India: MFF - Assam Integrated Flood and Riverbank Erosion Risk Management Investment Program (Facility Concept)

<table>
<thead>
<tr>
<th>Project Name</th>
<th>MFF - Assam Integrated Flood and Riverbank Erosion Risk Management Investment Program (Facility Concept)</th>
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<tbody>
<tr>
<td>Project Number</td>
<td>38412-013</td>
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<tr>
<td>Country</td>
<td>India</td>
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<tr>
<td>Project Status</td>
<td>Active</td>
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<tr>
<td>Project Type / Modality of Assistance</td>
<td>Loan</td>
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<tr>
<td>Source of Funding / Amount</td>
<td>MFF Facility Concept 0050-IND: MFF - Assam Integrated Flood and River Erosion Risk Management Investment Program (Facility Concept) Ordinary capital resources US$ 120.00 million</td>
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<tr>
<td>Strategic Agendas</td>
<td>Environmentally sustainable growth Inclusive economic growth</td>
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<tr>
<td>Drivers of Change</td>
<td>Governance and capacity development</td>
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<tr>
<td>Sector / Subsector</td>
<td>Agriculture and Natural Resources - Irrigation</td>
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<tr>
<td>Gender Equity and Mainstreaming</td>
<td>Effective gender mainstreaming</td>
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The goal of the project is to support the economic and poverty reduction efforts of the state governments through integrated FREM along the Brahmaputra river and its tributaries. The Project aims to promote people's livelihoods, through comprehensive FREM measures, which will provide protection from river erosion and floods, with a focus on the most vital areas of economic and national interests. An adaptive process approach is proposed that will protect critical reaches first, and then replicate suitable measures to other areas later. Nonstructural measures, including improved flood forecasting and warning, flood plain zoning, community preparedness, etc. will be adopted with intensive stakeholder participation. On the basis of the TA outputs, the Project may have the following components: (i) participatory scheme planning and design with extensive FREM options analysis in subproject areas; (ii) comprehensive FREM infrastructure and non-structural measures; (iii) complementary infrastructure and programs such as rural roads and demonstration of productive agriculture practices including groundwater irrigation, as necessary; and (iv) project management and institutional strengthening for operationalizing effective FREM at the state level, including sustainable operation and maintenance of FREM infrastructure.

Project Outcome

**Description of Outcome**
FRERM systems in Assam provide enhanced resilience to flood and riverbank erosion risks in selected flood-prone areas along the Brahmaputra River, benefiting about 1 million people.

**Progress Toward Outcome**
Activities are on-going. Project activities under the first tranche is on-going, and the second tranche is being processed.

**Implementation Progress**

**Description of Project Outputs**
1. Integrated FREM planning, institutional and knowledge bases developed and effectively implemented in Assam.
2. Comprehensive FREM nonstructural and structural measures developed, implemented, and sustainably maintained in selected subproject areas, protecting flood-prone areas along 90 km critical reach of the Brahmaputra River having 97,500 ha of urban and productive agriculture land.

**Status of Implementation Progress (Outputs, Activities, and Issues)**
FREMAA has been established and functioning. Institutional capacity strengthening activities for state agencies are ongoing under Project 1, and will be continued during Project 2. Activities for structural and non-structural measures under Project 1 are ongoing in the Dibrugarh and Palasbari subproject areas. Construction of about 12 km of bank protection structures has largely been completed. Protection by pro-siltation screens at about 10km of banks have been completed. Construction/rehabilitation of about 14 km of flood embankments are ongoing. Community-based flood management capacity development was conducted in 32 villages. Project 2 will cover the Dibrugarh, Palasbari and Kaziranga subproject areas, and will continue similar activities towards the achievement of the anticipated MFF outputs.

**Geographical Location**

**Summary of Environmental and Social Aspects**
Environmental Aspects

Environmental impact assessments (EIAs) have been carried out for the three subproject areas covering their entire scope including Project-1 and Project-2. While no significant negative environmental impacts are anticipated, ADB classified the Project-1 as environmental category A in consideration of the diverse riparian environment. Overall, the three subprojects are needed primarily to safeguard the people, Poverty and environment from frequent floods of the Brahmaputra River, and strongly supported by the stakeholders. Positive environmental impacts include preservation of flora and fauna from the impacts of river erosion and flooding including wetlands, pond fisheries and agriculture land. Interventions near Kaziranga will preserve the wild life habitat by protecting the impacts of sudden flooding (from embankment breach). No damage is anticipated on endangered species like dolphin as well as Kaziranga National Park. Anticipated impacts on hydrology and morphology are also deemed insignificant, given that the Project will support the proper functioning of the existing flood embankment systems, whereas riverbank protection works will be provided taking an adaptive approach, i.e., providing protection along the naturally developed bank line where and when necessary. Nevertheless, close monitoring will be operationalized so that any unforeseen impacts will be detected and mitigation measures provided. Possible negative impacts include those associated with construction, which are temporary and can be mitigated through prescribed mitigation measures under the environmental monitoring and management plan to be operationalized under the Project, with the necessary capacity building of the executing agency and outsourcing. The Project will also strengthen the capacities of SGOA to progressively cope with any possible impacts of climate change, which may increase the precipitation according to some global climate model.

Involuntary Resettlement

The Project is classified as involuntary resettlement category A. While its structural measures primarily involve the renovation of existing flood embankments, strip acquisition of land is needed in association with their shifting to cope with riverbank erosion, widening, and extension. The majority of acquired lands are located along the eroding bank line, which would be lost without project works. Project 1 will require acquisition of no land in Dibrugarh (embankment widening on the existing right-of-way with squatters, affecting 310 households); 20.6 hectares in Kaziranga (for inner secondary dyke, affecting 80 households); and 29.9 hectares in Palasbari subproject (for shifting, affecting 274 households). Full resettlement plans for project 1 works of these subprojects were prepared and agreed. For safeguards issues for the subsequent project, a resettlement framework were prepared following central and state government laws and regulations, and ADB's Safeguard Policy Statement (2009).

Indigenous Peoples

Indigenous peoples issues have been found insignificant for project 1, and any negative impact is addressed in the resettlement plans. For safeguards issues for the subsequent project, an indigenous peoples development framework were prepared following central and state government laws and regulations, and ADB’s Safeguard Policy Statement (2009).

Stakeholder Communication, Participation, and Consultation

During Project Design

A participatory process was used during the project preparatory stage, and consultations and collaborative decision making were carried out with a particular focus on women, the landless, ST, and other vulnerable groups in the subproject area using participatory risk appraisal (PRA) techniques, along with other ordinary stakeholders. Focus group meetings were organized targeting the most vulnerable people, and an inventory of local needs was prepared, encompassing problems/constraints related to: (i) water resources and disaster management including flooding and river erosion, agriculture, fisheries, environment, and other uses; (ii) possible solutions to resolve the constraints identified; and (iii) appropriate institutional mechanisms to address those constraints. NGOs were engaged to facilitate this process.

In addition to the local consultative process, three state level workshops were organized at the mid-term (Dec 2007) and draft final (June 2008) stages of the PFTA to present and discuss key findings and prospective and scope of issues of the proposed investment project, to seek the feedback of the central, state, and local governments, local and international experts, and a wide range of stakeholders including civil society organizations active in environmental and vulnerable groups development issues including tribal population. The third workshop was organized on 4 Feb 2009 at the time of the fact-finding mission to discuss the provisional scope, implementation of the Project, and associated safeguards and institution arrangements, and associated safeguards and institutional arrangements. Usefulness suggestions were provided, including the need for duly reflecting the interests of the marginal and poorest population who are often outside of the embankment systems including the embankment squatters displaced by river erosion, and the significant strengthening of the institutional bases and capacities of the relevant organizations.

During Project Implementation

The Project will strengthen and effectively utilizes the existing local participatory disaster management framework including district, sub-district, and village level DMCs. They will be empowered to take a lead role to plan and decide on implementing the concerned FREMA plans at the subproject and community levels, based on which the programs will be delivered by the designated organizations under the monitoring and supervision of the DMCs. This participatory process will be institutionalized after completion of the Project in the annual planning and implementation process of FREMA programs and delivery, and maintenance and adaptation of the infrastructure. Village DMCs and community groups will also be strengthened to take over the management of minor infrastructure such as flood proofing platforms, small sluice gates and drainage canals. NGOs will be engaged to facilitate the process.

In the context of the above, special efforts will be provided during the further Project preparation process, including the institutional strengthening of WRD, promotional actions and training programs to enhance the vulnerable group participation, and group formation of vulnerable people and delivery of programs for their empowerment.

Business Opportunities

Consulting Services

The Investment Program provides for the consultancy package, including (i) institutional strengthening of integrated FREMA, (ii) program management including subproject preparation and implementation, (iii) environmental and safeguards assessment, (iv) procurement of international and national consultants; and (v) stakeholder communication, participation and consultation. NGOs will be engaged to support disaster management organization strengthening, to facilitate land acquisition and resettlement, and to support environmental monitoring. The PMU will select and engage the consultants and NGOs using ADB’s quality- and cost-based selection procedures. In addition, NGOs, independent agencies, and institutions will be hired for survey, research and development (including knowledge management), and monitoring, while resource persons will be engaged for training. All consultants, NGOs, other institutions, and resource persons will be hired following the ADB’s Guidelines on the Use of Consultants (2010, as amended from time to time).

Procurement

The Investment Program will enhance resilience to the flood risks in the flood prone areas along the Brahmaputra River in Assam, in particular, in the three existing embankment systems protecting key urban, suburban, and productive rural and other strategic sites. The Investment Program will establish sound institutional basis for the State to put into operation reliable and effective flood and riverbank erosion risk management (FREMA) systems: enhance their reliability and effectiveness in the three subproject areas with holistic structural and nonstructural measures and strengthening of the disaster management committees (DMCs) that provide a platform for community participation; and operate the Program management system through multi-disciplinary program management unit (PMU) and subproject implementation offices (SIOs). The State Government of Assam (SGOA) has established a special purpose vehicle titled Assam Integrated Flood and Riverbank Erosion Risk Management Agency (AIFREMA) for this purpose, and will implement the Program with SGOA and outsourced staff and experts, consultants for institutional strengthening and project management, and NGOs. The first tranche project has three components: (i) development of FREMA planning, institutional, and knowledge bases; (ii) comprehensive FREMA programs; and (iii) multidisciplinary program management systems.

ADB has approved the Government’s request for advance contracting to expedite project implementation. Advance contracting will include, tentatively: the consultancy packages for (i) institutional strengthening (70 person-months of international and 169 person-months of national consultants); (ii) project management (48 person-months of international and 451 person-months of national consultants); and (iii) monitoring and evaluation (63 person-months of national consultants); and (iv) NGOs for contributions to DMC strengthening and project management.

Respondible ADB Officer

Drieu, Olivier

Respondible ADB Department

South Asia Department

Responsible ADB Division

Environment, Natural Resources & Agriculture Division, SARD

Executing Agencies

Flood and River Erosion Management Agency of Assam

Office of the CEO, FREMA

4th floor, Nayantara Supermarket Building

Six Mile, Guwahati, Pin - 781022

Timetable

Concept Clearance

22 Oct 2008

Fact Finding

27 Jan 2009 to 07 Feb 2009

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<th>Financing Plan</th>
<th>Loan Utilization</th>
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