



FLOOD AND RIVER EROSION MANAGEMENT AGENCY OF ASSAM (FREMAA)



Special Purpose Vehicle (FREMAA)

- A society called Assam Integrated Flood and Riverbank Erosion Risk Management Agency(AIFRERMA) as approved by Cabinet was registered under Society's Registration Act, 1860, on 27th April, 2010.
- Rename the agency as "Flood and River Erosion Management Agency of Assam(FREMAA)" with approval of EB and GB.
- ➤ Loan Agreement signed in May 2011 and became effective in August 2011
- Project civil work formally launched in March 2012 by Hon'ble CM Assam

FREMAA Objectives:

- A. To implement ADB funded IFRERM Project with comprehensive, cost –effective, structural and non-structural measures in selected locations.
- B. Improve effectiveness of flood and riverbank erosion management through a community based approach based on interdepartmental cooperation, co-ordination to integrate structural and non-structural measures.
- C. Strengthen Policy, institutional and knowledge base in the Water Resource Department to international benchmarks.

Background of the Project

The Assam State Government to address the issue of large scale unpredictable floods and riverbank erosion in the Brahmaputra and Barack Basin in a systematic manner approached the Asian Development Bank and preparation of an investment project started in 2007 with pre-feasibility level studies under PPTA 1 Phase I and Phase II which was completed in November, 2008. The aim of the PPTA 1 Phase I & II was to build a proposal and an investment package for prompt implementation of a conceived initiative which can provide economic returns commensurate with the ADB's water policy and Country Strategy for India (2005-07) and ADB's lending terms.

Background of the Project

Subsequently, the Assam State Government and ADB decided to support loan processing and readiness for the Assam Integrated Flood and River Bank Erosion Risk Management Program for which the PPTA 2 was started in early 2009.

ADB then included provisions for a loan for floods and erosion in Assam and Arunachal Pradesh as a component of ADB's 2009 lending program.

Loan Approval and Signing

•A Multitranche Financing Facility (MFF) Loan of USD 120M was approved between

ADB and the Government of India on 25th October, 2010.

•MFF Period: - Oct 2010 to Sept 2017

- •And finally the Loan Agreement for Tranche I was signed on 10th May, 2011
- •Tranche I Period Oct 2010- July 2017
- •Total Project Cost = USD 150M out of which USD 120M is the ADB Loan

Objective of the Project

•Primary Objective :- The primary aim of FREMAA is to manage the implementation of the Asian Development Bank (ADB) funded project (AIFRERMIP) with provision of comprehensive, cost-effective and sustainable structural and non-structural measures in the 3 (three) selected strategic locations of Palasbari -Gumi, Kaziranga and Dibrugarh.

Objective of the Project

•Secondary Objective :-

- 1. Facilitate sustainable interdepartmental cooperation, coordination and communication to integrate structural and non structural measures relevant to IFRERM Projects.
- 2. Implementation, maintenance, operation and management of such infrastructures.
- 3. Strengthen Policy, institutional and knowledge base in the Water Resource Department to international benchmarks.

Project Components [Tranche I]:

Component A:

Development of Flood and Riverbank Erosion Risk Management (FRERM) Planning, Institutional and Knowledge Bases - This component/output will establish sound basis for the State to put into operation reliable and effective FRERM systems, encompassing

- 1. Integrated FRERM Planning Framework
- 2. Institutional Bases
- 3. Data and Knowledge Base
- 4. Knowledge Sharing and Networking

Component B:

Comprehensive FRERM Systems - This component will enhance the reliability and effectiveness of FRERM systems with comprehensive structural and non structural measures and strengthening of the relevant local organizations that provides a framework for community consultation and participation, in the three sub project areas

- 1. Community Based Flood Risk Management with Disaster Management Committees Data and Knowledge Base
- 2. Structural Measures
- 3. Sustainable Infrastructure Maintenance and Adaptation

Component C:

Multidisciplinary Project Management Systems

Consulting Packages

- The Project Management Consultants contract has been awarded to Tetra Tech India Ltd to assist and guide FREMAA in the effective implementation of the Project with capacity building of FREMAA and SIOs as necessary.
- The Institutional Strengthening Consultants has been awarded to Danish Hydraulic Institute, India to enhance the capacities and strengthen the state flood and erosion management institutions like WR Deptt, AWRMI, AWC, etc at par with international best practices.
- The Benefit Monitoring Consultants or BME has been awarded to Sutra Consulting, whose main task is to measure the impact of this project, specifically if the project has been able to enhance a sustainable and inclusive economic growth and poverty reduction in the selected flood probe areas along the Brahmaputra River and to compare the experience of those communities participating in the AIFRERM project with those that are not covered by the program.

FREMAA Project focus [Tranche I]:

3 specific area sub-projects sites



Area-7300 ha,
Population (hh) -14000,
Component Focus: KNP avulsion
protection; Land,
Embankment Renovation-19.3 km
New Embankment -8.7 km
Shifted to Tranche - II:

DIBRUGARH

Area-14,800 ha,
Population(hh)-29,000
Component focus-Dibrugarh Town
Embankment renovation- 8.53 km
Riverbank Protection-2.4 km



Area-34,300 ha
Population(hh)-50,000
Component Focus-Productive
Agriculture land,

Palasbari :-

Embankment Renovation-5.01 km River Bank Protection-4.9 Km Gumi:-

River Bank Protection- 4.5 Km

Tranche - I Areas of operation :-Arunachal Pradesh Dibrugarh Sub-Project Nagaland Kaziranga Sub - Project Assam Palasbari-Gumi Sub Project

Financial Plan

► Total project cost for Tranche I & Tranche II - \$150 m

•ADB's Loan \$120 m\$

Govt share - \$30 m

>Tranche I

•Project cost - \$60.62 m

ADB Loan - \$ 48.50 m

Govt share - \$ 12.12 m

≻Tranche II

•Project cost-89.38 m\$

ADB Loan- \$ 71.50 m

Govt share- \$ 17.88 m

Tranche I Period has been extended from the original closing date of Sep, 2014 to July, 2016 and then again to July, 2017

Extension of MFF Period has been requested from the original closing date of September, 2017 to 18th October, 2020. and is pending with DEA.

Physical Works – As on Oct 2016

Palasbari-Gumi Subproject

Sl.	Name of Work	Contract Value	Progress
No.		in Lakh	
1	Palasbari Erosion Protection underwater works below Working Low Water Level (WLWL) with two layers of sand filled Geo-bags at apron	3918.4(revised 3511.48)	95%
2	Gumi Erosion Protection Works	3174.6(Revised 3361.15)	98%
3	Construction of Palasbari Embankment with black topped road and slope protection works above LWL along the Brahmaputra river	3269.9(revised 3737.52)	67%

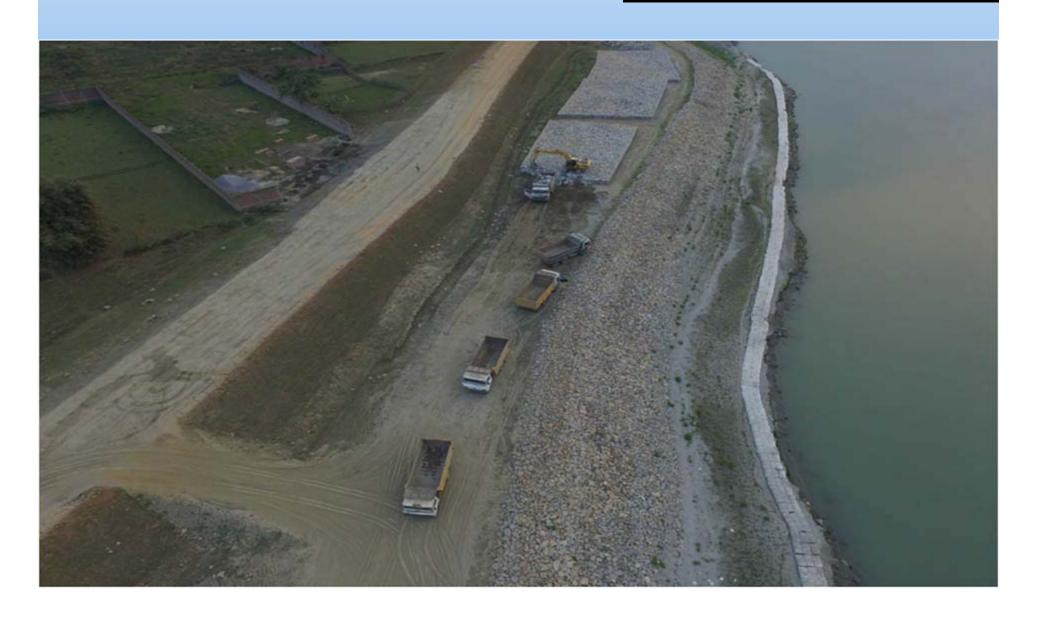
Physical Works - As on Oct 2016

S1.	Name of Work	Contract Value	Progress
No		in Lakh	
1	Raising, Strengthening, Upgradation and Construction of Road Works for Dibrugarh Town Protection (DTP) Dyke	2979.1	90%
2	Construction of Revetments, Geo-bag Apron, for Mothalla – Oakland bank protection works along the Brahmaputra River, Dibrugarh	3231.5	100%
3	Fabrication, Supply and Installation of Prestressed concrete Porcupine Dibrugarh Subproject Lot 1 (NCB)	210.2	100%

Physical Works - As on Oct 2016

S1.	Name of Work	Contract Value	Progress
No.		in Lakh	
4	Fabrication, Supply and Installation of Prestressed concrete Porcupine Dibrugarh Subproject Lot 2 (NCB)	230.2	100%
5	Fabrication, Supply and Installation of Prestressed concrete Porcupine Dibrugarh Subproject Lot 3 (NCB)	193.3	100%
6	Fabrication, Supply and Installation of Pre-stressed concrete Porcupine at Oakland area Dibrugarh Subproject Lot 4 (NCB)	222.9	100%

Palasbari-Gumi Subproject





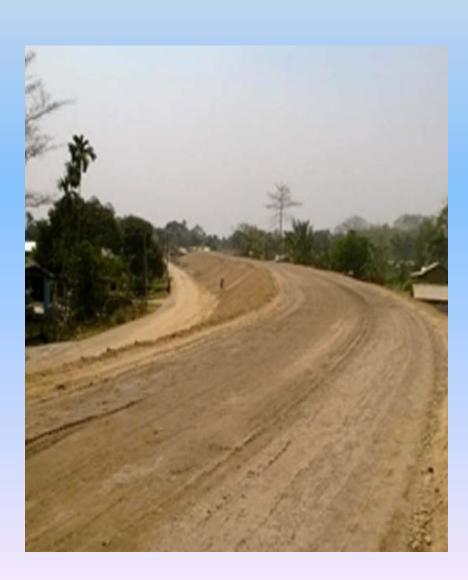


Palasbari-Gumi Subproject



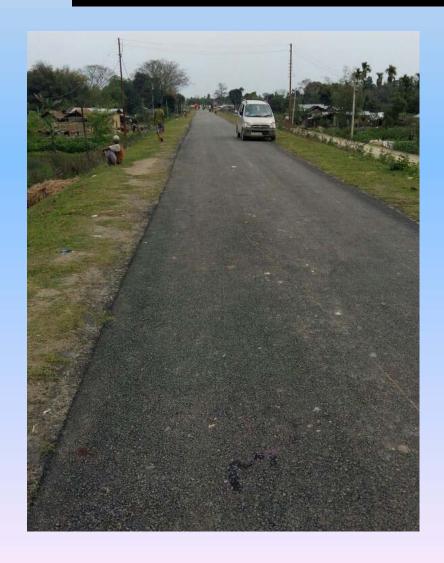


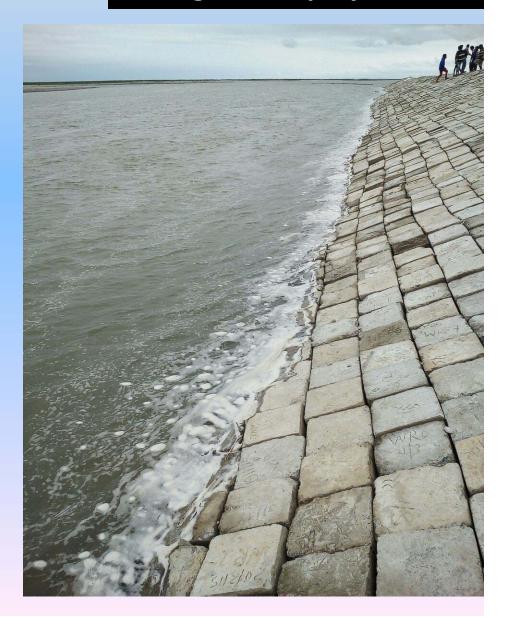














- 1. Disaster management committees in 16 villages each in the Dibrugarh and Palasbari sub project area.
- 2. Training on flood awareness and early warning systems and how to tackle floods has been imparted and mock drill has also been completed.
- 3. More training programs are proposed to be undertaken.







Training & Workshop (Capacity Building)

- 1. Every year an International Morphological Workshop is being conducted since 2013:-193 (participants) till date
- 2. International Training and Exposure Visit to AIT-Bangkok, Laos, Bangladesh and China 41 (participants) till date
- 3. Training at National level on Construction Management at NICMAR,

 Pune 127 (participants)
- 4. Other ADB Training Programs from time to time on ADB Procurement and safeguard policies.

FREMAA Project focus [Tranche II]:

3 specific area sub-projects linked to priority urban and strategic sites:



Area-14,800 ha,
Population(hh)-29,000
Component focus-Dibrugarh Town
Embankment renovation- 9.00 km
Riverbank Protection-2.7 km
Bank Protection Work (DTP)- 2.0KM

KAZIRANGA

Area-7300 ha,
Population (hh) -14000,
Component Focus: KNP avulsion
protection; Land,
mbankment Repovation-19 3 km

Embankment Renovation-19.3 km New Embankment -8.7 km

PALASBARI & GUMI

Population(hh)-50,000 Component Focus-Productive Agriculture land,

Palasbari:-

River Bank Protection-5.8 Km **Construction of Sluice** – 1 Nos.

Gumi:-

River Bank Protection— 6.2 Km Renovation of Spour — 3 Nos

Preparedness for Tranche II work

• Project Amount

= \$ 89.38 Mil

ADB Loan Amount

= \$ 71.50 Mil

Govt Share

= \$ 17.88 Mil

•State government's Commitment to provide counterpart funds submitted.

Budget for project implementation for first financial year ofTranche II submitted to Govt of Assam and has been approved and is expected to be released shortly.

Preparedness for Tranche II work

•DPRs has been cleared by CWC and central TAC

•Environmental clearance from GOI in respect of Kaziranga has been received.

The following documents have been submitted to ADB and are being finalized.

- 1. Draft Bid documents for the civil work package.
- 2. Draft Resettlement frameworks and Resettlement Plans.
- 3. Draft TOR for recruitment of RP and CBFRML NGOs
- 4. Periodic Financing Report,
- 5. Feasibility Study Report,
- 6. Economic and Financial Analysis Report,
- 7. Draft Environmental Impact Assessment for all the three sub projects
- 8. Gender Action Plan
- 9. Indigenous Devlopment Plan

