PMO submitted the Asset MIS ToR to ADB.

2.3.2 Capacity Building

The current primary activity under the Capacity Building Program is the preparation of training courses. A summary of the Training Program progress is shown in **Table 6**. The full Capacity Building program was initially provided in the inception report and has been revised to be more effective. The updated program is given in **Appendix-F**.

Table 6 Summary of Capacity Building Activities

Type of Training	Course Implementation Progress				
	Total	Discussed	Prepared	Approved	Completed
Capacity Building PMO					
A. Local Training	34	25	12	4	4
B. Overseas Training	2	2	2	1	1
C. Overseas Tours	4	4	3	2	1
PMO Totals	**40**	**31**	**17**	**7**	**6**
Capacity Building ISPMC					
Line 1:					
A. Workshops	7	7	4	4	4
B. Training	7	7	5	5	5
C. Seminars	1	0	0	0	0
Line- 2:					
A. Conferences	4	4	4	3	3
B. Study Tours	1	1	0	0	0
ISPMC Totals	**20**	**19**	**13**	**12**	**12**

Local Training under ISPMC during this quarter:
During the reporting quarter, A 1-day Training was held on Gender Awareness for BWDB Engineers, PMO and ISPMC on 31 May 2017. Training session were organized and conducted under ISPMC line item-1 of the provisional sum. The Total cost for 30 Trainees and 20 other participants (Total 50) was BDT= 63,990.00 (Sixty-Three Thousand Twenty-Nine Hundred Ninety) only.

To develop the knowledge on Gender Awareness for BWDB female Engineers the capacity building training course was organized under the FRERMIP project. The training included 30 female Engineers of the BWDB. The course was implemented by the ISPMC and was conducted in May 2017. As international expert Mr. Jean Louis Leterme, Social Development / Resettlement Specialist, ISPMC and as national expert Begum Shamsun Nahar, Social Development and Gender Specialist of ISPMC were assigned to coordinate training and the Training Coordinator coordinated the training program.

Study Tour -2 (North America) as per revised DPP:
'Overseas Study Tour in North America' including Mississippi River and Canada under BWDB Capacity Development Program of Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), BWDB is in the final stage for execution and the tentative date is fixed as 05 - 18 August (1+14+1= 16 days). The PMO, FRERMIP is updating the program day to day for 05 - 18 August 2017 (the payments made under FY 2016-2017) and executing it titled as "Study Tour on "Mississippi river management and allied erosion protection work" in America & Canada under Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP) from 05 - 18 August 2017." The Government of Bangladesh is pleased to sanction the deputation of 10 Govt. officials to attend the Study Tour (Official Visit).

The team will leave for the USA on or around 04 August 2017 and is expected to return to Dhaka on or around 19 August 2017 and the expenses of the officials relating to this visit including air travel, meals, accommodation and daily allowances will be borne by the Project "Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), BWDB".

The Overseas Study Tour in North America including Mississippi River and Canada under BWDB Capacity Development Program of FRERMIP, BWDB will help acquire knowledge on Mississippi River Management, sharing of experience on management of major river in Bangladesh and visit Flood/Erosion Management/Protection works in and around the USA and Canada.

Study Tour – 1 (Australia) as per revised DPP:
An overseas Study Tour in Australia under BWDB Capacity Development Program is being organized for five officials of BWDB. A draft tour program has been prepared and submitted to the Project Director for execution in the next July/Aug- 2017. In the year 2004 a group of high officials from JMREMP including BWDB staff visited Australia to share the ideas about geotextile. The draft program is included in the **Appendix-F.**

Upcoming Local Trainings:
The ISPMC is working to organize and implement the training on Riverbank Geotechnical Stability, Riverbank Protection, Survey and Evaluation, Resettlement, and Construction Management. A draft program is prepared and discussed with the Project Director for execution in the next July/Aug- 2017. Request letter was sent to the concerned persons to get the consent as the Course Director and preside the classes as instructor during the courses.

2.3.3 River Study

The study team continued extensive bifurcation investigations consisting of hydraulic, sedimentological and morphological studies. Schematic and specific numerical modelling, the latter with focus on the Lower Jamuna River, were continued and finished. This work is relevant for the long-term stabilization plan, as well as for the planning of Project-2 works as first step towards a more stable left branch of the Lower Jamuna. Some Technical Notes on bifurcations are in preparation, including an extensive study on the behaviour of some major bifurcations in the Lower Jamuna and Padma system using satellite images in combination with the insight from the schematic modelling.

The study team continued the additional study on sediment budgeting, started in the previous quarter. Systematic river stabilization will require sand and finer sediments for the rebuilding of the lost floodplains. Despite the very large sediment transport of the Brahmaputra river system, not sufficient sediment might be available in the next decades, resulting in lowering of the bed level of the river and reduced delta building in the Bay of Bengal. A Technical Note on this matter is in preparation, including suggestions to initiate a nation-wide planning study of sediment resources of Bangladesh.

Two members of the Netherlands Commission for Environmental Assessment (NCEA), Mr Arend Kolhoff, Environment Specialist and Mr Gert-Jan Akkerman, Hydrologist, visited Bangladesh from 9-12 June 2017 to present and discuss the draft review findings of the Strategic Environmental and Social Assessment (SESA) for river stabilization as prepared by ISPMC in July 2016. The NCEA experts had meetings and discussions with the Project Director, FRERMIP, Planning Commission, DoE, MoEF and ISPMC team. The ISPMC Team Leader and the International Environment Specialist will hold a meeting with NCEA experts in the Netherlands in mid-July to discuss the experts' findings on how to finalize the draft SESA.

3. ADMINISTRATIVE ARRANGEMENTS

3.1 *Establishment of Project Offices*

The PMO and two ISPMC offices are fully operational. The project management team of the ISPMC and the BWDB PMO Office are both located in the Firoz Tower, 152/3/B Bir Uttam, Kazi Nuruzzaman Road (Green Road), Dhaka-1205. The ISPMC River Study and Feasibility teams are located at the Banani Office: House 47 (8th 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 period. A total of 24 international specialists have expended 89 person-months (50% of total), and 35 national specialists have expended 241 person-months (50% of total), up to the end of the June 2017.

3.2 *Important Events During This Quarter:*

18 to 21 April:	Worlds Large River Conference Delhi, presentation of two papers on river stabilization activities in Bangladesh
24 and 25 April:	Blue Gold workshop on pilot work with top-blocked permeable spurs in the Lower Baddra River
26 April:	Submission of the Strategic Framework: Stabilization and Development Value Capture: Jamuna-Padma and Dependent Areas
3 to 11 May:	ADB safeguard mission
9, 23 May:	Coordination with Nippon Koei new airport team on data exchange for riverbank protection and land reclamation
14 to 20 May:	Final input of expert for grout-filled jute mattresses
31 May	Submission of report on “Site Selection and Initial Economic Assessment” for Project-2
4 to 8 June:	ADB review and handing over mission, transferring responsibility for Project-1 implementation to BRM, and handing over Study activities as well as Project-2 preparation to a newly recruited water resources specialist
9 to 12 June:	SESA review team
13 June:	ADB preparatory discussion on Project (Tranche)-2

4. FINANCIAL ARRANGEMENTS

4.1 *Statements of Expenditure*

Using the project implementation database, and with help from the FRERMIP PMO, the ISPMC tracks fiscal progress compared to Annual Development Plan (ADP) targets, BWDB PMO expenditures paid to contractors and suppliers, all reimbursement bill applications approved by ADB, and all ADB (and GON) disbursements (deposits) to the project.

Table A-5 shows the fiscal (ADP) target and progress, plus the cumulative totals to date for progress, expenses and reimbursements, for all DPP categories. The 2016/17 fiscal targets have recently been revised and are not expected to change again during the current fiscal year.

BWDB PMO expenditures by individual contract are provided in **Table B-5**. Only the total expenditure values are exactly correct. The individual donor values have been calculated using total expenditure values and the percent distribution by financial component.

Financial reimbursement on an individual contract basis is shown in **Table B-6.** The table shows the total bill claim amount, plus the reimbursed amount (BDT) by both ADB and GON. A summary of reimbursement applications for line of credit (L/C), direct payment and imprest amounts is shown in **Table B-7.** This table also shows the total bill amount claimed and the reimbursement amounts paid by ADB and GON in both BDT and US$.

Reimbursement values (BDT) are also summarized by ADB Financial Category **(Table A-3),** and by DPP Component **(Table A-4 and A-5)**.

Table B-8 shows the total ADB (plus GON) disbursement to the project. Total disbursement is the addition of all deposits to the ADB Loan Account and the Grant Imprest Account, plus the ADB and GON portions of all reimbursed Direct Payment and L/C applications.

A summary of the financial progress in available in **Table 1** which shows that the progress of PMO expenditure is 55%, the ADB disbursement is 45% and the total reimbursement is 40%. The history of project disbursements and reimbursements (US$) is shown in **Figure 2.**

5. ISSUES FOR DISCUSSION AND AGREEMENT

5.1 *Slope Instability at Chauhali*

Repeated slope instability problems at Chauhali indicate the need for a thorough assessment prior to reconstructing the slope. Overall around 4km of final concrete block protection are affected, mostly in the central and downstream part of the work. The upstream 2km, having received only temporary protection of the upper slope and not exhibiting a deep channel, are yet unaffected by localized slope failures. Most of the more recently experienced failures pertain to the sliding of the concrete block protection of the upper around 5m of slope. Unfortunately, this constitutes 60% of the investment cost, while the protection under water covering around 20m vertically is yet performing satisfactorily, despite of lacking adaptation works.

The BWDB has constituted a committee to investigate the failure of the upper slope at Chauhali including a hydraulic specialist and a geotechnical specialist from BUET. The committee work will receive further support from geotechnical investigations started in June 2017, with the laboratory investigations and additional slope stability calculations expected during the next quarter. First results indicate weak subsoil consisting predominantly of silt potentially asking for a wider berm several meters below low water level followed by very flat slopes, which will require additional land acquisition prior to implementation.

5.2 *Completion of Study Work*

Given the recent progress towards completing the first zero-cost variation order, the completion of the study work, consisting of the river stabilization plan and initial master plan is expected at the end of this year. The strategic framework providing the overview is planned to be discussed in the technical advisory committee in July. An important element of the study will consist of two types of research activities:

(i) Research that can be implemented with comparatively limited efforts during Project-1 from contingencies of the ISPMC contract, such as systematic discharge and sediment measurements during the 2018 flood season, and

(ii) Research requiring longer term involvement to be conducted during Project-2.

5.3 *Preparation of Project-2*

First discussion with ADB indicated that the feasibility study of Project-2 would be required by end of March 2018. Preparatory works, specifically field work for feasibility and detailed design can be conducted during the dry season. It is expected that all resources will be available from next quarter after approval of the first variation order of the ISPMC contract. Further discussions on schedule and scope of work will be held with the new ADB water resources specialist after his fielding in July 2017 and also in the technical advisory committee of BWDB.

5.4 *Construction Schedule for Embankment*

The construction of 23km of embankment remains on the critical path with respect of future disbursements and project completion date. Any delay in full mobilization of the contractors by October 2017 poses significant risks to the completion date of June 2019, given the limited period of time available before this tranche closes.

5.5 *Compliance with Covenants*

The loan covenants are provided in the Loan Agreement, Program Agreement, and Grant Agreement (**Ref.** 3) and are in general being followed. With respect to Schedule 5, land acquisition and resettlement, the preparation of resettlement and land plans remains on the critical path as the completion of the above-water construction works at Chauhali and Zaffarganj are expected to contribute to the stability. The more so as the temporary protection works at Chauhali has shown some significant erosion and slope instability problems in places. The particular covenants of loan agreement (Article IV) are as follows-

Section 4.01: In the carrying out the Project and operation of the Project facilities, the Borrower shall perform, or cause to be performed, all obligations set forth in Schedule 5 to this Loan Agreement.

Section 4.02: The Borrower shall enable ADB's representatives to inspect the Project, the Goods and Works, and any relevant records and documents.

Section 4.03: ADB shall disclose the annual audited financial statements for the Project and the opinion of the auditors on the financial statements within 30-days of the date of their receipt by posting them on ADB's website.

Section 4.04: The Borrower shall take all actions which shall be necessary on its part to enable BWDB to perform its obligations under the Project Agreement, and shall not take or permit any action which would interfere with the performance of such obligations.

5.6 *Pending Actions:*

The summarized list of major pending actions of the overall project is shown **Table 7.**

Table 7 Pending Actions

Action	Current Condition
Procurement Activities	The PMO is in the process of retendering of 5 contracts of Koijuri-Baghabari embankment. The retendering process is supposed to take place in early July 2017.
Physical Construction Work	Some part of the repair work and the total adaptation work at Chauhali and Harirampur have been deferred until the next dry season.
Livelihood	The PMO is supposed to submit revised ToR to ADB within 15 July 2017.

Action	Current Condition
Development Services	
Resettlement Activities	The two Semi-annual Reports (July-December 2016 and January-June 2017) are pending submission by the INGO.
CbFRM Services	The EOI evaluation is under process by the PMO.
Multibeam Echosounding Survey	The ToR is being reviewed by the ISPMC.
Asset MIS	The Asset MIS ToR lies with the ADB for review.
River Stabilization Plan, Initial Master Plan	The River Stabilization Plan, Initial Master Plan and the Feasibility Study Report for Tranche-2 is being prepared by the ISPMC and will be submitted when the additional resources from the first Variation Order will become available. The confirmation of the strategic framework is expected through an advisory committee meeting in July.
Feasibility Study for Tranche-2	The Feasibility Study Report for Tranche-2 is being prepared by the ISPMC and will be submitted when the additional resources from the first Variation Order will become available. The confirmation of the site selection is expected through an advisory committee meeting in July.
Capacity Development	Several Trainings and Study Tours are pending implementation currently. In particular, the Study Tours to North America and Australia are scheduled to be completed within the upcoming quarter.

6. REFERENCES

1. ADB, 2014: Facility Administration Manual, Bangladesh: Multi-Project 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 Multi-Project 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 – Project 1, 2014 May

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

TABLES

Appendix-A Work Program Summaries

Table A-1 Project Program Summary

Quantity (Units)

Component	Asset Type	Units	BWDB	DDM	MAN	KOI	TAN	Totals
A: Civil Works								
A1: Embankment Works	Cons/ReCon: Embank	km	0.0	0.0	0.0	10.5	0.0	**10.5**
	New: Embank	km	0.0	0.0	0.0	12.5	0.0	**12.5**
	New: Infrastr	BDTM	0.0	0.0	5.0	0.0	0.0	**5.0**
	New: Regulator	No	0.0	0.0	0.0	4.0	0.0	**4.0**
A2: Riverbank Prot Works	New: Revetment	km	0.0	0.0	9.0	0.0	7.0	**16.0**
A3: Emerg & Adaptation	Emerg: AdpRivProt	BDTM	54.0	0.0	0.0	0.0	0.0	**54.0**
A4: Pilot Land Recovery	New: RivTrnWrk	BDTM	380.0	0.0	0.0	0.0	0.0	**380.0**
B: Materials								
B1: Geotextile, Civil Works	Procure: GeoBag	Mil	0.0	0.0	2.7	0.0	1.9	**4.7**
B2: Geotextile, Emerg	Procure: AdpGeoBag	Mil	0.8	0.0	0.9	0.0	0.0	**1.6**
C: Vehicles & Equipment								
C1: Vehicles/Transport	Procure: Veh/Trans	No	12.0	0.0	0.0	0.0	0.0	**12.0**
C2: Office Equipment	Procure: Equip	BDTM	8.9	0.0	0.0	0.0	0.0	**8.9**
C3: Survey Equipment	Procure: Equip	BDTM	8.9	0.0	0.0	0.0	0.0	**8.9**
C4: DDM Office Eqpt	Procure: Equip	BDTM	0.0	0.6	0.0	0.0	0.0	**0.6**
D: Consulting Services								
D1: ISPM; Consultant Serv.	Service: Feasi.Stud	BDTM	173.0	0.0	0.0	0.0	0.0	**173.0**
	Service: Instit.Cap	BDTM	387.0	0.0	0.0	0.0	0.0	**387.0**
	Service: Riv.Stabil	BDTM	458.0	0.0	0.0	0.0	0.0	**458.0**
D2: INGO BWDB	Service: Liveli.Sup	BDTM	65.1	0.0	0.0	0.0	0.0	**65.1**
	Service: Resettle.S	BDTM	17.5	0.0	0.0	0.0	0.0	**17.5**
D3: INGO DDM	Service: CBFRM	BDTM	0.0	66.9	0.0	0.0	0.0	**66.9**
D4: Survey & Investigation	Service: Eros.Pred	BDTM	55.9	0.0	0.0	0.0	0.0	**55.9**
E: Capacity Development								
E1: BWDB Training & Study	Service: Training	BDTM	68.4	0.0	0.0	0.0	0.0	**68.4**
E3: MIS Development	Service: Instit.Cap	BDTM	12.9	0.0	0.0	0.0	0.0	**12.9**
F: Land Acqn & Resettle								
F1: Land Compensation	Compensate: Land.Acqu	BDTM	884.8	0.0	0.0	0.0	0.0	**884.8**
F2: Resettle Benefits	Compensate: Resettle.B	BDTM	29.7	0.0	0.0	0.0	0.0	**29.7**
G: Program Management								
G1: Staff Salaries BWDB	Service: Prog.Mngt	BDTM	83.7	0.0	0.0	0.0	0.0	**83.7**
G2: Office Opns BWDB	Service: Prog.Mngt	BDTM	49.6	0.0	0.0	0.0	0.0	**49.6**
G3: Office Opns DDM	Service: Prog.Mngt	BDTM	0.0	12.1	0.0	0.0	0.0	**12.1**
G4: BWDB River Surveys	Service: Riv.Surv	BDTM	7.8	0.0	0.0	0.0	0.0	**7.8**
	Service: LandSurvey	BDTM	0.2	0.0	0.0	0.0	0.0	**0.2**
X: Misc. Costs								
X1: Misc. Costs	Compensate: CD&SD	BDTM	72.3	0.0	0.0	0.0	0.0	**72.3**
	Compensate: Interest	BDTM	199.2	0.0	0.0	0.0	0.0	**199.2**

Abreviations:
DDM - Department of Disaster Managment
MAN - Manikganj SMO
KOI - Koitola SMO
TAN - Tangail SMO

The unit BDTM refers to an estimated tost cost of Bangladesh Taka 1 Million.

Table A-2 Project Cost Summary

Cost (BDT Mil)

Component	Asset	BWDB	DDM	MAN	KOI	TAN	Totals
A: Civil Works							
A1: Embankment Works	Cons/ReCon: Embank	0	0	0	511	0	**511**
	New: Embank	0	0	0	484	0	**484**
	New: Infrastr	0	0	8	0	0	**8**
	New: Regulator	0	0	0	226	0	**226**
A2: Riverbank Prot Works	New: Revetment	0	0	1,010	0	832	**1,842**
A3: Emerg & Adaptation	Emerg: AdpRivProt	81	0	0	0	0	**81**
A4: Pilot Land Recovery	New: RivTrnWrk	380	0	0	0	0	**380**
							3,532
B: Materials							
B1: Geotextile, Civil Works	Procure: GeoBag	0	0	788	0	365	**1,153**
B2: Geotextile, Emerg	Procure: AdpGeoBag	25	0	175	0	0	**200**
							1,353
C: Vehicles & Equipment							
C1: Vehicles/Transport	Procure: Veh/Trans	35	0	0	0	0	**35**
C2: Office Equipment	Procure: Equip	4	0	0	0	0	**4**
C3: Survey Equipment	Procure: Equip	7	0	0	0	0	**7**
C4: DDM Office Eqpt	Procure: Equip	0	1	0	0	0	**1**
							46
D: Consulting Services							
D1: ISPM; Consultant Serv.	Service: Feasi.Stud	170	0	0	0	0	**170**
	Service: Instit.Cap	387	0	0	0	0	**387**
	Service: Riv.Stabil	461	0	0	0	0	**461**
D2: INGO BWDB	Service: Liveli.Sup	65	0	0	0	0	**65**
	Service: Resettle.S	16	0	0	0	0	**16**
D3: INGO DDM	Service: CBFRM	0	64	0	0	0	**64**
D4: Survey & Investigation	Service: Eros.Pred	56	0	0	0	0	**56**
							1,219
E: Capacity Development							
E1: BWDB Training & Study	Service: Training	64	0	0	0	0	**64**
E3: MIS Development	Service: Instit.Cap	13	0	0	0	0	**13**
							77
F: Land Acqn & Resettle							
F1: Land Compensation	Compensate: Land.Acqu	1,650	0	0	0	0	**1,650**
F2: Resettle Benefits	Compensate: Resettle.B	28	0	0	0	0	**28**
							1,678
G: Program Management							
G1: Staff Salaries BWDB	Service: Prog.Mngt	84	0	0	0	0	**84**
G2: Office Opns BWDB	Service: Prog.Mngt	31	0	0	0	0	**31**
G3: Office Opns DDM	Service: Prog.Mngt	0	5	0	0	0	**5**
G4: BWDB River Surveys	Service: Riv.Surv	8	0	0	0	0	**8**
	Service: LandSurvey	0	0	0	0	0	**0**
							128
X: Misc. Costs							
X1: Misc. Costs	Compensate: CD&SD	12	0	0	0	0	**12**
	Compensate: Interest	199	0	0	0	0	**199**
							211
Grand Totals		**3,776**	**70**	**1,980**	**1,221**	**1,197**	**8,244**

Abreviations:
DDM - Department of Disaster Managment
MAN - Manikganj SMO
KOI - Koitola SMO
TAN - Tangail SMO

Table A-3 ADB Categories: Reimbursed Amount, by Dono

all Values in BDT Mil

Code	Categories	Total Cost Est.	Value of Physical Progress	PMO Expenses	Reimbursed Amount		
					ADB	GON	Total
Component							
1	Works	3,531.7	1,767.8	1,678.8	1,129.4	0.0	**1,129.4**
2	Materials	1,352.7	1,275.0	1,119.4	1,004.9	0.0	**1,004.9**
3A	Vehicles - BWDB	34.5	34.5	34.9	1.5	0.0	**1.5**
3B	Equipment - BWDB	11.1	11.1	11.1	10.6	0.0	**10.6**
3C	Equipment -DDM	0.5	0.0				
4	Resettlement	28.4	2.8	2.0	1.2	0.0	**1.2**
5	Training	76.8	35.1	33.8	24.2	0.0	**24.2**
6A	Consulting Services - Project Management - BWDB	1,018.2	631.6	403.0	45.4	258.2	**303.5**
6B	Consulting Services - NGO Services - BWDB	136.8	28.8	22.9	14.2	0.0	**14.2**
6C	Consulting Services - Project Management - DDM	64.4	0.0				
7A	Project Management - BWDB	38.9	22.7	17.4	9.0	0.0	**9.0**
7B	Project Management - DDM	5.1	0.5	0.5			
8	Interest	199.2	71.7	70.0			
9	Unallocated	1,745.8	1,199.3	1,143.6			
Grand Total		**8,244.1**	**5,081.0**	**4,537.5**	**2,240.4**	**258.2**	**2,498.6**

Table A-4 DPP Categories: Reimbursed Amount, by Donor

all Values in BDT Mil

Code	Categories	Total Cost Est.	Value of Physical Progress	PMO Expenses	Reimbursed Amount		
					ADB	GON	Total
Revenue Component							
4826	Interest & Service Charge for Netherland Grant	199.2	71.7	70.0			
4840	Capacity Development Program	76.8	35.1	33.8	24.2	0.0	**24.2**
4849	Resettlement Support Program	28.4	2.8	2.0	1.2	0.0	**1.2**
4874	ISPMC; Implementation Consultant Services	387.3	232.4	153.3	17.3	98.2	**115.5**
4874	ISPMC; River Stabilization and Land Recovery Study	461.2	322.9	182.6	20.5	117.0	**137.5**
4874	ISPMC; Feasibility of Tranch-2/3 Project	169.6	76.3	67.1	7.6	43.0	**50.6**
4874	Resettlement Implementation Support	16.2	6.5	4.7	4.1	0.0	**4.1**
4874	Livelihood Support Program	64.7	0.0				
4874	Community-based Flood Management Program (DDM)	64.4	0.0				
4886	Land/River Survey and Data Processing	8.0	6.3	4.4	0.4	0.0	**0.4**
4886	Survey and Investigation Data Processing	55.9	22.3	18.1	10.1	0.0	**10.1**
4700	PMO Salaries and Allowances	83.7	44.3				
4800	PMO Operational Expenses	30.9	16.4	13.0	8.5	0.0	**8.5**
4899	PMU DDM Oprational Expenses	5.1	0.5	0.5			
Revenue Totals		***1,651.4***	***837.6***	***549.7***	***94.0***	***258.2***	***352.1***
Capital Component							
6807	Transport Vehicles (Jeep 5, Motorcyle 10 and Speed Boat 1)	34.5	34.5	34.9	1.5	0.0	**1.5**
6819	Computer and Office Equipment BWDB	4.4	4.4	4.4	4.2	0.0	**4.2**
6819	Computer and Office Equipment DDM	0.5	0.0				
6851	Survey Equipment	6.7	6.7	6.7	6.4	0.0	**6.4**
6901	Land Acquisition (136 ha)	1,650.0	1,155.0	1,143.6			
7016	Construction of Inspection Bangalow at Manikganj	7.8	0.0				
7041	Regulator (new 4 and repair 3) in JRB1	225.8	0.0				
7081	Embankment (23 km) along RB Jamuna and LB Baria-Hurasagar, with Road (5 km)	995.4	0.0				
7081	Protective Works at RB Jamuna at Kaijuri, LB Jamuna at Chaulhali, Jafforganj & Harirampur (15 km)	2,994.7	2,920.5	2,716.4	2,119.0	0.0	**2,119.0**
7081	Land Recovery/River Training Works	379.8	0.0				
7081	Adaptive Protection and Emergency	280.9	122.3	81.9	15.3	0.0	**15.3**
7091	CD and SD	12.1	0.0				
Capital Totals		***6,592.7***	***4,243.4***	***3,987.9***	***2,146.4***	***0.0***	***2,146.4***
Grand Total		**8,244.1**	**5,081.0**	**4,537.5**	**2,240.4**	**258.2**	**2,498.6**

Table A-5 DPP Categories: Key Physical and Financial Indicators

all Values in BDT Mil

Code	Categories	Total Cost		Total to Date		
		Budget (RDPP)	Revised Est.	Progress	Expenses	Reimburs
Revenue						
4826	Interest & Service Charge for Netherland Grant	199.2	199.2	71.7	70.0	0.0
4840	Capacity Development Program	76.9	76.8	35.1	33.8	24.2
4849	Resettlement Support Program	28.4	28.4	2.8	2.0	1.2
4874	ISPMC; Implementation Consultant Services	387.3	387.3	232.4	153.3	115.5
4874	ISPMC; River Stabilization and Land Recovery Study	461.2	461.2	322.9	182.6	137.5
4874	ISPMC; Feasibility of Tranch-2/3 Project	169.7	169.6	76.3	67.1	50.6
4874	Resettlement Implementation Support	17.5	16.2	6.5	4.7	4.1
4874	Livelihood Support Program	64.7	64.7	0.0	0.0	0.0
4874	Environmental Management Program	0.0	0.0	0.0	0.0	0.0
4874	Community-based Flood Management Program (DDM)	64.4	64.4	0.0	0.0	0.0
4874	Particiatory Regular O&M Training Support	0.0	0.0	0.0	0.0	0.0
4886	Land/River Survey and Data Processing	8.0	8.0	6.3	4.4	0.4
4886	Survey and Investigation Data Processing	55.8	55.9	22.3	18.1	10.1
4700	PMO Salaries and Allowances	83.7	83.7	44.3	0.0	0.0
4800	PMO Operational Expenses	30.9	30.9	16.4	13.0	8.5
4899	PMU DDM Oprational Expenses	5.1	5.1	0.5	0.5	0.0
		1,652.8	***1,651.4***	***837.6***	***549.7***	***352.1***
Capital						
6807	Transport Vehicles (Jeep 5, Motorcyle 10 and Speed Boat 1)	34.9	34.5	34.5	34.9	1.5
6819	Computer and Office Equipment BWDB	4.4	4.4	4.4	4.4	4.2
6819	Computer and Office Equipment DDM	0.5	0.5	0.0	0.0	0.0
6851	Survey Equipment	6.7	6.7	6.7	6.7	6.4
6901	Land Acquisition (136 ha)	2,083.1	1,650.0	1,155.0	1,143.6	0.0
7016	Construction of Inspection Bangalow at Manikganj	7.8	7.8	0.0	0.0	0.0
7041	Regulator (new 4 and repair 3) in JRB1	225.9	225.8	0.0	0.0	0.0
7081	Embankment (23 km) along RB Jamuna and LB Baria-Hurasagar, with Road (5 km)	995.2	995.4	0.0	0.0	0.0
7081	Protective Works at RB Jamuna at Kaijuri, LB Jamuna at Chaulhali, Jafforganj & Harirampur (15 km)	3,000.8	2,994.7	2,920.5	2,716.4	2,119.0
7081	Land Recovery/River Training Works	379.8	379.8	0.0	0.0	0.0
7081	Adaptive Protection and Emergency	280.9	280.9	122.3	81.9	15.3
7091	CD and SD	12.1	12.1	0.0	0.0	0.0
		7,032.2	***6,592.7***	***4,243.4***	***3,987.9***	***2,146.4***
Totals		**8,685.0**	**8,244.1**	**5,081.0**	**4,537.5**	**2,498.6**

Appendix-B Work Program Details

Table B-1 Design Progress Details

Description	Total	Design Data Collection			Prog (%)		Remarks
		Surv	Hydraul	Geotech	Desn	Dwg	
Component A: Civil Works							
Koitola SMO							
Cons/ReCon: Embank: 4.8 km: Embankment Reconst. (4.8 km): Baghabari - Verakhola; km 12.5-17.3		c	c	na	100	100	Desn. & Dwg. Complete
Cons/ReCon: Embank: 5.7 km: Embankment Reconst. (5.7 km): Baghabari - Verakhola; km 17.3-23		c	c	na	100	100	Desn. & Dwg. Complete
New: Embank: 5 km: Embankment (5 km): Kaijuri - Bhatpara; km 0-5		c	c	na	100	100	Desn. & Dwg. Complete
New: Embank: 3.5 km: Embankment (3.5 km): Bhatpata - Gala; km 5-8.5		c	c	na	100	100	Desn. & Dwg. Complete
New: Embank: 4 km: Embankment (4 km): Gala - Verakhola; km 8.5-12.5		c	c	c	100	100	Desn. & Dwg. Complete
New: Regulator: 1 No: Kaijuri Reg 2V 1.5x1.8m		c	c	c	100	100	Desn. & Dwg. Complete
New: Regulator: 1 No: Rohindakandi Reg 2V 1.5x1.8m		c	c	c	100	100	Desn. & Dwg. Complete
New: Regulator: 1 No: Verakhola Reg 2V 1.5x1.8m		c	c	c	100	100	Desn. & Dwg. Complete
New: Regulator: 1 No: Andhar Manik Reg 4V 1.5x1.8m		c	c	c	100	100	Desn. & Dwg. Complete
Koitola SMO Totals	***9***	***9***	***9***	***9***	***9***	***9***	
Manikganj SMO							
New: Infrastr: 5 BDTM: Construction of Inspection Bungalow		c	na	na	100	100	Dwgs Complete
Manikganj SMO Totals	***1***	***1***	***1***	***1***	***1***	***1***	
Component Totals	***10***	**10**	**10**	**10**	**10**	**10**	

Legend:
n - not commenced c - completed
p - partially completed na - not applicable/required

Table B-2 Tender Progress Details

Package Code	Description	Dates												
		ISPMC ToR	ADB ToR	EoI Notice	EoI Received	BWDB EoI Eval	ADB EoI Eval.	ADB Bid Doc.	Tender Notice	Tender Received	Eval. Comp.	ADB Concur.	Appr.Compl. Authority	Notif. Award
Goods; B: Materials														
G-04.1	Supply of Geobags; Chauhali-Harirampur-Koijuri-Benotia							13Sep16	27Sep16	14Nov16	19Dec16	20Jan17	31Jan17	12Feb17
Component Totals		***0***	***0***	***0***	***0***	***0***	***0***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Goods; C: Vehicles & Equipment														
G-09	2017 Supply of Office Equip; DDM;													
Component Totals		***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Services; D: Consulting Services														
S-03	Livelihood Development;	25May16												
S-04	Community Based Flood Risk Mngmt;	30Sep15	01Mar16	28Mar16	26Apr16									
Component Totals		***2***	***1***	***1***	***1***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Works; A: Civil Works														
W-01	Embankment, & 2 Reg.; km 0-5							04Oct16						
W-02	Embankment; km 5-8.5							04Oct16						
W-03	Embankment; 8.5-12.5							04Oct16						
W-04	Embankment & 1 Regulator; km 12.5-17.3							04Oct16						
W-05	Embankment & 1 Regulator; km 17.3-23							04Oct16						
W-15	Construction of Inspection Bungalow;													
Component Totals		***0***	***0***	***0***	***0***	***0***	***0***	***5***	***0***	***0***	***0***	***0***	***0***	***0***
Project Totals		**2**	**1**	**1**	**1**	**0**	**0**	**6**	**1**	**1**	**1**	**1**	**1**	**1**

Abbreviations: **ADB - Asian Development Bank** **BDT - Bangladesh Taka** **Comp. - Completion** **Concur. - Concurrence** **Doc. - Document** **Eval. - Evaluation** **EoI - Expression of Interest** **Notif. - Notification**

Table B-3 Implementation Progress Details, by Contract

Contract Code	Description	Contractor	Best Estimate of Final Cost (BDT Mil)	Value of Cumulate Progress during Qtr%		30-Jun-2017 Current Qtr		30-Sep-2017 Next Qtr		Remarks
					(%)	(BDT Mil)	(%)	(BDT Mil)		
Goods										
B: Materials										
G-01	Supply of Geobags: Chouhali, Sirajganj	BJ Geo-Textile	365.0	0	100	365.0	100	365.0		Implemenation Complete
G-02	Supply of Geobags: Zaforganj, Harirampur, Manikganj	BJ Geo-Textile	472.6	0	100	472.6	100	472.6		Implemenation Complete
G-03	Supply of Geobags: Harirampur, Manikganj	DFL-DCTL(JV)	315.1	0	100	315.1	100	315.1		Implemenation Complete
G-04.1	Supply of Geobags: Chauhali-Harirampur-Koijuri-Benotia	DIRD	174.7	50	70	122.3	80	139.7		Satisfactory Progress
Component Totals			***1,327.4***			***1,275.0***		***1,292.5***		
C: Vehicles & Equipment										
G-05	2016 Supply of Jeep:	Pacific Motors Ltd.	5.5	0	100	5.5	100	5.5		Implemenation Complete
G-06.1	2015 Supply of Jeeps:	Progoti Industries	20.8	0	100	20.8	100	20.8		Implemenation Complete
G-06.2	2016 Supply of Jeep:	Progoti Industries	6.9	0	100	6.9	100	6.9		Implemenation Complete
G-06.3	2016 Supply of Motorcycles:	Atlas Bangladesh Ltd.	1.3	0	100	1.3	100	1.3		Implemenation Complete
G-07.1	2015 Office Equipment: BWDB PMO	Logitech Computer Ltd.	2.2	0	100	2.2	100	2.2		Implemenation Complete
G-07.2	2016 Office Equipment: BWDB PMO	Source & Service	2.2	0	100	2.2	100	2.2		Implemenation Complete
G-08	2016 Supply of Survey Equipments:	Logitech Computers Ltd.	6.7	0	100	6.7	100	6.7		Implemenation Complete
G-09	2017 Supply of Office Equip; DDM:		0.5	0	0	0.0	0	0.0		Contract Not Yet Started
Component Totals			***46.1***			***45.6***		***45.6***		
Goods Totals			***1,373.5***			***1,320.6***		***1,338.1***		
Services										
D: Consulting Services										
S-01	ISPMC; Tranche 1:	NHC (JV) Mott MacDonald	1,018.2	10	62	631.6	73	741.9		Satisfactory Progress
S-02	Resettlement Implementation Support:	VRDS-HCL-JV	16.2	4	40	6.5	50	8.1		Satisfactory Progress
S-03	Livelihood Development:		64.7	0	0	0.0	0	0.0		Contract Not Yet Started
S-04	Community Based Flood Risk Mngmt:		64.4	0	0	0.0	0	0.0		EoI Received
S-06.1	2015 Erosion & Morphological Chg:	CEGIS	4.6	0	100	4.6	100	4.6		Implemenation Complete
S-06.2	2016 Erosion Prediction:	CEGIS	25.3	20	70	17.7	90	22.7		Satisfactory Progress
Component Totals			***1,193.4***			***660.3***		***777.3***		
Services Totals			***1,193.4***			***660.3***		***777.3***		
Works										
A: Civil Works										
W-01	Embankment, & 2 Reg.: km 0-5		293.6	0	0	0.0	0	0.0		Retendered
W-02	Embankment: km 5-8.5		133.4	0	0	0.0	0	0.0		Retendered
W-03	Embankment: 8.5-12.5		139.4	0	0	0.0	0	0.0		Retendered
W-04	Embankment & 1 Regulator: km 12.5-17.3		335.9	0	0	0.0	0	0.0		Retendered
W-05	Embankment & 1 Regulator: km 17.3-23		318.8	0	0	0.0	0	0.0		Retendered
W-06	Revetment: Jamuna at Chauhali, R1; km 0-2.5	I-J (JV)	386.9	7	97	375.3	100	386.9		Satisfactory Progress
W-07	Revetment: Jamuna at Chauhali, R2; km 2.5-7.0	I-J (JV)	445.2	7	97	431.8	100	445.2		Satisfactory Progress
W-08	Revetment: Jamuna at Zaffarganj, km 6.1-8.1	WEL-NZK-PTSL (JV)	492.8	40	90	443.5	100	492.8		Satisfactory Progress
W-09	Revetment: Padma at Harirampur, R1; km 6.7-10.2	M.M.Builders & Engineers Lt	268.9	0	100	268.9	100	268.9		Construction Complete
W-10	Revetment: Padma at Harirampur, R2; km 3.2-6.7	M.M.Builders & Engineers Lt	248.3	0	100	248.3	100	248.3		Construction Complete
W-15	Construction of Inspection Bungalow:		7.8	0	0	0.0	0	0.0		Dwgs Complete
Component Totals			***3,071.0***			***1,767.8***		***1,842.0***		
Works Totals			***3,071.0***			***1,767.8***		***1,842.0***		
ProjectTotals			**5,637.9**			**3,748.7**		**3,957.4**		

Table B-4 Project Program, by Contract

Code	Description	Cost (BDT Mil)
Goods		
Component B1: Materials Geotextile, Civil Works		
G-01	Geobags 1.25x1.00m; Chouhali, Sirajganj	364.97
G-02	Geobags 1.25x1.00m; Zaforganj & Harirampur, Manikganj	472.64
G-03	Geobags 1.25x1.00m; Harirampur, Manikganj	315.11
		1,152.72
Component B2: Materials Geotextile, Emerg		
G-04.1	Supply of Geobags; Chauhali & Harirampur	174.67
G-04.2	Supply of Geobags;	25.30
		199.97
Component C1: Vehicles & Equipment Vehicles/Transport		
G-05	2016 Supply of Jeep;	5.49
G-06.1	2015 Supply of Jeeps;	20.78
G-06.2	2016 Supply of Jeep;	6.93
G-06.3	2016 Supply of Motorcycles;	1.31
		34.51
Component C2: Vehicles & Equipment Office Equipment		
G-07.1	Supply of Office Equip.; BWDB PMO	2.20
G-07.2	2016 Office Equipment; BWDB PMO	2.18
		4.37
Component C3: Vehicles & Equipment Survey Equipment		
G-08	Supply of Survey Equipments;	6.75
Component C4: Vehicles & Equipment DDM Office Eqpt		
G-09	Supply of Computers & Photocopiers;	0.51
Goods Total		**1,398.83**
Services		
Component D1: Consulting Services ISPM; Consultant Serv.		
S-01	Implementation Consultant Services; Feasibility Study Tranche-2; River Stabilization & Land Recovery;	1,018.19
Component D2: Consulting Services INGO BWDB		
S-02	Resettlement Plan;	16.20
S-03	Livelihood Development;	64.73
		80.93
Component D3: Consulting Services INGO DDM		
S-04	Cb Flood Risk Mngmt;	64.40
Component D4: Consulting Services Survey & Investigation		
S-05	Multi-beam Echo Sounding & River Sur;	26.00
S-06.1	2015 Erosion & Morphological Chg; Jamuna, Ganges, Padma R	4.60
S-06.2	2016 Erosion Prediction;	25.25
		55.85
Component E3: Capacity Development MIS Development		
S-07	MIS Development, Support 1;	12.88
Services Total		**1,232.24**
Works		
Component A1: Civil Works Embankment Works		
W-01	Embankment (5 km); Kaijuri - Bhatpara; km 0-5 Kaijuri Reg 2V 1.5x1.8m; Rohindakandi Reg 2V 1.5x1.8m;	293.63
W-02	Embankment (3.5 km); Bhatpata - Gala; km 5-8.5	133.37
W-03	Embankment (4 km); Gala - Verakhola; km 8.5-12.5	139.42
W-04	Embankment Reconst. (4.8 km); Baghabari - Verakhola; km 12.5-17.3 Verakhola Reg 2V 1.5x1.8m;	335.93
W-05	Embankment Reconst. (5.7 km); Baghabari - Verakhola; km 17.3-23 Andhar Manik Reg 4V 1.5x1.8m;	318.81
W-15	Construction of Inspection Bungalow;	7.80
		1,228.96
Component A2: Civil Works Riverbank Prot Works		

Table B-4 Project Program, by Contract

Code	Description	Cost (BDT Mil)
Works		
Component A2: Civil Works Riverbank Prot Works		
W-06	Revetment (2 km); Chauhali; km 0- 2.5	386.94
W-07	Revetment (4.5 km); Chauhali; km 2.5-7.0	445.15
W-08	Revetment (2 km); Zaffarganj; km 6.1-8.1	492.80
W-09	Revetment (3.5 km); Harirampur; km 0-3.5	268.85
W-10	Revetment (3.5 km); Harirampur; km 3.5-7	248.28
		1,842.02
Component A3: Civil Works Emerg & Adaptation		
W-11	Emergency/Adaptive 1; Riverbank Protection	44.75
W-12	Koijhuri-Benotia Revetment; Riverbank Protection	18.36
W-13	Emergency/Adaptive 3; Riverbank Protection	17.82
		80.93
Component A4: Civil Works Pilot Land Recovery		
W-14	River Training Pilot Work; & Land Recovery	379.80
Works Total		**3,531.72**
eXtra		
Component E1: Capacity Development BWDB Training & Study		
X-05	BWDB Training and Study Tours;	63.90
Component F1: Land Acqn & Resettle Land Compensation		
X-07	Land Compensation;	1,650.00
Component F2: Land Acqn & Resettle Resettle Benefits		
X-08	Resettlement Benefits;	28.36
Component G1: Program Management Staff Salaries BWDB		
X-02	BWDB Staff Salaries;	83.67
Component G2: Program Management Office Opns BWDB		
X-03	BWDB Office Operations;	30.94
Component G3: Program Management Office Opns DDM		
X-04	DDM Office Operations;	5.10
Component G4: Program Management BWDB River Surveys		
X-10.1	River Survey Work; Padma LB & Jamuna LB	0.15
X-10.2	Survey Work for Land Acquisition; Hat-Pachi to Dombaria	0.20
X-10.3	Land/River Survey Work; Jamuna at Chouhali 7km	0.15
X-10.4	Bathymetric River Survey; Dhaka, Pabna and Mymenshingh	1.99
X-10.5	2018 Bathymetric River Survey; Manikganj	5.51
		8.00
Component X1: Misc. Costs Misc. Costs		
X-01	ADB Interest & Service Charge;	199.20
X-09	CD and SD;	12.10
		211.30
eXtra Total		**2,081.26**
Project Total		***8,244.06***

Table B-5 BWDB PMO Expenditure Summary, by Contract

all Values in BDT

Code	Description	ADB	GON	GOB	Total
Goods					
B1 Geotextile, Civil Works					
G-01	Supply of Geobags; Chouhali, Sirajganj	316,703,598	0	0	316,703,598
G-02	Supply of Geobags; Zaforganj, Harirampur, Manikganj	406,878,635	0	0	406,878,635
G-03	Supply of Geobags; Harirampur, Manikganj	313,997,430	0	0	313,997,430
Component Total		***1,037,579,663***	***0***	***0***	***1,037,579,663***
B2 Geotextile, Emerg					
G-04.1	Supply of Geobags; Chauhali-Harirampur-Koijuri-Benotia	81,860,650	0	0	81,860,650
Component Total		***81,860,650***	***0***	***0***	***81,860,650***
C1 Vehicles/Transport					
G-05	2016 Supply of Jeep;	1,940,400	0	4,989,600	6,930,000
G-06.1	2015 Supply of Jeeps;	5,940,900	0	15,276,600	21,217,500
G-06.2	2016 Supply of Jeep;	1,537,200	0	3,952,800	5,490,000
G-06.3	2016 Supply of Motorcycles;	366,940	0	943,560	1,310,500
Component Total		***9,785,440***	***0***	***25,162,560***	***34,948,000***
C2 Office Equipment					
G-07.1	2015 Office Equipment; BWDB PMO	2,087,749	0	109,882	2,197,630
G-07.2	2016 Office Equipment; BWDB PMO	2,066,333	0	108,754	2,175,087
Component Total		***4,154,081***	***0***	***218,636***	***4,372,717***
C3 Survey Equipment					
G-08	2016 Supply of Survey Equipments;	6,409,650	0	337,350	6,747,000
Component Total		***6,409,650***	***0***	***337,350***	***6,747,000***
Goods Total		***1,139,789,484***	***0***	***25,718,546***	***1,165,508,030***
Services					
D1 ISPM; Consultant Serv.					
S-01	ISPMC; Tranche 1;	52,396,048	298,254,426	52,396,048	403,046,522
Component Total		***52,396,048***	***298,254,426***	***52,396,048***	***403,046,522***
D2 INGO BWDB					
S-02	Resettlement Implementation Support;	4,131,467	0	617,346	4,748,813
Component Total		***4,131,467***	***0***	***617,346***	***4,748,813***
D4 Survey & Investigation					
S-06.1	2015 Erosion & Morphological Chg;	4,002,000	0	598,000	4,600,000
S-06.2	2016 Erosion Prediction;	11,749,843	0	1,755,724	13,505,567
Component Total		***15,751,843***	***0***	***2,353,724***	***18,105,567***
Services Total		***72,279,358***	***298,254,426***	***55,367,117***	***425,900,902***
Works					
A2 Riverbank Prot Works					
W-06	Revetment; Jamuna at Chauhali, R1; km 0-2.5	313,030,085	0	30,959,019	343,989,104
W-07	Revetment; Jamuna at Chauhali, R2; km 2.5-7.0	361,565,560	0	35,759,231	397,324,791
W-08	Revetment; Jamuna at Zaffarganj, km 6.1-8.1	385,248,148	0	38,101,465	423,349,613
W-09	Revetment; Padma at Harirampur, R1; km 6.7-10.2	244,469,460	0	24,178,298	268,647,758
W-10	Revetment; Padma at Harirampur, R2; km 3.2-6.7	223,389,944	0	22,093,511	245,483,455
Component Total		***1,527,703,196***	***0***	***151,091,525***	***1,678,794,721***
Works Total		***1,527,703,196***	***0***	***151,091,525***	***1,678,794,721***
eXtra					
E1 BWDB Training & Study					
X-05	BWDB Training and Study Tours;	31,793,771	0	2,029,390	33,823,161
Component Total		***31,793,771***	***0***	***2,029,390***	***33,823,161***

Table B-5 BWDB PMO Expenditure Summary, by Contract

all Values in BDT

Code	Description	ADB	GON	GOB	Total
F1 Land Compensation					
X-07	Land Compensation;	0	0	1,143,588,000	1,143,588,000
Component Total		***0***	***0***	***1,143,588,000***	***1,143,588,000***
F2 Resettle Benefits					
X-08	Resettlement Benefits;	2,036,260	0	0	2,036,260
Component Total		***2,036,260***	***0***	***0***	***2,036,260***
G2 Office Opns BWDB					
X-03	BWDB Office Operations;	11,445,018	0	1,560,684	13,005,702
Component Total		***11,445,018***	***0***	***1,560,684***	***13,005,702***
G3 Office Opns DDM					
X-04	DDM Office Operations;	396,506	0	54,069	450,575
Component Total		***396,506***	***0***	***54,069***	***450,575***
G4 BWDB River Surveys					
X-10.1	River Survey Work; left bank Padma & Jamuna	122,778	0	16,742	139,520
X-10.2	Survey Work for Land Acquisition; Hat-Pachi to Dombaria	170,702	0	23,278	193,980
X-10.3	Land/River Survey Work; Jamuna at Chouhali 7km	128,040	0	17,460	145,500
X-10.4	2017 Bathymetric River Survey; Dhaka, Pabna and Mymenshingh	1,753,294	0	239,086	1,992,380
X-10.5	2018 Bathymetric River Survey; Manikganj	1,731,756	0	236,149	1,967,905
Component Total		***3,906,571***	***0***	***532,714***	***4,439,285***
X1 Misc. Costs					
X-01	ADB Interest & Service Charge;	70,000,000	0	0	70,000,000
Component Total		***70,000,000***	***0***	***0***	***70,000,000***
eXtra Total		***119,578,126***	***0***	***1,147,764,857***	***1,267,342,983***
Project Total		**2,859,350,165**	**298,254,426**	**1,379,942,045**	**4,537,546,636**

The donor values are calculated using Total Expenditure and percent distribution by Financial Component.

Table B-6 Reimbursement Summary, by Contract

Code	Description	Total Bill Amount (BDT	Reimbursed Amount (BDT		
			ADB	GON	Total
Goods					
B1	***Geotextile, Civil Works***				
G-01	Supply of Geobags; Chouhali, Sirajganj	314,572,776	314,572,776	0	314,572,776
G-02	Supply of Geobags; Zaforganj, Harirampur, Manikganj	407,379,210	407,379,210	0	407,379,210
G-03	Supply of Geobags; Harirampur, Manikganj	267,640,452	267,640,452	0	267,640,452
		989,592,438	***989,592,438***	***0***	***989,592,438***
B2	***Geotextile, Emerg***				
G-04.1	Supply of Geobags; Chauhali-Harirampur-Koijuri-Benotia	15,301,650	15,301,650	0	15,301,650
C1	***Vehicles/Transport***				
G-05	2016 Supply of Jeep;	5,490,000	1,537,200	0	1,537,200
C2	***Office Equipment***				
G-07.1	2015 Office Equipment; BWDB PMO	2,197,630	2,087,749	0	2,087,749
G-07.2	2016 Office Equipment; BWDB PMO	2,175,087	2,066,333	0	2,066,333
		4,372,717	***4,154,081***	***0***	***4,154,081***
C3	***Survey Equipment***				
G-08	2016 Supply of Survey Equipments;	6,747,000	6,409,650	0	6,409,650
Goods Total		***1,021,503,805***	***1,016,995,019***	***0***	***1,016,995,019***
Services					
D1	***ISPM; Consultant Serv.***				
S-01	ISPMC; Tranche 1;	377,798,859	45,354,054	258,169,228	303,523,281
D2	***INGO BWDB***				
S-02	Resettlement Implementation Support;	4,748,813	4,131,467	0	4,131,467
D4	***Survey & Investigation***				
S-06.1	2015 Erosion & Morphological Chg;	4,600,000	4,002,000	0	4,002,000
S-06.2	2016 Erosion Prediction;	7,000,000	6,090,000	0	6,090,000
		11,600,000	***10,092,000***	***0***	***10,092,000***
Services Total		***394,147,672***	***59,577,521***	***258,169,228***	***317,746,749***
Works					
A2	***Riverbank Prot Works***				
W-06	Revetment; Jamuna at Chauhali, R1; km 0-2.5	217,117,316	193,710,770	0	193,710,770
W-07	Revetment; Jamuna at Chauhali, R2; km 2.5-7.0	344,230,501	302,787,707	0	302,787,707
W-08	Revetment; Jamuna at Zaffarganj, km 6.1-8.1	195,799,810	178,177,828	0	178,177,828
W-09	Revetment; Padma at Harirampur, R1; km 6.7-10.2	268,647,758	244,469,460	0	244,469,460
W-10	Revetment; Padma at Harirampur, R2; km 3.2-6.7	245,483,455	210,293,789	0	210,293,789
		1,271,278,841	***1,129,439,554***	***0***	***1,129,439,554***
Works Total		***1,271,278,841***	***1,129,439,554***	***0***	***1,129,439,554***
eXtra					
E1	***BWDB Training & Study***				
X-05	BWDB Training and Study Tours;	25,782,556	24,235,602	0	24,235,602
F2	***Resettle Benefits***				
X-08	Resettlement Benefits;	1,209,410	1,209,410	0	1,209,410
G2	***Office Opns BWDB***				
X-03	BWDB Office Operations;	9,686,643	8,524,245	0	8,524,245

Table B-6 Reimbursement Summary, by Contract

Code	Description	Total Bill Amount (BDT	Reimbursed Amount (BDT		
			ADB	GON	Total
G4	***BWDB River Surveys***				
X-10.1	River Survey Work; left bank Padma & Jamuna	141,500	124,520	0	124,520
X-10.2	Survey Work for Land Acquisition; Hat-Pachi to Dombaria	200,000	176,000	0	176,000
X-10.3	Land/River Survey Work; Jamuna at Chouhali 7km	149,860	131,877	0	131,877
		491,360	***432,397***	***0***	***432,397***
eXtra Total		***37,169,968***	***34,401,655***	***0***	***34,401,655***
Project Total		**2,724,100,286**	**2,240,413,748**	**258,169,228**	**2,498,582,976**

Table B-7 Reimbursement Summary, by Application

Acct. Type	Applic. No.	Date	Page	Cat	Rate of US	Total Bill Amount (BDT)	Total Bill Amount (US$)	Reimburs	ADB Reimbursed Amount (BDT)	ADB Reimbursed Amount (US$)	Grant Applic. No.	Reimburs	GoN Reimbursed Amount (BDT)	GoN Reimbursed Amount (US$)	Total Reimbursed Amount (BDT)	Total Reimbursed Amount (US$)
L/C	**BW001**	**30-Jun-16**	**01**	**2**	77.80	721,064,886	9,268,186	100	721,064,886	9,268,186		0	0	0	721,064,886	9,268,186
Imprest	**BW006**	**14-Sep-15**	**01**	**7A**	77.80	596,191	7,663	88	524,648	6,744		0	0	0	524,648	6,744
			02	**6B**	77.80	4,600,000	59,126	87	4,002,000	51,440		0	0	0	4,002,000	51,440
			03	**3B**	77.80	2,197,630	28,247	95	2,087,749	26,835		0	0	0	2,087,749	26,835
			04	**7A**	77.80	457,804	5,884	88	402,868	5,178		0	0	0	402,868	5,178
			05	**7A**	77.80	200,000	2,570	88	176,000	2,262		0	0	0	176,000	2,262
			06	**7A**	77.80	149,860	1,926	88	131,877	1,695		0	0	0	131,877	1,695
						8,201,485	***105,416***		***7,325,141***	***94,153***			***0***	***0***	***7,325,141***	***94,153***
Imprest	**BW008**	**03-Dec-15**	**01**	**1**	78.74	77,441,455	983,509	91	70,471,724	894,993		0	0	0	70,471,724	894,993
			02	**2**	78.74	23,896,480	303,486	100	23,896,480	303,486		0	0	0	23,896,480	303,486
						101,337,935	***1,286,995***		***94,368,204***	***1,198,479***			***0***	***0***	***94,368,204***	***1,198,479***
Dir.Pay.	**BW009**	**23-Feb-16**	**01**	**6A**	77.57	18,202,930	234,649	13	2,366,381	30,504	**BW010**	74	13,470,168	173,641	15,836,549	204,145
Imprest	**BW011**	**07-Mar-16**	**01**	**1**	78.74	154,166,642	1,957,920	91	125,963,608	1,599,741		0	0	0	125,963,608	1,599,741
			02	**2**	78.74	887,099	11,266	100	887,099	11,266		0	0	0	887,099	11,266
			03	**6A**	78.40	4,597,309	58,639	13	597,650	7,623	**ED002**	74	3,402,009	43,393	3,999,659	51,016
			04	**7A**	78.74	800,964	10,172	88	704,848	8,952		0	0	0	704,848	8,952
						160,452,013	***2,037,997***		***128,153,205***	***1,627,582***			***3,402,009***	***43,393***	***131,555,214***	***1,670,975***
Dir.Pay.	**BW012**	**20-Mar-16**	**01**	**6A**	77.57	30,049,770	387,364	13	3,512,027	45,273	**ED003**	74	19,991,540	257,706	23,503,567	302,979
Imprest	**BW013**	**05-May-16**	**01**	**1**	78.60	242,232,508	3,083,883	91	207,335,427	2,639,716		0	0	0	207,335,427	2,639,716
			02	**2**	78.40	97,265,910	1,240,637	100	97,265,910	1,240,637		0	0	0	97,265,910	1,240,637
			03	**5**	78.60	624,855	7,950	94	587,364	7,473		0	0	0	587,364	7,473
			04	**7A**	78.74	173,409	2,202	88	152,600	1,938		0	0	0	152,600	1,938
						340,296,682	***4,334,672***		***305,341,300***	***3,889,763***			***0***	***0***	***305,341,300***	***3,889,763***
Dir.Pay.	**BW014**	**23-Jun-16**	**01**	**5**	78.40	7,966,561	101,614	94	7,488,568	95,517		0	0	0	7,488,568	95,517
Dir.Pay.	**BW015**	**29-Jun-16**	**01**	**6A**	77.57	37,052,991	477,641	13	4,336,393	55,899	**ED004**	74	24,684,081	318,196	29,020,474	374,096
Dir.Pay.	**BW016**	**29-Jun-16**	**01**	**6A**	77.57	30,310,811	390,729	13	3,552,983	45,801	**ED005**	74	20,224,672	260,711	23,777,655	306,512
Imprest	**BW017**	**29-Sep-16**	**01**	**1**	78.40	208,446,710	2,658,759	91	189,686,506	2,419,471		0	0	0	189,686,506	2,419,471
			02	**2**	78.40	56,809,500	724,611	100	56,809,500	724,611		0	0	0	56,809,500	724,611

Table B-7 Reimbursement Summary, by Application

Acct. Type	Applic. No.	Date	Page	Cat	Rate of US	Total Bill Amount (BDT)	Total Bill Amount (US$)	Reimburs	ADB Reimbursed Amount (BDT)	ADB Reimbursed Amount (US$)	Grant Applic. No.	Reimburs	GoN Reimbursed Amount (BDT)	GoN Reimbursed Amount (US$)	Total Reimbursed Amount (BDT)	Total Reimbursed Amount (US$)
Imprest	**BW017**	**29-Sep-16**	**03**	**3A**	78.40	5,490,000	70,026	28	1,537,200	19,607		0	0	0	1,537,200	19,607
			04	**3B**	78.40	8,922,087	113,802	95	8,475,983	108,112		0	0	0	8,475,983	108,112
			05	**5**	78.40	6,096,985	77,768	94	5,731,166	73,102		0	0	0	5,731,166	73,102
			06	**6A**	78.40	36,141,795	460,992	13	4,698,433	59,929	**ED006**	74	26,744,928	341,134	31,443,362	401,063
			08	**6B**	78.40	8,620,000	109,949	87	7,499,400	95,656		0	0	0	7,499,400	95,656
			09	**7A**	78.40	1,584,307	20,208	88	1,394,190	17,783		0	0	0	1,394,190	17,783
			10	**7A**	78.40	1,585,375	20,222	88	1,395,130	17,795		0	0	0	1,395,130	17,795
			11	**7A**	78.40	1,595,731	20,354	88	1,404,243	17,911		0	0	0	1,404,243	17,911
			12	**7A**	78.40	304,456	3,883	88	267,922	3,417		0	0	0	267,922	3,417
			13	**7A**	78.40	884,047	11,276	88	777,961	9,923		0	0	0	777,961	9,923
						336,480,994	***4,291,849***		***279,677,635***	***3,567,317***			***26,744,928***	***341,134***	***306,422,563***	***3,908,451***
Imprest	**BW018**	**08-Dec-16**	**01**	**6A**	78.40	5,385,000	68,686	13	804,655	10,263	**ED007**	74	4,580,345	58,423	5,385,000	68,686
Dir.Pay.	**BW019**	**09-Jan-17**	**01**	**5**	78.95	1,599,534	20,260	94	1,503,562	19,044		0	0	0	1,503,562	19,044
Imprest	**BW020**	**02-May-17**	**01**	**1**	78.84	214,208,421	2,717,002	91	194,929,663	2,472,472		0	0	0	194,929,663	2,472,472
			02	**1**	78.84	248,912,255	3,157,182	91	226,510,152	2,873,036		0	0	0	226,510,152	2,873,036
			03	**2**	78.84	89,668,562	1,137,349	100	89,668,562	1,137,349		0	0	0	89,668,562	1,137,349
			04	**6A**	78.84	33,754,290	428,139	13	4,388,058	55,658	**ED008**	74	24,978,174	316,823	29,366,232	372,481
			05	**6A**	78.84	3,033,444	38,476	13	453,273	5,749		74	2,580,170	32,727	3,033,444	38,476
			06	**7A**	78.84	1,542,815	19,569	88	1,357,677	17,221		0	0	0	1,357,677	17,221
						591,119,787	***7,497,717***		***517,307,385***	***6,561,484***			***27,558,345***	***349,550***	***544,865,730***	***6,911,034***
Dir.Pay.	**BW021**	**26-Feb-17**	**01**	**6A**	77.57	43,623,862	562,381	13	4,754,404	61,292	**ED009**	74	27,063,531	348,892	31,817,935	410,184
Dir.Pay.	**BW022**	**06-Apr-17**	**01**	**6A**	77.58	10,914,447	140,695	13	1,248,698	16,097	**ED010**	74	7,107,971	91,627	8,356,669	107,724
			02	**6A**	77.58	31,422,484	405,059	13	3,594,977	46,342		74	20,463,714	263,793	24,058,691	310,135
			03	**6A**	77.58	27,536,950	354,972	13	3,150,441	40,612		74	17,933,279	231,173	21,083,720	271,785
						69,873,881	***900,727***		***7,994,115***	***103,050***			***45,504,965***	***586,593***	***53,499,080***	***689,643***
Imprest	**BW023**	**22-Jun-17**	**01**	**1**	78.84	125,870,850	1,596,535	91	114,542,474	1,452,847		0	0	0	114,542,474	1,452,847
			02	**2**	78.84	15,301,650	194,085	100	15,301,650	194,085		0	0	0	15,301,650	194,085
			03	**4**	78.84	1,209,410	15,340	100	1,209,410	15,340		0	0	0	1,209,410	15,340
			04	**5**	78.84	1,518,029	19,255	94	1,426,947	18,099		0	0	0	1,426,947	18,099

Table B-7 Reimbursement Summary, by Application

Acct. Type	Applic. No.	Date	Page	Cat	Rate of US	Total Bill Amount (BDT)	Total Bill Amount (US$)	Reimburs	ADB Reimbursed Amount (BDT)	ADB Reimbursed Amount (US$)	Grant Applic. No.	Reimburs	GoN Reimbursed Amount (BDT)	GoN Reimbursed Amount (US$)	Total Reimbursed Amount (BDT)	Total Reimbursed Amount (US$)
Imprest	**BW023**	**22-Jun-17**	**05**	**6A**	78.84	16,135,219	204,658	13	2,216,757	28,117	**ED011**	74	12,618,463	160,052	14,835,220	188,169
			06	**6B**	78.84	3,128,813	39,686	87	2,722,067	34,526		0	0	0	2,722,067	34,526
			07	**7A**	78.84	303,043	3,844	88	266,678	3,383		0	0	0	266,678	3,383
						163,467,014	***2,073,402***		***137,685,983***	***1,746,398***			***12,618,463***	***160,052***	***150,304,446***	***1,906,449***
Dir.Pay.	**BW024**	**06-Jun-17**	**01**	**5**	80.63	7,976,591	98,928	94	7,497,996	92,993		0	0	0	7,497,996	92,993
Dir.Pay.	**BW025**	**07-Jun-17**	**01**	**6A**	77.58	29,445,241	379,571	13	3,368,766	43,426	**ED012**	74	19,176,051	247,194	22,544,817	290,620
Dir.Pay.	**BW026**	**31-Mar-17**	**01**	**6A**	77.58	20,192,316	260,294	13	2,310,158	29,780	**ED013**	74	13,150,130	169,515	15,460,287	199,295
Project Totals						**2,724,100,286**	**34,779,080**		**2,240,413,748**	**28,586,204**			**258,169,228**	**3,314,999**	**2,498,582,976**	**31,901,203**

Table B-8 ADB & GON Disbursement Details

ADB Disbursements

ADB Loan Account

Appl. No	Date	US$	Rate	BDT
WL001	09-Dec-2014	3,682,433.00	77.85	286,677,409
Wl007	17-Dec-2015	11,069,711.00	78.70	871,186,256
BW008	20-Dec-2015	1,198,478.59	78.70	94,320,265
BW013	30-Jun-2016	3,889,762.94	78.40	304,957,414
BW011	02-Oct-2016	1,627,548.73	78.40	127,599,820
BW017	27-Nov-2016	3,567,316.77	78.65	280,569,464
BW018	04-May-2017	10,263.46	78.40	804,655
BW020	02-May-2017	6,561,484.21	78.84	517,307,415
BW023	22-Jun-2017	1,746,397.55	78.84	137,685,983
		33,353,396.25		**2,621,108,682**

Grant Imprest Account

Appl. No	Date	US$	Rate	BDT
WG002	09-Dec-2014	1,189,354.00	77.85	92,591,209
WG007	17-Dec-2015	20,651.00	78.70	1,625,234
WG008	04-Oct-2016	319,995.00	78.40	25,087,608
ED002	24-Nov-2016	43,392.97	78.63	3,411,989
ED006	24-Nov-2016	341,134.29	78.63	26,823,389
ED007	04-May-2017	58,422.77	78.40	4,580,345
ED008	02-May-2017	349,549.87	78.84	27,558,512
ED011	22-Jun-2017	160,051.52	78.84	12,618,462
		2,482,551.42		**194,296,748**

Reimbursement

Dir.Pay Applic	Date	Category	ADB & GoN	
			US$	(BDT)
BW009/BW010	23-Feb-2016	6A	204,145	15,836,549
BW012/ED003	20-Mar-2016	6A	302,979	23,503,567
BW014	23-Jun-2016	5	95,517	7,488,568
BW015/ED004	29-Jun-2016	6A	374,096	29,020,474
BW016/ED005	29-Jun-2016	6A	306,512	23,777,655
BW001 (LC)	30-Jun-2016	2	9,255,825	720,177,803
BW019	20-Jan-2017	5	19,044	1,503,562
BW021/ED009	10-Mar-2017	6A	410,184	31,819,987
BW022/ED010	06-Apr-2017	6A	689,589	53,499,087
BW024	06-Jun-2017	5	92,993	7,497,996
BW025/ED012	07-Jun-2017	6A	290,620	22,544,814
BW026/ED013	22-Jun-2017	6A	199,295	15,460,289
Totals			**12,240,798**	**952,130,351**

Total Disbursement

Currency	ADB & GON
BDT Mil	3,768
US$ Mil	48.08

Total Disbursement is the sum of the ADB Loan and Grant Imprest Account deposits, plus the total ADB & GoN Reimbursment amount.

Appendix-C Utilization of Person-months

Table C-1 Utilization of Consultant Person-Months

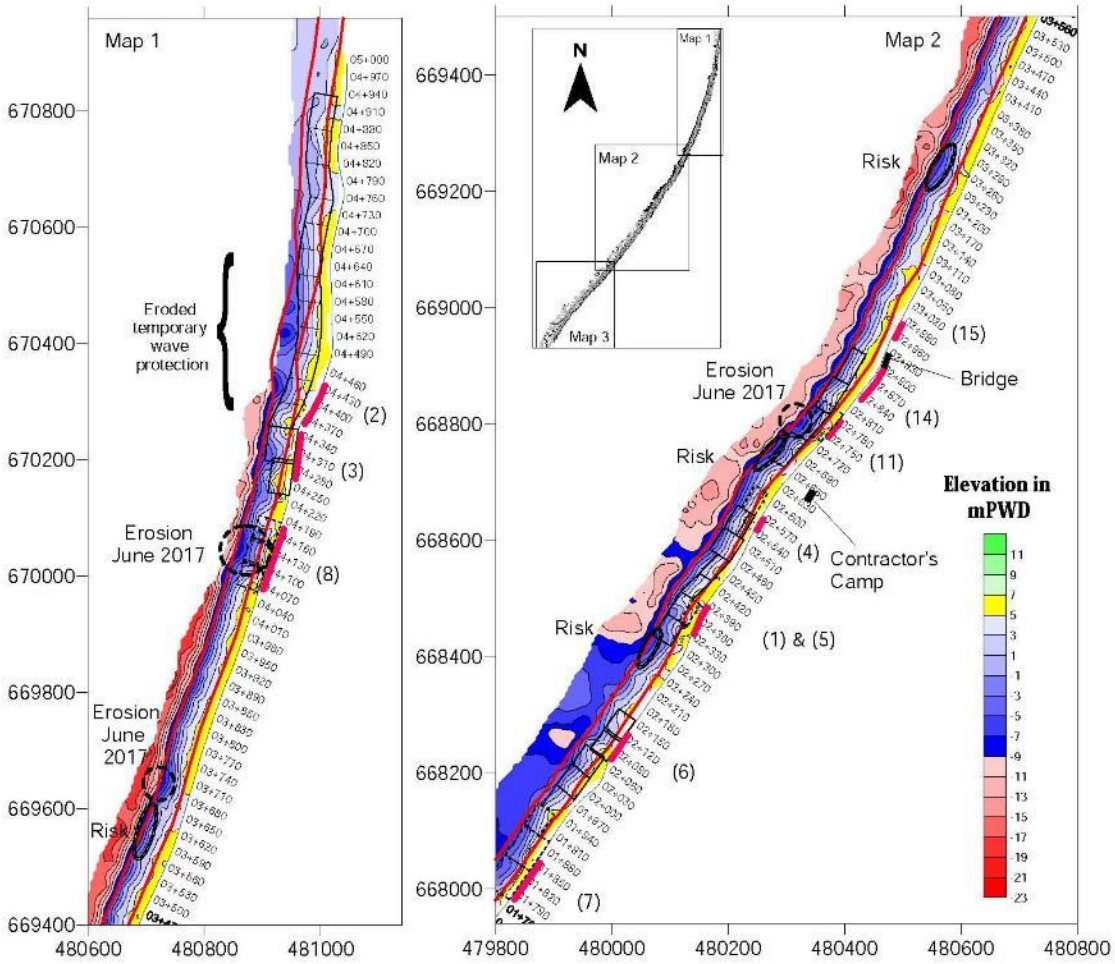
No.	Position	Firm	Name	Person-Months		
				Contract	Used	Balance
	MAIN TEAM - INTERNATIONAL					
I-1	Team Leader / River Mangement Specialist	NHC	Knut Oberhagemann	35.0	15.75	19.25
I-2	Institutional Development Specialist	EMM	Robert A. van de Putte	5.0	1.47	3.53
I-3	Morphologist	DELTARES	EriK Mosselman	5.0	1.75	3.25
I-4	River Engineer	NHC	Bruce Walsh	10.0	1.93	8.07
I-5	Construction / Quality Control Engineer	EMM	R. Mahendrarajah	24.0	0.00	24.00
I-6	Flood Disaster Risk Management Specialist	NHC	Dave Burkholder	12.0	6.78	5.22
I-7	Social Development / Resettlement Specialist	EMM	Jean Louis Leterme	8.0	7.80	0.20
I-8	Economist	NHC	John D. M. Roe	3.0	0.00	3.00
I-9	Financial Management Specialist	EMM	J. Spurr	1.5	0.00	1.50
I-10	Hydrologist	NHC	Derek Stuart	3.0	2.22	0.78
I-11	Environmental Specialist	EMM	Wandert Benthem	7.0	2.25	4.75
I-12	Information and Data Management Specialist	NHC	Dave Burkholder	4.0	4.01	-0.01
I-13	Int'l Construction Advisor-Engineer	NHC	Graeme Vass	3.0	3.00	0.00
I-14	Junior Engineer	NHC	Jesper Mathiesen	4.0	6.62	-2.62
I-15	Numerical Modeller	NHC	Angela Thompson	5.0	8.01	-3.01
I-16	River Engineer	NHC	Brad Hall		0.84	-0.84
			Totals	**129.50**	**56.72**	**67.06**
	MAIN TEAM - NATIONAL					
N-1	DTL / Flood & Erosion Risk Management Spec.	EMM	Sharif Al Kamal	41.5	20.23	21.27
N-2	Institutional / Capacity Development Specialist	RPMC	Dr. M. A. Qassem	10.0	9.80	0.20
N-3	River Engineer (Morphologist)	CEGIS	Dr. Maminul Haque Sarker	8.0	7.02	0.98
N-4	Community-based Flood Risk Mngt. Spec.	RPMC	Quazi Towfique Islam	36.0	19.30	16.70
N-5	Resettlement Specialist	EMM	Shireen Akhter	15.0	1.86	13.14
N-6	Project Economist	RPMC	Amiul Islam	7.0	7.00	0.00
N-7	Procurement Specialist	RPMC	A. Abdullah Chowdhury / **Md Abdullah Sadeque**	10.0	0.50	9.50
N-8	Construction Engineer	RPMC	Mirza Harunar Rashid	32.0	15.24	16.76
N-9	Financial Management Specialist	EMM	Md. Habibur Rahman/**Ektedar Rahman**	12.0	2.95	9.05
N-10-1	River Engineer Flood Management Infr.- 1	RPMC	Mukhles uz zaman	12.5	12.49	0.01
N-10-2	River Engineer Flood Management Infr. -2	RPMC	Md. Motiur Rahman	12.5	11.10	1.40
N-11	Social Development and Gender Specialist	EMM	Ruh Afza Ruhi/**Begum S. Nahar**	12.0	7.04	4.96
	Resettlement Specialist	EMM	Ruh Afza Ruhi/**Begum S. Nahar**		1.91	-1.91
N-12	Environment Specialist	RPMC	Dr. Md. Nurul Islam/**Md. Amir Faisal**	16.0	9.93	6.07
N-13	Training Coordinator	EMM	Jahangir Kabir/ **Shameem Ahmed**	14.0	14.33	-0.33
N-14	Information and Data Management Specialist	EMM	Asrafuzzamen	15.0	0.00	15.00
N-15	Hydraulic Structural Engineer	RPMC	Md. Dabir Uddin	10.0	0.00	10.00
N-16	Road Engineer	RPMC	Zakir Hossain	6.0	1.53	4.47
N-17	Geotechnical Engineer / **Geotecnical Expert (Local)**	EMM	Md. Korban Ali / **Md. Shamsul Islam**	7.0	0.75	6.25
N-18-1	Site Engineer 1 (PRB-1)	RPMC	Md. Nurul Amin	36.0	18.80	17.20
N-18-2	Site Engineer 2 (JLB-2 Chauhali)	RPMC	KM Nazmul Haque/ **Ekram Sarder**	36.0	8.20	27.80
N-18-3	Site Engineer 3 (JLB-2 Zaffarganj)	EMM	Md Faridul Alam	36.0	14.47	21.53
N-18-4	Site Engineers 4 (PLB-1 Harirampur)	EMM	Abdul Jalil/**Saiful Islam**	36.0	8.04	27.96
			Totals	**420.50**	**192.49**	**228.01**
					-	

Table C-1 Utilization of Consultant Person-Months continued ... 0.0

	RIVER STUDY TEAM - INTERNATIONAL					
IR-1	Task Leader / Flood & River Management Spec.	NHC	Carsten Stuab	10.0	10.24	-0.24
IR-2	Institutional Development Specialist	EMM	Robert A. van de Putte	3.0	0.35	2.65
IR-3	Morphologist	DELTARES	Sanjay Giri	7.0	2.56	4.44
IR-4	River Engineer (River Training)	NHC	Gerritt Klaassen	7.0	6.03	0.97
IR-5	Water Resources Management Specialist	DELTARES	W. J. Oliemans	5.0	1.58	3.42
IR-6	Economist	EMM	Alexander Mueller/**John D.M. Roe**	4.0	2.47	1.53
IR-7	Social / Regional Development Specialist	NHC	Mark Hopkins	5.0	5.01	-0.01
IR-8	Environmental Specialist	EMM	Wandert Benthem	4.0	1.89	2.11
IR-9	Hydrologist	NHC	Malcolm Leytham	5.0	1.85	3.15
			Totals	**50.00**	**31.98**	**18.02**
	RIVER STUDY TEAM - NATIONAL					
NR-1	Water Resources Management Specialist	RPMC	G M Akram Hossain	10.0	9.97	0.03
NR-2	Flood Management Specialist	RPMC	Md. Makbul Hossain	6.0	7.55	-1.55
NR-3	River Engineer (Morphologist)	CEGIS	Dr. Maminul Haque Sarker	9.0	2.66	6.34
NR-4	Economist	EMM	Dr. Shaker Ahmed	4.0	0.00	4.00
NR-5	Regional / Spatial Planner	RPMC	Dr. Shamim M Haque	4.0	3.37	0.63
NR-6	Institutional Development Specialist	RPMC	Dr. M. A. Qassem	4.0	4.00	0.00
NR-7	River Engineer	RPMC	Md. Motiur Rahman Jewel	8.0	7.84	0.16
NR-8	Hydrologist	EMM	Imdadul Haque Siddiqui	6.0	0.00	6.00
NR-9	Social Development and Gender Specialist	EMM	Ruh Afza Ruhi/**Begum S. Nahar**	5.0	5.00	0.00
NR-10	Environment / Climate Change Specialist	EMM	Md. Rakibul Haque	5.0	0.00	5.00
NR-11	Water Supply and Water Quality Specialist	EMM	Md. Mozammel Hossain/ **Dr. Khairul Bashar**	5.0	2.07	2.93
NR-12	Agriculture Specialist	RPMC	Dr Quazi Reasul Islam	4.0	3.34	0.66
NR-13	Fishery Specialist	RPMC	Dr. Md. S. Howlader	3.0	3.00	0.00
			Totals	**73.00**	**48.81**	**24.19**

Appendix-D Survey Maps

Chauhali Bathymetry Survey Map 1 & 2,1st July 2017



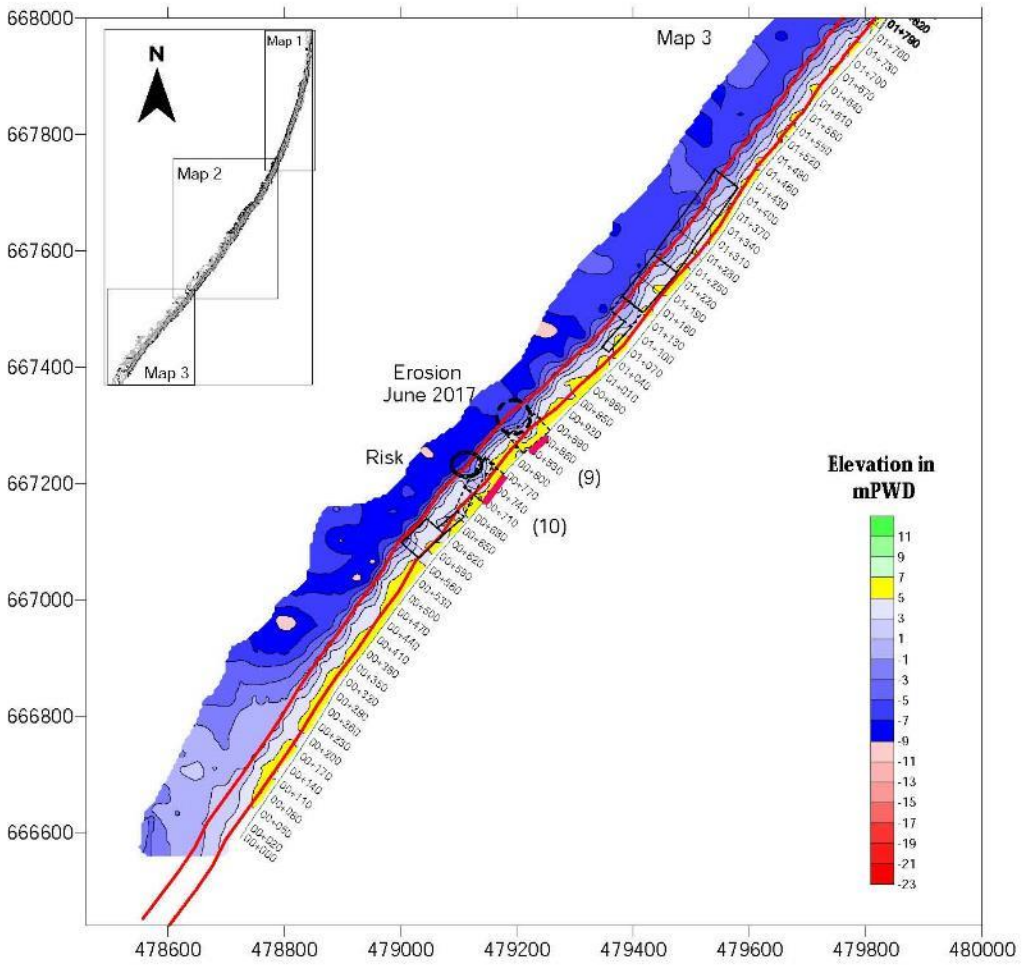
Legend:
Bankline April 2017
Dumping Line, 2016
2017 Repair Strip
2017 Repair Planned
Failure Location
Erosion June 2017
Risk

July Survey
Date: 1 July, 2017

List of Failure

(1) 4 February, 2017 Ch 2.340 to 2.390
(2) 23 February, 2017 Ch 4.445 to 4.365
(3) 2 May, 2017 Ch 4.270 to 4.345
(4) 7 May, 2017 Ch 2.550 to 2.570
(5) 16 May, 2017 Ch 2.330 to 2.380
(6) 3 June, 2017 Ch 2.084 to 2.112
(7) 8 June, 2017 Ch 1.780 to 1.857
(8) 23 June, 2017 Ch 4.180 to 4.070
(9) 23 June, 2017 Ch 0.833 to 0.863
(10) 25 June,2017 Ch 0.718 to 0.763
(11) 27 June, 2017 Ch 2.755 to 2.785
(13) 03 July, 2017 Ch 3.170 to 3.260
(14) 07 July, 2017 Ch 2.830 to 2.915
(15) 18 July,2017 Ch 2.980 to 2.960

Chauhali Bathymetry Survey, Map 3,1st July 2017



Legend:
Bankline April 2017
Dumping Line, 2016
2017 Repair Strip
(Complete & Partial)
2017 Repair Planned
Failure Location
Erosion June 2017
Risk

List of Failure

(1) 4 February, 2017 Ch 2.340 to 2.390
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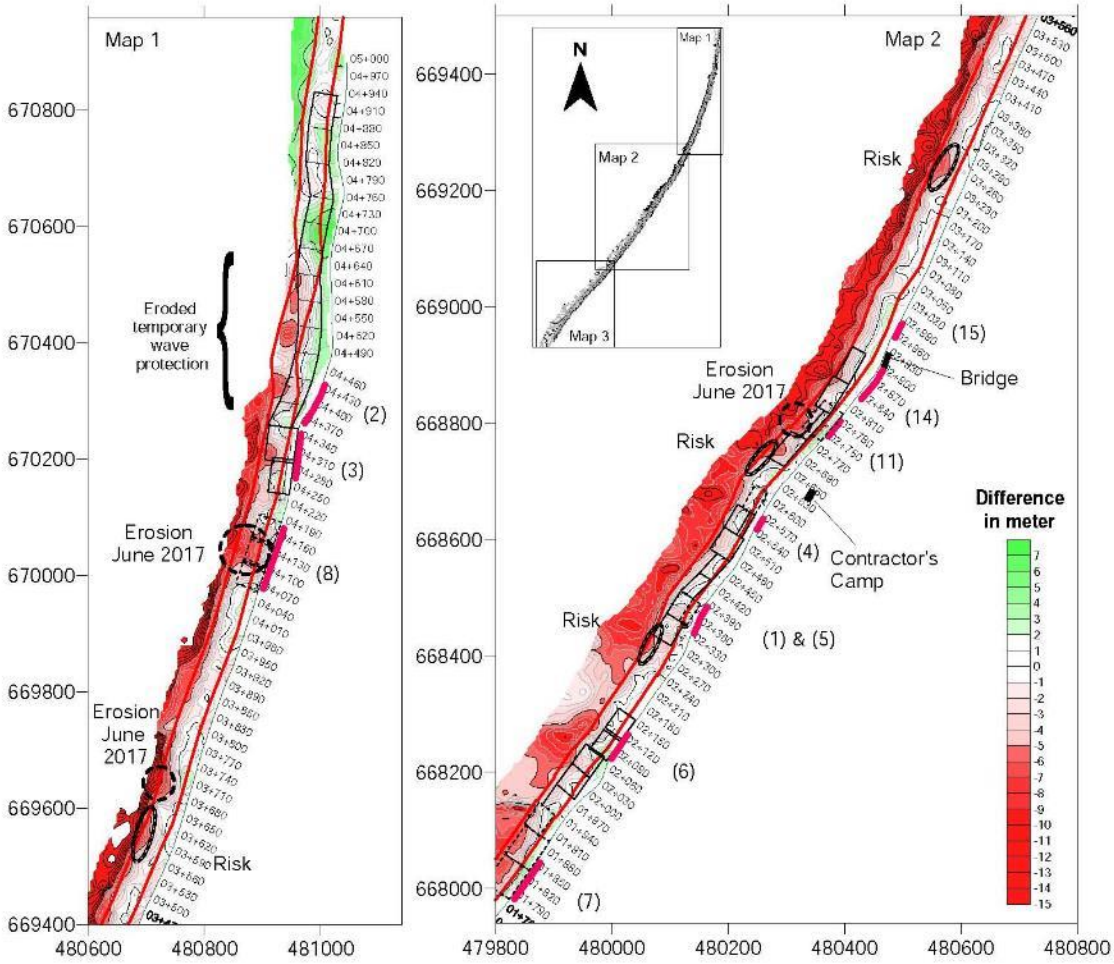
(13) 03 July, 2017 Ch 3.170 to 3.260
(14) 07 July, 2017 Ch 2.830 to 2.915
(15) 18 July,2017 Ch 2.980 to 2.960

July Survey
Date: 1 July, 2017

Chauhali Differential Map 1 & 2, AsBuilt to 1st July 2017



Legend:
Bankline April 2017
Dumping Line, 2016
2017 Repair Strip
2017 Repair Planned
Failure Location
Erosion June 2017
Risk

July Survey
Date: 1 July, 2017

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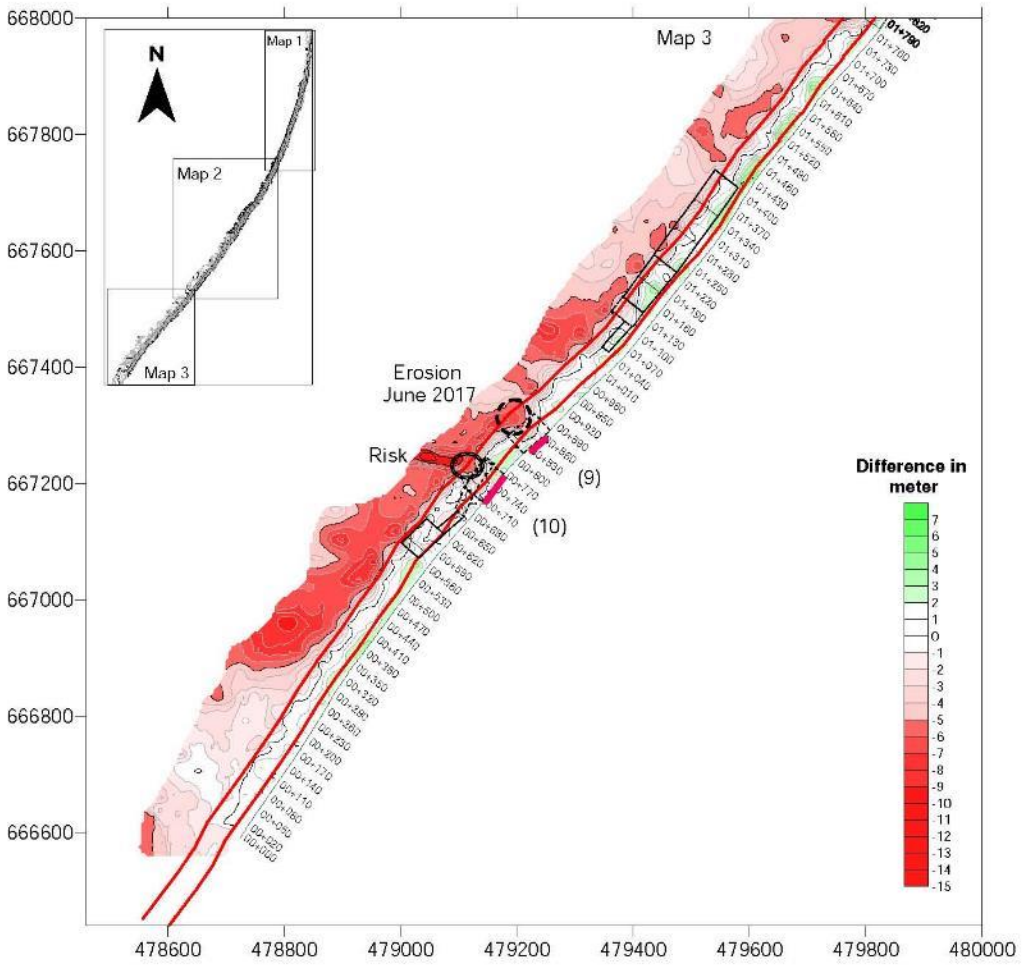
(13) 03 July, 2017 Ch 3.170 to 3.260
(14) 07 July, 2017 Ch 2.830 to 2.915
(15) 18 July,2017 Ch 2.980 to 2.960

Chauhali Differential Map 3, AsBuilt to 1st July 2017



Legend:
Bankline April 2017
Dumping Line, 2016
2017 Repair Strip
(Complete & Partial)
2017 Repair Planned
Failure Location
Erosion June 2017
Risk

July Survey
Date: 1 July, 2017

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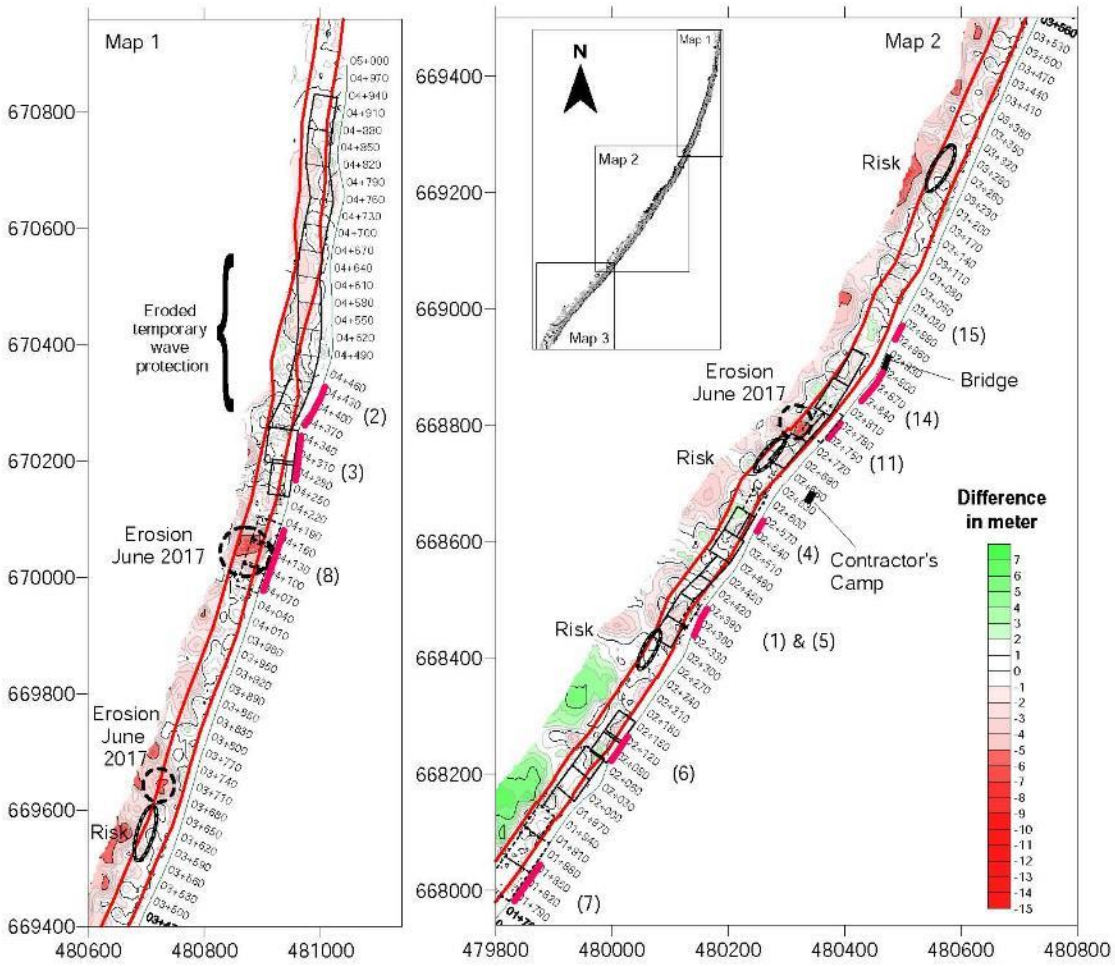
(11) 27 June, 2017 Ch 2.755 to 2.785
(13) 03 July, 2017 Ch 3.170 to 3.260
(14) 07 July, 2017 Ch 2.830 to 2.915
(15) 18 July,2017 Ch 2.980 to 2.960

Chauhali Differential Map 1& 2, 10th June 2017 to 1st July 2017



Legend:
Bankline April 2017
Dumping Line, 2016
2017 Repair Strip
2017 Repair Planned
Failure Location
Erosion June 2017
Risk

July Survey
Date: 1 July, 2017

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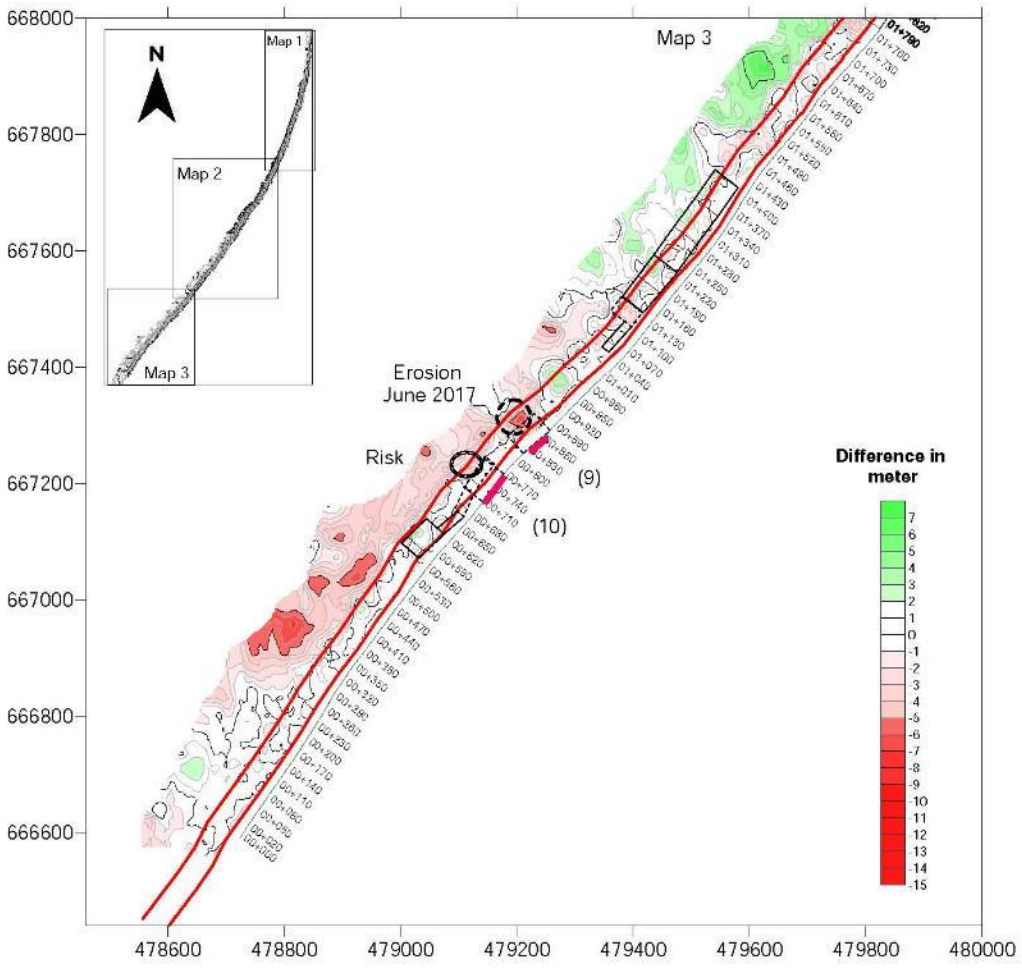
(14) 07 July, 2017 Ch 2.830 to 2.915
(15) 18 July,2017 Ch 2.980 to 2.960

Chauhali Differential Map 3, 10th June 2017 to 1st July 2017



Legend:

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Dumping Line, 2016
2017 Repair Strip
(Complete & Partial)
2017 Repair Planned
Failure Location
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(11) 27 June, 2017 Ch 2.755 to 2.785
(13) 03 July, 2017 Ch 3.170 to 3.260
(14) 07 July, 2017 Ch 2.830 to 2.915
(15) 18 July,2017 Ch 2.980 to 2.960

Appendix-E Gender Action Plan

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP) GENDER ACTION PLAN					
Output/Activities		**Indicators and Targets**	**Responsibility**	**Time frame**	**Progress since inception**
Output I: Integrated flood and riverbank erosion disaster risk mitigation measures for the subproject areas developed, implemented and maintained					
Sub-Component A1: Infrastructure improvement					
Activity :	**A1-1 Construction of riverbank protection structures using appropriate technology and methods** **A1-2 Rehabilitation/construction of embankments**				
Tasks:	– Ensure women benefit from employment in construction – Emphasize gender aspect of labor standard including equal wage for women and men for equal work – Occupational health and safety, safe water supply, sanitation – Separate toilet for women, where identified	– Include specific condition of contract in contractors' bid document with provision of 15% women in unskilled labor – Orient field staff to supervise, verify and ensure that the conditions are met – Incorporate relevant sex disaggregated information in field monitoring reports and contractors' compliance reports	PMO and work contractors	Entire T-1 period	Not done; During Feasibility Study the plan was to make a geo-textile bag filling 125 kg but detailed design proposed 250 kg. So, it is not possible to include women for this work.
Sub-Component A2: Community-based Flood Risk Management					
Activity :	**A2-1. Formulating community disaster management units**				
Tasks:	– Form 40 Community Disaster Management Units (CDMUs) consisting of 15 volunteers (male and female) each – Identify specific risks	– 40 Units established with minimum 33% women as general members and in leadership in the units (unit records) – Community flood risk assessment report prepared containing risks, coping mechanism, and needs of women and men	PMU-DDM and community disaster management NGO	End of T-1	These issues have been incorporated to the INGO TOR but INGO not yet recruite

	for women and men; disaster response mechanism, risk reduction measures and disaster preparedness measures on household and village level, specifically related to flood and erosion warning; and Identify location and build community flood markers for flood warning information through Community flood risk assessment – Integrate strategy and action in community risk reduction plan and disaster resilience action plans to address specific needs of women and men	and recommended response – Community risk reduction plan prepared for 40 Units through participation of women volunteers specifying roles, targets and benefits for women and men			d; so, work is yet to be started
Activity :	**A2-2. Capacity development for community disaster management Unit**				
Tasks:	– Establish community-based flood warning dissemination procedures - including indigenous techniques – Establish and disseminate	– 50% of the units have flood warning mechanisms after three years (field survey at the end of each tranche) – 50% of the households, including 75% of women-headed households, and poor women living on the embankment, have increased resilience	PMU-DDM and community disaster management NGO	End of T-1	Not yet started

	regular warning messages relevant to local context/language and linked with the national warning network – Where possible, conduct separate sessions with community women for flood risk mapping and needs assessment	through preventive measures at household level after three years (field survey at the end of each tranche)			
Sub-Component A3: Participatory Regular O&M					
Activity:	A3-1 Capacity development of communities				
Tasks:	– Include women in the planning phase – Training of CDMU members, both female and male beneficiaries, in water management and O&M – Training on gender and different social awareness issues using the guidelines for gender requirements – Ensure gender-friendly time and venue for training	– 30% women participation in planning phase, as recorded in meeting minutes – 30% women members in management committee, as reflected in members' list – Women constitute 30% of all community training for O & M	PMO and community disaster management NGO	End of T-1	Cancelled for Tranche 1
Sub-Component A4: Livelihood support for project affected people					
Activity:	A4-1. Construction of resettlement areas with basic infrastructure and facilities				

Tasks:	– Ensure effective consultation with women in the affected areas and maintain sex-disaggregated data on Project Affected Persons (PAPs) along with entitlement benefits, as per Resettlement Plan (RP) – Assure that gender issues are considered when planning resettlement villages and community facilities – Employ willing women in labor-intensive geo-textile bag filling, head loading, embankment and roadside tree planting, and in maintenance activities	– Full compensation for 100% women PAPs, as per RP entitlement. – 33% women involved in planning meetings – 15% to 20% women wage earners engaged in the project construction activities – At least 50% women participants will operate livelihood support programs in 3 community groups in and around resettlement areas.	PMO and Partner NGOs	By June 2018	These issues have been incorporated to the TOR of INGO for Livelihood Development; INGO TOR is submitted to ADB for approval.
Activity:	**A4-2. Support for project affected people**				
Tasks:	– Establish contact with local representatives of the Departments of Agriculture, Fisheries, Cooperatives,	– Groups organized covering 90% women-headed households and women in ultra-poor households who are living on the embankment, as established by resettlement surveys, for special training and financial support.	PMO and resettlement NGOs	End of T-1	INGO for Resettlement is working for disbursement of compensation to the

	Women's Affairs and so on to integrate with and build social networking at the local level – Establish the priority groups of abandoned, divorced, separated, widowed, and deserted women – Provide special training and financial support for women-headed households and for women in ultra-poor households – Ensure Gender-friendly time and venue for training – Training on skills and leadership development, gender equality and other social awareness issues – Ensure adequate follow-up to help women manage their IGAs	– Organize and impart training on skills and leader development to 30 persons including 10 women.			affected people.
Output II: Strengthening Institutional System for Flood and Riverbank Erosion Risk Management					
Sub- Component B1: Institutional capacity strengthening for flood and riverbank erosion risk management					
Activity :	**B1-1 Capacity enhancement of BWDB**				
Tasks:	– Integrate a gender-	– 10% women in training programs	BWDB	End of T-1	One-day gender

	specific module in the BWDB training – Include women in the training program	– Gender aspects integrated in the relevant training program/module			specific course has been organized with PMO, ISPMC and BWDB officials in this quarter. 25 were female out of 32 participants. The main discussions were Importance of gender in water management project and concept of gender with government's commitment. ADB's Gender Specialist will be attended a resource person in this workshop.
Activity :	**B1-2 Support the initial set-up of the office of the chief engineer river management**				
Tasks:	– Deploy women staff	– Give priority to women having required qualification for staff positions (approximately 10%)	BWDB	Entire T-1 period	Work is in progress
Output III: Efficient program management system established					
Component C: Program Management					

Activity:	**C-1: Implementation management**				
Tasks:	– Establish MIS system with sex disaggregated data base for project reporting	– Identify gender indicators, incorporate in monitoring system and ensure regular reporting on progress of GAP implementation based on gender analysis	BWDB	By Dec 2016	Work is in progress
Activity:	**C1-2: Preparation for Tranches 2 and 3**				
Tasks:	– Incorporate gender issues in the planning process	– Prepare gender action plans for Tranche 2	BWDB	By Dec 2016	Draft gender action plans for Tranche 2 prepared

Appendix-F Capacity Building

Local Training:

During the reporting quarter, a 1-day Training was organized on Gender Awareness for BWDB Engineers, PMO and ISPMC on 31 May 2017 in order to develop the knowledge on Gender Awareness for BWDB female Engineers. The training included 30 female Engineers of the BWDB. The course was implemented by the ISPMC. As International expert Mr. Jean Louis Leterme, Social Development / Resettlement Specialist, ISPMC and Ms. Begum Shamsun Nahar, Social Development and Gender Specialist of ISPMC was assigned to coordinate training and the training Coordinator was in charge of overall management. The detail of the training is as follows-

One-day course on "Gender Awareness Training for BWDB Officials, PMO and ISPMC" has been held on 31 May 2017. This is the first batch of training on gender under this project held while Project Director inaugurated the course and ADB's Social Development and Gender Specialist Ms. Nasheeba Selim attended as Resource Person. Social Development and Gender Specialists (The International and National both) of ISPMC were attended as Resource Persons and Team Leader of ISPMC has given closing speech. The main contents of the course were:

- Briefing on FRERMIP activities, implementing strategy and Importance of women-friendly design of physical structures required for the project
- Importance of gender mainstreaming in FRERMIP activities
- National and International Policy Commitments of GOB in Gender Mainstreaming
- Concept of Gender Equality and Equity
- Gender Action Plan of FRERMIP
- ADB's Gender Strategy and Action Plan
- Importance of implementation and reporting of project's Gender Action Plan (GAP).

A total of 32 (25 female and 7 male) participants attended the course where 24 female Engineers attended from BWDB design and other sections designation holds Superintending Engineers, Executive Engineers, Sub-divisional Engineers and Assistant Engineers. This initial course focused on conceptual clarity and policy commitments of government and ADB. The participants were very much attentive and they suggested organizing a "3-5 days course on Gender in Water Management" with a field trip to project sites so that they can have an overview of the project as well as how to mainstream gender in water management.

Figure 5 Gender Awareness Training

Figure 6 Gender Awareness Training

The training session was organized and conducted under ISPMC line item-1 of the provisional sum. The Total cost for 30 Trainees and 20 other participants (Total 50) was BDT= 63,990.00 (Sixty-Three Thousand Twenty-Nine Hundred Ninety) only.

Study Tour -2 (North America) as per revised DPP:

'Overseas Study Tour in North America' including Mississippi River and Canada under BWDB Capacity Development Program of FRERMIP, BWDB is in the final stage for execution. The tentative date is 05 - 18 August.

The Government of Bangladesh is pleased to sanction the deputation of the following officials to attend the Study Tour (Official Visit) on "Mississippi river management and allied erosion protection work" in America and Canada under FRERMIP, BWDB. The expected officials are as follows-

1. Dr. Zafar Ahmed Khan. Senior Secretary. Ministry of Water Resources.
2. A N Shamsuddin Azad Chowdhury. Member. Agriculture. Water Resources and Rural Institution Division.
3. Md. Mofizul Islam. Secretary In Charge. Implementation Monitoring and Evaluation Division
4. Md. Mahfuzur Rahman. Director General (Former Additional Director General. Western
5. Dr. Jiban Ranjan Majumder, Chief. ADB Wing, Economic Relations Division.
6. Mantu Kumar Biswas, Joint Chief. Ministry of Water Resources.
7. Nasreen Afroz, Director (Joint Secretary). Prime Minister's Office.
8. A. M. Aminul Haque Project Director. Project Management Office. FRERMIP, BWDB
9. Kazi Tofail Hossain. Chief Monitoring. Bangladesh Water Development Board.
10. Md. Monirul Islam. Superintending Engineer. Project Management Office. FRERMIP, BWDB

The terms and conditions of the visit finalized as follows:

- They will leave for the USA on or around 04 August 2017 and is expected to return to Dhaka on or around 19 August 2017.
- All the expenses of the officials relating to this visit including air travel. Meals. Accommodation and as well as daily allowance will be borne by the Project "Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), BWDB.
- This visit is official and the period or their stay abroad including transit to and from America & Canada will be treated as on duty. No portion of his salary and emoluments will be payable in foreign currency.

The corresponding authority has approved this and the Visa is under prossess for USA and Canada.

The Overseas Study Tour in North America including Mississippi River and Canada under BWDB Capacity Development Program of FRERMIP, BWDB is executing to aquire knowlege on Mississippi River Management, sharing of experience on management of major river in Bangladesh and visit Flood/Ersion Management/Protection works in and around the USA and Canada.

Overseas Study Tour – 1 (Australia) as per revised DPP

The ISPMC is working to organize a 14-day study tour to Australia for 5 officials of BWDB and prepared the plan/Draft program and submitted to the Project Director for execution in the next July/Aug- 2017 Australia is know for its strong geotextile industry, large coastal protection projects. In 2004 a group of high officials from JMREMP including BWDB staff visited Australia to share the ideas about geotextile. Draft program for the trip is as follows-

Overseas Study Tour

Tentative/Proposed Plan/Programme Schedule

Visit to Australia including the Geofabrics geotextile factory & the Coastal Protection Work for BWDB Capacity Development Program of Flood and River bank Erosion Risk Management Investment Program (FRERMIP), BWDB, under The Ministry of Water Resources, Government of the People's Republic of Bangladesh

Tentative Date: 25 August- 7 September 2017 (1+12+1= 14 days)

Participants: 5 persons (As DPP) to be selected by the BWDB.

Area to visit: Australia

Tentative Movement Schedule: Dhaka- Perth - Adelaide – Melbourne - Brisbane - Sydney - Dhaka

Day	Date	Time	Transport	Activities	Guide	Over Night
0	25 August -2017 Friday	11:30	Flight	***Start from Dhaka for Perth, Australia.***	N/A	Flight
1	26 August -2017 Saturday	Convenient time	Flight Car	1. Arrive Perth, Hotel Check In, Rest+ Discussion with guide to sharing ideas about the tour & implementation plan (hotel lobby) 2. City+ Museum visit, others	Guide: TBA Provided by: TBA	Hotel in Perth
2	27 August -2017 Sunday	8:30 to 17:00 Evening:	Car Flight	1. Daylong Short Course on Scour and Erosion and Use of Geotextile in shore protection work organized by School of Civil, Environmental and Mining Engineering and the Centre for Offshore Foundation Systems at the University of Western Australia at Perth 2. City+ Museum visit+ shopping if likes. 3. Fly to **Adelaide**, Hotel Check In, Rest.	Guide: TBA Provided by: TBA	Hotel Check In Adelaide
3	28 August -2017 Monday	8:30 to 17:00 Evening:	Car Flight	1. Visit to Troubridge Island Coastal Protection work 2. City+ Museum visit+ shopping if likes. 3. Drive to **Melbourne,** Hotel Check In, Rest.	Guide: TBA Provided by: TBA	Nearest Hotel Melbourne,
4	29 August -2017 Tuesday	8:30 to 17:00 Evening:	Car	1. Visit Anglesea, Fairhaven, Skenes Creek coastal erosion zone 2. City+ Museum visit+ shopping if likes. 3. National park visit (near)	Guide: TBA Provided by: TBA	Melbourne- Check out in the morning

Day	Date	Time	Transport	Activities	Guide	Over Night
5	30 August -2017 Wednesday	8:30 to 17:00 Evening:	Car Flight	1. Visit Apollo Bay, Marengo, Port Fairy & Portland erosion zone 2. City+ Museum visit+ shopping if likes. **3. Fly for Brisbane**	Guide: TBA Provided by: TBA	Hotel: Brisbane
6	31 August -2017 Thursday	8:30 to 17:00 Free time	Car	**1.** Site visit to Gold Coast Broadwater Coastal Protection Work in **Queensland** **2.** City+ Museum visit+ shopping if likes.	Guide: TBA Provided by: TBA	Hotel- Brisbane
7	01 Sep- 2017 Friday	10:00 - 17:30 Free time	Car	1. Visit to Geofabrics Australia International Geotextile Factory in Southern **Queensland** **2.** City+ Museum visit+ shopping if likes.	Guide: TBA Provided by: TBA	Hotel-Brisbane
8	02 Sep-2017 Saturday	10:00 - 16:00 Free time	Car	1. Visit to Bank Protection works by Geotextile at Maroochy River, Maroochydore in **Queensland** **2.** City+ Museum visit+ shopping if likes.	Guide: TBA Provided by: TBA	Hotel- Brisbane
9	03 Sep-2017 Sunday	09:00 - 16:00 16:30 -17:30	Car/ Train	1. Visit to Shore Protection work at North Kirra, Gold Coast in Queensland, 2. City+ Museum visit+ shopping if likes. 3. Drive to **Sydney**, New South Wales from Gold Coast in Queensland	Guide: TBA Provided by: TBA	Hotel- Sydney
10	04 Sep- 2017 Monday	06:00 - 16:00 Free time	Car/ Train	1. Visit the coastal COMS Shoreline Position & Monitoring systems 2. City+ Museum visit+ shopping- if likes.	Guide: TBA Provided by: TBA	Hotel - Sydney
11	05 Sep- 2017 Tuesday	7:30 - 16:00 Free time	Car/ Train	1. Visit the Belongil Beach, Lennox Head, Brooms Head & other coastal erosion zones 2. City+ Museum visit+ shopping- if likes.	Guide: TBA Provided by: TBA	Hotel - Sydney
12	06 Sep-2017 Wednesday	7:30 - 4:00 pm Free time	Car/ Train	1. City visit+ shopping. Preparation for back to Bangladesh	N/A	Hotel - Sydney
0	07 Sep-2017 Thursday	Convenient Flight	Car+ Flight	Fly from Sydney for Dhaka	N/A	Flight

Note: 1. some body may like to make a family visit to relatives, time may be considered for them
2. Option for train journey: The Great Southern Rail operates three passenger trains: Indian Pacific (Sydney–Adelaide–Perth): 1 round trip per week. The Ghan (Adelaide–Alice Springs–Darwin): 1 round trip per week. The Overland (Melbourne–Adelaide): 2 round trips per week.

According to budget of DPP (9. Component and estimated cost summary)

								Revised DPP- BDT (@$=77.575)
4840, BWDB Capacity Development Programme		**Original**=Total BDT=			**104,350,000**			**78,880,000**
Sl.	**Training**	**FY 2015-2016**	**FY 2016-2017 (On going)**		**FY 2017-2018**	**FY 2018-2019**	**Planed date**	**Remarks**
	Courses/Training/Tour/Workshop	**Spent**	**Budget**	**Spent**	**Budget**	**Budget**		
A- Local Training								
1	River Engineering	1,726,976					Ap. 2016	Completed by BUET
2	River Training Techniques		1,518,029	1,518,029			Feb.2017	Completed by BUET
3	Riverbank Geotechnical Stability		4,753,884				June-2017	Back to Back, US resource Person (1 Course)[1] for 2 batch
4	Riverbank Protection		2,479,829				May-2017	Geotextile, B. Walsh- hydraulic design.[1] &[2]
5	Stratergic Planning				1,811,867		Jul-17	Back to back, Combined: [1] &[2]
6	Survey and Evaluation				1,615,643		Aug-2017	Back to back, Combined: Mr. Atique, Mr Ghani.[1] &[2]
7	Underwater Investigations				1,264,153			
8	Resettlement				1,391,667		Sep 2017	[1] &[2] - CEGIS is Interested
9	Environment				1,407,778			[1] &[2] - CEGIS is Interested
10	Leadership				2,369,299		Oct-2017	Bert D Putte[1] &[2],
11	Project Management				2,467,112			BIM ?? [1] &[2], 80% OK
12	Construction Management		2,532,277				May-17	Mr. Bruce Hunter-RTW[1] &[2] (Possible to prepare soon)
13	Technology Transfer (counterpart)-1. Followup workshopon Draft Master Plan		87,740	36,138	2,291,956	2,198,158	Dec-2016	BWDB Board Hall
	Technology Transfer (counterpart)- 2. Training for Task Force on Quality Control of Sand-filling of Geobags		40,800	38,640			Dec 22 -16	BWDB Board Hall
	Demonstration Presentation on Use of Grout-Filled Jute Mattress for Permanent Riverbank Protection		20,000	19,020			May-17	Seminar Room, Design Office, 72 Green road, Dhaka
	Sub Total-13			**93,798**				
14	Capacity Building for DDM				1,954,552		Aug 17	Dr. Towfique[1] &[2]. To be reconsidered during MTR
B- Overseas Training								
B.1	River Morphology	7,488,567	1,612,194	1,612,194			Sep-Oct 2016	Completed By IHE- The Netherlands
B.2	River Training Techniques				9,000,000		July-2017	Contract completed with IHE- The Netherlands[2]
C- Study Tour								
C-1	Study Tour-1 (Financial Management)			12766000	4,000,000		July/Aug- 2017	To be done[1] &[2] (This program will be helpful to solve the 'ISPMC' accounts related problem)
C.2	Study Tour-2* (North America)						June-2017	To be done[1] &[2] (Possible to prepare soon)
C.3	Study Tour-3* (China)	5,135,984					16 to 24 Aug 201	Completed - FY 2015-2016
C.4	Study Tour-4* (India)					3,000,000	July-2018	To be done[1] &[2]
	For emergency purpose*					**7,636,083**		
	Description	**Spent**	**Budget**	**Spent**	**Budget**	**Budget**	**Sub-Total**	a) We don't have the approved Revised DPP in our hand, only we Got the changed figure from accounts section PMO as BDT= 78,880,000 in Place of 104,250,000
Q-1	**Spend**	**14,351,527**		**3,224,021**			**17,575,548**	b) For FY 16-17 Draft Budget Calculated Same as Approved Budget of FY 2016-2017, Cost must be within the budget. *
Q-2	Revised DPP Budget	**78,880,000**	25,000,000	21,775,979	26,694,232	12,834,242	**61,304,452**	In case of overexpenditure in the budgeted items or introduction of new program, the fund will be pulled out from here.
	Total =						**78,880,000**	
Note:	1) Paid amount under FY 2016-2017 USD=159,575.00, BDT= 1,27,66,000 @ Tk. 80/= Final payment may vary.							

Appendix-G Photos

Chauhali: completed revetment between bridge and contractors camp, 1 May 2017

Chauhali: the completed revetment allows the local population easy access tot he river

Solimabad, downstream of Chauhali: mobilization of equipment for emergency works, 1 May 2017

Chauhali: site vist of Project Director, 4 April 2017

Chauhali: local failure of upper slope, 10 June 2017

Chauhali: ongoing repair works in areas with slope failure, 10 June 2017

Zaffarganj: construction of final wave protection, 1 May 2017

Zaffarganj: work around the old school building to be dismantled, 1 May 2017

Harirampur: diving investigations 1 April 2017

Harirampur: Caddisfly larvae covering the bags underwater with a dense layer, 1 April 2017