

Environmental Monitoring Report

Project No. 44167-014
Semiannual Report
(July – December 2017)
February 2018

Flood and Riverbank Erosion Risk Management Investment Program - Project 1

Prepared by Bangladesh Water Development Board for the People's Republic of Bangladesh and the Asian Development Bank.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

Government of the People's Republic of Bangladesh



**Bangladesh Water
Development Board**

Flood and River Bank Erosion Risk Management Investment Program

ADB Loan Number: 3138 BAN (SF)

**Semi-annual Environmental Monitoring Report
Period: July 2017 - December 2017**

Table of Contents

Abbreviations and Acronyms	iii
Executive Summary	iv
1. INTRODUCTION	6
1.1 FRERMIP Location and Area.....	6
1.2 Project Interventions.....	6
1.3 Objectives:	6
1.4 Environmental category as per ADB Safeguard Policy Statement 2009: Category A.....	6
1.5 Environmental category as per national laws and regulations: Red.....	6
1.6 Project Safeguards Team:	8
1.7 Overall project and subproject progress and status	8
1.8 Description of subproject (package-wise) and status of implementation (preliminary, detailed, design, on-going construction, completed and/or O&M stage).....	10
2. COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORYENVIRONMENTAL REQUIREMENTS	12
3. COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS	12
4. COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT PLAN (REFER TO EMP TABLES IN APPROVED EIA)	15
5. APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT	17
6. MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS (AMBIENT AIR, WATER QUALITY AND NOISE LEVEL)	18
7. Follow up action of the findings of previous EMR.....	19
8. SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS	21
9. Recommendation and conclusion:	21

List of Maps

Map1.1: Location of Project area	7
--	---

Abbreviations and Acronyms

ADB	Asian Development Bank
BWDB	Bangladesh Water Development Board
CEMP	Contractor's environmental management plan
DOE	Department of Environment
DPHE	Department of Public Health Engineering
EIA	Environmental impact statement
EMP	Environmental management plan
FGD	Focus Group Discussion
FRERMIP	Flood and Riverbank Erosion Risk Management Investment Program
GRM	Grievance Redress Mechanism
ISPMC	Institutional Strengthening and Project Management Consultant
PMO	Project Management Office
RRA	Rapid Rural Appraisal

Executive Summary

This 4th Semi-annual Environmental Monitoring Report for the period July 2017 to December 2017 of Flood and Riverbank Erosion Risk Management Investment Program (FRERMIP) has been prepared to fulfill the safeguard policy requirement of ADB. FRERMIP has been categorized as category-A for environment in accordance with ADB's Safeguard Policy Statement (2009). Similarly according to Bangladesh Environment Act (1995) and Environment Conservation Rule-1997 it was categorized as Red Category and a detail Environmental Impact Assessment (EIA) including EMP was done to fulfill the GoB requirement as well as ADB's requirement. This 4th semiannual Environmental Monitoring Report is prepared for monitoring the EMP following the Environmental Monitoring Plan described in that EIA report. In fact during in this period usually no work takes place in BWDB due to flood season. As such there was no construction work in the field and there was limited scope for monitoring the EMP. But to meet ADB's reporting requirements semi-annual Environmental Monitoring Reports are mandatory to submit ADB for disclosure.

As a part of implementation of the FRERMIP a number of interventions have been planned in three (3) tranches. The Tranche-1 is already being implemented. The main components of tranche-1 are (a) Riverbank Protection work at Chauhali, Dist. Sirajgonj- 7 km (b) Riverbank Protection work at Zaforganj, Dist. Manikganj- 2.00 km (c) Riverbank Protection work at Harirampur, Dist. Manikganj- 8.80 km and (d) Construction and Rehabilitation of Embankment from Kaijuri to Hurasagar, Dist. Sirajganj – 23 km. The riverbank protection work have been completed on June 2017 and the finalization of tender for embankment work have been completed and expected to start in February 2018 and complete by May 2019.

The Project is expected to have generally positive impacts on the environment of which the objective of the Project are

- To protect land and valuable infrastructure from riverbank erosion making risk free environment and poverty alleviation of the local people.
- Flood Embankments to reduce flood damage and infrastructure and to induce greater economic investment and productivity in flood plain agriculture by reducing flood risk

On the other hand, negative impacts identified include (i) degradation of Floodplain aquatic (wetland) habitats due to reduced flooded area, depth, and duration; reduced hydrologic connectivity; and physiochemical / water quality changes. This in turn will adversely affect floodplain-dependent open water fish species migration, population levels, as well as wetland biodiversity services, and more generally yield. The embankment can impede cross-drainage (drainage congestion), adversely affecting agriculture within the protected area, and blocking the movement of migrating fish and other animal and plant species and therewith reduce biodiversity of the area concerned, and thus ecosystem sustainability(ii) Due to bank protection work, accretion may result which in turn reduces the navigability in the river reaches (iii) water quality deterioration due to agriculture intensification (iv) temporary impacts during construction of structure and embankments.

These will be mitigated through (i) a number of sluice gates with fish pass that will reduce the risk of drainage congestion and allow some cross movement of fish during the migration season. However, the loss of open water fisheries will be compensated by the increase in culture fisheries, resulting in a net gain in fish production. The loss of floodplain fisheries will be further mitigated through a program enhancing wetland biodiversity, aquaculture and a number of fish sanctuary in the Project area. The program will be implemented through a specialist NGO and supervised through the Department of

Fisheries (DOF). Vulnerable groups, specifically the poor, project affected people, and women will be given preference in these activities. (ii) the accretion in the river causing reduction of navigability may be reduced by dragging to be done during dry season. (iii) Introducing integrated pest management and effective soil nutrient management as a part of agriculture extension (iv) involvement of Community organizations in project activities would enhance crop production. Proper resettlement as per safe guard methodology would compensate the land lose.

The positive and adverse impacts and their mitigation measures and enhancement were incorporated in the EIA for tranche-1 of FRERMIP. A comprehensive EMP was also in the EIA of the project distinguishing the phases i.e. pre-construction, construction and post-construction and is meant to manage and mitigate all identified adverse impacts of the project. At the field level contractors are responsible to implement prepared EMP of the project. To comply with the EMP at field level Environmental health and safety commensurate with nation and international laws have been included in the contractor's contract. A national and an international Environment Specialist have been engaged to monitor the EMP prepared for the project from consultant's team. A safeguard cell at PMO headed by an Executive Engineer is responsible to oversee the whole process and verify the claims and grievances raised by community people/farmers if any and finally prepare and submit safeguard report to ADB regularly for disclosure.

1. INTRODUCTION

1.1 FRERMIP Location and Area

The FRERMIP area encompasses the Jamuna River reach starting below the Jamuna Bridge and the proposed Ganges Barrage site, down to Chandpur on the Lower Meghna. Downstream of the Jamuna Bridge and the Barrage site, the Jamuna and Ganges river courses are somewhat independent of upstream river developments. The FRERMIP area covers 9,300 km³ with a total population of 10.5 million (2011 census) in 40 upazilas and 431 unions, with an average population density of nearly 1,600 persons per km² of floodplain land. The FRERMIP will be implemented in 3 (three) phases of which Phase-1 started from 2014-15 and schedule to be completed on 2018-19.

1.2 Project Interventions

Proposed interventions under Tranche 1 fall into three categories: (i) riverbank protection, (ii) new and rehabilitated road/flood embankments, (iii) drainage sluices. The major construction work (a) Bank protection work at Chauhali-7.00 (b) Bank protection work at Zafarjang- 2.00 km (c) Bank protection work at Horirampur- 8.80 km, (d) new and rehabilitated road/flood embankments- 23 Km. The bank protection work is mostly completed and the construction of Embankment is expected to start from January 18 after conducting tendering process. Map 1 shows the locations of interventions during Tranches 1.

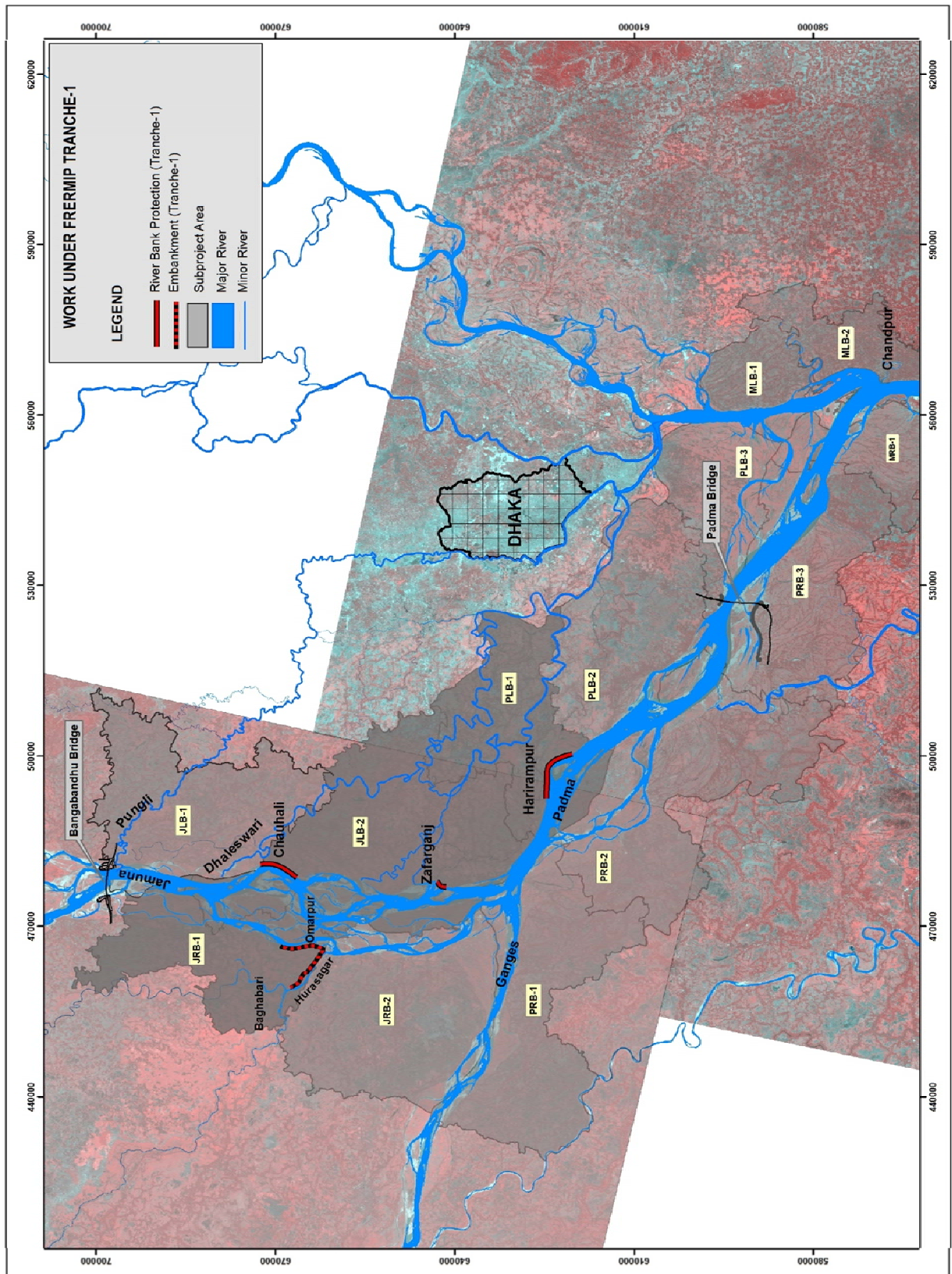
1.3 Objectives:

The objectives of the program are –

- to sustain economic growth, poverty reduction and livelihoods of people, living in the areas threatened by riverbank erosion.
- to enhance resilience to flood and riverbank erosion risks through strengthening the flood and riverbank erosion management system, including the knowledge base and underlying institutions;
- to establish integrated non-structural and structural risk management measures at priority erosion sites and addressing their sustainability.

1.4 Environmental category as per ADB Safeguard Policy Statement 2009: Category A

1.5 Environmental category as per national laws and regulations: Red



Map1.1: Location of Project Intervention

1.6 Project Safeguards Team:

Name	Designation/Office	Email Address	Contact Number
PMO			
Mr. Muhammad Jahangir Alam	Executive Engineer Focal Person (Env.)	Jahangirbwdb05@gmail.com	02-9140558 01713-173871
Mr. Abul Basher	Assistant Director		01675-207803
SMO			
	Jahangir insert the names and address of SMO		
Consultants			
Mr. Wandert Benthem	International Environmental Specialist	Wanderbenthem@mottmac.com	
Mr. Md.Amir Faisal	National Environmental Specialist	faisal.mdamir@gmail.com	01715-315227
Dr. Md Shahjahan Howlader	National Fisheries Specialist	dr.mshowlader077@gmail.com	01731-301821

1.7 Overall project and subproject progress and status

The Bangladesh Water Development Board is implementing the Flood and Riverbank Erosion Risk Management Investment Program covering parts of the main rivers in Bangladesh. Asian Development Bank (ADB) and Government of the Netherland (GoN) is the fianancing agency of the project. The program will be implemented in three phases starting from July 2014 until June 2023. The total program cost is approximately US\$ 375 million, of which ADB will finance up to US\$ 250 million in three loan tranches under a multi-tranche financing facility (MFF). The Project will cover the main rivers from downstream of Bangabandhu (Jamuna) Bridge and from the proposed Ganges Barrage to Chandpur, as such covering around 60 km of the Jamuna, around 20 km of the Ganges, and around 100 km long Padma reach. The program will be implemented in the tranches. At present Tranche-1 is being implemented as per PPTA study of the project. The tranche-1 includes the following activities with locations

Table-1: Subproject wise location and activities:

Name of Work	Location	Length	Type of activities
--------------	----------	--------	--------------------

Bank protection work at Chauhali (Package-W-06/2014-15 & W-07/2014-15)	Upazila-Chauhali & Tangail Sadar Dist. Sirajgang & Tangail	7.00 km	Main contract activities are clearance and establishment of work sites and worker's camps, sand mining, transport of sand to filling areas and cement concrete block manufacturing; filling and dumping of sand filled geo-bags on/from barges; laying of concrete blocks etc.
Bank protection work at Zafarganj (Package-W-08/2014-15)	Upazila-Shibalaya Dist.- Manikganj	2.00 km	Main contract activities are clearance and establishment of work sites and worker's camps, sand mining, transport of sand to filling areas and cement concrete block manufacturing; filling and dumping of sand filled geo-bags on/from barges; laying of concrete blocks etc.
Bank protection work at Harirampur (Package-W-09/2014-15 & W-10/2014-15)	Upazila-Harirampur Dist.- Manikganj	8.80 km	Main contract activities are clearance and establishment of work sites and worker's camps, sand mining, transport of sand to filling areas; filling and dumping of sand filled geo-bags on/from barges etc.
Construction/Re-construction of Embankment (Package- W 01/2016-17, W-02/2016-17, W-03/2016-17, W-04/2016-17 & W-05/2016-17)	Upazila-Shahjadpur Dist. Sirajganj	21.30 km	Main contract activities are clearance and establishment of work sites and worker's camps; Earth work by dredged material from river bed; Providing clay cladding by carried earth; Plantation of vetiver Grass and construction of regulators etc.
Emergency/Adaptive bank protection works (Package-W-11/2017-18)	Upazila-Chauhali & Tangail Sadar Dist. Sirajgang & Tangail	2.43 km	Main contract activities are clearance and establishment of work sites and worker's camps, sand mining, transport of sand to filling areas; filling and dumping of sand filled geo-bags on/from barges etc.
Land Recovery/River Training pilot works through construction of grout filled jute mattresses. (Package-W-14/2017-18)	Upazila-Chauhali, Harirampur & Shahjadpur Dist. Sirajgang & Manikganj	2.9 km	Embankment Slope Protection work with grout filled Jute Mattresses; Riverbank protection work by Grout filled Jute mattresses; land recovery through Plantation of vetiver Grass etc.
Construction of Inspection Banglow at Manikganj (Package -W-15/2017-18)	Upazila- Manikganj Sadar Dist.-Manikganj	1 no	Main contract activities are clearance and establishment of work sites and worker's camps; construction of Building etc.

1.8 Description of subproject (package-wise) and status of implementation (preliminary, detailed, design, on-going construction, completed and/or O&M stage)

Package Number	Components/List of work	Status of Implementation (Preliminary Design/Detailed Design/Ongoing Construction/Completed/O&M)	Contract Status(specify if under bidding or contract awarded)	If ongoing Construction	
				%Physical Progress	Expected Completion Date
W-06/2014-15	i) dumping of sand bags on river bed ii) Manufacturing of c.c blocks iii) Placing of c.c block on slopes of eroding bank	On going	Contract awarded	96%	30-04-2018
W-07/2014-15	i) dumping of sand bags on river bed ii) Manufacturing of c.c blocks iii) Placing of c.c block on slopes of eroding bank	Completed	Contract awarded	100%	-
W-08/2014-15	i) Dumping of sand bags on river bed ii) Manufacturing of c.c blocks iii) Placing of c.c block on slopes of eroding bank	Completed	Contract awarded	100 %	-
W-09/2014-15	i) Dumping of sand bags on river bed. ii) Placing of sand bags on slopes of eroding bank	Completed	Contract awarded	100%	-

Package Number	Components/List of work	Status of Implementation (Preliminary Design/Detailed Design/Ongoing Construction/Completed/O&M)	Contract Status(specify if under bidding or contract awarded)	If ongoing Construction	
				%Physical Progress	Expected Completion Date
W-10/2014-15	i) Dumping of sand bags on river bed. ii) Placing of sand bags on slopes of eroding bank	Completed	Contract awarded	100%	-
G-01/2014-15	Supply of Geo-bags	Completed	Contract awarded	100%	-
G-02/2014-15	Supply of Geo-bags	Completed	Contract awarded	100%	-
G-03/2014-15	Supply of Geo-bags	Completed	Contract awarded	100%	-
G-04/2016-17	Supply of Geo-bags	ongoing	Contract awarded	65%	25-03-2018
W-01/2016-17	i) Construction of Embakment ii) Construction of Regulator-2 nos.	ongoing	Bid Evaluation report approval under processes.	-	-
W-02/2016-17	i) Construction of Embakment	ongoing	NOA issued.	-	-
W-03/2016-17	i) Construction of Embakment	ongoing	NOA issued.	-	-
W-04/2016-17	i) Construction of Embakment ii) Construction of Regulator- 1 no.	ongoing	Bid Evaluation report approval under processes.	-	-
W-05/2016-17	i) Construction of Embakment ii) Construction of Regulator-1 no.	ongoing	Bid Evaluation report approval under processes.	-	-

Package Number	Components/List of work	Status of Implementation (Preliminary Design/Detailed Design/Ongoing Construction/Completed/O&M)	Contract Status(specify if under bidding or contract awarded)	If ongoing Construction	
				%Physical Progress	Expected Completion Date
W-11/2017-18	Adaptive bank protection works	ongoing	Tender will be received on 15/02/2018.	-	-
W-14/2017-18	Land Recovery/River Training pilot works	ongoing	Bid Document preparation under processes.	-	-
W-15/2017-18	Construction of Inspection Banglow at Manikganj	ongoing	Bid Document sent to ADB for reviewing.	-	-

2. COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS

Package no	Project name	Statutory Environmental Requirement	Status of Compliance	Validity if obtained	Action required	Specific conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish
-	FRERMIP	Approval of EIA and Environmental clearance	Approval of EIA and Environmental clearance obtained	Valid up to 2nd November 2018	-	

3. COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS

No. (List schedule and paragraph)	Covenant	Status of Compliance	Action required
-----------------------------------	----------	----------------------	-----------------

number of Loan Agreement			
Para. 9, Schedule 5	The Borrower and BWDB shall ensure that the preparation, design, construction, implementation, operation and decommissioning of all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment, health, and safety; (b) the Environmental Safeguards; (c) the EARF; and (d) all measures and requirements set forth in the respective EIA and EMP, and any corrective or preventive actions set forth in a Safeguards Monitoring Report.	Being Complied	PMO, SMO officials are more concerned and monitored the work site regularly for compliances.
Para. 13, Schedule 5	The Borrower and BWDB shall make available the necessary budgetary and human resources to fully implement the EMPs and the RPs.	Being Complied	Necessary budgets and human resources are available to fully implement EMPs and RPs.
Para. 14, Schedule 5	The Borrower and BWDB shall ensure that all bidding documents and contracts for Works contain provisions that require contractors to:		
	<ul style="list-style-type: none"> (a) comply with the measures and requirements relevant to the contractor set forth in the relevant EIA, EMP and RP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguards Monitoring Report; (b) make available a budget for all such environmental and social measures; (c) provide BWDB with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the relevant EIA, EMP or RP; (d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and (e) fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction. 	<p>Being Complied</p> <p>Complied and being Complied</p> <p>Complied and being Complied</p> <p>Complied and being Complied</p> <p>Complied and being Complied</p>	Proper training program to the contractor may be conducted.

Para. 15, Schedule 5	No later than 6 months after effectiveness, the Borrower and BWDB shall engage qualified and experience external experts or qualified NGOs under a selection process and terms of reference acceptable to ADB, to verify information produced through the Project monitoring process in respect of land acquisition and involuntary resettlement, and facilitate the carrying out of any verification activities related to land acquisition and involuntary resettlement by such external experts.	Complied	NGO engaged for implementation of resettlement plan and recruitment of external monitor is under processes.
	The Borrower and BWDB shall report any actual or potential breach of compliance with the measures and requirements set forth in an EMP or RP promptly after becoming aware of the breach.	Being complied	PMO officials monitored the site regularly, any incompliances will take necessary measures.
	The Borrower and BWDB shall promptly inform ADB of the occurrence of any unanticipated environmental and/or social risks and impacts that would arise during construction, implementation or operation of the Project that were not considered in the relevant EIA, EMP or RP, in detailed description of the event and proposed corrective action plan.	Being complied	PMO officials always alert regarding these issues and will be informed ADB for necessary action as and when arises.
	The Borrower and BWDB shall submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission.	Complied and being complied	PMO always submit semi-annual Safeguards Monitoring Reports to ADB regularly and in future will submit at the earliest.
Para. 17, Schedule 5	The Borrower shall ensure that all bidding documents and contracts for construction or civil works under the Project contain provisions that require contractors:		

	(a) to comply with applicable core labor standards, labor laws and incorporate applicable workplace occupational and health and safety principles;	Complied and being complied	Bid Document as well as contract comprises with these issues and PMO, SMO officials are concerned.
	(b) to eliminate discrimination in respect of employment and to not differentiate payment between men and women for work of equal value;	Complied and being complied	
	(c) not to employ child labor; to eliminate forced or compulsory labor; to allow for freedom of association;	Complied and being complied	
	(d) to maximize employment of local poor and disadvantaged persons for construction purposes to the extent possible, provided that the requirements for efficiency are adequately met;	Complied and being complied	
	(e) to disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmittable infections, including HIV/AIDS, to their employees and to members of the local communities surrounding the Project facilities, particularly to females; and	Complied and being complied	
	(f) to implement the applicable provisions of the GAP developed for the Investment Program.	Complied and being complied	

4. COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT PLAN (REFER TO EMP TABLES IN APPROVED EIA)

The contractors submit monthly environmental report to SMO, PMO and the consultant. The focal person for Environment from PMO, and site officers from SMO monitor environmental issues of the sites during their regular site visits. The consultants time to time visit sites and submit reports for monitoring EMP compliance.

Package- wise Implementation Status

Package no.	Components	Design Status (Preliminary design stage/detailed design completed)	Final EIA based on Detailed Design				Site-specific EMP (or construction EMP) approved by Project Director ? (Yes/No)	Remarks
			Not yet due (detailed design not yet completed)	Submitted to ADB (Provide date of submission)	Disclosed on project website (provide link)	Final EIA provided to contractor/s (Yes/No)		
As there was no work at sites due to flood season, monitoring as per EMP was not conducted. So, implementation status of EMP is not mentioned in this table. The implementation status as per EMP will be continued in the next EMR (January 2018 to June 2018)								

COMPLINTS LOG

Log Ref	Date/Location	Complainant/Date of contact	Details of Complaint	Investigation/Mitigation Action	Resolution Status

Summary of Environmental Monitoring Activities (for the Reporting Period)

Impacts (List from EIA)	Mitigation Measures (List from EIA)	Parameters monitored (AS a minimum those identified in the EIA should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person who conducted the Monitoring
Design Phase						
Pre-Construction Phase						
Construction Phase						

There was no work at sites during the reporting period, so monitoring was not done. As such the monitoring report is considered as nil. This table will be filled up during the next reporting period.						
Operational Phase						

Overall Compliance with CEMP/EMP

No.	Project Name	EMP/CEMP Part of Contract Document (Y/N)	CEMP/EMP Being Implemented (Y/N)	Status of Implementation (Excellent/Satisfactory/Partially Satisfactory/Below Satisfactory)	Action proposed and Additional Measures Required
	FRERMIP	Yes	Yes	Satisfactory	Potential contractors /contractor's personnel may be trained up for compliance of EMP through conducting adequate no of relevant training program. Provide adequate budget mentioned in the EMP. Selection of good and efficient NGOs .

5. APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

The contractors submit monthly environmental report to SMO, PMO and the consultant. The consultants time to time visit sites and submit quarterly reports for monitoring of EMP compliance and provide recommendation to overcome short fall. The focal person for Environment from PMO, and site officers from SMO monitor environmental issues of the sites during their regular site visits.

6. MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS (AMBIENT AIR, WATER QUALITY AND NOISE LEVEL)

There was no work at sites during the reporting period so monitoring was not done. As such the monitoring results of the following table is considered as nil. The following table will be filled up during next reporting period

Air Quality Results

Site No.	Date Testing	of	Site Location	Parameters (Government Standards)		
				PM10 Mg/m3	SO2	NO2

Water Quality Results

Site No.	Date of Sampling	Site Location	Parameters (Government Standards)					
			pH	Conductivity mS/cm	BOD mg/L	TSS mg/L	TN mg/L	TP mg/L

Noise Quality Results

Site No.	Date of Testing	Site Location	LAeq (dBA) (Government Standard)	
			Day Time	Night Time

7. Follow up action of the findings of previous EMR

Work site: Zafarganj Bank protection site

Items to be corrected/developed Instructed during the previous EMR	Corrected actions recorded in the last EMR	Remarks
Employing one full-time EMP inspector	Implemented	The Environmental Inspector has been appointed but he has other responsibility
Preserve a set of environmental standards at site.	Implemented	A Contractor Contract (including the EMP) was available on site
Submission of Monthly EMP report	Partially Implemented	Monthly partial EMP report has been submitted
Noise protection measure at work sites.	Implemented	Noise silencers provided in concrete mixture machine
Prevention of spills of lubricants and fuel.	Implemented	No spills of lubricant and fuel were seen during the visit
Proper Waste disposal at work sites.	Partially Implemented	A number of waste bins were available in contractor's work camp
Maintenance of inspection road	Implemented	Access road to the site office is only some 100 m; this road was maintained
Helmets & life jackets / buoys.	Implemented	Helmets were seen put on to concrete mixture machine operator. Some equipment available (life jackets) in Contractor's office
Drinking water supply	Implemented	Number of tube well increased at contractor's labour shed.
Sanitation (toilets etc).	Implemented	Number of toilets with sock pit increased
Supervising consultant is to improve on supervising the contractor obligations	Implemented	Supervising consultant visited three times in a working season and report of monitoring was submitted to PMO
Establish and operate GRM in each of the work sites	Implemented	There exists GRM

Work site: Chauhali Bank protection site

Items to be corrected/developed Instructed during the previous EMR	Corrected actions recorded in the last EMR	Remarks
Replacement of one full-time EMP inspector	Implemented	The Environmental Inspector has been changed. It was apprehended during discussion that the new Inspector have insufficient knowledge about environmental issue.
Preserve a set of environmental standards at site.	Implemented	A Contractor Contract (including the EMP) was available on site.
Submission of Monthly EMP report	Not Implemented	Monthly partial EMP report has been submitted.
Maintenance of inspection road	Implemented	Access road to the site office was seen maintained
Helmets & life jackets / buoys.	Implemented	Helmets were seen put on to concrete mixture machine operator. Some equipment available (life jackets) in Contractor's office
Proper Waste disposal at work sites.	Partially Implemented	A number of waste bins were available in contractor's work camp. The waste is collected at a place and carried away and dumped in a safe place.
Spraying water on dry surfaces (roads and work sites).	Implemented	Partially implemented.
Sanitation (toilets etc).	Implemented	Number of toilets with sock pits increased.
Qualified medical doctor.	Partially implemented	It was reported a doctor is on call available.
Supervising consultant is to improve on supervising the contractor obligations	Implemented	Supervising consultant visited three times in a working season and report of monitoring was submitted to PMO.
Establish and operate GRM in each of the work sites.	Implemented	There exists GRM.

8. SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

Grievance Redress Mechanism- Grievance Redress Committees (GRC) have been formed covering the working jurisdiction of each Divisional office of BWDB. The local GRC review and resolve grievances within one month of receiving any complaints and maintain written records of all the appeals received. The GRC have been formed consisting the following persons:

Executive Engineer, SMO, BWDB - Convener

Chairman of the concerned U. P- Member.

One representative of EPs – Member

Sub-Divisional; Engineer, SMO, BWDB - Member Secretary.

Complaints Received during the Reporting Period – As there was no work at sites during the reporting period, no complaints received. The GRM will be functioning and all information regarding GRM will be provided from the next reporting period.

9. Recommendation and conclusion:

The EIA for FRERMIP (May 2014) contains the elaborate Environmental Management Plan (EMP; 68 pages) for the Project in its Chapter 10, and is for all three phases of the Project (pre-construction, construction and post-construction). As the pre-construction phase for the current two pilot areas has already been completed whereas post-construction starts after completion of the works, the focus for EMP compliance monitoring is currently on the construction phase only. The Contractor's Contracts include an EMP as well, which although based on the PPTA/EIA report, is much shorter than the latter. In fact the Contractor's EMP is basically a listing of clauses (Section 2 of Chapter 6 of the Contractor's Contract) covering 2 pages only. The EARF (Environmental Review and Assessment Framework) for FRERMIP includes the responsibility of the PMO to establish and operate a Grievance Redress Mechanism (GRM) in each of the project sites. PMO and supervising consultants should take about proper functioning of the GRM. For future contractor's contract, the EMP section should be revised and amended, based on experience gained in implementing the previous work. Proper training on Environmental monitoring, Environmental health and safety compliance, International law and concerned compliance should be provided to concerned safeguard personnel working in PMO and SMO and construction contractor. The monitoring report generally focuses on whether the Contractor implements the works in compliance with its EMP obligations. As there was no work at sites due to flood season the current monitoring report for the period July 2017 to December 2017 does not focus on whether the Contractor implements the works in compliance with its EMP obligations. But it will be focused on the next reporting period when the work at sites start.