

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 Consultant (ISPMC)**

**QUARTERLY PROGRESS
REPORT NO. 12**

FOR

APRIL - JUNE 2018

Prepared by:

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23 July 2018

To
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Project Director,
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Firoz Tower, (12th Floor) Dhaka-1205, Bangladesh

**Subject: Submission of Quarterly Progress Report No. 12
April - June 2018.**

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. 12 for the period April - June 2018 for the Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP) – Project 1. This report has been prepared in close discussion with your office, using information available in the Revised (May 2017) Development Project Performa and considering the Facility Administration Manual.

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

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

Yours sincerely,

JV Northwest Hydraulic Consultants – Euroconsult Mott MacDonald

Knut Oberhagemann
(Team Leader)

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ABBREVIATIONS AND ACRONYMS

ADB	-	Asian Development Bank
ADP	-	Annual Development Programme
BDT	-	Bangladesh Taka
BRM	-	Bangladesh Resident Mission
BWDB	-	Bangladesh Water Development Board
CbFRM	-	Community-based Flood Risk Management
CEGIS	-	Center for Environmental and Geographic Information Services
CRO	-	Chief Resettlement Officer
DG	-	Director General
DDM	-	Department of Disaster Management
DPP	-	Development Project Performa
EKN	-	Embassy of the Kingdom of the Netherlands
GAP	-	Gender Action Plan
GFM	-	Grout Filled Mattress
GOB	-	Government of Bangladesh
GON	-	Government of the Netherlands
ha	-	hectare
IMED	-	Implementation Monitoring and Evaluation Division
INGO	-	Implementation Non-Government Organization
ISPMC	-	Institutional Strengthening and Project Management Consultants
JLB-2	-	Jamuna Left Bank 2 Sub-Project
JRB-1	-	Jamuna Right Bank 1 Sub-Project
JVT	-	Joint Verification Team
km	-	Kilometer
LA	-	Land Acquisition
MDIP	-	Meghna-Dhonagoda Irrigation Project
Mil	-	Million (1,000,000)
MIS	-	Management Information Systems
MoDM	-	Ministry of Disaster Management
MoWR	-	Ministry of Water Resources
O&M	-	Operation and Maintenance
PM	-	Project Manager (DDM)
PD	-	Project Director (BWDB)
PIRDP	-	Pabna Irrigation and Rural Development Project
PLB-1	-	Padma Left Bank 1 Sub-Project
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

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Figure 0.1. Project Location Map

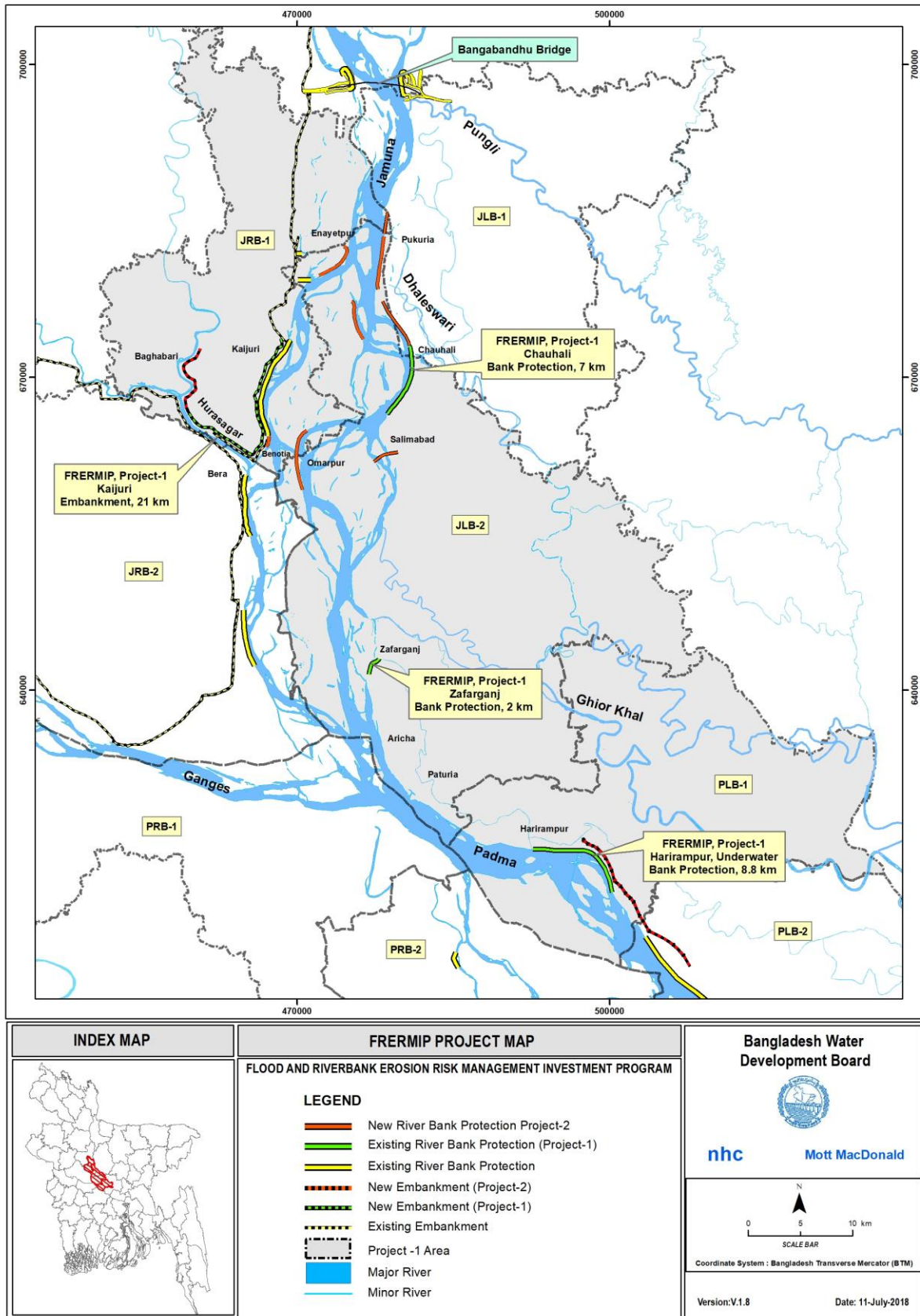


Table 0.1 Progress at a Glance
Table 1 Project Progress at a Glance

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)	61.2	100	90	251.2
Government of The Netherlands (GON)	13.7	0	0	13.7
Government of Bangladesh (GOB)	33.5	45.3	34.8	113.6
Total	108.4	145.3	124.8	378.5

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	27 February-07 March, 2018

4. Assets and Physical Progress						
Proposed Project Assets	Goods	Services	Works	eXtra	Total	Available
Project Program Best Estimate (Tk Mil)	1399	1220	3540	2514	8673	8685

Primary Component	Secondary Component	Assigned Weight (%)	Progress	
			Actual (%)	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	66	1
2. Implementation; Tranche-1	2.1 Detailed Design	2	100	2
	2.2 Tender Documents Preparation	6	90	5
	2.3 Tendering and Contract Award	6	90	5
	2.4 Land Acquisition and Resettlement	8	90	7
	2.5 Project Management	6	90	5
	2.6 Physical Completion of Works	32	80	26
	2.7 Financial Disbursements	4	85	3
3. Knowledge Base & Capacity	3.1 Knowledge Base & Tech. Studies	4	80	3
	3.2 CBFRM Activities	6	35	2
	3.3 MIS Project Mgmt Module	4	0	0
4. River Study, Piloting & Master Plan	4.1 Long-term stabilization study	4	90	4
	4.2 Land recovery piloting	2	30	1
5. Preparation; Project-2	5.1 Feasibility Study; Project-2	6	95	6
	5.2 Detailed Design; Project-2	4	40	2
Totals		100		77

5. Financial Progress			
Financial Indicator	BDT Million	US\$ Million	% of Total
Estimated Project Cost (Source: DPP Page 1)	8,685	108.65	100
Physical Progress	6,652	83.15	77
PMO Expenditures	5,641	70.51	65
ADB Disbursement	4,361	54.51	50
Total Reimbursement	3,236	40.45	37

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. Even though the erosion rates of floodplain land have reduced from nearly 5000 hectares per year to less than 2,000 (Figure 0.1), ten thousands of people are affected annually.

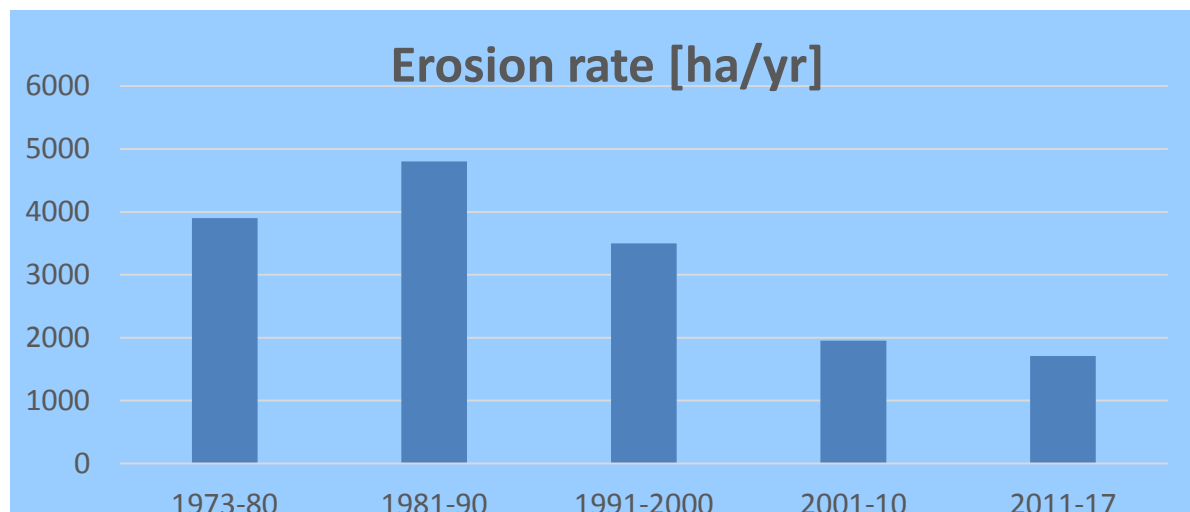


Figure 0.1 Decadal erosion rates

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, as the setback distances from the riverbank become increasingly smaller. 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. This initiative includes reclaiming floodplain land lost during the widening process which has persisted since the 1960s¹.

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.

¹ ADB 2014. Report and Recommendation of the President to the Board of Directors, Proposed Multitranchise Financing Facility, People's Republic of Bangladesh: Flood and Riverbank Erosion Risk Management Investment Program, June.

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 17 km 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-projects: Jamuna Left Bank 2 (JLB-2), Jamuna Right Bank 1 (JRB-1) and Padma Left Bank 1 (PLB-1); refer to **Figure 0.1** and **Ref 5**. 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.

1.2 The Project

The project has three funding partners including 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**), except for the postponement of some activities due to the reduction of available loan 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

Under Project-1, nearly 18 km of riverbank protection² and more than 20 km of flood embankments (rehabilitation and new; refer to the Project Map-**Figure 0.1**) will be implemented. Project outputs will also include related social and environmental safeguards; institutional, knowledge-base, and capacity development; and community capacity development for flood risk management activities.

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 0.1**, placed at the beginning of the report, provides a summary of project information including salient reference data, estimates of project assets, plus physical and financial progress indicators, in Bangladesh Taka (BDT), US dollars (USD) and percent completion.

Delays in the bidding process for key work and service contracts, require that Project-1 will be extended by a minimum of one construction season, until June 2019. Government has approved the extension until June 2020, with initial concurrence from ADB to allow the completion of all planned activities, namely, the embankment construction, pilot works including monitoring during the 2019 flood season, as well as non-structural flood risk management through the Department of Disaster Management (DDM). After the first revision of the Development Project Proforma (DPP), approved

² The length of protection work has increased from 16 to 17.8 km due to changes in the river morphology at Chauhali and Harirampur between the feasibility study and the construction start.

on 15 June 2017 (**Ref. 4**), the Project Management Office (PMO) has revised the current DPP, which is currently at the Planning Commission for review. The revised DPP increases the budget for land acquisition and resettlement to complete the embankment works, without increasing the overall amount. The first DPP revision addressed the reduced level of loan funding by transferring several activities to Project-2³. A first zero-cost Variation Order for the ISPMC was accepted on 27 July 2017, a second zero cost variation, extending the consulting services to May 2019, was signed on 10 June 2018.

The PMO still expects that the modified Project outputs (**Appendix-A, Table A-5**) can be fully achieved by the original scheduled closing date of 30 June 2019.

1.3 Overall Progress

Project-1 was very successful in its core activity, the construction of riverbank protection, during the dry season 2015/16. The progress during 2016/17 dry season concentrated on the continuation of the ongoing contract works. In total, 17.8 km riverbank protection (underwater with temporary or permanent wave protection above low water level) has been substantially completed. Some damages at Chauhali are under investigation by a technical committee. This notwithstanding, the underwater protection has performed very well, despite deep scouring to, in places, 25 m below the original apron setting level as demonstrated by the Chauhali multi-beam echo-sounder survey performed in November 2017.

The construction of 21.3 km of embankment at Kaijuri has started with little progress before the flood 2018. This is not at last due to the slow land acquisition and resettlement process, which requires additional funding to be sanctioned through the second revision of the DPP. To this end the full dry season 2019 will be required to complete the works.

The overall weighted project progress is presented in **Table 0.1** and shows that the weighted progress achieved to the end of the reporting period is around 77%`after elapsing of 75% of the time. Compared with the total estimated projected cost, the physical progress is 77%, PMO expenditure is 65%, ADB (plus GON) disbursement is 50%, and total reimbursement is 37%.

1.4 This Report

Quarterly Progress Report No. 12 covers the period 01 April to 30 June 2018. The report describes activities carried out during the quarter, which primarily included: river monitoring, river stabilization study, Project-2 feasibility study, preparation and bidding for remaining goods, works and services contracts. Small progress has been made in the construction of the Kojuri embankment and the adaptation work of the existing protective work at Chauhali during this quarter. The ISPMC, with close collaboration with the Design Office, BWDB, has submitted the updated Feasibility Report designs for Tranche-2 during this quarter.

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 Tangail and Manikganj). At the end of the second construction season, a total of 17.8 km of riverbank

³ Project support service contracts deferred due to lack of funding include: S-05 Participatory O&M, S-08 Annual Development Plan MIS, S-09 Asset MIS, and S-10 Environment Management.

protection has been constructed under the project: 7.0 km at Chauhali, 2.0 km at Zafarganj and 8.8 km at Harirampur. The Kojuri embankment construction has made some progress during this quarter.

The Institutional Strengthening and Project Management Consultants (ISPMC) have been working since September 2015 and have completed the following activities: prepared the Project Inception Report and a number of River Study team reports, supported overall project management and capacity building activities, advised on design, construction and resettlement activities, and prepared the terms of reference for several supporting studies. The ISPMC has submitted an updated Feasibility Report designs during this quarter.

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 2.1**, along with the actual total reimbursements. The graph has not been corrected for the expected reduction in loan amount from US\$ 65 to around 58 million, but a horizontal line with the expected ADB revised funding amount has been added.

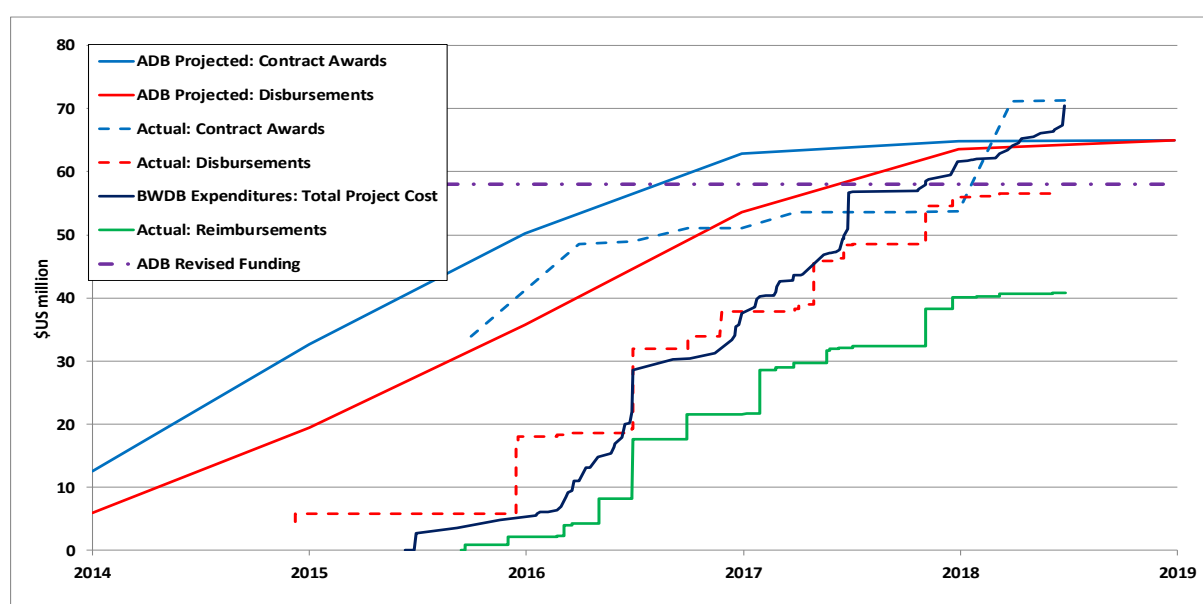


Figure 2.1 Contract, Disbursement and Reimbursement History of ADB Loan

Table 2.1 provides the status of annual ADP expenditures. During the current fiscal year, the allocation had to be revised down due to the delay in embankment construction. However, it is expected that the completion of the embankment construction by June 2019 will allow completing Tanche-1 within the planned period and even compensating for the start-up delay of one year. The PMO expects to spend the remaining BDT 3042.49 Mil of the budget within June 2019.

Table 2.1 Annual ADP allocation and disbursement (in BDT million)

Fiscal Year	ADP Allocation	Revised Allocation	Actual expenditure	Percentage Actual/Revised
2014/15	329.00	311.20	217.78	66.20/70.00
2015/16	2296.40	2108.20	2074.34	90.33/98.39
2016/17	2604.00	2290.80	2246.11	86.26/98.05
2017/18	2723.50	1398.00	1107.28	40.65/80.08
total	7623.90	6126.00	5645.51	74.05/92.16

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 23.0 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 17.8 km of riverbank revetment is expected to cost BDT 1850 million, plus BDT 1153 million for geo-bags. Details on an individual contract basis are provided in **Table B-4**. This detailed table also shows that the best estimate of final cost for all project assets currently identified is BDT 8715 million (Goods BDT 1457 million, Services BDT 1155 million and Works BDT 3589 million, plus BDT 2514 million of additional assets included in the DPP; primarily land acquisition).

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 values (**Ref. 4**).

A second revised DPP has been submitted to the Ministry of Water Resources during the last quarter. The revision has been of zero-cost variation. The reasons to revise the DPP for a second time are as follows-

- I. To increase the cost of resettlement to accommodate the revised government regulations.
- II. To reduce the reduce the embankment length of Kojjuri (23 KM down to 21.3 KM) in order to make it commensurate with the DPP provisions.
- III. To exclude the livelihood development component as discussed with the donors. The component has been transferred to the next tranche.
- IV. To increase the project period up to December 2019.

The RDPP is currently lying in the Planning Commission and awaiting approval.

2.2.2 Bidding Activities

Two component tenders were received during this quarter. The tender for W-14 contract of River Training Pilot Works was received on 25 June 2018. On the other hand, the W-15 contract of Construction of Inspection Bungalow was awarded on 11 June 2018.

The ADB Evaluation of the S-04 contract of Community based Flood Risk Management short-listed tenders is under process (**Section 2.3.5**).

The details of bidding activities can be found in the Table B-2 of **Appendix-B**.

2.2.3 Design Activities

There is no design activity going on for Tranche-1 works currently, as most of the work is essentially complete. The details of the Tranche-1 design works can be found in Table A-1 of **Appendix-B**.

2.2.4 Implementation Activities

After the completion of original works of W-06 and W-07 at Chauhali, further adaptation works under a new Contract Package W-11 which started from the last quarter has been carried out during this quarter. The work was done in between Ch 0.060 km to Ch 0.180 km and Ch 1.520 km to 3.990 km at Chauhali. According to the contract, 344,000 no. of geo-bags are supposed to be dumped and 56,000 no. of geo-bags are supposed to be placed at damaged slopes for wave protection. A total of 337,895 no. of geo-bags have been dumped and 27,012 no Geo-bags have been placed on damaged

slopes by the end of this quarter under this contract. The work was carried out by three sets of barges, two of them were 45 meters long and another one was 60 meters long. After placing 27,012 no. of geo-bags on slope, most of the damaged slope have been repaired and no damaged slope was found within Ch 0.060 km to Ch 0.180 km and Ch 1.520 km to Ch 3.990 km. So, the rest of the 28,988 no. of geo-bags could not be placed on slope. The following **Figure 2.2** visualizes the dumping progress of W-11 package. The As-built dumping plan for the repair/adaptation works at Chauhali can be found in the **Appendix-I**.

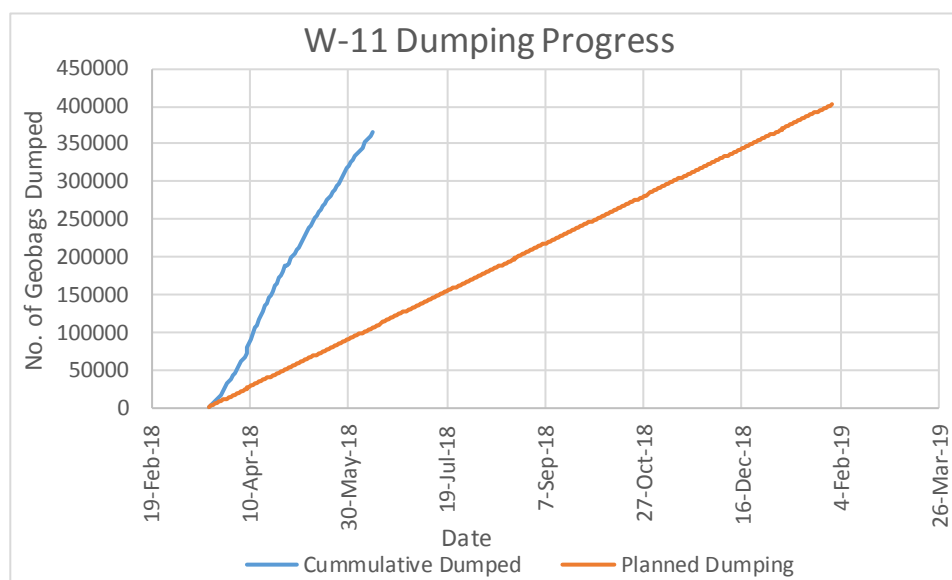


Figure 2.2 Dumping Progress of Chauhali Adaptation Package

On the other hand, construction of 21.30 km of embankment and 4 regulators on the right bank of the Jamuna and the left bank of the Hurasagar Rivers was awarded to five contractors during the last quarter. All contractors have mobilized to site by March 2018. The progresses of works under different contracts during the period from March 2018 to 30th June 2018 are as follows-

(A) The contract Package No. W-01 (Ch 0+000 km to 5+000 km) has 5.00 km earth work for construction of embankment, construction of one 2-vent regulator at Kojjuri and construction of one 2-vent regulator at Rohindakandi. Out of these works, the contractor has already completed mobilization (100%) and the construction of 2-vent regulator at Kojjuri by 60%. The completed components of 2-vent Kojjuri regulator are-construction of base slab, return walls and wing walls up to 1-meter height and manufacturing of 10,469 (100%) no. of CC blocks (Size 30cm x 30cm x 30cm). For the Rohindakandi regulator, the contractor has already manufactured 3,400 no CC blocks (size-30cm x 30cm x 30cm) out of 10,469 no which mean 7% progress has been attained for this regulator. Rest of the CC block manufacturing work of Rohindakandi regulator is in progress. Work is also going on at Kojjuri regulator site to complete the rest of the work except CC blocks placing and chute block, baffle block and end sill casting. The contractor of W-01 has not yet started the original embankment work.

(B) The contract package no. W-02 (Ch 5+000 km to 8+500 km) has only 3.50 km earth worth work for construction of embankment as major component of work. The contractor has mobilized dredgers, bulkhead, chain dozer etc. for construction of embankment. The contractor has also prepared 400-meter bed and earthen dyke for filling dredged earth but could not attain progress in the work due to land acquisition problem. The SMO, Koitola is working to settle up the issue.

(C) The contract package no. W-03 (Ch 8+500 km to 12+500 km) has only 4.00 km earth work for construction of embankment as major component of work. The contractor has constructed site office and mobilized dredgers, bulkhead, chain dozer etc. for construction of embankment. The contractor has also prepared 700-meter bed and earthen dyke for filling dredged earth. But this contract too has not seen significant progress due to land acquisition problem. SMO, Koitola is working to settle the problem.

(D) The contract package no. W-04 (Ch 12+500 km to 17+300 km) has construction of one no 4-vent regulator and 4.80 km earth work for construction of embankment as major components of work. The contractor has constructed site office, manufactured 123 no. RCC pile out of 357 no. and manufactured 11,200 no. of CC blocks (size 30cm x 30cm x 30cm) out of 15,900 of the 4-vent regulator. The overall progress of the 4-vent regulator is about 10%. The contractor has also mobilized dredgers, bulkhead, chain dozer etc. for construction of embankment. The contractor is performing earth work in 400-meter length and has attained 50% of design height. The work of regulator and embankment are in progress. The problems with land acquisition persists here too but SMO, Koitola is working to settle up the issue.

(E) The contract package no. W-05 (Ch 17+300 km to 21+300 km) have construction of one no 4-vent regulator and 4.00 km earth work for construction of embankment as major component of work. The contractor is yet to start any activity on any component of the work.

2.3 OTHER PROJECT ACTIVITIES

Other project activities that are documented in the following sections include:

1. Supporting Service Studies
2. Environmental Management
3. Resettlement Services
4. Gender and Development
5. Community-Based Flood Risk Management
6. Capacity Building
7. Pilot Works
8. River Study
9. Feasibility Study for Tranche-2

2.3.1 Supporting Service Studies

There is currently a total of 6 service contracts for supporting studies. The status of all support studies is summarized in **Table 2.2**.

Table 2.2 Supporting Service Studies

Pkg.	Study Name	Present Status
S-01	Institutional Strengthening and Project Management Consultant (ISPMC)	The ISPMC signed a contract with BWDB on September 2015, and their work is estimated to be around 80 percent complete.
S-02	Resettlement Plan Implementation	The Resettlement INGO signed a contract with BWDB on 16 March 2016, and their work is estimated to be 80 percent complete (Section 2.3.3).
S-03	Livelihood Development Services	Essentially deferred to the next tranche.

S-04	CbFRM Services	A short-listed tender was received on 17 December 2017 and is currently being evaluated (Section 2.3.5).
S-05	Multi-Beam Echo Sounding (MBES) Survey	The Item has been cancelled by the PMO and omitted from the proposed 2 nd revised DPP.
S-06	Erosion Prediction Services	The progress of CEGIS for the Erosion Prediction Services Contract is as follows- <ul style="list-style-type: none"> • Riverbank Erosion Prediction Report for 2016, submitted on 19-Jun-2016 • Riverbank Erosion Prediction Report for 2017, submitted on 21-Jun-2017 • Riverbank Erosion Prediction Report for 2018, submitted on 11-Jun-2018 • Updating of tool of the existing erosion prediction tool, submitted on 15-Jan-2018

2.3.2 Environmental Management

The National Environmental Specialist monitored the EMP compliance at the adaptation site (Chauhali, W-11) in April 2018 and two embankment Packages, one at Koijuri (W-01) and other at Verakhola (W-04) in June 2018 in accordance with EMP indicated in the contracts. The Chauhali EMP compliance monitoring report was submitted to the PMO on 26-Apr-2018 (Ref: ISPMC-FRERMIP-493) and the Embankment EMP compliance monitoring reports have been submitted to the PMO on 30-Jun-2018 (Ref: ISPMC-FRERMIP-509/1). The other embankment packages were not monitored for EMP compliance as there was no significant progress in the physical work. Monitoring of spatial environmental changes along river banks with and without Geo-bag revetment continued through the ISPMC in-house arrangements.

It is planned that monitoring of spatial changes in the ecosystem of the bank line with and without revetment in selected FRERMIP area along the left bank of the Jamuna-Padma Rivers will continue during the next term.

2.3.3 Resettlement Services

During this quarter, RP for Harirampur was approved by ADB dated 22-05-2018; LAP of Harirampur has been submitted to the DC office dated 09-04-2018. Notice under section-7 has been served dated 17-06-2018 for Chauhali (Nagarpur, Tangail) LA Case 08/2016-2017 where total land required 15.34 Acres. For RBP work in Harirampur PLB-1, revised proposal has been submitted to the DC, Manikgonj office dated 09-04-2018. Details of compensation received by APs mentioned in **Table 2.3** and list of awareness meetings held mentioned in **Table 2.4**.

Table 2.3 Summary of Compensation Received by the APs

Project location	Cumulative status as of June 2018	Payment status	
		Resettlement grant	CCL
Zafargonj (1.4 Km)	Total APs - 90 APs All APs submitted application to DC office for CCL payment	88 APs received Resettlement Grant	02 APs received CCL
Zafargonj (0.6 Km)	Total APs - 26 All APs submitted application to DC office for CCL payment.	26 APs received Resettlement Grant	Not yet started

Chauhali RBP JLB-2	Total APs - 191 Structure Replacement Cost (RC) for 36 APs Cheque distributed on 25/04/2018	52 APs received Resettlement Grant & 36 APs received Replacement Cost (RC)	Not yet started
Embankment JRB-1 (23Km)	Resettlement grant budget for title & non-title holders submitted to PD office. Out of 3915 Notice Holders APs, 2970 APs applied for CCL Payment to DC office	Not yet started	515 APs received CCL payment from DC office
Harirampur	LAP has been submitted to DC office	Not yet started	Not yet started

Table 2.4 List of Awareness Meetings Held

Place	Nos. of Awareness Meetings held in this quarter
Zafarganj (1.4 km)	05 Public consultation meeting done
Zafarganj (600 m)	05 Public consultation meeting done
Chauhali	07 Public consultation meeting done
Embankment JRB-1	70 Public consultation meeting done
Harirampur	04 Public consultation meeting done

To make people aware, information brochure with list of documents needed for getting CCL payment have been distributed among all APs. INGO has formed 60 groups each consisting of 20 members to facilitate income generating activities. As per ADB requirement, INGO has established Grievance Redress Committee (GRC) signboards at all required sites. GRC meetings are held on need basis, not regularly. A total of 36 grievances were found in Chauhali JLB-2 site and a total of 11 grievances were found in Zaffarganj (1.4 Km) JLB-2 site.

2.3.4 Gender and Development

The updated GAP was approved by the MTR Mission. After that, there were several discussions held with ADB BRM Gender Specialist, ADB Gender Consultant and Gender Specialist of FRERMIP regarding reporting of gender component of FRERMIP as per revised GAP.

As per revised GAP, JRB-1 contractors of all packages agreed to recruit female labor wherever possible and provide facilities like toilets, drinking water, shed for break time rest etc. It was identified that the embankment construction work is being done by modern equipment so female labor can be recruited for turfing and relevant work which will start once the embankment construction is completed. So, there is very limited progress seen in regards of female labor recruitment. During this quarter 100 labors worked in work package 1 & work package 4 where 10 labors are female (10%).

The GAP progress report, compiled as per approved revised GAP is provided in **Appendix-F**.

2.3.5 Community-Based Flood Risk Management (CbFRM)

Beginning of the current quarter, a review meeting was held with ADB procurement staff to clarify issues on submission-2 and processed concurrence to the proposal validity extension by the

shortlisted consultants. On 26 April 2018, submission-2 was resubmitted to ADB followed by receipt of 'no objection' on 8 May 2018 to proceed with processing the submission-3 including evaluation of financial proposal of the lone technically qualified consultant named "Bangladesh Disaster Preparedness Centre". On completion of all procedural formalities, including opening and evaluating the above financial proposal by the evaluation committee, submission-3 was submitted on 10 June 2018 to PMO followed by receipt of it by ADB on 13 June 2018. Following the clarification of the full name of technically qualified consultant, ADB provided "no objection" to financial proposal evaluation on 28 June 2018 with a request to process contract negotiation with Bangladesh Disaster Preparedness Centre as part of processing the last submission form-4.

Following ADB's no objection to the above, it is expected to finally engage the consultant for this sub-component in early August 2018 in the next quarter.

The detailed timeline of the CbFRM progress is shown in the **Table 6.4 of Appendix-E**.

2.3.6 Capacity Building

Local Trainings

The PMO has prioritized the local trainings and approved under FY 2017-2018. The trainings will be executed in July 2018 with particular emphasis on ADB & GOB guidelines/requirement for BWDB Engineer and officials under BWDB Capacity Development Program of Flood and River bank Erosion Risk Management Investment Program (FRERMIP) as mentioned below:

Riverbank Protection

The Department of Water Resources Engineering (DWRE), BUET is conducting training course on "Riverbank Protection" and BUET has agreed to conduct the above-mentioned training program at BUET. The contract agreement was signed to execute the 5 days training (One batch with 20 participants).

Riverbank Geotechnical Stability

BUET is conducting the training course on "Riverbank Geotechnical Stability" at BUET. They are preparing the course accordingly (one batch with 20 participant).

Environment

Centre for Environmental and Geographic Information Services (CEGIS), Dhaka, Bangladesh is conducting the training course on Environmental Impact Assessment and accordingly the contract agreement has been signed to execute the 5 days training (One batch with 15 participants).

Resettlement

Centre for Environmental and Geographic Information Services (CEGIS), Dhaka, Bangladesh is conducting the Training on Resettlement (Titled as Land Acquisition & Resettlement Plan Implementation) for BWDB and accordingly the contract agreement has been signed to execute the 5 days training (One batch with 15 participants).

Survey and Evaluation

Institute of Water Modeling (IWM), Dhaka, Bangladesh is conducting training course on Survey and Evaluation (Topographical, Morphological and Hydrometric data Collection) for BWDB and accordingly the contract agreement has been signed to execute the 11 days training (With 10 participant).

In a meeting held on 10 June 2018 at PMO between PD and PM of DDM, it was decided, amongst others, to postpone DDM capacity development training this fiscal year because of time constraint as well as fund shortage. It would now be held in next fiscal year.

The summary of the Capacity Building Progress is given in the **Table 2.5**. The details of the Capacity Building Progress can be found in the **Appendix-H**.

Table 2.5 Summary of Capacity Building Progress as per DPP

Type of Training	Implementation Progress				
	Total	Discussed	Prepared	Approved	Completed
PMO Program					
A. Local Training	34	34	15	9	5
B. Overseas Training	2	2	2	2	2
C. Overseas Tours	4	4	3	2	2
PMO Totals	40	40	20	13	9

2.3.7 Pilot Works

The tender for the Pilot Works package was received on 25 June 2018. After the evaluation process, the contract is expected to be awarded next quarter. The details of the bidding process of the pilot works can be found in the Table B-2 of Appendix-B.

2.3.8 River Study

As part of the FRERMIP River Study, a large number of Technical Notes have been prepared. It is intended that these Technical Notes will form Annexes to the four main study documents:

- (i) Strategic Framework
- (ii) River Stabilization Plan – Jamuna and Padma River Stabilization
- (iii) Preliminary Regional Master Plan – North Central Region Development
- (iv) Strategic Environmental and Social Assessment

Apart from presenting the context at two national workshops in 2016 and 2017, the Strategic Framework was approved by the Technical Advisory Committee in September 2017 and the SESA was reviewed by a Dutch Government organization and has been update during this quarter reflecting the latest standard of the river stabilization plan and the regional master plan.

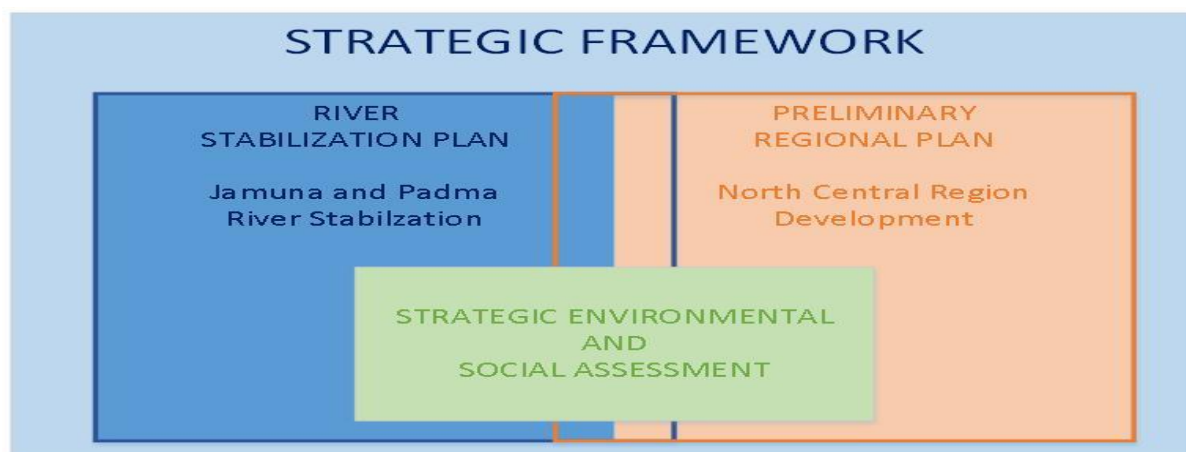


Figure 2.3 Structure of Main Study Documents

The Technical Notes are under formatting this quarter (and the next) for final submission. The **Appendix-D** portrays the details of the status of the technical notes.

2.3.9 Feasibility Study

Design

In the course of preparation of the feasibility study for Tranche-2, the design documents for the work packages have been updated in close cooperation with the BWDB design office. The update process aimed to reach a design that considers the standards and practices of the BWDB, while simultaneously incorporating international best practice and allowing for a practical and modernized design. In order to achieve this, a number of meetings were held with the BWDB design office, in which, among others, the embankment cross sections, project locations and regulator design were agreed. (Minutes of the meetings are summarized in **Appendix-E**)

The process led to the re-submission of the Tranche-2 works design packages:

- (i) Bank protection design for works in Enayetpur, Benotia and Salura (JRB-1) and Pukuriya, Upstream Chauhali and Omarpur (JLB-2) on 31 May 2018
- (ii) Embankment in PLB-1 from Harirampur to Dohar on 11 June 2018
- (iii) Embankment in JRB-1 from Tranche-1 embankment to Shahjadpur on 14 June 2018

Responses to the comments received by the BWDB regarding the Salimabad char development and flow re-distribution have been prepared and submitted on 31 May 2018.

A further meeting was carried out with the BWDB design office on 26 June 2018 regarding the launching behavior of the geobag aprons. No formal approval of the designs has been made to date.

The detailed timeline of the design work progress of Tranche-2 Feasibility Study is shown in the **Table 6.1, Table 6.2, Table 6.3 of Appendix-E.**

Environmental Management

After incorporating ADB's review (two times), EIA had been submitted to ADB and PMO on February 2018. By the end of the reporting period approval of the EIA report by both the parties was still awaited. Meanwhile, efforts were continued on a limited scale to study certain aspects environmental/fisheries aspects of the aquatic ecosystems of the Tranche-2 area focusing particularly on the spatial changes in the river-floodplain connectivity and their impacts on fisheries along the Jamuna-Padma left bank line (not studied earlier).

Discussions on the final design of the regulators-cum-fish passes for Tranche-2 were continued. A term of reference was prepared for CEGIS to analyze satellite information to support the project's intended environmental and social baseline study for Tranche-2. In mid-April a one-day field trip was conducted to check the location of planned project-funded regulator/fish passes in the project area (Ratankandi) to be implemented under Tranche-2. List and locations of 12 fish sanctuaries to be established in the project floodplain area under Tranche-2 were finalized.

On 4 June 2018 the TL and the environmental team gave a presentation to the Isabela Foundation, an NGO focusing on sustainably managing the marine and coastal environment including the inland river ecosystems. As the NGO has facilities including a river research vessel, expertise and other needed facilities to conduct river ecosystem study, possibilities of involving the NGO in the Tranche-2 baseline Survey were explored.

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; on the 12th and 13th floor respectively. The ISPMC River Study and Feasibility teams are located at the Banani Office: House 47 (8th Floor) Road 27, Banani, Dhaka. Some responsibilities of Koitola construction division of BWDB, Bera, Pabna have been transferred to other O&M Divisions by the office order Memo No. 11/BWDB/Sec/DS (OD) on 06 March 2018.

Appendix-C Utilization of Consultant Person-Months details the time spent by all international and national specialists to the end of the reporting period, which includes information from the Variation Order-2 (VO) for the ISPMC. According to the proposed Variation Order-2, up to the end of the June 2018, a total of 41 international specialists have expended 248 of 309 total person-months (80% of total), and 35 national specialists have expended 361.8 of 495.5 person-months (73% of total).

3.2 Compliance with Loan Agreement Covenants

Schedule 5 of the FRERMIP Loan Agreement (**Ref. 8**) contains a set of 30 specific covenants to be followed during project implementation. These 30 covenants are documented in **Appendix-G**, together with a column for compliance, and a column that provides evidence to support the compliance value. Out of the 30 covenants: 22 fully comply, 7 do not fully comply, and 1 are non-applicable. Of the 7 covenants that do not fully comply: 2 refer to BWDB and DDM staffing, 3 with resettlement issues, and 2 with contractual specifications.

3.3 Important Events During This Quarter:

13-Apr-2018	Field Trip of Chauhali committee
14 & 15-May-2018	Meeting between Design Office, BWDB and ISPMC on the design updates of embankment and regulator of Tranche-2
22-May-2018	Meeting between Design Office, BWDB and ISPMC on the design updates of riverbank protection works of Tranche-2
31-May-2018	Submission of design of Bank protection design for Tranche-2 works in Enayetpur, Benotia and Salura (JRB-1) and Pukuriya, Upstream Chauhali and Omarpur (JLB-2) by ISPMC
11-Jun-2018	Submission of design of Embankment in PLB-1 of Tranche-2 from Harirampur to Dohar by ISPMC
14-Jun-2018	Submission of design of Embankment in JRB-1 of Tranche-2 from Tranche-1 embankment to Shahjadpur
21-Jun-2018	Notification of award of Package W-15: Construction of Inspection Bungalow
26-Jun-2018	Meeting between Design Office, BWDB and ISPMC about river training works for Tranche-2

4. FINANCIAL ARRANGEMENTS

4.1 *Statements of Expenditure*

Using the project implementation database, and with help from the FRERMIP PMO, the ISPMC monitors project financial progress including: all ADB (and GON) disbursements (deposits) to the project, BWDB PMO expenditures paid to contractors and suppliers, and all reimbursement bill applications approved by ADB.

Table A-5 shows cumulative totals to date for progress, expenses and reimbursements, for all DPP categories. This table also includes the 2017/18 fiscal targets (and fiscal progress) as define in the provisional ADP (Annual Development Program).

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 (deposits) 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 is also available in **Table 0.1** which shows that the progress of PMO expenditure is 65%, the ADB disbursement is 50% and the total reimbursement is 37%. The history of project disbursements and reimbursements (US\$) is shown in **Figure 2.1** in **Section 2.1**.

5. ISSUES FOR DISCUSSION AND AGREEMENT

5.1 Extension of Time

The completion of key project activities as per Design and Monitoring Framework (DMF) requires the extension of the project by one year. This period basically compensates for the start-up delay in 2014/15. The key activities, which are required to complete are:

- (i) Completion of more than 20km of embankment works
- (ii) Completion of pilot works, one contract being evaluated, while one tender is pending,
- (iii) Completion of non-structural DDM activities.

In order to have some buffer time for construction completion, the proposed Project-1 extension is to complete all work activities by 31-Mar-2020 and close the loan by 30-Jun-2020.

This also allows the overlap with Tranche-2, which is currently scheduled to be approved during the second quarter 2019 and would basically overlap during the 2020 construction season.

Issues pertaining to the extension is the limited budget without being able to increase allocations for adaptation works and consulting services (NGOs, ISPMC).

5.2 Construction of Embankment

The 5 work contracts for the construction of Kojuri Embankment have been awarded during the last quarter in early March. All of the contractors have mobilized in the site and two of them have made some progress in the construction of regulator work. But, due to resettlement and land acquisition activities, the earthwork for embankment construction is yet to make any significant progress. Reliable completion will only be possible after approval of the second revision of the DPP and when the project is extended by one year.

5.3 PMO Under-Staffing

The PMO, BWDB of FRERMIP is understaffed. **Table 5.1** shows the proposed and actual staffing for senior PMO personnel. It is not possible for the current reduced PMO staff to properly handle all their required duties.

Table 5.1 Proposed and Actual PMO Staffing

Position	Proposed ¹	Current (Jun-2018)
Project Director	1	1
Superintending Engineer	2	0
Executive Engineer	4	2
Assistant Director	1	1
Deputy Director (Accounts)	1	1
System Analyst	1	0
Sub-Divisional Engineer	2	1
Assistant Engineer	2	1
Totals	14	7

1. Source: Revised DPP

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
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7. ADB, 2012: Involuntary Resettlement Safeguards, A Planning and Implementation Good Practice Sourcebook – Draft Working Document, Asian Development Bank, 2012 November
8. ADB, 2014: Loan Agreement, Flood and Riverbank Erosion Risk Management Investment Program - Project 1, between People's Republic of Bangladesh and Asian Development Bank, 2014 August 14

APPENDICES

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Table B-7	:	Reimbursement Summary, by Application
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Appendix-E	:	Status of Different Project Components
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Appendix-G	:	Compliance with Loan Agreement Covenants
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Appendix-J	:	Photo Annex

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	8.8	0.0	8.8
	New: Embank	km	0.0	0.0	0.0	12.5	0.0	12.5
	New: Infrastr	BDTM	0.0	0.0	7.8	0.0	0.0	7.8
	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	10.8	0.0	7.0	17.8
A3: Emerg & Adaptation	Emerg: AdpRivProt	BDTM	80.9	0.0	0.0	0.0	0.0	80.9
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	0.0	0.0	1.3	0.0	0.0	1.3
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	4.4	0.0	0.0	0.0	0.0	4.4
C3: Survey Equipment	Procure: Equip	BDTM	6.7	0.0	0.0	0.0	0.0	6.7
C4: DDM Office Eqpt	Procure: Equip	BDTM	0.0	0.5	0.0	0.0	0.0	0.5
D: Consulting Services								
D1: ISPM; Consultant Serv.	Service: Feasi.Stud	BDTM	170.0	0.0	0.0	0.0	0.0	170.0
	Service: Instit.Cap	BDTM	387.0	0.0	0.0	0.0	0.0	387.0
	Service: Riv.Stabil	BDTM	461.0	0.0	0.0	0.0	0.0	461.0
D2: INGO BWDB	Service: Resettle.S	BDTM	16.2	0.0	0.0	0.0	0.0	16.2
D3: INGO DDM	Service: CBFRM	BDTM	0.0	64.4	0.0	0.0	0.0	64.4
D4: Survey & Investigation	Service: Eros.Pred	BDTM	29.9	0.0	0.0	0.0	0.0	29.9
E: Capacity Development								
E1: BWDB Training & Study	Service: Training	BDTM	63.9	0.0	0.0	0.0	0.0	63.9
F: Land Acqn & Resettle								
F1: Land Compensation	Compensate: Land.Acqu	BDTM	2,083.	0.0	0.0	0.0	0.0	2,083.
F2: Resettle Benefits	Compensate: Resettle.B	BDTM	28.4	0.0	0.0	0.0	0.0	28.4
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	31.0	0.0	0.0	0.0	0.0	31.0
G3: Office Opns DDM	Service: Prog.Mngt	BDTM	0.0	5.1	0.0	0.0	0.0	5.1
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	12.1	0.0	0.0	0.0	0.0	12.1
	Compensate: Interest	BDTM	199.2	0.0	0.0	0.0	0.0	199.2

Abbreviations:

DDM - Department of Disaster Management

MAN - Manikganj SMO

KOI - Koitola SMO

TAN - Tangail SMO

The unit BDTM refers to an estimated 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	486	0	486
	New: Embank	0	0	0	463	0	463
	New: Infrastr	0	0	7	0	0	7
	New: Regulator	0	0	0	254	0	254
A2: Riverbank Prot Works	New: Revetment	0	0	1,010	0	890	1,899
A3: Emerg & Adaptation	Emerg: AdpRivProt	99	0	0	0	0	99
A4: Pilot Land Recovery	New: RivTrnWrk	380	0	0	0	0	380
							3,588
B: Materials							
B1: Geotextile, Civil Works	Procure: GeoBag	0	0	788	0	365	1,153
B2: Geotextile, Emerg	Procure: AdpGeoBag	0	0	259	0	0	259
							1,411
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	0	0	0	0	0
							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: 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	30	0	0	0	0	30
							1,129
E: Capacity Development							
E1: BWDB Training & Study	Service: Training	64	0	0	0	0	64
							64
F: Land Acqn & Resettle							
F1: Land Compensation	Compensate: Land.Acqu	2,083	0	0	0	0	2,083
F2: Resettle Benefits	Compensate: Resettle.B	28	0	0	0	0	28
							2,111
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		4,098	70	2,063	1,203	1,255	8,689

Abbreviations:

DDM - Department of Disaster Management

MAN - Manikganj SMO

KOI - Koitola SMO

TAN - Tangail SMO

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

Code	Categories	Total Cost Est.	Value of Physical Progress	PMO Expenses	all Values in BDT Mil		
					Reimbursed Amount		Total
					ADB	GON	
Component							
1	Works	3,588.1	2,123.1	2,061.2	1,586.7	0.0	1,586.7
2	Materials	1,411.2	1,325.9	1,278.8	1,105.4	0.0	1,105.4
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	0.5	0.5	0.5	0.0	0.5
4	Resettlement	28.4	28.4	28.1	2.0	0.0	2.0
5	Training	63.9	57.5	51.4	41.8	0.0	41.8
6A	Consulting Services - Project Management - BWDB	1,018.2	823.0	552.3	67.1	382.2	449.4
6B	Consulting Services - NGO Services - BWDB	46.1	41.2	34.3	21.6	0.0	21.6
6C	Consulting Services - Project Management - DDM	64.4	0.0				
7A	Project Management - BWDB	38.9	27.4	23.7	16.1	0.0	16.1
7B	Project Management - DDM	5.1	3.6	1.2	0.4	0.0	0.4
8	Interest	199.2	139.4	120.0			
9	Unallocated	2,178.9	2,035.8	1,443.2			
Grand Total		8,688.5	6,651.5	5,640.8	2,853.7	382.2	3,235.9

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

Code	Categories	Total Cost Est.	Value of Physical Progress	all Values in BDT Mil PMO Expenses	Reimbursed Amount		
					ADB	GON	Total
Revenue Component							
4826	Interest & Service Charge for Netherland Grant	199.2	139.4	120.0			
4840	Capacity Development Program	63.9	57.5	51.4	41.8	0.0	41.8
4849	Resettlement Support Program	28.4	28.4	28.1	2.0	0.0	2.0
4874	ISPMC; Implementation Consultant Services	387.3	309.9	210.1	25.5	145.4	170.9
4874	ISPMC; River Stabilization and Land Recovery Study	461.2	369.0	250.2	30.4	173.1	203.6
4874	ISPMC; Feasibility of Tranch-2/3 Project	169.6	144.2	92.0	11.2	63.7	74.9
4874	Resettlement Implementation Support	16.2	11.3	10.3	5.9	0.0	5.9
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	29.9	29.9	24.0	15.8	0.0	15.8
4700	PMO Salaries and Allowances	83.7	56.9				
4800	PMO Operational Expenses	30.9	21.0	19.2	15.6	0.0	15.6
4899	PMU DDM Oprational Expenses	5.1	3.6	1.2	0.4	0.0	0.4
Revenue Totals		1,547.8	1,177.4	811.0	149.0	382.2	531.2
Capital Component							
6807	Transport Vehicles (Jeep 5, Motorcycle 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	0.5	0.5	0.5	0.0	0.5
6851	Survey Equipment	6.7	6.7	6.7	6.4	0.0	6.4
6901	Land Acquisition (136 ha)	2,083.1	1,979.0	1,443.2			
7016	Construction of Inspection Bangalow at Manikganj	7.0	0.7	0.7			
7041	Regulator (new 4 and repair 3) in JRB1	253.7	47.4	34.3			
7081	Embankment (23 km) along RB Jamuna and LB Baria-Hurasagar, with Road (5 km)	949.2	115.9	117.9			
7081	Protective Works at RB Jamuna at Kaijuri, LB Jamuna at Chaulhali, Jafforganj & Harirampur (15 km)	3,052.2	3,052.2	2,920.4	2,601.8	0.0	2,601.8
7081	Land Recovery/River Training Works	379.8	0.0				
7081	Adaptive Protection and Emergency	357.4	232.8	266.7	90.3	0.0	90.3
7091	CD and SD	12.1	0.0				
Capital Totals		7,140.7	5,474.1	4,829.8	2,704.6	0.0	2,704.6
Grand Total		8,688.5	6,651.5	5,640.8	2,853.7	382.2	3,235.9

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	139.4	120.0	0.0
4840	Capacity Development Program	76.9	63.9	57.5	51.4	41.8
4849	Resettlement Support Program	28.4	28.4	28.4	28.1	2.0
4874	ISPMC; Implementation Consultant Services	387.3	387.3	309.9	210.1	170.9
4874	ISPMC; River Stabilization and Land Recovery Study	461.2	461.2	369.0	250.2	203.6
4874	ISPMC; Feasibility of Tranch-2/3 Project	169.7	169.6	144.2	92.0	74.9
4874	Resettlement Implementation Support	17.5	16.2	11.3	10.3	5.9
4874	Livelihood Support Program	64.7	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
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	29.9	29.9	24.0	15.8
4700	PMO Salaries and Allowances	83.7	83.7	56.9	0.0	0.0
4800	PMO Operational Expenses	30.9	30.9	21.0	19.2	15.6
4899	PMU DDM Operational Expenses	5.1	5.1	3.6	1.2	0.4
		1,652.8	1,547.8	1,177.4	811.0	531.2
Capital						
6807	Transport Vehicles (Jeep 5, Motorcycle 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	0.5	0.5	0.5
6851	Survey Equipment	6.7	6.7	6.7	6.7	6.4
6901	Land Acquisition (136 ha)	2,083.1	2,083.1	1,979.0	1,443.2	0.0
7016	Construction of Inspection Bangalow at Manikganj	7.8	7.0	0.7	0.7	0.0
7041	Regulator (new 4 and repair 3) in JRB1	225.9	253.7	47.4	34.3	0.0
7081	Embankment (23 km) along RB Jamuna and LB Baria-Hurasagar, with Road (5 km)	995.2	949.2	115.9	117.9	0.0
7081	Protective Works at RB Jamuna at Kajjuri, LB Jamuna at Chaulhali, Jafforganj & Harirampur (15 km)	3,000.8	3,052.2	3,052.2	2,920.4	2,601.8
7081	Land Recovery/River Training Works	379.8	379.8	0.0	0.0	0.0
7081	Adaptive Protection and Emergency	280.9	357.4	232.8	266.7	90.3
7091	CD and SD	12.1	12.1	0.0	0.0	0.0
		7,032.2	7,140.7	5,474.1	4,829.8	2,704.6
Totals		8,685.0	8,688.5	6,651.5	5,640.8	3,235.9

Appendix-B Work Program Details

Table B-1 Design Progress Details

Description	Design Data Collection			Prog (%)		Remarks
	Total	Surv	Hydraul	Geotech	Desn	
Component A: Civil Works						
BWDB PMO						
Emerg: AdpRivProt: 44.75 BDTM: Emergency/Adaptive 1: Riverbank Protection	c	c	na	100	100	Desn. & Dwg. Complete
Emerg: AdpRivProt: 18.36 BDTM: Kojihuri-Benotia Revetment: Riverbank Protection	n	n	n	0	0	Design Not Yet Started
Emerg: AdpRivProt: 17.82 BDTM: Emergency/Adaptive 3: Riverbank Protection	n	n	n	0	0	Design Not Yet Started
New: RivTrnWrk: 380 BDTM: River Training Pilot Work: & Land Recovery	c	c	na	100	100	Desn. & Dwg. Complete
BWDB PMO Totals	4	2	2	2	2	
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: 4 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	na	100	100	Desn. & Dwg. Complete
New: Regulator: 1 No: Kaijuri Reg 2V 1.5x1.8m: Kojjuri	c	c	c	100	100	Desn. & Dwg. Complete
New: Regulator: 1 No: Rohindakandi Reg 2V 1.5x1.8m: Ruhindakandi	c	c	c	100	100	Desn. & Dwg. Complete
New: Regulator: 1 No: Verakhola Reg 2V 1.5x1.8m: Verakhola	c	c	c	100	100	Desn. & Dwg. Complete
New: Regulator: 1 No: Andhar Manik Reg 4V 1.5x1.8m: Andharmanik	c	c	c	100	100	Desn. & Dwg. Complete
Koitola SMO Totals	9	9	9	9	9	
Manikganj SMO						
New: Infrastr: 7.8 BDTM: Construction of Inspection Bungalow	c	na	na	100	100	Desn. & Dwg. Complete
New: Revetment: 2 km: Revetment (2 km): Zaffarganj; km 6.1-8.1	c	c	na	100	100	Desn. & Dwg. Complete
New: Revetment: 3.5 km: Revetment (3.5 km): Harirampur; km 0-3.5	c	c	na	100	100	Desn. & Dwg. Complete
New: Revetment: 5.3 km: Revetment (3.5 km): Harirampur; km 3.5-7	c	c	na	100	100	Desn. & Dwg. Complete
Manikganj SMO Totals	4	4	4	4	4	
Tangail SMO						
New: Revetment: 2.5 km: Revetment (2 km): Chauhali; km 0- 2.5	c	c	na	100	100	Desn. & Dwg. Complete
New: Revetment: 4.5 km: Revetment (4.5 km): Chauhali; km 2.5-7.0	c	c	na	100	100	Desn. & Dwg. Complete
Tangail SMO Totals	2	2	2	2	2	
Component Totals	19	17	17	17	17	

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	Eol Notice	Eol Received	BWDB Eval	Eol Eval.	ADB Bid Doc.	Tender Notice	Tender Received	Eval. Comp.	ADB Concur.	Appr. Compl. Authority	Notif. Award
Goods; B: Materials														
G-01	Supply of Geobags; Chouhali, Sirajganj							26Dec14	31Dec14	19Feb15	04Aug15	29Apr15	07Jan15	01Jul15
G-02	Supply of Geobags; Zaforganj, Harirampur, Manikganj							26Dec14	31Dec14	19Feb15	04Aug15	29Apr15	07Jan15	01Jul15
G-03	Supply of Geobags; Harirampur, Manikganj							19May15	19May15	06Jul15	08Dec15	27Aug15	22Sep15	27Sep15
G-04	Supply of Geobags; Chauhali-Harirampur-Kojhuri-Benotia							13Sep16	27Sep16	14Nov16	19Dec16	20Jan17	31Jan17	12Feb17
Component Totals		0	0	0	0	0	0	4	4	4	4	4	4	4
Goods; C: Vehicles & Equipment														
G-05	2016 Supply of Jeep;							26Feb16	29Feb16	31Mar16	13Apr16	19Apr16	19Apr16	07Jun16
G-06.1	2015 Supply of Jeeps;								01Jun16	05Jun16	09Jun16	12Jun16	16Jun16	30Jun16
G-06.2	2016 Supply of Jeep;								10Mar16	24Mar16	14Apr16	21Apr16	28Apr16	05May16
G-06.3	2016 Supply of Motorcycles;								10Mar16	24Mar16	14Apr16	21Apr16	28Apr16	05May16
G-07.1	2015 Office Equipment; BWDB PMO								13Apr15	17May15				28May15
G-07.2	2016 Office Equipment; BWDB PMO							10Apr15	03Jan16	04Feb16	29Feb16	28Mar16	28Mar16	30Mar16
G-08	2016 Supply of Survey Equipments;							10Apr15	03Jan16	04Feb16	29Feb16	14Mar16	14Mar16	16Mar16
G-09	2017 Supply of Office Equip; DDM; DDM								01Jun17	08Jun17	08Jun17	15Jun17	22Jun17	22Jun17
Component Totals		0	0	0	0	0	0	3	8	8	7	7	7	8
Services; D: Consulting Services														
S-01	ISPMC; Tranche 1;			23Oct14	15Dec14				01Apr15	01Jun15				08Sep15
S-02	Resettlement Implementation Support;		22Apr15	09Jun15	09Jul15	24Aug15		22Oct15	11Nov15	10Dec15	11Jan16	04Mar16	15Mar16	16Mar16
S-04	Community Based Flood Risk Mngmt;	30Sep15	01Mar16	28Mar16	26Apr16	27Mar17	23Oct17	23Oct17	12Nov17	17Dec17				
S-06.1	2015 Erosion & Morphological Chg;								23Dec14	01Jan15				29Jan15
S-06.2	2016 & 2017 Erosion Prediction;		23Feb16						23Feb16	15Mar16	24Mar16	28Mar16	09May16	10May16
Component Totals		1	3	3	3	2	1	2	5	5	2	2	2	4
Works; A: Civil Works														
W-01	Embankment, & 2 Reg.; km 0-5							06Nov17	07Nov17	11Dec17	27Dec17	21Jan18	12Feb18	12Feb18
W-02	Embankment; km 5-8.5							06Nov17	07Nov17	11Dec17	27Dec17	21Jan18	23Jan18	29Jan18
W-03	Embankment; 8.5-12.5							06Nov17	07Nov17	11Dec17	27Dec17	21Jan18	23Jan18	29Jan18
W-04	Embankment & 1 Regulator; km 12.5-17.3							06Nov17	07Nov17	11Dec17	27Dec17	21Jan18	12Feb18	12Feb18
W-05	Embankment & 1 Regulator; km 17.3-21.3							06Nov17	07Nov17	11Dec17	27Dec17	29Jan18	20Feb18	22Feb18
W-06	Revetment; Jamuna at Chauhali, R1; km 0-2.5							30Mar15	04May15	08Jun15	28Jul15	14Aug15	22Sep15	23Sep15
W-07	Revetment; Jamuna at Chauhali, R2; km 2.5-7.0							30Mar15	04May15	08Jun15	28Jul15	14Aug15	22Sep15	23Sep15
W-08	Revetment; Jamuna at Zaffarganj, km 6.1-8.1							11May15	22Jun15	27Jul15	08Oct15	04Dec15	03Feb16	03Feb16
W-09	Revetment; Padma at Harirampur, R1; km 6.7-10.2							11May15	22Jun15	27Jul15	04Nov15	10Dec15	30Dec15	30Dec15
W-10	Revetment; Padma at Harirampur, R2; km 3.2-6.7							11May15	22Jun15	27Jul15	04Nov15	10Dec15	30Dec15	30Dec15
W-11	Emergency/Adaptive 1; Riverbank Protection							31Dec17	14Jan18	15Feb18	25Feb18	01Mar18	14Mar18	19Mar18
W-12	Emergency/Adaptive 2; Kojhuri-Benotia Revetment													
W-13	Emergency/Adaptive 3; Riverbank Protection													
W-14	River Training Pilot Work;	04Oct17						21May18	21May18	25Jun18				
W-15	Construction of Inspection Bungalow; Manikgonj		05Apr18					15Apr18	15Apr18	17May18	29May18	07Jun18	11Jun18	11Jun18
Component Totals		1	1	0	0	0	0	13	13	13	12	12	12	12
Project Totals		2	4	3	3	2	1	22	30	30	25	25	25	28

Abbreviations: ADB - Asian Development Bank
 BDT - Bangladesh Taka
 Comp. - Completion
 Concur. - Concurrence
 Doc. - Document
 Eval. - Evaluation
 Eol - 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					Remarks
				during Qtr%	30-Jun-2018 Current Qtr (%)	30-Sep-2018 Next Qtr (%)			
Goods									
B: Materials									
G-01	Supply of Geobags: Chouhali, Sirajganj	BJ Geo-Textile	365.0	0	100	365.0	100	365.0	Implementen Complete
G-02	Supply of Geobags: Zaforganj, Harirampur, Manikganj	BJ Geo-Textile	472.6	0	100	472.6	100	472.6	Implementen Complete
G-03	Supply of Geobags: Harirampur, Manikganj	DFL-DCTL(JV)	315.1	0	100	315.1	100	315.1	Implementen Complete
G-04	Supply of Geobags: Chauhali-Harirampur-Kojhuri-Benotia	DIRD	258.5	0	67	173.2	100	258.5	Implementation Started
Component Totals			1,411.2			1,325.9		1,411.2	
C: Vehicles & Equipment									
G-05	2016 Supply of Jeep:	Pacific Motors Ltd.	5.5	0	100	5.5	100	5.5	Implementen Complete
G-06.1	2015 Supply of Jeeps:	Progoti Industries	20.8	0	100	20.8	100	20.8	Implementen Complete
G-06.2	2016 Supply of Jeep:	Progoti Industries	6.9	0	100	6.9	100	6.9	Implementen Complete
G-06.3	2016 Supply of Motorcycles:	Atlas Bangladesh Ltd.	1.3	0	100	1.3	100	1.3	Implementen Complete
G-07.1	2015 Office Equipment: BWDB PMO	Logitech Computer Ltd.	2.2	0	100	2.2	100	2.2	Implementen Complete
G-07.2	2016 Office Equipment: BWDB PMO	Source & Service	2.2	0	100	2.2	100	2.2	Implementen Complete
G-08	2016 Supply of Survey Equipments:	Logitech Computers Ltd.	6.7	0	100	6.7	100	6.7	Implementen Complete
G-09	2017 Supply of Office Equip; DDM: DDM	DDM	0.5	0	100	0.5	100	0.5	Implementen Complete
Component Totals			46.1			46.1		46.1	
Goods Totals			1,457.4			1,372.1		1,457.4	
Services									
D: Consulting Services									
S-01	ISPMC; Tranche 1:	NHC (JV) Mott MacDonald	1,018.2	5	81	823.0	86	873.9	Satisfactory Progress
S-02	Resettlement Implementation Support:	VRDS-HCL-JV	16.2	5	70	11.3	75	12.2	Satisfactory Progress
S-04	Community Based Flood Risk Mngmt:		64.4	0	0	0.0	0	0.0	Tender Received
S-06.1	2015 Erosion & Morphological Chg:	CEGIS	4.6	0	100	4.6	100	4.6	Implementen Complete
S-06.2	2016 & 2017 Erosion Prediction:	CEGIS	25.3	10	100	25.3	100	25.3	Implementen Complete
Component Totals			1,128.6			864.2		915.9	
Services Totals			1,128.6			864.2		915.9	
Works									
A: Civil Works									
W-01	Embankment, & 2 Reg.: km 0-5	Md. Moyenuddin (Bashi)-Gol	323.0	11	11	36.2	22	72.3	Satisfactory Progress
W-02	Embankment: km 5-8.5	Taher Brothers Ltd.-MA Ente	118.2	5	5	5.9	20	23.6	Construction Started
W-03	Embankment: 8.5-12.5	Taher Brothers Ltd.-MA Ente	112.3	5	5	5.6	20	22.5	Construction Started
W-04	Embankment & 1 Regulator: km 12.5-17.3	HB-SSECL (JV)	362.4	30	30	109.4	63	229.0	Satisfactory Progress
W-05	Embankment & 1 Regulator: km 17.3-21.3	Md. Moyenuddin (Bashi)-Gol	287.1	2	2	6.2	22	63.6	Satisfactory Progress
W-06	Revetment: Jamuna at Chauhali, R1; km 0-2.5	I-J (JV)	444.4	0	100	444.4	100	444.4	Construction Complete
W-07	Revetment: Jamuna at Chauhali, R2; km 2.5-7.0	I-J (JV)	445.2	0	100	445.2	100	445.2	Construction Complete
W-08	Revetment: Jamuna at Zaffarganj, km 6.1-8.1	WEL-NZK-PTSL (JV)	492.8	0	100	492.8	100	492.8	Construction Complete
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-11	Emergency/Adaptive 1: Riverbank Protection	M/S. Hassan & Brothers	62.7	90	95	59.5	100	62.7	Satisfactory Progress
W-12	Emergency/Adaptive 2: Kojhuri-Benotia Revetment		18.4	0	0	0.0	0	0.0	Design Not Yet Started
W-13	Emergency/Adaptive 3: Riverbank Protection		17.8	0	0	0.0	0	0.0	Design Not Yet Started
W-14	River Training Pilot Work:		379.8	0	0	0.0	0	0.0	Tender Received
W-15	Construction of Inspection Bungalow: Manikgonj	MS Builders	7.0	10	10	0.7	30	2.1	Construction Started
Component Totals			3,588.1			2,123.1		2,375.4	
Works Totals			3,588.1			2,123.1		2,375.4	
ProjectTotals			6,174.1			4,359.3		4,748.7	

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	Supply of Geobags; Chauhali & Harirampur	258.52
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; DDM	0.50
Goods Total		1,457.37
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
Component D3: Consulting Services INGO DDM		
S-04	Cb Flood Risk Mngmt;	64.40
Component D4: Consulting Services Survey & Investigation		
S-06.1	2015 Erosion & Morphological Chg; Jamuna, Ganges, Padma R	4.60
S-06.2	2016 & 2017 Erosion Prediction;	25.25
		29.85
Services Total		1,128.64
Works		
Component A1: Civil Works Embankment Works		
W-01	Embankment (5 km); Kajjuri - Bhatpara; km 0-5 Kajjuri Reg 2V 1.5x1.8m; Kojjuri Rohindakandi Reg 2V 1.5x1.8m; Ruhindakandi	322.98
W-02	Embankment (3.5 km); Bhatpata - Gala; km 5-8.5	118.24
W-03	Embankment (4 km); Gala - Verakhola; km 8.5-12.5	112.28
W-04	Embankment Reconst. (4.8 km); Baghabari - Verakhola; km 12.5-17.3 Verakhola Reg 2V 1.5x1.8m; Verakhola	362.36
W-05	Embankment Reconst. (5.7 km); Baghabari - Verakhola; km 17.3-23 Andhar Manik Reg 4V 1.5x1.8m; Andharmanik	287.08
W-15	Construction of Inspection Bungalow;	7.05
		1,209.99
Component A2: Civil Works Riverbank Prot Works		
W-06	Revetment (2 km); Chauhali; km 0- 2.5	444.41
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
		1,899.49
Component A3: Civil Works Emerg & Adaptation		

Table B-4 Project Program, by Contract

Code	Description	Cost (BDT Mil)
Works		
Component A3: Civil Works Emerg & Adaptation		
W-11	Emergency/Adaptive 1; Riverbank Protection	62.68
W-12	Kojhuri-Benotia Revetment; Riverbank Protection	18.36
W-13	Emergency/Adaptive 3; Riverbank Protection	17.82
		98.86
Component A4: Civil Works Pilot Land Recovery		
W-14	River Training Pilot Work; & Land Recovery	379.80
Works Total		3,588.14
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;	2,083.11
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 Mymensingh	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		2,514.37
Project Total		8,688.52

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	325,119,259	0	0	325,119,259
G-02	Supply of Geobags; Zaforganj, Harirampur, Manikganj	417,777,105	0	0	417,777,105
G-03	Supply of Geobags; Harirampur, Manikganj	313,997,430	0	0	313,997,430
Component Total		1,056,893,794	0	0	1,056,893,794
B2 Geotextile, Emerg					
G-04	Supply of Geobags; Chauhali-Harirampur-Kojjuri-Benotia	221,947,067	0	0	221,947,067
Component Total		221,947,067	0	0	221,947,067
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
C4 DDM Office Eqpt					
G-09	2017 Supply of Office Equip; DDM; DDM	473,955	0	24,945	498,900
Component Total		473,955	0	24,945	498,900
Goods Total		1,299,663,987	0	25,743,491	1,325,407,478
Services					
D1 ISPM; Consultant Serv.					
S-01	ISPMC; Tranche 1;	71,800,848	408,712,518	71,800,848	552,314,214
Component Total		71,800,848	408,712,518	71,800,848	552,314,214
D2 INGO BWDB					
S-02	Resettlement Implementation Support;	8,993,441	0	1,343,847	10,337,288
Component Total		8,993,441	0	1,343,847	10,337,288
D4 Survey & Investigation					
S-06.1	2015 Erosion & Morphological Chg;	4,002,000	0	598,000	4,600,000
S-06.2	2016 & 2017 Erosion Prediction;	16,881,479	0	2,522,520	19,403,999
Component Total		20,883,479	0	3,120,520	24,003,999
Services Total		101,677,768	408,712,518	76,265,215	586,655,501
Works					
A1 Embankment Works					
W-01	Embankment, & 2 Reg.; km 0-5	47,396,263	0	4,687,542	52,083,805
W-02	Embankment; km 5-8.5	10,759,405	0	1,064,117	11,823,522
W-03	Embankment; 8.5-12.5	10,217,637	0	1,010,536	11,228,173
W-04	Embankment & 1 Regulator; km 12.5-17.3	44,030,849	0	4,354,699	48,385,548
W-05	Embankment & 1 Regulator; km 17.3-21.3	26,124,286	0	2,583,721	28,708,007
W-15	Construction of Inspection Bungalow; Manikgonj	641,113	0	63,407	704,520
Component Total		139,169,553	0	13,764,022	152,933,575

Table B-5 BWDB PMO Expenditure Summary, by Contract

all Values in BDT

Code	Description	ADB	GON	GOB	Total
A2 Riverbank Prot Works					
W-06	Revetment; Jamuna at Chauhali, R1; km 0-2.5	384,141,613	0	37,992,028	422,133,641
W-07	Revetment; Jamuna at Chauhali, R2; km 2.5-7.0	370,574,469	0	36,650,222	407,224,691
W-08	Revetment; Jamuna at Zaffarganj, km 6.1-8.1	424,850,997	0	42,018,230	466,869,227
W-09	Revetment; Padma at Harirampur, R1; km 6.7-10.2	281,164,655	0	27,807,493	308,972,148
W-10	Revetment; Padma at Harirampur, R2; km 3.2-6.7	235,090,298	0	23,250,689	258,340,987
Component Total		1,695,822,032	0	167,718,662	1,863,540,694
A3 Emerg & Adaptation					
W-11	Emergency/Adaptive 1; Riverbank Protection	40,712,783	0	4,026,539	44,739,322
Component Total		40,712,783	0	4,026,539	44,739,322
Works Total		1,875,704,368	0	185,509,223	2,061,213,591
eXtra					
E1 BWDB Training & Study					
X-05	BWDB Training and Study Tours;	48,346,784	0	3,085,965	51,432,749
Component Total		48,346,784	0	3,085,965	51,432,749
F1 Land Compensation					
X-07	Land Compensation; Tangail and Manikganj	0	0	1,443,163,761	1,443,163,761
Component Total		0	0	1,443,163,761	1,443,163,761
F2 Resettle Benefits					
X-08	Resettlement Benefits;	28,071,059	0	0	28,071,059
Component Total		28,071,059	0	0	28,071,059
G2 Office Opns BWDB					
X-03	BWDB Office Operations;	16,914,871	0	2,306,573	19,221,444
Component Total		16,914,871	0	2,306,573	19,221,444
G3 Office Opns DDM					
X-04	DDM Office Operations;	1,040,650	0	141,907	1,182,557
Component Total		1,040,650	0	141,907	1,182,557
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;	120,000,000	0	0	120,000,000
Component Total		120,000,000	0	0	120,000,000
eXtra Total		218,279,935	0	1,449,230,920	1,667,510,855
Project Total		3,495,326,057	408,712,518	1,736,748,849	5,640,787,425

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		Reimbursed Amount (BDT)		
		(BDT)	ADB	GON	Total	
Goods						
B1 Geotextile, Civil Works						
G-01	Supply of Geobags; Chouhali, Sirajganj	322,485,940	322,485,940	0		322,485,940
G-02	Supply of Geobags; Zaforganj, Harirampur, Manikganj	417,808,694	417,808,694	0		417,808,694
G-03	Supply of Geobags; Harirampur, Manikganj	274,809,368	274,809,368	0		274,809,368
		1,015,104,002	1,015,104,002	0		1,015,104,002
B2 Geotextile, Emerg						
G-04	Supply of Geobags; Chauhali-Harirampur-Kojjuri-Benotia	90,279,735	90,279,735	0		90,279,735
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
C4 DDM Office Eqpt						
G-09	2017 Supply of Office Equip; DDM; DDM	498,900	473,955	0		473,955
Goods Total		1,122,492,354	1,117,958,623	0		1,117,958,623
Services						
D1 ISPM; Consultant Serv.						
S-01	ISPMC; Tranche 1;	556,558,843	67,144,722	382,208,416		449,353,138
D2 INGO BWDB						
S-02	Resettlement Implementation Support;	6,748,813	5,871,467	0		5,871,467
D4 Survey & Investigation						
S-06.1	2015 Erosion & Morphological Chg;	4,600,000	4,002,000	0		4,002,000
S-06.2	2016 & 2017 Erosion Prediction;	13,590,567	11,749,843	0		11,749,843
		18,190,567	15,751,843	0		15,751,843
Services Total		581,498,223	88,768,032	382,208,416		470,976,448
Works						
A2 Riverbank Prot Works						
W-06	Revetment; Jamuna at Chauhali, R1; km 0-2.5	395,411,571	355,958,542	0		355,958,542
W-07	Revetment; Jamuna at Chauhali, R2; km 2.5-7.0	397,324,791	351,103,511	0		351,103,511
W-08	Revetment; Jamuna at Zaffarganj, km 6.1-8.1	466,869,227	424,850,997	0		424,850,997
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
		1,773,736,803	1,586,676,299	0		1,586,676,299
Works Total		1,773,736,803	1,586,676,299	0		1,586,676,299
eXtra						
E1 BWDB Training & Study						
X-05	BWDB Training and Study Tours;	44,455,896	41,788,542	0		41,788,542
F2 Resettle Benefits						
X-08	Resettlement Benefits;	2,036,260	2,036,260	0		2,036,260
G2 Office Opns BWDB						
X-03	BWDB Office Operations;	17,749,034	15,619,149	0		15,619,149
G3 Office Opns DDM						
X-04	DDM Office Operations;	450,000	396,000	0		396,000

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		65,182,549	60,272,348	0	60,272,348
Project Total		3,542,909,929	2,853,675,303	382,208,416	3,235,883,719

Table B-7 Reimbursement Summary, by Application

Acct. Type	Applic. No.	Date	Page	Cat	Exchange Rate (BDT to US\$)	Total Bill Amount		Reimburs (%)	ADB Reimbursed Amount		Grant Applic. No.	Reimburs (%)	GoN Reimbursed Amount		Total Reimbursed Amount			
						(BDT)	(US\$)		(BDT)	(US\$)			(BDT)	(US\$)	(BDT)	(US\$)		
L/C	BW001	30-Jun-16	01	2	77.80	675,913,796	8,687,838	100	675,913,796	8,687,838			0	0	0	675,913,796	8,687,838	
Dir.Pay.	BW002	22-Sep-15	01	2	77.80	27,665,835	355,602	100	27,665,835	355,602			0	0	0	27,665,835	355,602	
Dir.Pay.	BW003	22-Sep-15	01	2	77.80	35,827,904	460,513	100	35,827,904	460,513			0	0	0	35,827,904	460,513	
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		

Table B-7 Reimbursement Summary, by Application

Acct. Type	Applic. No.	Date	Page	Cat	Exchange Rate (BDT to 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\$)
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
			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

Table B-7 Reimbursement Summary, by Application

Acct. Type	Applic. No.	Date	Page	Cat	Exchange Rate (BDT to US\$)	Total Bill Amount		Reimburs (%)	ADB Reimbursed Amount		Grant Applic. No.	Reimburs (%)	GoN Reimbursed Amount		Total Reimbursed Amount	
						(BDT)	(US\$)		(BDT)	(US\$)			(BDT)	(US\$)	(BDT)	(US\$)
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
			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
Dir.Pay.	BW027	06-Jul-17	01	6A	77.58	7,582,956	97,750	13	867,549	11,183	ED014	74	4,938,357	63,659	5,805,906	74,842
Dir.Pay.	BW028	06-Jul-17	01	5	80.00	8,000,000	100,000	94	7,520,000	94,000		0	0	0	7,520,000	94,000
Imprest	BW029	06-Nov-17	01	1	80.50	407,515,881	5,062,053	91	368,076,256	4,572,169		0	0	0	368,076,256	4,572,169
			02	2	80.50	58,568,916	727,089	100	58,568,916	727,089		0	0	0	58,568,916	727,089
			03	3C	80.50	498,900	6,198	95	473,955	5,888		0	0	0	473,955	5,888
			04	4	80.50	826,850	10,271	100	826,850	10,271		0	0	0	826,850	10,271
			05	6A	80.50	32,250,000	400,422	13	4,192,500	52,055	ED015	74	23,865,000	296,312	28,057,500	348,367
			06	6A	80.56	13,262,024	164,623	13	1,981,711	24,599		74	11,280,509	140,026	13,262,220	164,625
			07	6B	80.50	6,590,567	81,859	87	5,659,843	70,300		0	0	0	5,659,843	70,300
			08	7A	80.50	2,954,756	36,705	88	2,600,185	32,300		0	0	0	2,600,185	32,300
			09	7A	80.50	1,737,733	21,587	88	1,529,205	18,996		0	0	0	1,529,205	18,996
			10	7A	80.50	2,595,803	32,246	88	2,284,307	28,376		0	0	0	2,284,307	28,376
			11	7B	80.50	450,000	5,590	88	396,000	4,919		0	0	0	396,000	4,919
					527,251,430	6,548,643		446,589,728	5,546,963			35,145,509	436,339	481,735,237	5,983,301	
Imprest	BW030	22-Dec-17	01	1	80.85	94,942,081	1,174,299	91	89,160,489	1,102,789		0	0	0	89,160,489	1,102,789
			02	2	80.85	23,578,085	291,628	100	23,578,085	291,628		0	0	0	23,578,085	291,628

Table B-7 Reimbursement Summary, by Application

Acct. Type	Applic. No.	Date	Page	Cat	Exchange Rate (BDT to US\$)	Total Bill Amount		Reimburs (%)	ADB Reimbursed Amount		Grant Applic. No.	Reimburs (%)	GoN Reimbursed Amount		Total Reimbursed Amount		
						(BDT)	(US\$)		(BDT)	(US\$)			(BDT)	(US\$)	(BDT)	(US\$)	
Imprest	BW030	22-Dec-17	03	5	80.56	6,170,300	76,593	94	5,800,082	71,997			0	0	0	5,800,082	71,997
			04	6A	80.56	23,848,512	296,034	13	3,100,307	38,484	ED016	74	17,647,899	219,065	20,748,205	257,550	
			05	6B	80.56	2,000,000	24,826	87	1,740,000	21,599			0	0	1,740,000	21,599	
			06	7A	80.56	774,099	9,609	88	681,207	8,456			0	0	681,207	8,456	
						151,313,077	1,872,989		124,060,170	1,534,953			17,647,899	219,065	141,708,069	1,754,018	
Dir.Pay.	BW031	18-Dec-17	01	6A	77.58	8,714,858	112,341	13	997,048	12,853	ED017	74	5,675,505	73,162	6,672,553	86,014	
			02	6A	77.58	2,456,507	31,666	13	281,043	3,623		74	1,599,785	20,622	1,880,829	24,245	
						11,171,365	144,007		1,278,092	16,476			7,275,290	93,784	8,553,382	110,260	
Dir.Pay.	BW032	01-Feb-18	01	5	80.00	4,503,040	56,288	94	4,232,858	52,911			0	0	4,232,858	52,911	
Dir.Pay.	BW033	12-Mar-18	01	6A	77.58	19,036,391	245,393	13	2,177,912	28,075	ED018	74	12,397,345	159,811	14,575,257	187,886	
			02	6A	77.58	30,137,989	388,501	13	3,448,021	44,448		74	19,627,197	253,009	23,075,218	297,457	
						49,174,381	633,895		5,625,933	72,523			32,024,541	412,820	37,650,474	485,343	
Dir.Pay.	BW035	20-May-18	01	6A	77.58	41,470,746	534,589	13	4,744,577	61,161	ED020	74	27,007,592	348,148	31,752,169	409,309	
Project Totals						3,542,909,929	45,003,007		2,853,675,303	36,212,140			382,208,416	4,888,814	3,235,883,719	41,100,954	

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
WI007	17-Dec-2015	11,069,711.00	78.70	871,186,256
BW006	15-Oct-2015	94,110.00	77.80	7,321,766
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
BW029	06-Nov-2017	5,546,958.57	80.51	446,585,634
BW030	22-Dec-2017	1,148,309.32		
		40,142,774.14		3,075,016,082

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
ED015	10-Nov-2017	435,718.95	80.66	35,145,091
ED016	22-Dec-2017	218,279.52	77.58	16,934,125
		3,136,549.89		246,375,963

Reimbursement

Dir.Pay Applic	Date	Category	ADB & GoN	
			US\$	(BDT)
BW002	22-Sep-2015	2	355,602	27,665,835
BW003	22-Sep-2015	2	460,513	35,827,904
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	8,687,840	675,998,236
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
BW027/ED014	06-Jul-2017	6A	74,843	5,805,907
BW028	06-Jul-2017	2	94,000	7,520,000
BW031/ED017	12-Jan-2018	6A	110,260	8,553,382
BW032	01-Feb-2018	5	52,910	4,232,857
BW033/ED018	12-Mar-2018	2	485,343	37,650,474
BW035/ED020	08-Jun-2018	6A	61,161	4,744,577
Totals			13,367,445	1,039,951,720

Total Disbursement

Currency	ADB & GON
BDT Mil	4,361
US\$ Mil	56.65

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

Appendix-C Administrative Details

No.	Position	Firm	Name	Person-Months - updated for month of June - 2018					
				Contract	VO - 1	comparing VO-1 BTWIN VO-2	Used	Balance VO-1	Balance VO-2
MAIN TEAM - INTERNATIONAL									
I-1	Team Leader / River Management Specialist	NHC	Knut Oberhagemann	35.0	31.5	2.0	25.09	6.41	8.41
I-2	Institutional Development Specialist/	EMM	Robert A. van de Putte	5.0	4.5	-1.5	2.51	1.99	0.49
I-3	Morphologist	DELTARES	Erik Mosselman	5.0	4.5	0.0	4.25	0.25	0.25
I-4	River Engineer	NHC	Bruce Walsh	10.0	9.0	-4.5	3.62	5.38	0.88
I-5	Construction / Quality Control Engineer	EMM	Basistha Adhikari	24.0	21.6	-20.7	0.87	20.73	0.00
I-6	Flood Risk Management Specialist	NHC	Dave Burkholder	12.0	10.8	0.0	10.50	0.30	0.30
I-7	Social Development / Resettlement Specialist	EMM	Jean Louis Leterme	8.0	8.8	2.2	10.13	-1.33	0.87
I-8	Economist CRVA (Climate Risk and Vulnerability Assessment)	NHC	John D. M. Roe	3.0	3.3	-1.3	0.91	2.39	1.09
I-9	Financial Management Specialist	EMM	J. Spurr	1.5	0.0	0.0	0.00	0.00	0.00
I-10	Hydrologist	NHC	Derek Stuart	3.0	5.0	0.5	6.41	-1.41	-0.91
I-11	Environmental Specialist	EMM	Wandert Benthem	7.0	7.0	0.0	3.90	3.10	3.10
I-12	Information and Data Management Specialist	NHC	Dave Burkholder	4.0	6.0	2.5	5.41	0.59	3.09
I-13	Unallocated Engineering Services	NHC	TBN		26.0	18.0	0.00	26.00	44.00
I-13-1	Int'l Construction Advisor-Engineer	NHC	Graeme Vass	3.0	3.0		3.00	0.00	0.00
I-13-2	Junior Engineer CRVA (Climate Risk and Vulnerability Assessment)	NHC	Jesper Mathiesen	4.0	5.0	7.0	12.09	-7.09	-0.09
							0.36	-0.36	-0.36
I-13-3	Numerical Modeller	NHC	Angela Thompson	5.0	5.0	5.0	6.07	-1.07	3.93
I-13-4	Unallocated Engineering Services	NHC	Seth Bryant		2.0	2.0	2.82	-0.82	1.18
I-13-5	Unallocated Engineering Services	NHC	TBN/Brecht D'Haeyer		2.0		0.60	1.40	1.40
I-14	Senior Geotechnical Engineer	NHC	Dr. Horst Kramer		2.0	0.0	0.26	1.74	1.74
I-15	River Engineer	NHC	Brad Hall		4.5	1.0	6.09	-1.59	-0.59
I-16	Water Resources Specialist	EMM	Hiba Khan		1.0	12.0	2.96	-1.96	10.04
I-17	Water Resources Specialist	NHC	Marieke Nlewaal		2.0	-1.9	0.00	2.00	0.14
	Design and Specification Engineer	EMM	John Prytherch				1.84	-1.84	4.16
			Totals	129.50	164.50	46.14	110.06	54.44	82.75
N-1	DTL / Flood & Erosion Risk Management Spec.	EMM	Sharif Al Kamal	41.5	37.40	2.1	31.22	6.18	8.28
N-2	Institutional / Capacity Development Specialist	RPMC	Dr. M. A. Qassem	10.0	10.00	0.0	9.80	0.20	0.20
N-3	River Engineer (Morphologist)	CEGIS	Dr. Maminul Haque Sarker	8.0	8.80	0.0	6.24	2.56	2.56
N-4	Community-based Flood Risk Mngt. Spec.	RPMC	Quazi Towfique Islam	36.0	36.0	1.0	29.01	6.99	7.99
N-5	Resettlement Specialist	EMM	Shireen Akhter/Begum S. Nahar	15.0	13.5	6.0	13.82	-0.32	5.68
N-6	Project Economist	RPMC	Amiul Islam	7.0	7.7	1.8	7.55	0.15	1.95
N-7	Procurement Specialist	RPMC	A. Abdullah Chowdhury / Md Abdullah Sadeque	10.0	9.0	-6.9	2.12	6.88	0.00
N-8	Construction Engineer	RPMC	Mirza Harunar Rashid	32.0	29.0	6.0	26.89	2.11	8.11
N-9	Financial Management Specialist	EMM	Md. Habibur Rahman/Ektedar Rahman	12.0	11.0	-2.0	6.80	4.20	2.20
N-10-1	River Engineer Flood Management Infr.- 1	RPMC	Mukhles uz zaman	12.5	12.5	2.0	14.25	-1.75	0.25
N-10-2	River Engineer Flood Management Infr.- 2	RPMC	Md. Motiur Rahman	12.5	20.5	0.0	16.19	4.31	4.31
N-11	Social Development and Gender Specialist	EMM	Ruh Afza Ruhi/Begum S. Nahar	12.0	16.0	-5.0	8.85	7.15	2.15
N-12	Environment Specialist	EMM	Dr. Md. Nurul Islam/Md. Amir Faisal	16.0	16.0	3.0	16.84	-0.84	2.16
N-13	Training Coordinator	EMM	Jahangir Kabir/ Shameem Ahmed	14.0	20.0	0.0	18.56	1.44	1.44
N-14	Information and Data Management Specialist	EMM	Asrafuzzamen	15.0		0.0	0.00	0.00	0.00
N-15	Hydraulic Structural Engineer	RPMC	Md. Dabir Uddin/Aminul Haque Shah	10.0	5.0	-2.0	3.02	1.98	-0.02
N-16	Road Engineer	RPMC	Zakir Hossain	6.0	6.0	-1.0	4.21	1.79	0.79
N-17	Geotechnical Engineer / Geotechnical Expert (Local)	EMM	Md. Korban Ali / Md. Shamsul Islam	7.0	7.0	0.0	6.49	0.51	0.51
N-18-1	Site Engineer 1 (PRB-1)	RPMC	Md. Nurul Amin	36.0	33.0	6.0	29.58	3.42	9.42
N-18-2	Site Engineer 2 (JLB-2 Chauhali)	RPMC	KM Nazmul Haque/ Ekram Sarder	36.0			8.20	-8.20	5.80
N-18-3	Site Engineer 3 (JLB-2 Zaffarganj)	EMM	Md Faridul Alam	36.0			26.01	-26.01	10.99
N-18-4	Site Engineers 4 (PLB-1 Harirampur)	EMM	Abdul Jalil/Saiful Islam	36.0			8.04	-8.04	5.96
N-19	Surveyor	EMM	Osman Ghani		13.0	0.0	7.17	5.83	5.83
N-20	Unallocated Engineering Services	RPMC	TBN Mukhles uz zaman		6.0	0.0	1.00	5.00	5.00
N-21	Morphologist	CEGIS	Sudipta Kumar Hore		7.5	-3.5	2.06	5.44	1.94
							0.00	0.00	0.00
			Totals	420.50	324.90	7.52	303.92	20.98	93.50

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

RIVER STUDY TEAM - INTERNATIONAL									
IR-1	Task Leader / Flood & River Management Spec.	NHC	Carsten Stuab	10.0	11.0	0.0	10.98	0.02	0.00
IR-2	Institutional Development Specialist/Capacity Development Specialist.	EMM	Robert A. van de Putte	3.0	2.7	-1.7	0.50	2.20	0.5
IR-3	Morphologist	DELTARES	Sanjay Giri	7.0	6.3	0.0	5.60	0.70	0.7
IR-4	River Engineer (River Training)	NHC	Gerritt Klaassen	7.0	7.7	2.3	10.34	-2.64	-0.3
IR-5	Water Resources Management Specialist	DELTARES	W. J. Oliemans	5.0	4.5	-2.0	2.76	1.74	-0.3
IR-6	Economist CRVA (Climate Risk and Vulnerability Assessment)	EMM	Alexander Mueller/John D.M. Roe	4.0	3.6	-0.9	2.47	1.13	0.2
IR-7	Social / Regional Development Specialist	NHC	Mark Hopkins	5.0	5.5	0.7	6.23	-0.73	0.0
IR-8	Environmental Specialist	EMM	Wardert Benthem	4.0	3.6	0.4	3.94	-0.34	0.1
IR-9	Hydrologist CRVA (Climate Risk and Vulnerability Assessment)	NHC	Malcolm Leytham	5.0	2.0	1.5	2.89	-0.89	0.6
IR-10	Climate Change Specialist	NHC	Mariza Costa-Cabral		1.0	1.0	1.98	-0.98	0.0
IR-11	Dredging Specialist	NHC	Pieter Van Groen		1.0	1.0	1.81	-0.81	0.2
IR-12	Urban & Master Planner	NHC	Dr. Douglas Webster		1.0	2.5	1.91	-0.91	1.6
IR-13	Morphologist Modeller	DRS	Mohammed Yossef		1.0	0.5	1.35	-0.35	0.2
IR-1	Sedimentologist	NHC	Dan Haught				0.00	0.00	2.0
IR-2	Geomorphologist	NHC	Andrew Nelson				0.66	-0.66	0.3
IR-3	Community Development/ Flood Management Specialist	EMM	Judith de Bruijne				0.18	-0.18	1.3
IR-4	Report Editor	NHC	Dr. Sara Bennett,				0.00	0.00	2.0
IR-5	Report Publisher	NHC	Sabrina Asche				1.12	-1.12	3.9
			Totals	50.00	50.90	5.28	54.97	-4.07	12.71
			Grand Total International	179.5	215.4	51.4	138.28	299.03	95.46
RIVER STUDY TEAM - NATIONAL									
NR-1	Water Resources Management Specialist	RPMC	G M Akram Hossain	10.0	10.0	-0.4	9.97	0.03	-0.40
NR-2	Flood Management Specialist	RPMC	Md. Makbul Hossain	6.0	6.6	1.0	7.55	-0.95	0.00
NR-3	River Engineer (Morphologist)	CEGIS	Dr. Maminul Haque Sarker	9.0	8.1	-4.1	3.13	4.97	0.87
NR-4	Economist	EMM	Dr. Shaker Ahmed	4.0	3.6	-3.1	0.00	3.60	0.50
NR-5	Regional / Spatial Planner	RPMC	Dr. Shamim M Haque	4.0	4.0	-0.5	3.37	0.63	0.13
NR-6	Institutional Development Specialist	RPMC	Dr. M. A. Qassem	4.0			4.00	4.00	0.00
NR-7	River Engineer	RPMC	Md. Motiur Rahman Jewel	8.0			11.70	7.84	0.30
NR-8	Hydrologist	EMM	Imdadul Haque Siddiqui	6.0			0.00	0.00	0.00
NR-9	Social Development and Gender Specialist	EMM	Ruh Afza Ruhi/Begum S. Nahar	5.0			5.00	5.00	0.00
NR-10	Environment / Climate Change Specialist	EMM	Md. Rakibul Haque	5.0			0.00	0.00	2.50
NR-11	Water Supply and Water Quality Specialist	EMM	Md. Mozammel Hossain/ Dr. Khairul Bashar	5.0			3.63	3.63	0.37
NR-12	Agriculture Specialist	RPMC	Dr. Quazi Reasul Islam	4.0			3.34	3.34	0.66
NR-13	Fishery Specialist	RPMC	Dr. Md. S. Howlader	5.0			6.00	6.00	4.00
NR-14	Environmental Advisor	EMM	Dr. Alnun Nishat		0.5	0.5	0.18	0.32	0.82
			Totals	75.00	32.80	-6.68	57.88	38.41	9.74
			Grand Total International	495.5	357.7	0.8	350.69	358.12	103.24

Appendix-D Status of River Study Technical Notes

Table D-1 Status of River Study Technical Notes

New Number	Old Number	Title	Main Author(s)	Review/Approval	A	B	C	D	E	F	G	Status
					Background information	Morphology - General	Morphology - Bifurcations & Offtakes	River Engineering	Water Resources and Flood Modelling	Social and Environmental Impacts	Land Use & Economic Benefits	
A1	1	Background data, river use, studies and plans	MH	CS	x							Completed
A2	40	Inland Navigation and Dredging	HK	KO	x							Final report expected by mid-July 2018.
B1	2	Holistic river morphology analysis for the Brahmaputra river system	MHS	CS/EM		x						Completed
B2	44	Long term view of Brahmaputra/Jamuna channel planform	AN	EM		x						Completed: 03-Jul-2018.
B3	39	Cross-Section Analysis on Brahmaputra, Jamuna and Padma Rivers	MRJ	GJK		x						Completed; 06-Feb-2018
B4	5	Char characteristics and dynamics – past and present conditions on basis of satellite imagery	MHS	GJK		x						Completed
B5	4	Upper Meghna - present conditions and issues	JAA/MHS	CS		x						Completed
C1	6	River bifurcations: Theory and model experience	EM	KO			x					Completed
C2	7	Anabranching Channels of the Jamuna and Padma Rivers	MHS	CS			x					Completed; 08-Feb-2018
C3	8	River bifurcations: Simplified numerical modelling	AT	SG/GJK			x					Completed
C4	9	Reach 3 and bifurcation: numerical modelling	AT/SG	EM			x					Completed; 08-Feb-2018.
C5	10	Offtake and Flow Dynamics of the Major Rivers	MHS	CS			x					Completed; 06-Feb-2018.
C6	11	Offtakes part 2 Numerical model studies and generic guidelines	MY	EM			x					Completed; 12-Mar-2018.
D1	13	River Stabilization Plan -Technical Basis	GJK	BH				x				Draft expected by end-July-2018.
D2	14	River stabilization of other main rivers	GJK/BH/EM	BH/GJK				x				Draft expanded to include more rivers. Revisions expected by end-July-2018.
D3	15	Earlier proposals and attempts for stabilization of Jamuna River (include capital dredging)	MZ/GJK	BH				x				Report needs to be integrated to include capital dredging. Review expected by early August-2018.
D4	17	Intermediate and final planform alternatives	MRJ	GJK				x				Review expected by mid-August-2018.
D5	18	Feasible techniques and methods for riverbank protection and future channel narrowing	AN	BH				x				Review expected by mid-August-2018.
D6	16	Underwater Apron for Chandpur Confluence	MRJ/AT	SG				x				Completed
E1	19	Main river flood risk and management	Mho/DS	DS					x			Final report expected by mid-July-2018.
E2	20	Flooding numerical modelling	DS	BH					x			Draft report expected by mid-July-2018.
E3	21	Distributaries: Water resources preparation and baseline	WO/ML	ML					x			Completed; 10-Jan-2018
E4	22	Potential Impacts of Flow Augmentation and Study Needs	WO/ML	EM					x			Completed; 17-Apr-2018
F1	23	Socio-economic Aspects	MH/SN	JLL						x		Completed; 07-Dec-2017.
F2	24	Environmental and social aspects of river stabilization: Remedial measures	WB/MH	CS						x		Completed
F3	25	Fisheries Impacts of FRERMIP and their Management: A Pre-project Status Review	SH	CS/WB							x	Completed
F4	27	Long-term effects of river narrowing on water levels	EM	KO							x	Completed; 22-Nov-2017.
F5	36	Effects of sinuosity on channels and bars	MY	EM							x	Completed
F6	26	River stabilization and Sediment Management	GJK/MHS	BH							x	Draft expected by 20-July-2018.
F7	43	Modelling of impact of char land sedimentation	SB/GJK	EM							x	Final draft expected by mid-July 2018.
F8	37	Impact of Earthquake Induced Sediment Supply Variability	EM/AN	GJK/BH							x	Review expected by end-July-2018.
F9	28	Future conditions affecting flows	MCC	ML							x	Completed; 13-Feb-2018
G1	29	Planning the Use of Stabilized and Reclaimed Land, Procedure and Issues	MH	CS							x	Completed
G2	30	Charland amelioration and agriculture development	QRI/AC	AC							x	Completed; 10-June-2018
G3	31	Economic Assessment of River Stabilization	JR/AI	KO							x	Draft received in May 2016. Requires inputs from other Technical Notes.

Abbreviations:

AC = Alan Clark	DS = Derek Stuart	KO = Knut Oberhagemann	MZ = Mukhles uz Zaman
AF = Amir Faisal	EM = Erik Mosselman	MCC = Mariza Costa-Cabral	QRI = Qazi Reasul Islam
AI = Aminul Islam	GJK = Gerrit Klaassen	MH = Mark Hopkins	SB = Seth Bryant
AN = Andrew Nelson	HK = Hiba Khan	MHo = Makbul Hossain	SG = Sanjay Giri
AT = Angela Thompson	JAA = Jakia Akter	MHS = Mamin H. Sarker	SH = Shajahan Howlader
BH = Brad Hall	JLL = Jean Louis Leterme	ML = Malcolm Leytham	SN = Shamsun Nahar
BW = Bruce Walsh	JM = Jesper Mathiesen	MRJ = Motiur Rahman Jewel	WB = Wandert Bernthem
CS = Carsten Staub	JR = John Roe	MY = Mohamed Yossef	WO = William Oliemans

Reports	
23	Completed
8	Draft
4	Under Preparation
35	Total

Appendix-E Status of Different Project Components

Table 6.1 Status of Feasibility Study for Tranche-2

Date	Letter Reference	PMO	ADB	ISPMC
31-May-2017	ISPMC-FRERMIP-362			Submission of site selection report by the ISPMC
17-Sep-2017	N/A	Approval of site selection by the 3rd Technical Advisory Committee		
26-Nov-2017 to 01-Dec-2017	N/A		Discussion of first draft EIA and RP (for Harirampur) during the ADB consultation mission	
15-Dec-2017	N/A	Submission of draft EIA to ADB for review (including comment matrix from mission) through email		
21-Dec-2017	N/A			Submission of first draft RF and RP Harirampur
31-Jan-2018	N/A			Initial draft feasibility study (internal document)
02-Feb-2018	N/A		ADB Comments on Harirampur RP and RF	
08-Feb-2018	N/A		ADB Comments on EIA (main report)	
12-Mar-2018		Draft EARF Tranche-2 sent to ADB (by email)		
13-Feb-2018	N/A		ADB Comments on EIA (annexes)	
14-Mar-2018	N/A	SPRSS and GAP were sent to ADB (by email)		
15-Mar-2018	N/A		ADB comments on EARF	
19-Mar-2018	N/A	Revised EARF send to ADB (by email)		
25-Feb-2018	PMO/FRERMIP/E-4/138	Final draft EIA sent to ADB		
27-Feb-2018	ISPMC-			Final draft EIA sent

Date	Letter Reference	PMO	ADB	ISPMC
	FRERMIP-464			to PMO for distribution
22-Mar-2018	N/A			Development of concept paper to update initial draft feasibility study (started on 26 February 2018)
25-Mar-2018	ISPMC-FRERMIP-478			Submission of draft feasibility study
28-Mar-2018	N/A	Document passed for EIA peer review in ADB		

Table 6.2 Status of DPP Progress for Tranche-2

Date	Letter Reference	Design	Other	Approval
25-Feb-2018	PMO-FRERMIP/C-2/131		Draft EIA sent to ISPMC for comments	
07-Mar-2018	ISPMC-FRERMIP-468	Submission of draft Harirampur Embankment design to PD		
08-Mar-2018	PMO-FRERMIP/D-1/161	Submission of Harirampur design to design office		
12-Mar-2018	ISPMC-FRERMIP-471	Submission of draft Shahjadpur Embankment design to PD		
14-Mar-2018	PMO-FRERMIP/D-1/179	PD submits Shahjadpur design to design office		
14-Mar-2018	PMO-FRERMIP/C-2/177	Comments from design office on Harirampur embankment		
14-Mar-2018	ISPMC-FRERMIP-473	Submission of draft riverbank protection design to PD		
15-Mar-2018	PMO-FRERMIP/D-1/182/1	PD submits riverbank protection design to design office		
19-Mar-	PMO-		Submission of draft	

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

Date	Letter Reference	Design	Other	Approval
2018	FRERMIP/C-2/186		feasibility study	
25-Mar-2018	ISPMC-FRERMIP-478		Submission of draft feasibility study	
27-Mar-2018	ISPMC-FRERMIP-480	Submission of draft Solimabad design to PD		
05-Apr-18	PMO-FRERMIP/C-2/234	Re submission of riverbank protection /revetment works design at Enayetpur, chauhali & Salura under frermip (Trance-II) Project.		
12-Apr-18	PMO-FRERMIP/C-2/255	Re submission of embankment & regulator design at Shazadpur of Sirajganj district under FRERMIP (Trance-II) Project.		
16-Apr-18	PMO-FRERMIP/C-2/269		Missing comments on embankment & regulator design at Shazadpur of Sirajganj.	
29-May-18	PMO-FRERMIP/C-2/415 & 416	Re-Submission of embankment & regulator design at Shazadpur and riverbank protection/revetment works design at Enayetpur, Chauhali & Salura of district under proposed FRERMIP (Trance-II) and Works design at Salimabad feasibility study report		
31-May-18	PMO-FRERMIP/D-1/421			Approval/vetting of river bank protection works design at Enayetpur, Pukuria, Benotia,

Date	Letter Reference	Design	Other	Approval
				Omarpur, upstream Chauhali and Salura under FRERMIP (Tranche-II)
31-May-18	PMO-FRERMIP/D-1/422			Approval/vetting of Char Development works Design at Salimabad under (Tranche-II) Project.
11-Jun-18	PMO-FRERMIP/D-1/469 &470			Approval / vetting of embankment & regulators design at Harirumpur if Manikganj District under FRERMIP (Tranche-II) project

Table 6.3 Status of Design Documents for Feasibility Study, Tranche-2

Date	Letter Reference	Document
07-Mar-2018	ISPMC-FRERMIP-468	Embankment in PLB 1 from Harirampur to Dohar
12-Mar-2018	ISPMC-FRERMIP-471	Embankment in JRB 1 from Tranche 1 embankment to Shajadpur
14-Mar-2018	ISPMC-FRERMIP-473	Bank protection design for works in Enayetpur, Salura (both JRB 1) and Upstream Chauhali (JLB 2)
27-Mar-2018	ISPMC-FRERMIP-480	Design for River channelization and char development in Solimabad
31-May-2018	ISPMC-FRERMIP-499	Bank protection design for works in Enayetpur, Benotia and Salura (JRB-1) and Pukuriya, Upstream Chauhali and Omarpur (JLB-2)
11-Jun-2018	ISPMC-FRERMIP-502	Updated design of Embankment in PLB 1 from Harirampur to Dohar
14-Jun-2018	ISPMC-FRERMIP-507	Updated design of Embankment in JRB 1 from Tranche-1 embankment to Shahjadpur

Table 6.4 Status of CbFRM Progress

Date	Activity
09-Sep-2015	Joined the PMU, CbFRM.
Mid-October 2015	Drafted ToR, Sub-0 & NGO budget and sent to ADB for review and approval.
01-Mar-2016	ADB approval of Sub-0 with all attachments i.e. ToR & NGO budget after several communications on mitigating clarifications.
28-Mar-2016	Advertised EoI notice.
29-Mar-2016	Submission of a proposal to line ministry to form POC and PEC.
26-Apr-2016	Submission of 42 EoIs (including 4 online submission)
03-May-2016	Constitution of Proposal Opening Committee (POC)/Proposal Evaluation

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

Date	Activity
	Committee (PEC) by the line ministry.
Mid-May 2016	First Project Manager promoted and transferred subsequently in end June 2016.
29-Jun-2016	Joining of 2 nd Project Manager
18-Jul-2016	Eols were opened by the Proposal Opening Committee (PoC).
19-Jul-2016	Preparation of draft Eol evaluation in excel spreadsheet for CSC evaluation.
28-Aug-2016	Convening of first PEC meeting. Meeting was postponed
21-Sep-2016	Cancellation of POC/PEC by the line ministry without showing any reason whatsoever.
02-Oct-2016 and again on 10-Nov-2016	DDM requested the ministry to form new PEC twice.
27-Dec-2016	The second Project Manager promoted and transferred.
28-Dec-2016	Reconstituted PEC comprising five members without one from ISPMC.
08-Jan-2017	Current Project Manager joined.
20-Feb-2017	Revised PEC formation comprising 6 members including one from ISPMC in response to recommendation of the last aid memoire. Also, validated earlier POC.
07-Mar-2017	First PEC was held to recommend standard sub-criteria for Eol evaluation.
27-Mar-2017	Second and final PEC held to shortlist 6 Eols out of 42.
Early April to End August 2017	Processing equipment procurement following ADB's guidelines using 'shopping method'.
11-May-2017	Submission of Sub-1 to ADB including revised NGO budget, Eol shortlisting report, Eol evaluation spreadsheets, Narrative Evaluation Criteria, Draft RFP etc.
14-Sep-2017	Submission of Sub-1 to ADB including revised NGO budget, Eol shortlisting report, Eol evaluation spreadsheets, Narrative Evaluation Criteria, Draft RFP etc.
15-Oct-2017	ADB sent subsequent revised versions of Sub-1 with attachments (i.e. RFP, revised budget, procurement plan etc.)
23-Oct-2017	ADB approval Sub-1 with all attachments (RFP, revised NGO budget, procurement plan etc.)
12-Nov-2017	Circulation of RFP to six shortlisted NGOs.
17-Dec-2017	Submission of Technical and Financial proposals by 5 short-listed NGOs.
17-Dec-2017	Opening of Technical Proposals afternoon.
18-Dec-2017	Held first PEC meeting.
03-Jan-2018	Preliminary submission of RFP evaluation with all other pertinent doc as attachment to sub-2 to ADB for informal review and comments.
28-Jan-2018	ADB asked for formal submission of sub-2 with all docs without any important comments.

Date	Activity
07-Feb-2018	Carried out second and final evaluation of Technical Proposals at second round of Proposal Evaluation Committee meeting.
20-Feb-2018	Formally submitted submission form 2 to ADB with eight attachments including Technical Proposal Evaluation spreadsheets and Narrative Evaluation Report.
22-Mar-2018	Received ADB's comments on Sub-2 afternoon
26-Apr-2018	Resubmission of Submission-2 to ADB
08-May-2018	Received "no objection" on Submission-2 from ADB
10-Jun-2018	Submission of Submission-3 to PMO
13-Jun-2018	Submission of Submission-3 to ADB
28-Jun-2018	Received "no objection" on Submission-3 from ADB

Record of meeting

Project title FRERMIP

Subject Embankment and regulator design

Location Design Office

Date of meeting 14th & 15th May 2018

Present 14th May: Chief Design, Project Director, Sharif, John, Hiba, Jewel

15th May: SE Design, John, Hiba, Jewel

Recorded by JDP	Distribution All present, Knut, Jesper	
Item	Text	Action on
1	<p><u>Meeting with Chief Engineer Design (14th May)</u></p> <p>Embankment Design</p> <p>1.1 In BWDB experience any crest narrower than 6m will be cut by local people. 6m width is the minimum that will be acceptable. This will also permit later road development by others.</p> <p>1.2 Crest level should be 1:200 year flood level plus freeboard. No additional allowance for climate change is required except in coastal areas. The difference between 1:100 year flood level and 1:200 year flood level is similar to the allowance for climate change (ie, 0.3 to 0.4m) so min. 1:100 year standard will be achieved even in future.</p> <p>1.3 It was discussed that if road is on the crest then it will be difficult to raise the embankment in future ie, it will not be "climate smart". Also the wider crest will require greater land acquisition and will add cost. It was emphasised that the safety of the embankment was the priority and the 6m crest width cannot be reduced.</p> <p>1.4 BWDB practice is that if a berm is required it should be 5m width and berm level should be 3m below crest level</p> <p>1.5 It was discussed that to meet the required FoS for all load cases – particularly earthquake – then a wider berm will be required.</p> <p>1.6 It was commented that the combined probability of earthquake and flood water level was low and it may be better to review the hydrograph and select a high water level that prevails for 2 months rather than just a few days.</p> <p>1.7 To plan for any future raising then in areas where no berm is required then an additional 5m of land acquisition would be prudent</p> <p>1.8 There are a few sections with height up to 9m at the location of the regulators. It was suggested that any local depressions may be filled by introducing a secondary berm at lower level.</p> <p>1.9 The consultant was requested to model an embankment with 6m</p>	ISPMC

Record of meeting

Item	Text	Action on
	crest width, a 7m wide berm at level 3m below the crest for the existing load cases and present the results tomorrow morning to SE Design.	
2	Regulator Design	
2.1	For fish passage to be effective the barrel height will need to be increased to have a 1m clear height above the water level during all periods of migration. Overall barrel height should be around 3m	ISPMC
	<u>Meeting with SE Design (15th May)</u>	
3	Harirampur Embankment Design	
3.1	A copy of the design circular was shared confirming that the design standard should be 1:200 year flood level plus freeboard. No additional allowance for climate change is required except in coastal areas.	
3.2	The modelling work requested by the CE was shared and discussed. The revised embankment section with 6m crest width and a 7m wide berm at level 3m below the crest was found to have an acceptable FoS in all load cases.	
3.3	SE Design advised that the drawing should show the specified friction angle (30 degrees).	
3.4	As well as the stability analyses the section should be checked to confirm 1.5m safety margin at the toe for a seepage gradient of 1:6	
3.5	The saturated unit weight of the foundation material is generally taken to be 18.9 kN/m ³ rather than 20.0 kN/m ³ . This will be updated but will not impact on the results.	
3.6	A comparison of a hand calculation with the modelled earthquake case was requested for discussion in the next few days.	ISPMC
3.7	Protection works should use blocks which are too large to be removed by local people	
3.8	For the revised section the drains in the body of the embankment will be removed. The toe drain should be kept.	
3.9	The embankment cross section was agreed for Harirampur	
4	General Comments on Drawings	
4.1	Standard of drawings was observed to be improved from Tranche 1	

Record of meeting

Item	Text	Action on
4.2	Drawing names should include: (a) the project name (b) the name of work (same for all drawings in each album) (c) the name of the drawing	
4.3	An index map is essential	
4.4	Local name shall be shown for the start / end point of the embankment on the long sections	
4.5	Regulator name and chainage shall be shown on the long sections	
4.6	Drawings should be added to show km post and name plate	
5	Harirampur Regulator Design	
5.1	A 10-vent regulator has been proposed by BWDB for the Ichamaty river. This is to allow future rehabilitation of the river. The size / number of vents of the regulator proposed (presently 2nr vents of size 2m x 2m) at the location upstream of this proposed regulator should be reviewed	ISPMC
6	Shahjadpur Embankment Design	
6.1	In general the design should be similar to Harirampur. However, the crest level should be 1:100 year flood level plus 1m freeboard. No additional allowance for climate change.	
6.2	Some harmonisation with the embankment works under implementation may be proposed by BWDB. This design has a 10m wide crest, no berm and a flexible pavement on the crest.	BWDB
7	Shahjadpur Regulator Design	
7.1	It was queried whether the existing regulators on the road from Shahjadpur to Khajuri should be closed or kept open. If kept open is the size of the regulators adequate?	ISPMC to discuss with PD

Record of meeting

Project title FRERMIP

Subject Riverbank design

Location Design Office

Date of meeting 22nd May 2018

Present SE Design, John, Hiba

Recorded by	Distribution
JDP	All present, Knut, Sharif, Jesper, Jewel

Item	Text	Action on
1	<p>Site selection</p> <p>1.1 The sites selected for river bank protection as per the Site Selection Report which has been approved by the Board are as follows:</p> <ul style="list-style-type: none"> - Upstream Chauhali (5km full protection plus 5km full protection plus 2km light protection) – NB: The name of the northern site including 5km full protection and 2km light protection has since been changed to Pukuriya to avoid confusion - Enayetpur (4km full protection) - Benotia (1km full protection) <p>The above works are expected to be carried out in the 2018/19 construction season at the beginning of Tranche 2.</p> <ul style="list-style-type: none"> - Salura (4km full protection) - Omarpur (6km full protection) <p>The above works are expected to be carried out in the 2019/20 construction season.</p> <p>The extent and location of the riverbank protection will need to be confirmed following morphological changes during the flood season.</p> <p>1.2 SE Design raised two concerns:</p> <p>(a) That in his view the RBP at Salura and Omarpur will be difficult to make sustainable</p> <p>(b) That it should be clear who will be responsible for the development of the designs after the flood season</p>	
2	Initial protection and Adaption works	

Record of meeting

Item	Text	Action on
2.1	SE Design was satisfied that u/s Chauhali had been changed to full protection.	
2.2	SE Design requested that adequate provision was made for the adaptation works.	
2.3	The Consultants confirmed that there will be an "on call" contract for the adaption works	
2.4	SE Design requested that the overall geobag protection should be around 55 cu.m per m. He appreciated that this could initially be lower in the construction phase and include a provision for future adaptation. This means that the overall this value is likely to be approximately equal to 55 cu.m per m.	
2.5	The Consultant indicated that it was not possible to predict the final amount of protection required at each site including the adaptation works. The initial protection is designed now based on the well documented understanding that the geobags will launch in a single layer. The adaption works will follow on in subsequent years under the "on call" contract.	
2.6	SE Design stated that sufficient provision must be made for the adaption works and the Consultants confirmed this would be the case.	
3	Slope stability	
3.1	SE Design requested that lessons should be learned from the failures at Chauhali	
3.2	The Consultants indicated that the apron is extended to accommodate additional scour, a berm has been included which should be properly formed and the above water slope will be 1:3.5 for the permanent wave protection.	
3.3	It was noted that this has an impact on the amount of land acquisition required but that it is better to face this issue than have any failures.	
3.4	SE Design requested that the slopes at each site, considering both the temporary and permanent wave protection, and slopes above and below water level should be properly justified based on geotechnical investigations and slope stability analyses	
3.5	The Consultants confirmed that this is the approach that is being followed.	

Appendix-F Gender Action Plan

GAP IMPLEMENTATION MONITORING

Quarterly Progress Report on Revised⁴ Gender Action Plan (GAP)

Of

Flod and Riverbank Erosion Management Investment Program (FRERMIP) Tranche-1

Project Title:	Flod and Riverbank Erosion Management Investment Program (FRERMIP) Tranche-1	
Date of Update:	30-06-2018	Submission Date: 07-07-2018
Agency:	Local Government Engineering Department	
Timeframe:	2015-2019	
Gender Category:	EGM	
Project Impact (from PAM):	The expected impact of the investment program will be improved livelihoods of people in the project area along the main rivers in Bangladesh.	
Project Outcome (from DPP log frame):	The outcome of the program will be reduced flood and riverbank erosion risks in the subproject reaches	
Whether there is a Gender Action Plan:	Yes	
Is there a Gender Specialist:	Yes; a Gender Specialist (intermittent basis) in Institutional Strengthening Project Management Consultants (ISPMC) Team and a Gender Focal Point in Project Management Office (PMO);	
If not, how gender mainstreaming is supported?	N/A	

⁴ During MTR February 2018

Features of Revised Gender Action Plan

Output/Activities/Targets	Progress of Reporting Quarter (Apr-Jun 2018)	Cumulative Progress up to June 2018	Remarks
Output I: Flood and riverbank erosion risk mitigation functioning at priority reaches			
A1 Construction of riverbank protection structures using appropriate technology and methods A1-2 Rehabilitation/construction of embankments			
<p>1.Ensure women benefit from employment in construction</p> <p>Target 1.1: Specific condition included contractors' bidding document whereby 5% unskilled labor opportunities be given to women⁵</p>	<p>1.1: During this quarter, a total of 10 female labours (10% of total) out of total labour force 100 worked in construction sites: work package 1 & work package 4</p>	<p>1.1: A total of 951 female labours (5% of total) out of total labour force 20433 worked in construction sites.</p>	
<p>2.Ensure gender-related aspect of labor standard including equal wage for women and men for equal work</p> <p>Target 2.1 Orientation sessions targeting 45 SMO staffs (at least one orientation in each SMO) i.e. SDE, Section Officers, surveyors and contractors' site manager, site engineer and supervisors to verify and ensure that conditions are met</p>	<p>2.1: Prepared guidelines and session schedule for the "Orientation session for SMO" that will be conducted in next quarter;</p>	<p>2.1: Orientation session for SMO will be conducted in next quarter in the site offices;</p>	
<p>3. Ensure occupational health and safety, safe water supply, sanitation are in place (incl. separate toilets)</p> <p>Targets:</p> <p>3.1: Provisions for either separate toilets for women or arrangements for use of facilities in nearby communities and/or households</p> <p>3.2: Sex-disaggregated information in field monitoring quarterly reports and contractors' compliance reports</p>	<p>3.2:Sex-disaggregated data collection is on-going process</p>	<p>3.1:In 2-places separate toilet for women arranged with neighborhood and 2-places built newly by the contractors;</p> <p>3.2:Sex-disaggregated data collection is on-going process</p>	

⁵ Given the (large) physical infrastructure supported under the Loan, the EA requested the ADB to reduce the target for women's engagement to 5-10% range in light of the major change in design of geo-bags for better river bank stability which -initially estimated at 125 kg/bag- were revised upward to 250 kg/bag. The heavy weight filling and stitching of geo-bags on barges and the strenuous dumping methods resulted in women's reluctance to be involved in these activities.

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

Output/Activities/Targets	Progress of Reporting Quarter (Apr-Jun 2018)	Cumulative Progress up to June 2018	Remarks
A2 Formulating community disaster management units			
4. Form 40 Community Disaster Management Units (CDMUs) Target: 4.1: CDMUs (40) -consisting of 15 male and female volunteers/each-established with minimum 33% units led by women (baseline=0).	In progress		These issues have been incorporated to the TOR of INGO for CDMU that recruiting process is in progress; so, work is yet to be started
5. Develop a community flood risk assessment and community risk reduction plan Targets 5.1: Community Flood Risk Assessment prepared identifying: (i) risks for women, men, children and vulnerable groups; and (ii) disaster response mechanism related to flood and erosion warning; 5.2: Community Risk Reduction Plan 20 plans prepared for 40 Units through participation of women volunteers specifying roles, provisions for women and men in terms of disaster preparedness at HH and community level; (iii) risk reduction measures 5.3: 60 locations identified and build community flood markers for flood warning information	In progress		
A3 Formulating community disaster management units			

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

Output/Activities/Targets	Progress of Reporting Quarter (Apr-Jun 2018)	Cumulative Progress up to June 2018	Remarks
<p>6. Initiate community-based flood warning dissemination procedures building on indigenous techniques</p> <p>Target 6.1: 50% of the units have flood warning mechanisms [Source: end-line beneficiary survey]</p>	In progress		These issues have been incorporated to the INGO TOR but INGO not yet recruited; so, work is yet to be started
<p>7. Disseminate regular warning messages in relevant to local context/language in line with national warning network</p> <p>Targets:</p> <p>7.1: 20 knowledge events held [Target: 100 women]</p> <p>7.2: 50% of households, including low-income households, and poor women living on the embankment participate have increased resilience through preventive measures at household level ([Source: end-line beneficiary survey])</p>	In progress		
A4 Construction of resettlement areas with basic infrastructure and facilities			
<p>8. 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)</p> <p>Target 8.1: Full compensation for 100% women PAPs as per RP entitlement.</p>	8.1: Total 517 APs (35 women) received CCL through DC office.	<p>8.1: A total of 264 women APs out of 2695 APs are eligible for entitlement benefits;</p> <ul style="list-style-type: none"> • Until now a total of 35 women and 350 men (total=385 PAP) received compensation and resettlement benefit from the project. 	

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

Output/Activities/Targets	Progress of Reporting Quarter (Apr-Jun 2018)	Cumulative Progress up to June 2018	Remarks
		<ul style="list-style-type: none"> A total of 517 APs (45 women) received CCL through DC office. 	
<p>9.Ensure that gender issues are considered when planning resettlement villages and community facilities</p> <p>Target 9.1: 33% women involved in planning meetings</p>	<p>9.1: It is ensured that 33% women involved in planning meetings.</p>	<p>9.1: It is ensured that 33% women involved in planning meetings.</p>	
Output II: Strengthened Institutional Systems for Flood and Riverbank Erosion Risk Management			
A5 Capacity enhancement of BWDB			
10. Integrate a gender-specific module in the BWDB training			
<p>11. Build capacity of female staff in BWDB</p> <p>Targets:</p> <p>11.1: 10% women in training programs</p> <p>11.2: Provide 3 training (1 in BWDB HQ, 1 in design office and 1 in 3 SMOs) to at least 60 women staff in BWDB on working as women in BWDB – Challenges and issues</p>	<p>11.2: Prepared guidelines and session schedule for the “training session for SMOs” that will be conducted in next quarter</p>	<p>In June 2017, 1 (one) Gender specific course has been held for building capacity of female staff in BWDB HQ. Out of 32 participants, 25 were female. The main discussions were Importance of gender in water management project and concept of gender with government’s commitment. ADB’s Gender Specialist attended as resource person in this workshop.</p>	
Output III: Program Management Systems Operational			
A6: Implementation management			
<p>12.Establish MIS system with sex disaggregated data base for project reporting</p> <p>Target 12.1: Identify gender indicators, incorporate in monitoring system and</p>	<p>12.1: Using data from MIS for regular reporting on progress of GAP implementation</p>	<p>12. Established MIS system with sex disaggregated data base for project reporting</p> <p>12.1 Using data from MIS for regular reporting on progress of GAP implementation</p>	

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

Output/Activities/Targets	Progress of Reporting Quarter (Apr-Jun 2018)	Cumulative Progress up to June 2018	Remarks
ensure regular reporting on progress of GAP implementation			

Notes:

1. Quarterly Progress Report (QPR) is prepared based on revised version of Gender Action Plan during ADB MTR Mission;
2. Based on project MIS, all activities and its' progress were reviewed and reported in the form of
 - i) Cumulative Progress; and
 - ii) Progress of Reporting Quarter with some explanations where necessary;

Issues/ Challenges with proposed measures to address them:

- (i) Capacity building of the women of the affected households through Income Generating and Livelihood Development Activities;
- (ii) Empowerment of women in the family affected by the river erosion is not impossible but very difficult due to change of location frequently as well as male domination and women are not willing to come forward;
- (iii) Extra effort is needed to ensure at least 5-10% involvement of women in construction work due to heavy duty and some areas are very conservative towards women's working outside home or beyond household work;

Comments/ Remarks:

FRERMIP is working to implement GAP for livelihood development and empowerment of women.

Compiled by:

Begum Shamsun Nahar
 Social Development and Gender Specialist
 ISPMC, FRERMIP, BWDB, Dhaka

Appendix-G Compliance with Loan Agreement Covenants

Sl.No.	Covenant Description	Comply ²	Evidence to Support Claim
Implementation Arrangements			
1	Project is implemented in accordance FAM.	Yes	All Environmental, Social and Financial provisions outlined in the FAM are being satisfactorily implemented.
2	PMO, SMOs and PMU shall employ sufficient and experienced staff.	No No	<ul style="list-style-type: none"> • BWDB: on average, the PMO has only 55% of Senior Staff as specified in DPP. • DDM: PMU only has only 2 staff, and the Project Manager is on additional charges.
3	PMO, SMOs and PMU staff shall remain for a reasonable period of time.	Yes No	<ul style="list-style-type: none"> • BWDB: PD stayed for over 4 years • DDM: has had 3 Project Managers in 2.5 years
4	The PMO PD shall have a rank not less than a Superintending Engineer.	Yes	PMO PD had rank of Superintending Engineer.
5	BWDB shall establish a CE River Management office responsible for flood and riverbank erosion risk management.	Yes	On 22-Nov-2017, BWDB established the office of CE River Management, and appointed a Chief Engineer.
Counterpart Support			
6	If Borrower cannot avail of the proceeds of the Grant, the Borrower shall find an alternative source of funding.	na	No problem has occurred in availing Grant money.
7	The Borrower shall reimburse BWDB for any taxes and duties imposed for Goods, Works and Consulting Services.	Yes	Typically, taxes and duties are being reimbursed by the Borrower as per their portion of each Loan Category.
Selection of Subproject areas			
8	BWDB shall ensure that Subprojects are selected in accordance with FFA Schedule 4.	Yes	All 3 selected Subprojects are included in the approved Project-1 Feasibility Study completed in Dec-2013.
Environment			
9	Project facilities comply with environmental safeguards, laws and regulations, EARF, EIA/EMP, and reported upon in Monitoring Reports.	Yes	EIA approved, EMP being implemented, SESA drafted, and Quarterly and Semi-Annual Monitoring Reports submitted. These reports document satisfactory compliance with environmental safeguards.
Land Acquisition and Involuntary Resettlement			
10	BWDB shall ensure that all land and all rights-of-way are available to contractors in a timely manner.	Yes	Contractors' work has not been delayed due to land acquisition issues.
	(a,b,c&d) Land acquisition and resettlement comply with applicable laws, Involuntary Resettlement Safeguards, RF, and RP.	No Yes	<ul style="list-style-type: none"> • Riverbank Protection: land acquisition done after construction, due to severe erosion potential and local public demand. A Corrective Action Plan is currently being implemented. • Embankment: land acquisition and resettlement processes have been properly followed.

Sl.No.	Covenant Description	Comply ²	Evidence to Support Claim
11	BWDB shall ensure that there is no physical or economic displacement until:		
	(a) compensation and other entitlements have been provided to affected people	No	Refer to Sl.No. 10 above. However, compensation process is now actively ongoing for both Riverbank Protection and Embankment.
	(b) a comprehensive income and livelihood restoration program has been established	No	Not yet started. ToR for Livelihood Support Study sent to ADB for concurrence in May 2016.
Indigenous Peoples			
12	BWDB shall ensure that the Project does not have any indigenous peoples' impacts.	Yes	No indigenous people affected by project.
Human and Financial Resources to Implement Safeguards Requirements			
13	BWDB shall fully implement the EMPs and the RPs.	Yes	EMPs included in all Civil Work contracts, and an INGO is actively engaged to develop all RPs. Monitoring results are regularly being reported.
Safeguards			
14	BWDB shall ensure that all Works contracts require contractors to:		
	(a) comply with EIA, EMP and RP; and Safeguards Monitoring Report actions	Yes	Covered in 'Technical Specifications' under Section 2. Environmental Management Plan and Safety at the Site.
	(b) include a budget for environmental and social measures	Yes	Included in Bill of Quantities, Bill No. 02: Environmental Management Works.
	(c) provide written notice of unanticipated environmental, resettlement or indigenous peoples' risks	No	No special clause found to provide written notice of unanticipated environmental, resettlement or indigenous peoples' risks. Clause to be added to all 5 pending embankment contracts.
	(d) adequately record pre-Work condition of roads, agricultural land and infrastructure	No	No special clause found requiring contractors to record pre-Work condition. Clause to be added to all 5 pending embankment contracts.
	(e) fully reinstate pathways, other local infrastructure, and agricultural land pre-Work condition	Yes	Adequately covered in Section 2. 'Environmental Management Plan and Safety at the Site' of the Technical Specifications.
Safeguards Monitoring and Reporting			
15	BWDB shall:		
	(a) submit semi-annual Safeguards Monitoring Reports to ADB	Yes	ISPMC submit Monitoring Reports on quarterly and bi-annual basis on environmental and social issues.
	(b) promptly document any unanticipated environmental and social risks and impacts	Yes Yes	<ul style="list-style-type: none"> • Environ: No serious unanticipated risks or impacts have occurred. • Social: Resettlement Issues documented in QPR.
	(c) within 6 months, engage external experts to verify information regarding land acquisition and involuntary resettlement	No	The bid document has been received and evaluated, short-listing completed, and negotiations are ongoing for External Expert. Contract award is expected by early Feb-2018.

Sl.No.	Covenant Description	Comply ²	Evidence to Support Claim
	(d) promptly report any breach of compliance with EMP or RP	Yes Yes	<ul style="list-style-type: none"> • Environ: No serious compliance breach with EMP has occurred. • Social: Resettlement Issues documented in QPR.
Prohibited List of Investments			
16	BWDB shall ensure that Loan or Grant funds are not used for prohibited investment activities.	Yes	Accounting procedures are being rigorously maintained by PMO and no evidence of misuse has been found.
Labour Standards			
17	All civil works contracts require contractors to:		
	(a) comply with labour standards, labor laws and applicable health and safety principles	Yes	Covered in 'Conditions of Contracts for Construction', under Section: 6. Staff and Labour.
	(b) eliminate discrimination between men and women for work of equal value	Yes	Adequately covered in 'Conditions of Contracts for Construction', under clause: 6.24 Non-Discrimination and Equal Opportunity.
	(c) eliminate child labour, and forced or compulsory labour; and allow freedom of association	Yes	Covered in 'Conditions of Contracts for Construction', under clause: 6.21 Child Labour.
	(d) maximize employment of local poor and disadvantaged persons	No	No special clause found to employ local poor and disadvantaged person. Clause to be added to all 5 pending embankment contracts.
	(e) disseminate information on sexually transmittable infections and HIV/AIDS	Yes	Covered in 'Conditions of Contracts for Construction', under clause: 6.7 'Health and Safety'.
	(f) implement applicable provisions of GAP	No	No special clause found related to provisions of GAP. Clause to be added to all 5 pending embankment contracts.
Gender and Development			
18	BWDB shall implement the GAP, and monitor and report on key gender outcome and output targets.	Yes	GAP outcomes and outputs are being documented in QPR.
Quality Assurance			
19	Engage external experts to inspect and store results of completed riverbank protection works using accurate surveying equipment.	Yes	ISPMC performs a rigorous and regular Flood Monitoring Program including Multi-Beam Echo-Sounder surveys at Chauhali and Kojjuri in Nov-2018. Scuba diving investigations also conducted.
Panel of Experts			
20	BWDB shall engage experts to analyze project implementation constraints, and advise on remedial measures.	Yes	There has been four Technical Advisory Committee(TAC) Meetings to review Project technical issues and make recommendations. A Technical Committee has also been formed by BWDB to investigate slope failures at Chauhali.
Inter-agency Coordination			
21	BWDB shall timely notify all relevant agencies of their riverbank protection works.	Yes	ISPMC has one Specialist permanently deputed to DDM, who updates PM PMU on project activities.

Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

Sl.No.	Covenant Description	Comply ²	Evidence to Support Claim
Operation and Maintenance of Project Facilities			
22	Ensure that:		
	(a) BWDB inspect and maintains all Works rehabilitated according to O&M plans	Yes	ISPMC performs a rigorous Flood Monitoring Program to identify status of Riverbank Protection Works.
	(b) BWDB submits annual budgets to MoWR for O&M works according to the plans	Yes	Provisional 2017/18 ADP funding for Adaptive Protection and Emergency work is BDT 89 million; other funding also available.
	(c) Borrower allocates adequate resources for BWDB to carry out O&M works	Yes	Funding for 2017/18 Emergency/Adaptive work is expected to be around BDT 160 million. Koitola riverbank protection transferred to O&M Division in Dec-2017.
23	BWDB shall maintain adequate stockpiles of geo-textile bags for emergency riverbank protection works and repairs.	Yes	BWDB has purchased enough geo-bags to accommodate all expected emergency and adaptive work for 2017/18.
24	BWDB shall provide local communities with land use rights for embankment to promote livestock grazing and tree cultivation.	na	Construction work of embankments not yet started. However, Social Forestry is mentioned in the CbFRM Support Services INGO Contract.
Road Map and Policy and Institutional Reforms			
25	BWDB shall implement timely institutional reform actions identified under Investment Program policy framework.	Yes	Refer to Sl.No. 5 reply regarding the establishment of CE River Management office.
Policy Dialogue and Coordination with Development Partners			
26	BWDB shall keep ADB informed of discussions with government and quasi-government bodies responsible for water sector development.	Yes	This is being done through periodic ADB Missions, and regular discussions and correspondence between PMO and ADB BRM.
Governance and Corruption			
27	BWDB shall comply with ADB's Anticorruption Policy and cooperate with any investigations.	Yes	No evidence of corruption in dealing with any project activities have been reported or found.
28	BWDB shall include anticorruption provisions in contracts, allowing ADB to audit records of contractors, suppliers, and consultants.	Yes	Covered in the 'Conditions of Contracts for Construction' Section, under clause: 15.6 Corrupt and Fraudulent Practices.
29	BWDB shall announce all business opportunities on their websites, including participating bidders, winning bidders and contract award amounts.	Yes	Adequate contract information is available on: www.bwdb.gov.bd/index.php/site/live_tender
30	Borrower shall periodically inspect financial activities related to the procurement of Goods, Works and Consulting Services.	Yes	Foreign Aided Project Audit Directorate (FAPAD) audits carried out on a annual basis.

Notes: 1. Implementation Arrangement Covenants are defined in Loan Agreement Schedule 5.
2. Valid Comply answers include: Yes, No or na (non-applicable)

Appendix-H Capacity Building

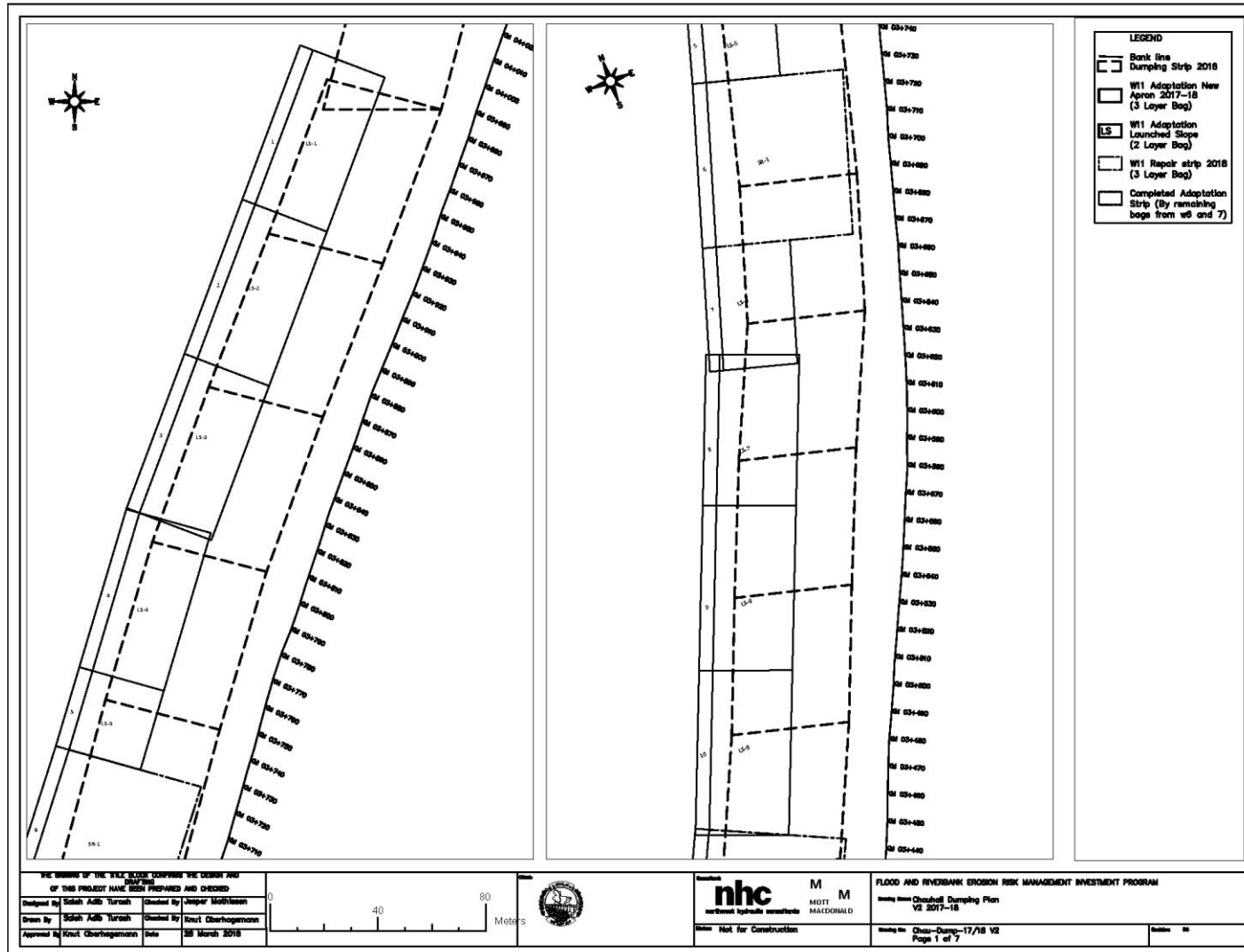
 Table I-1: Implementation Progress of Training Activities
Capacity Building PMO

Sl.	Description	Total No. of Trainees			Implementation Progress				Date			Remarks	
		No. of Course	M	F	Total	Discussed	Prepared	Approved	Complete	FY 15-16	FY 16-17		FY 17-18
A. Local Training													
1	River Engineering	2	34	6	40	2	2	2	2	3-9 & 24-30 Apr-2016			By BUET: FY 2015-2016
2	River Training Techniques	2	38	2	40	2	2	2	2	12-16 & 18-23 Feb-2017			By BUET: FY 2016-2017
3	*Riverbank Geotechnical Stability	1			20	2	1				July-2018		BUET is conducting the training on Riverbank Geotechnical Stability under FY 2017-2018
4	*Riverbank Protection	1			20	2	1	1	1		July-2018		Department of Water Resources Engineering (DWRE), BUET is conducting training on Riverbank Protection under FY 2017-2018.
5	Strategic Planning	2			40	2					Aug-2018		Back to back, Combined: To be completed under FY 17-18
6	*Survey and Evaluation	1			10	2	1	1	1		July-2018		INSTITUTE OF WATER MODELLING (IWM) will be executed 11 days training (With 10 participant) under FY
7	Underwater Investigations	1			20	1					Sep-2018		Back to back, Combined: Mr. Atique, Mr. Ghani. To be completed under FY 17-18
8	*Resettlement	1			15	2	1	1	1		July-2018		Centre for Environmental and Geographic Information Services (CEGIS) will conduct the training under FY 17-18
9	*Environment	1			15	2	1	1	1		July-2018		Centre for Environmental & Geographic Information Services (CEGIS) will conduct the training under FY 17-18
10	Leadership	2			40	2	0	0	0		?		Confusing
11	Project Management	2			40	2	0	0	0		?		Confusing
12	Construction Management	2			40	2	2				Aug-2018		Mr. Bruce Hunter-RTW. (To be prepared soon)
13	Technology Transfer: Demonstration Presentation on Use. of Grout-Filled Jute Mattress for Permanent Riverbank.	1	27	3	30	9	1	1	1				Completed
14	Capacity Building for DDM	2			30	2					Jul to Aug-18		Dr. Towfique, preparing the programme
Sub Total		21	99	11	400	34	12	9	5				
B. Overseas Training													
1	River Morphology	1	7	1	8	1	1	1	1	Sep-16			OK by IHE (Netherlands) on Sep-2016 (FY: 15-16 & 16-17)
2	River Training Techniques	1	7	1	8	1	1	1	1		Jun-Jul-2017		OK by IHE (Netherlands) on 5 June-2 July- 2017 (FY: 16-17)
Sub Total		2	14	2	16	2	2	2	2				
C. Overseas Study Tour													
1	Study Tour-1 (Australia)	1			5	1	1	1	1		Feb-Mar-2018		To be executed Jul 2018
2	Study Tour-2 (North America)	1	9	0	9	1	1	1	1		Oct-2017		Completed on 5-21 October 2017
3	Study Tour-3 (China)	1	10	0	10	1	1	1	1	Jun-2016			Completed on June 2016; FY 2015-16
4	Study Tour-4	1			10	1	1				Within 2018		To be held in 2018
Sub Total		4	19	0	34	4	3	2	2				
Totals		27	132	13	450	40	17	13	9				
Gender Percentages (%)			91	9									

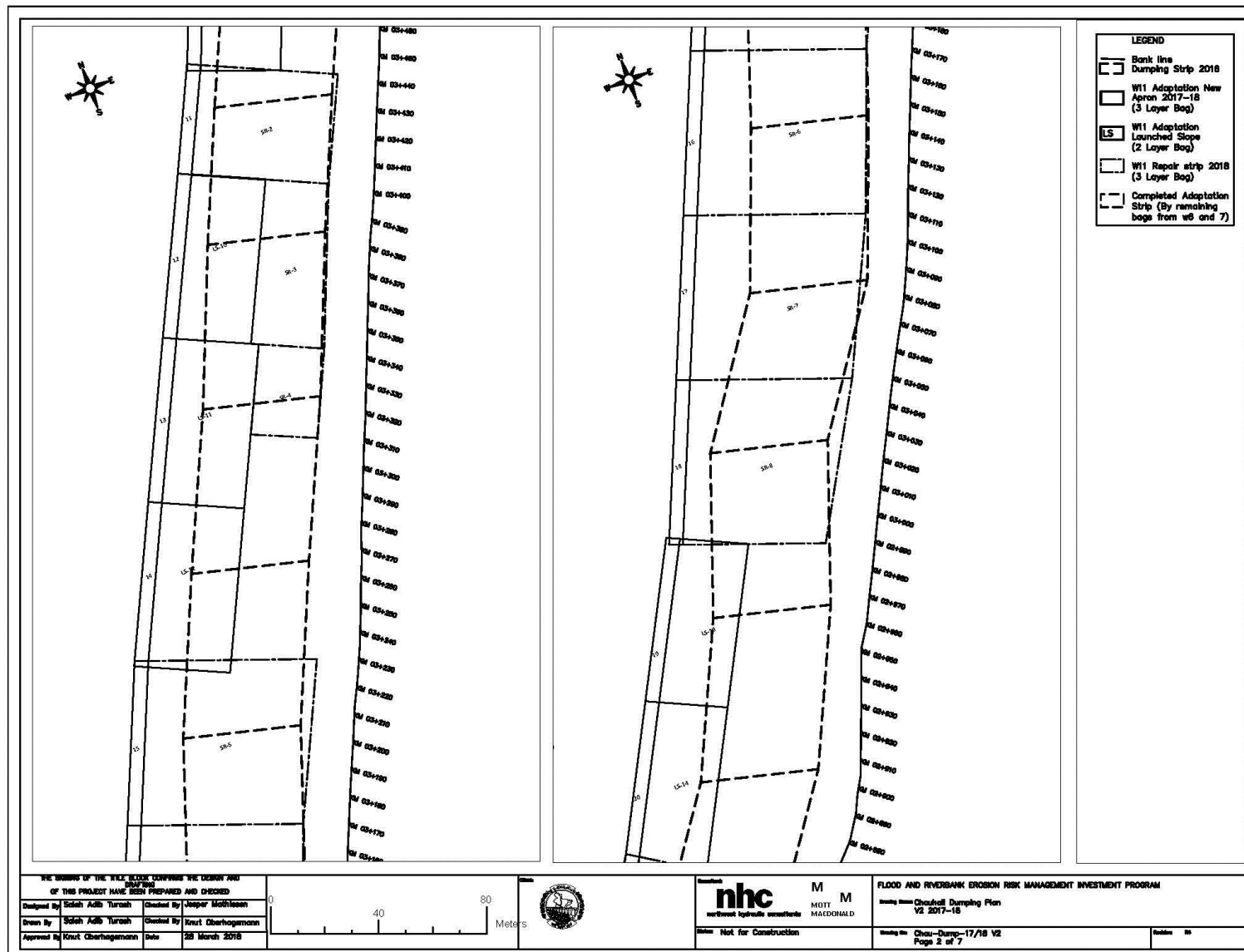
Implementation Progress of Training Activities by ISPMC

Sl.	Description	Completed			Date			Remarks	
		No. of Courses	No. of Trainees			FY 15-16	FY 16-17		FY 17-18
			M	F	Total				
ISPMC Line Item-1: Workshops, Training and Seminars (Provisional Sum)									
A. Workshops									
1	Workshop on Draft Inception Report	1	83	40	123	09-Dec-2015		Pan Pacific Sonargaon, Dhaka	
2	River Stabilization and Preliminary Master Plan	1	99	41	140		07-Dec-2016	Pan Pacific Sonargaon, Dhaka	
3	National Stakeholder Workshop on the River Stabilization Plan	1	170	80	250			29-Nov-2017 Hotel Radisson, Dhaka	
Sub Total		3	352	161	513				
B. Training:									
1	Training on Environmental Management at 3 sites	3	30	0	30	26-28 Apr-2016		Chauhali, Harirampur & Zaffarganj	
2	Training on International River Stability	1	90	20	110		08-Dec-16	Level-4 of WAPDA Building	
3	Training for Task Force on Sand-filled Geotextile Bags	1	24	0	24		22-Dec-16	Level-4 of WAPDA Building	
4	Training: Gender Awareness for BWDB Engineers	1	7	25	32			31-Jul-17 BWDB Design Office Conference Room	
Sub Total		6	151	45	196				
C. Conferences & Discussions									
1	International Conference on Scour and Erosion	1	3	0	3		12-15 Sep-2016	Oxford University, UK With the DG, BWDB & PD, FRERMIP	
2	International Large Rivers Conference	1	3	0	3		17-22 Apr-2017	Delhi, India with solely ISPMC	
3	a) Round Table Discussion: River Management	1	20	0	20	28-Mar-16		Pan Pacific, Sonargaon	
	b) Round Table Discussion: Presentation from the DG,	1	20	0	20	25-May-16		Lake Castle, Gulshan	
	c) Round Table Discussion: Capacity Development	1	30	0	30		28-Oct-16	Pan Pacific Sonargaon	
Sub Total		5	76	0	76				
ISPMC Totals		14	579	206	785				

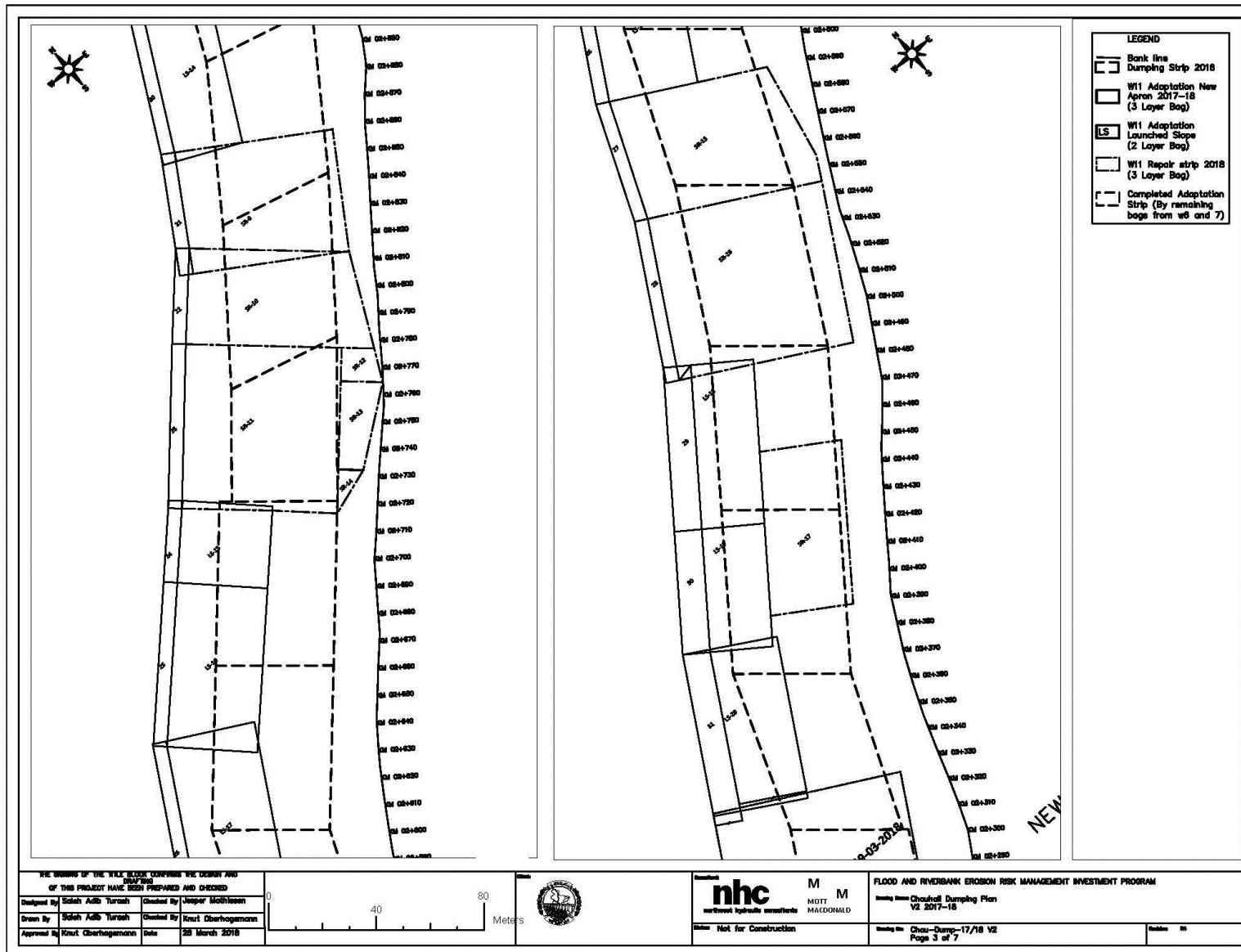
Appendix-I As-built Dumping Plan of Repair/Adaptation Works at Chauhali

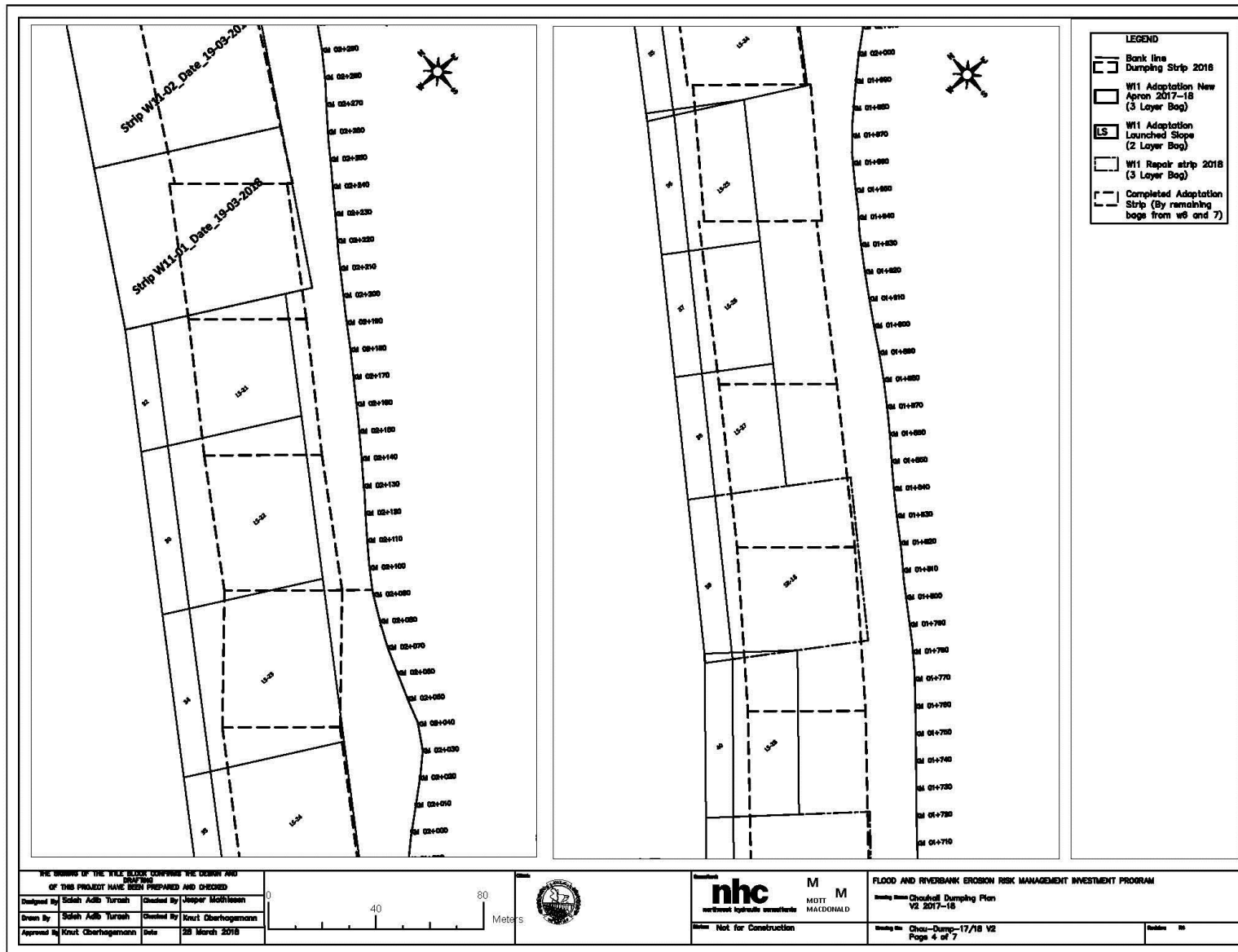


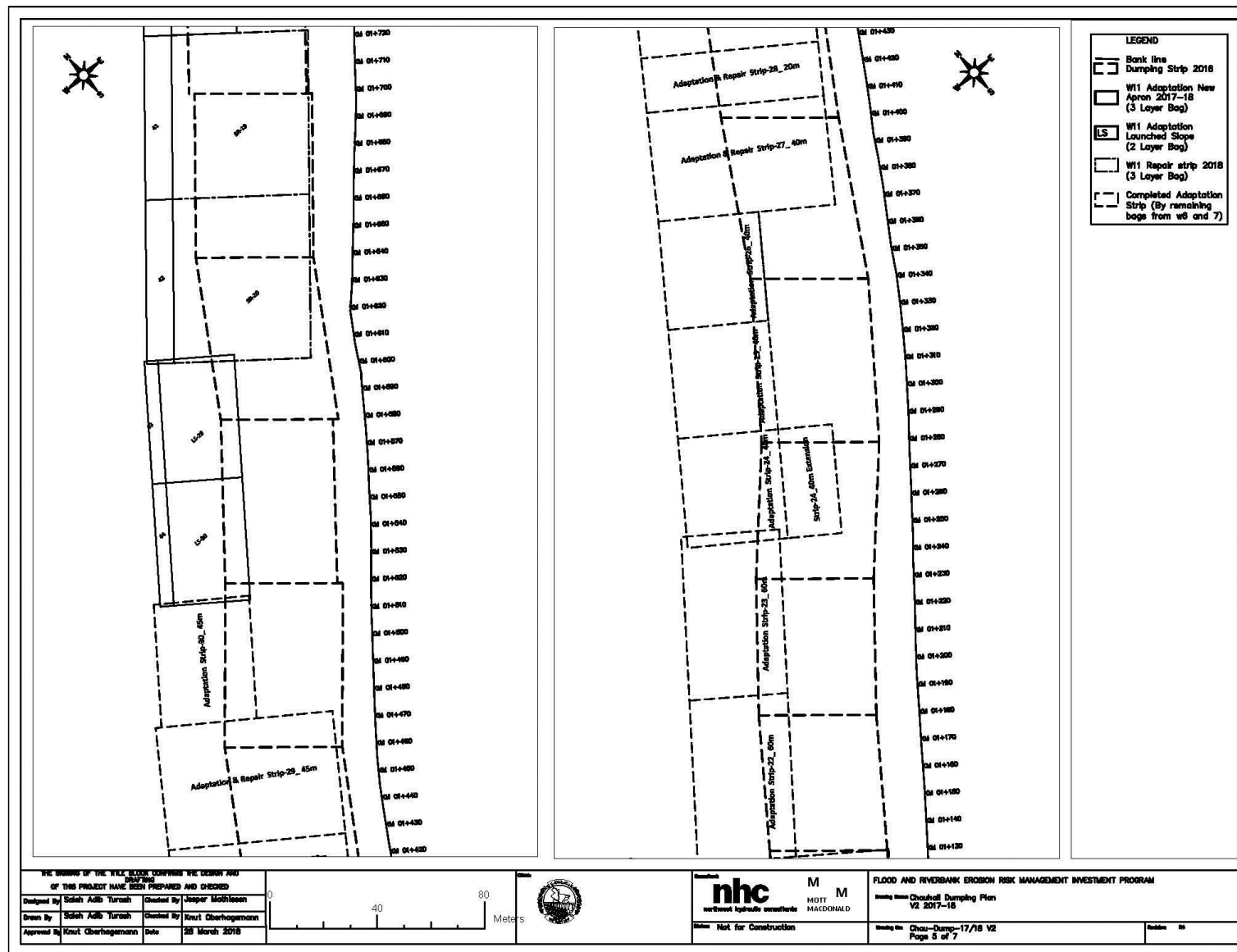
Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1

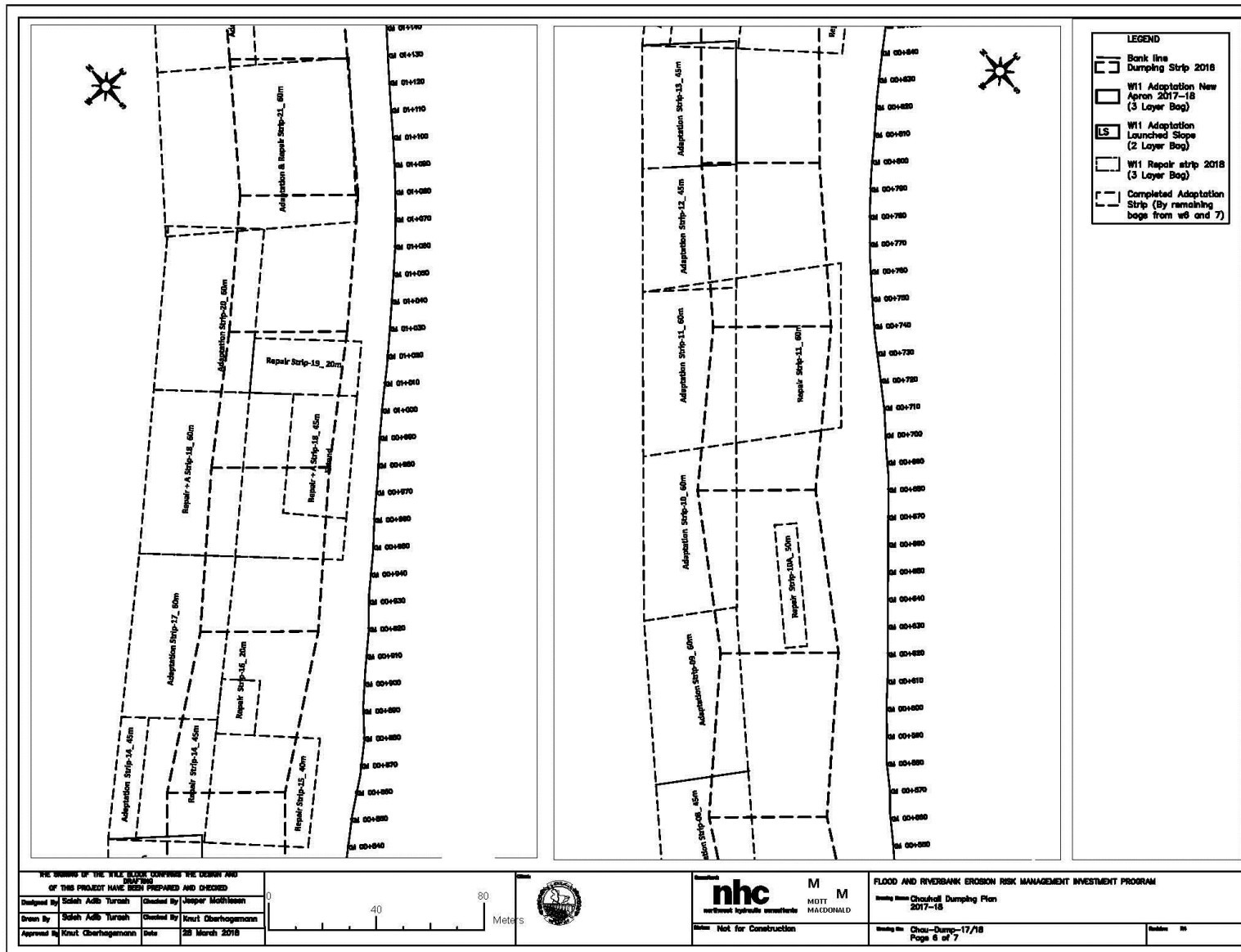


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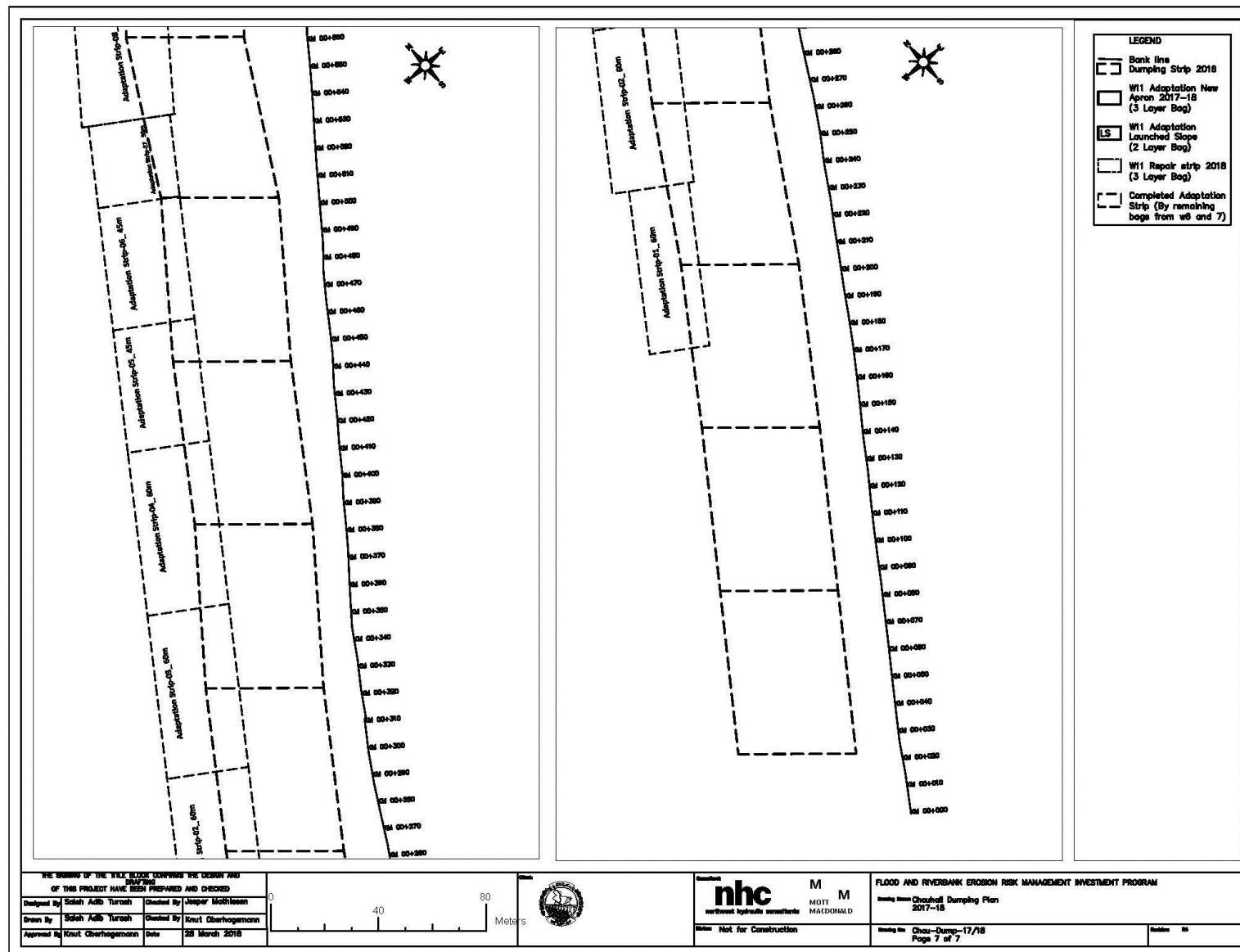








Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP), Project-1



Appendix-J Photo Annex



Riverbank Protection at the PIRDP, built between 2004 and 2008 – in good condition after 10 years



New embankment construction alongside the Hurashagar River, contract package 4



Riverbank erosion at Benotia



Bandalling at Benotia to counter riverbank erosion



Preparation of embankment construction, contract package 3



Construction of Kojjuri Regulator, Package W-01