# Bangladesh: Jamuna-Meghna River Erosion Mitigation Project

**Project Name:** Jamuna-Meghna River Erosion Mitigation Project  
**Project Number:** 34038-013  
**Country:** Bangladesh  
**Project Status:** Closed  
**Project Type / Modality of Assistance:** Loan  
**Source of Funding / Amount:** Loan 1941-BAN: Jamuna-Meghna River Erosion Mitigation Project  
concessional ordinary capital resources lending / Asian Development Fund  
US$ 41.17 million

### Strategic Agendas
- Environmentally sustainable growth
- Inclusive economic growth

### Drivers of Change
- Governance and capacity development
- Knowledge solutions

### Sector / Subsector
Agriculture, natural resources and rural development - Water-based natural resources management

### Gender Equity and Mainstreaming
Some gender elements

### Description
The objective of the Project is to sustain and enhance the incomes and poverty reduction in Pabna Irrigation and Rural Development Project (PIRDP) and Meghna-Dhonagoda Irrigation Project (MDIP) areas through reliable, cost-effective and sustainable riverbank erosion mitigation measures comprising adaptive riverbank protection works and a range of non-structural instruments to adapt to the morphological processes of the Jamuna and the Meghna rivers. The Project scope comprises three parts, i.e., Part A: adaptive riverbank protection works; Part B: non-structural mitigation and social development to erosion-displaced poor; and Part C: capacity development. The Project will protect 7.0 km and 4.4 km of riverbank revetment using geotextile sand bags in PIRDP and MDIP, respectively. It will be implemented over 6-year period starting from October 2002.

### Project Rationale and Linkage to Country/Regional Strategy
Agriculture and rural sectors have been accorded high priority in ADB’s country strategy, with operational focus on the crop/agribusiness credit, rural infrastructure, water resources development and microfinance. Within the water resources sector, ADB strategy is to support strengthening and implementing the policy framework as reflected in the 1999 National Water Policy that emphasizes (i) integrated and sustainable water resources management by enhancing stakeholder participation and empowerment, (ii) improving financial efficiency and sustainability, and (iii) helping the poor rural population while not disturbing the natural environment. Establishing comprehensive and cost effective riverbank erosion management system including the underlying institutional setup is one of the agendas in this context.

### Impact
Sustain (i) economic growth, and (ii) poverty reduction with livelihood security in areas threatened by riverbank erosion, through cost-effective and sustainable erosion mitigation strategy and measures (to be applied in PIRDP and MDIP and then replicated nationwide)

### Project Outcome

<table>
<thead>
<tr>
<th>Description of Outcome</th>
<th>Progress Toward Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustain incomes in PIRDP and MDIP areas by establishing effective REMS comprising comprehensive structural and nonstructural measures</td>
<td>The Project is providing full protection from flood damages through the cost-effective REMS as intended. However, the actual irrigated area remain below the target level due to water unavailability in tail end areas. Specific data on production level in most recent year under collection and will be incorporated in the management information system, but are generally in line with the appraisal estimates. Action plan to enhance irrigation coverage is being prepared and pursued.</td>
</tr>
</tbody>
</table>

### Implementation Progress

<table>
<thead>
<tr>
<th>Description of Project Outputs</th>
<th>Status of Implementation Progress (Outputs, Activities, and Issues)</th>
</tr>
</thead>
</table>
| 1. Part A: Riverbank Protection Works: 7.0 km and 4.4 km of geotextile bag launching revetment in PIRDP and in MDIP, with technical verification of the design and implementation approach for revetment using sand-filled geotextile bags.  
2. Non Structural Erosion Impact Mitigation (i) Improved DPMP  
   (ii) Affected persons resettled, and living standard improved for households living on the embankments and along the riverbank  
   C. Institutional Strengthening (i) Capacity development and project management (a) Permanent institutions at the project level established and strengthened, including JMCs, Project offices with strong monitoring and evaluation capacities, and stakeholder institutions with diverse professions; (b) Central level project management, programming and coordination strengthened; (c) Capacities of participating agencies, stakeholders, and their representatives strengthened through training; (ii) Operational riverbank erosion information management, including monitoring, forecasting, and warning of riverbank erosion | The overall implementation progress of the Project is 80% as of 31 Dec 2010 at an elapsed period of 93%. So far, most of the critical bank lines in PIRDP and MDIP have been largely protected with low cost revetments. Project review mission was undertaken in May 2010. It was noted that while the implementation of all Project components are satisfactorily in progress, additional riverbank protection in both subprojects to cope with recent morphological changes has been approved with one-year loan extension with no cost overrun. With technical verification of the adopted revetments and protection of most critical bank lines mostly completed, attention in Project implementation focused on: (i) finalizing the 4 km additional river bank protection work in PIRDP based on the recommendations of the study conducted by NWMP with numerical model, CEGIS by prediction, (ii) REMS and CAD Actions Plans to be followed by PMO and use these for monitoring purposes, (iii) settling all audit observations; (iv) Fill in the vacant staff positions of the REM (Construction) Divisions in line with the approved organogram (set-up) in order to avoid possible implementation problems in future; (v) ensure continuity of consultancy for the extended period of the Project till June 2011; (vi) expedite progress of CAD activities at MDIP and PIRDP; especially the registration process and its membership target; and (vii) Improve the ISC collection for 2009-10 by December 2010. Most of the Civil Works packages completed. Ongoing works are: Additional 1.0 km flood protection in PIRDP, and ferro cement lining in MDIP. Some repairing of canals in both PIRDP and MDIP are required for which procurement process is ongoing. |
The public was substantially involved in the project preparatory process. It was carried out in two rounds, the first through focus group discussions with smaller groups of homogeneous stakeholders in the area (i) inside and outside the embankment directly threatened by riverbank erosion, (ii) outside the embankment not threatened by bank erosion, and (iii) inside the embankment benefited from flood control, drainage and irrigation (FCDI) facilities. On the basis of focused group discussions, the second round was held in the form of local workshops involving representatives from the central and local governments, water management associations (WMAs), and civil society. The process generally revealed that (i) river erosion protection is strongly favored against retiring the embankments; (ii) nonstructural measures were identified as beneficial; (iii) people’s representation in WMAs and union parishad and involvement of NGOs was considered important in implementing the river protection works along with the Bangladesh Water Development Board; and (iv) local people are willing to contribute to mitigating river erosion by paying irrigation service fees, taxes on fish culture, and tolls on traffic and on market places; and in kind such as physical labor, and supply of food, shelter, and materials (bamboo, sacks, etc.).

Involuntary Resettlement

The Project will involve a total of (i) 11.4 km of revetment works in the PIRDP and MDIP; and (ii) 1.2 km of secondary defense line (SDL) of embankments in PIRDP, which will require land acquisition and resettlement. The amount of land acquired for revetment is estimated at 35 ha in the PIRDP and 22 ha in the MDIP. These are located along the eroding bank line, which would be lost without project intervention. The SDL will require 10 ha of land acquisition. A resettlement framework for revetment works and a short resettlement plan for SDL were prepared for the Project (Appendix 14 for summary resettlement framework and resettlement plan).

Indigenous Peoples

No indigenous people in the project areas

Stakeholder Communication, Participation, and Consultation

During Project Design

The public was substantially involved in the project preparatory process. It was carried out in two rounds, the first through focus group discussions with smaller groups of homogeneous stakeholders in the area (i) inside and outside the embankment directly threatened by riverbank erosion, (ii) outside the embankment not threatened by bank erosion, and (iii) inside the embankment benefited from flood control, drainage and irrigation (FCDI) facilities. On the basis of focused group discussions, the second round was held in the form of local workshops involving representatives from the central and local governments, water management associations (WMAs), and civil society. The process generally revealed that (i) river erosion protection is strongly favored against retiring the embankments; (ii) nonstructural measures were identified as beneficial; (iii) people’s representation in WMAs and union parishad and involvement of NGOs was considered important in implementing the river protection works along with the Bangladesh Water Development Board; and (iv) local people are willing to contribute to mitigating river erosion by paying irrigation service fees, taxes on fish culture, and tolls on traffic and on market places; and in kind such as physical labor, and supply of food, shelter, and materials (bamboo, sacks, etc.).

During Project Implementation

In line with the 1999 National Water Policy, which promotes participatory and comprehensive management of water, the Project will establish joint Management Committees (JMCs) to play key roles in decision making on water resources management, including riverbank erosion management, irrigation and drainage, and agricultural and fishery development. The Project’s institutional strengthening component will focus on developing a firm institutional basis to affiliate stakeholder institutions such as WMAs. Their membership status will be substantially strengthened through involvement of consultants, nongovernment organizations (NGOs), and community-based organizers (CBOs). JMC will also include representatives of the diverse indigenous peoples, including the most vulnerable groups. JMCs and subproject management offices (SMOs) will also form an emergency riverbank protection group (ERPG) to provide labor for emergency works during the flood season. ERPG representatives will also participate in construction quality assurance, e.g., throughout the JMC subcommittee for joint construction inspection.

Consulting Services

Consultants were recruited in accordance with ADB’s guidelines on the Use of Consultants and arrangements satisfactory for the engagement of domestic consultants. Under the Project, ADB selected the consultants on behalf of the Government. A total of 643.47 person-months (pm) of consulting services were utilized, including 95.77 pm of international and 643.47 pm of domestic consulting inputs. This comprises the following: (i) A team of individually recruited consultants to undertake the immediately-required protection works in 2002-2003: This includes (A) international consultants comprising Team leader/river engineer (37.17 pm); three construction supervision engineer (22.29 pm); water resources institutional specialist (3.43 pm); resettlement specialist (4.3 pm); Social Development Specialist (2.61 pm); geotechnical specialist (3.91 pm); geo-textile specialist (1.87 pm); syrvey instrument specialist (2.14 pm); and technical (B) domestic consultants included deputy team leader/river engineers (19.83 pm), 4 construction supervision engineer (108.89 pm), inspector and surveyor (44.74 pm); beneficiary consultant (85.93 pm); resettlement specialist (20 pm); environmental specialist (6 pm); agriculture specialist (38 pm); fishery development specialist (6.09 pm); CAD-monitoring coordinator (16.60 pm); cooperative specialist (9.93 pm); senior social development specialist (2.61 pm); agriculture specialist (38 pm); fishery development specialist (6.09 pm); CAD-monitoring coordinator (16.60 pm); cooperative specialist (9.93 pm); senior social development specialist (2.61 pm); agriculture specialist (38 pm); fishery development specialist (6.09 pm); CAD-monitoring coordinator (16.60 pm); cooperative specialist (9.93 pm); senior social development specialist (2.61 pm).

Procurement

All procurements were approved in accordance with ADB’s Guidelines for Procurement. Due to the crucial nature of the completion of riverbank protection works, advance actions were approved for procurement of geo-textile bags and related civil works. As the civil works packages were small in sizes, located in remote areas, and labor intensive these were contracted through local competitive bidding (LCB) with prequalification by the Project Management Office. The number of geo-textile bags was around 12.2 million, in four sizes, e.g., 900 mm x 600 mm; 720 mm x 500 mm; 600 mm x 400 mm; and 350 mm x 350 mm. As to the ICB for geo-bag supply and LCB for civil works, consultants were engaged as “the engineer’s representative” to undertake contractual management activities with Bangladesh Water Development Board.
# Loan 1941-BAN

## Milestones

<table>
<thead>
<tr>
<th>Approval</th>
<th>Signing Date</th>
<th>Effectivity Date</th>
<th>Closing</th>
</tr>
</thead>
</table>

## Financing Plan

<table>
<thead>
<tr>
<th>Total (Amount in US$ million)</th>
<th>Date</th>
<th>ADB</th>
<th>Others</th>
<th>Net Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Cost</td>
<td>60.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADB</td>
<td>41.17</td>
<td>40.34</td>
<td>0.00</td>
<td>97%</td>
</tr>
<tr>
<td>Counterpart</td>
<td>19.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cofinancing</td>
<td>0.00</td>
<td>41.52</td>
<td>0.00</td>
<td>100%</td>
</tr>
</tbody>
</table>

## Loan Utilization

<table>
<thead>
<tr>
<th>Date</th>
<th>ADB</th>
<th>Others</th>
<th>Net Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 Nov 2002</td>
<td>40.34</td>
<td>0.00</td>
<td>97%</td>
</tr>
<tr>
<td>25 Nov 2002</td>
<td>41.52</td>
<td>0.00</td>
<td>100%</td>
</tr>
</tbody>
</table>

## Status of Covenants

<table>
<thead>
<tr>
<th>Category</th>
<th>Sector</th>
<th>Safeguards</th>
<th>Social</th>
<th>Financial</th>
<th>Economic</th>
<th>Others</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
<td>-</td>
<td>-</td>
<td>Satisfactory</td>
<td></td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

## Project Page

https://www.adb.org/projects/34038-013/main

## Request for Information

http://www.adb.org/forms/request-information-form?subject=34038-013

## Date Generated

04 October 2020

**ADB provides the information contained in this project data sheet (PDS) solely as a resource for its users without any form of assurance. Whilst ADB tries to provide high quality content, the information are provided "as is" without warranty of any kind, either express or implied, including without limitation warranties of merchantability, fitness for a particular purpose, and non-infringement. ADB specifically does not make any warranties or representations as to the accuracy or completeness of any such information.**