



## Project Data Sheet

Project 34038-013

Project Name	Jamuna-Meghna River Erosion Mitigation Project	
Project Number	34038-013	
Country / Economy	Bangladesh	
Project Status	Closed	
Project Type / Modality of Assistance	Loan	
Source of Funding / Amount	<b>Loan 1941-BAN: Jamuna-Meghna River Erosion Mitigation Project</b> Asian Development Fund US\$ 41.17 million	
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth	
Drivers of Change	Gender Equity and Mainstreaming Governance and capacity development Knowledge solutions	
Sector / Subsector	<b>Agriculture, natural resources and rural development</b> / Water-based natural resources management	
Gender	Some gender elements	
Description	<p>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 geo-textile sand bags in PIRDP and MDIP, respectively. It will be implemented over 6-year period starting from October 2002.</p>	
Project Rationale and Linkage to Country/Regional Strategy	<p>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) helpin 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.</p>	

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)
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## Project Outcome

Description of Outcome	Sustain incomes in PIRDP and MDIP areas by establishing effective REMS comprising comprehensive structural and nonstructural measures
Progress Toward Outcome	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 coverate is being prepared and pursued.

## Implementation Progress

Description of Project Outputs	<p>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.</p> <p>B. Nonstructural Erosion Impact Mitigation</p> <p>(i) Improved DPMP</p> <p>(ii) (ii) Affected persons resettled, and living standard improved for households living on the embankments and along the riverbank</p> <p>C. Institutional Strengthening</p> <p>(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</p>
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Status of  
Implementation  
Progress (Outputs,  
Activities, and  
Issues)

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 IWM 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 10 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.

Geographical  
Location

### Safeguard Categories

Environment	A
Involuntary Resettlement	A
Indigenous Peoples	

### Summary of Environmental and Social Aspects

Environmental  
Aspects

An environmental impact assessment (EIA) was carried out during the feasibility studies.<sup>26</sup> The Project will have overall beneficial impacts, preserving the existing and potential benefits of the PIRDP and MDIP schemes as well as protecting the livelihood of the population in the erosion-prone areas nearby. Potential negative impacts identified under summary environmental impact assessment (SEIA) include (i) mining, transportation and storage of sand; (ii) construction-related impacts including health hazards and accidental injury of workers; (iii) land acquisition and resettlement; and (iv) possible erosion of sandbars/chars and changes in river morphology. On these accounts, the impact of sand mining will be negligible, given the amount of sand required for construction during the 6-year Project of about 1 million metric tons compared with the annual bed load transport of the Jamuna and the lower Meghna of more than 150 and 200 million metric tons. The morphological impacts are also estimated to be limited, as the structures do not confront the flow and cause great scouring. The sandbars and the char closest to the protected portion are uninhabited and largely without vegetation. The Project will closely monitor the morphological process, and if significant changes originate from the protection works, a compensation program will be implemented.

Involuntary Resettlement	<p>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 the 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.<sup>28</sup> 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).</p>
Indigenous Peoples	No indigeous people in the project areas

## Stakeholder Communication, Participation, and Consultation

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During Project Design	<p>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 riverbank 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.).</p>
During Project Implementation	<p>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 stakeholders, 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.</p>

## Business Opportunities

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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); survey instrument specialist (2.14 pm); and technical BU river and construction specialist (13.44 pm); and (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 procurement specialist (29.51 pm); under water engineer (4.67 pm); five cooperative organizer (135.01 pm); and three gender organizer (97.37 pm).

Procurement All procurement under the Project were done 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.

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## Timetable

Concept Clearance	06 Jun 2000
Fact Finding	28 Mar 2002 to 28 Apr 2002
MRM	03 Jun 2002
Approval	25 Nov 2002
Last Review Mission	-
PDS Creation Date	29 Nov 2006
Last PDS Update	19 Jan 2012

## Loan 1941-BAN

### Milestones

Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
25 Nov 2002	03 Feb 2003	01 Apr 2003	30 Jun 2009	30 Jun 2011	05 Oct 2011

### Financing Plan

### Loan Utilization

Total (Amount in US\$ million)			Date	ADB	Others	Net Percentage
Project Cost	60.27	Cumulative Contract Awards				
ADB	41.17	17 Jun 2022	41.52	0.00		100%
Counterpart	19.10	Cumulative Disbursements				
Cofinancing	0.00	17 Jun 2022	41.52	0.00		100%

### Status of Covenants

Category	Sector	Safeguards	Social	Financial	Economic	Others
Rating	Satisfactory	Satisfactory	-	-	-	Satisfactory

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