

PROJECT INFORMATION DOCUMENT (PID)

APPRAISAL STAGE

Report No.: AB6110

Project Name	Bangladesh Padma Multipurpose Bridge Project
Region	SOUTH ASIA
Sector	Roads and highways (90%); Flood protection (10%)
Project ID	P111017
Borrower(s)	BANGLADESH
Implementing Agency	Bangladesh Bridge Authority Setu Bhaban New Airport Road, Banani Bangladesh Tel: 88029888969 Fax: 88029889869 enr_rafiqul_rhd@yahoo.com
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Environment Category	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
Date PID Prepared	November 9, 2010
Date of Appraisal Authorization	December 2010
Date of Board Approval	February 24, 2011

A. Country and Sector Background

1. Bangladesh, with about 160 million inhabitants on a landmass of 147,570 square kilometers, is among the most densely-populated countries in the world. It remains a low-income country, with a per capita income of US\$645 (Atlas method) in FY10 and 40 percent of its population living in poverty.

2. Geography is a strong determinant of Bangladesh's development. The country is bounded by India on the west, north, and north-east, Myanmar on the south-east, and the Bay of Bengal on the south. Eighty percent of its area consists of floodplains created by more than 300 rivers and channels, including three major rivers: the Ganges, the Brahmaputra, and the Meghna. Bangladesh forms only a small part of a large regional hydrologic system—less than 10 percent of the river basin falls within the national territory. Its southern part is nestled in the Bay of Bengal with a 710 km long coastal belt that is home to nearly 35 million people. Bangladesh's geographical position and very high population density makes it extremely vulnerable to natural disasters including floods, droughts, and cyclones. Global climate change has magnified these vulnerabilities.

3. Due to this very dynamic riverine morphology, the development of transport and communication networks across the floodplain is a challenge, in particular, construction of fixed crossings over major rivers. The first fixed crossing across the Brahmaputra/Jamuna River was undertaken in 1998 with the construction of the Jamuna Bridge, which connected the eastern part of the country to the north-west. The proposed Padma Multipurpose Bridge will be the second large fixed crossing, and will connect the southwest region (SWR) with the rest of the country.

4. The Project is a centerpiece of the country assistance strategy (CAS) for FY11-14 that would support Bangladesh's ambitions by contributing to accelerated, sustainable and inclusive growth, underpinned by stronger governance at central and local levels. The project is expected to have a transformative impact on the socio-economic development of the country as a whole, and on the southwest region in particular.

B. Objectives

5. The Project Development Objective (PDO) is to: (i) connect the south-western region to the rest of the country so as to stimulate economic growth by facilitating inter-regional, cross-river transport of passengers and freight, and transmission of natural gas, telecommunication and electricity in a cost effective manner; and (ii) build capacity of the Bangladesh Bridge Authority (BBA) to develop, implement and effectively manage large bridge projects in the country.

C. Rationale for Bank Involvement

6. The construction of the bridge over the Padma River is a top priority on the development agenda of the Government of Bangladesh (GOB) that will benefit the southwest region and, more importantly, the country as a whole. In addition, the GOB not only regards the Bank as a primary source of financing but also as a source of technical knowledge, professional and policy advice, and expertise in the sector. The Bank has a long history of partnership and collaboration with Bangladesh in the water and transport sectors and is seen as a trusted partner and a coordinator for international financial institutions and other development partners. It has provided previous support to several main interventions including the financing of the Jamuna Bridge. The Bank therefore is well placed to assist the country with this Project to support sustained growth in line with the CAS objectives, in particular pillars 1 and 2, related to the increased resilience to disaster risk reduction/climate change and the promotion of an enabling environment for private sector development respectively. The Bank also has a comparative advantage in ensuring that these resources will be utilized effectively for the country.

D. Description

7. The project consists of the following components:

- **Component A: Main Bridge and Approach Roads (US\$1,626.2 million).** This component will include construction of the foundation, substructure and superstructure of the main bridge and services on the bridge, road viaducts, approach roads, toll plazas and various bridge-end facilities. This would be a "rail ready" road bridge. The bridge design incorporates adaptation to impacts of long term climate change and can withstand earthquake loading. This component will include construction of (i) the main bridge and viaducts (component A1.1) and the construction yards (A1.2); and (ii) the approach roads and bridge-end facilities.

- **Component B: River Training Works (US\$799.9 million).** Padma is one of the major rivers in the world with an alluvial bed and complex morphology. The river has a tendency to shift westwards. Though the main consideration in the site selection for the bridge is stability of the river, keeping the river stable under the bridge in the long-run is a challenge. The river training works are designed to meet this challenge. The left side (Mawa side) bank is relatively high and stable. The river training works (RTWs) on the Mawa side are about 1.5 km long about 1 km on upstream side. On the Janjira side construction of RTWs is more extensive and heavily designed. The length of the RTWs on the Janjira side would be about 12 km.
- **Component C: Implementation of Social Action and Environmental Management Plans (US\$291.9 million).** This component will finance the implementation of the social and environmental action plans. Sub-component C1 will finance the implementation of the Social Action Plan. The PMBP is a large, complex and challenging project involving a variety of issues ranging from land acquisition, physical and economic displacement, impacts on vulnerable groups and other unanticipated impacts. This sub-component would support implementation of the Resettlement Action Plans (RAP), public health action, gender action, *charland* monitoring and public consultation plans. Sub-component C2 will finance the implementation of the Environmental Management Plan. Though much of the EMP activities have been included in the construction contracts under other components, some activities, like tree plantations, development of protected area on *charland*, community environment management plan etc. may be funded under this component.
- **Component D: Construction Supervision, Monitoring and Evaluation of the Project Impact and Social and Environmental Management Plans (US\$72 million).** This component will cover the cost of consulting and other services for project implementation, including construction supervision and project management support. In addition, the component will support monitoring and evaluation (M&E), project implementation activities, project's socio-economic, physical, environmental impact, and supervision of implementation of EMP and RAP. As such, it would provide continuous feedback to the Government of Bangladesh (GoB), the Project Steering Committee (PSC), the Project Management Committee (PMC), the BBA and the project cofinanciers/development partners (DPs). This component would also provide support for BBA in project management. For implementation of this component, an independent consultant team, namely the Management Support Consultants (MSC), would be recruited under the project.
- **Component E: Project Management Support, Capacity Building of BBA, Technical Assistance and Training (US\$26.0 million).** This component will support (i) the overall project management support and audits; (ii) strengthening BBA, the panel of experts and technical assistance; and funding strategic studies to address technical, financial or management issues, mitigation measures and pilot projects that may be identified during the project implementation and agreed upon with the Association.

E. Financing

Source:	(\$m.)
BORROWER/RECIPIENT	660
International Development Association (IDA)	1,200
Asian Development Bank	615
Islamic Development Bank	140
Japan International Cooperation Agency (JICA)	300
Total	2,915

F. Implementation

8. The project will be implemented by the Bangladesh Bridge Authority. The Bangladesh Bridge Authority (BBA) was created in 1985 through an ordinance as an Authority. BBA reports to the Ministry of Communication of the Government of Bangladesh. BBA shall be responsible for the execution and implementation of the Project through the Project Management Unit (PMU). The PMU has been strengthened by providing additional staff. It would be supported by consultants, advisors and appropriate Non-Governmental Organizations (NGOs) for implementation of the Project.

G. Sustainability

9. The Padma Bridge Project is vital for the continued economic growth of the country in particular the SWR. The GoB is very much committed to the Project and appreciates the importance of its sustainability which is crucial for the Project to continue to provide benefits. The Project is of national importance and all political parties of the country support this investment and most importantly people of the area even those who are affected by the involuntary resettlement. As evidenced in case of the Jamuna Bridge, operation and maintenance (O&M) have remained important since its inception. Ensuring sustainability would involve: (i) setting aside adequate funds for proper operation and maintenance (O&M) each year from the toll revenue; (ii) satisfactory institutional arrangements and capacity for carrying out the O&M of infrastructure and facilities; and (iii) adequate capacity and performance of the BBA to manage and monitor the O&M of both Jamuna and Padma Bridges.

H. Lessons Learned from Past Operations in the Country/Sector

10. The project design draws on lessons learned from infrastructure projects both in and outside Bangladesh, most notably the Jamuna Bridge Project in Bangladesh. Bank-wide experience has shown that infrastructure is crucial for socio-economic development and this is particularly true in case of Bangladesh which has a significant infrastructure gap and where the country is divided in four parts by the major rivers. The primary lesson incorporated in the project is that of improving connectivity between regions of the country, creating an enabling environment for exchange of goods and people in the country and regionally.

I. Safeguard Policies (including public consultation)

11. The project is expected to have significant social benefits in the project area, as well as in the southwest region and in the country as a whole. However, the project will also have some adverse impacts through land acquisition and involuntary resettlement. As a part of project preparation, three Resettlement Action Plans were completed that identified mitigation measures for adverse impacts through a carefully planned two-phased resettlement and rehabilitation program. This program will provide compensation and resettlement opportunities for households displaced during construction and implementation of the project, as well as a longer term livelihood restoration program that is anticipated to extend beyond the life of the project. In addition, surveys were conducted in the project area on socioeconomic conditions, impact inventory and census, impacts on physical cultural resources, gender, public health and *charlands*. The planning process followed a participatory approach, involving extensive consultations and participation of the local communities, particularly over entitlement policies, relocation options, livelihood development approaches and packages. A series of action plans have been developed to address the adverse impacts. They include three component Resettlement Action Plans (RAP-I, RAP-II, RAP-III), a Resettlement Policy Framework, a Gender Action Plan, a Public Consultation and Participation Plan, a Public Health Action Plan, a Charland Impact Monitoring and

Management Framework. These action plans are included in one project Social Action Plan (SAP). The project will also establish a two-tier grievance redress mechanism.

12. The Project is categorized as Environmental Category “A”. A full environmental assessment of the impacts has been carried out during project preparation to ensure that the environmental impacts are identified, prioritized, and appropriately managed during all stages of the project. Since the project is also financed by ADB, JICA, and IDB, in addition to the World Bank, the co-financiers worked with the BBA to evolve a harmonized safeguard policy framework to guide the assessment. While the assessment recognizes many benefits from the project—including new employment and business opportunities, improved connectivity, reduced air and noise pollution and less traffic congestion—the assessment also identifies the key environmental impacts from large-scale construction in the project area. The environmental assessment has also considered the previous work done between 2000 and 2007—Environmental Screening, Initial Environmental Examination, and preliminary EIA with several specialized studies on key aspects – such as *charlands*, ecology etc. The final EA/EMP report consisted of three volumes, and an Executive Summary summarizing all aspects of EA/EMP and SAP. The second volume provides more details of the EA/EMP, and the third volume summarizes the SAP. This is supported by several volumes of reports and field work.

13. The process of public consultation and participation has been an integral part of all project preparations since 2003. During the prefeasibility and feasibility study a series of consultations were organized and these were stepped up during detailed design. These consultations were held as proposed in the Public Consultation and Participation Plan with formal and informal meetings, village level workshops and disclosures of project impacts to the affected households and communities. The views, needs and aspirations of the affected people as expressed during these consultations have been incorporated in the project design and the proposed mitigating measures with the objective to maximize benefits and minimize adverse social and environmental effects. Focus group discussions were held with groups of affected persons covering the issues like anticipated impacts, possible solutions, etc. Formal consultations at three locations involving about 350 participants representing affected persons, union and *upazila* leaders, NGOs, and national and local government representatives were also held. The recommendations from the public consultations have been incorporated in the engineering design and the resettlement and compensation plan for the affected communities. In addition, consultations with experts were held during the detailed design phase to share information on the project and to obtain feedback on important social and environmental aspects. Guidance and expert advice on the social and environmental studies was also received from the Panel of Experts appointed by BBA consisting of 10 national and international experts charged with periodic review of procedures and progress of the PMBP.

14. Five consultation meetings to disclose the results of the environmental and social assessment and the EMP and SAP were held in the project area March 16 – 19, 2010. A national workshop was held on October 23, 2010. After completion of the Environmental Impact and Social Assessment, a summary in Bangla has been prepared and distributed to local authorities and relevant stakeholders. The draft Summary and the EIA and EMP have been published on the website of BBA and placed in various places in the Project area and Dhaka. The hard copies of these documents will also be available at the BBA office, project site offices and deputy commissioner offices for general public access. The EA/EMP and SAP/RAP approved by the Department of Environment on September 6, 2010. The reports were submitted to the Bank’s InfoShop on September 8, 2010. The reports are also disclosed on ADB and JICA websites.

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[x]	[]
Natural Habitats (OP/BP 4.04)	[x]	[]
Pest Management (OP 4.09)	[]	[x]
Indigenous Peoples (OP/BP 4.10)	[]	[x]
Physical Cultural Resources (OP/BP 4.11)	[x]	[]
Involuntary Resettlement (OP/BP 4.12)	[x]	[]
Forests (OP/BP 4.36)	[]	[x]
Safety of Dams (OP/BP 4.37)	[]	[x]
Projects on International Waterways (OP/BP 7.50)	[]	[x]
Projects in Disputed Areas (OP/BP 7.60)*	[]	[x]

J. List of Factual Technical Documents

15. Detailed Design of Padma Multipurpose Bridge Project: Additional Study – Updating Site Seismic Assessment, Bureau of Research, Testing & Consultation, Bangladesh University of Engineering & Technology, Dhaka, Bangladesh, November 2009.
16. Padma Multipurpose Bridge Design Project: Draft Environmental Assessment Report, Bangladesh Bridge Authority, November 2009.
17. Detailed Design of Padma Multipurpose Bridge Project: Economic and Financial Evaluation, Bangladesh Bridge Authority, December 2009.
18. Detailed Design of Padma Multipurpose Bridge Project: Detailed Economic and Financial Analysis, Bangladesh Bridge Authority, December 2009.
19. Padma Multipurpose Bridge Design Project: Technical Note RTW # 1 – Assessment of River Training Alternative 2 Modified”, Bangladesh Bridge Authority, January 2010.
20. Padma Multipurpose Bridge Design Project: Social Action Plan – Vol. 2 Social and Poverty Assessment, Bangladesh Bridge Authority, January 2010.
21. Padma Multipurpose Bridge Design Project: Social Action Plan – Vol. 11 Institutional and Implementation Arrangements, Bangladesh Bridge Authority, January 2010.
22. Padma Multipurpose Bridge Project: Volume I – Environmental and Social Impact Assessment – Executive Summary, Bangladesh Bridge Authority, September 2010.
23. Padma Multipurpose Bridge Project: Volume II – Environmental Assessment, Bangladesh Bridge Authority, September 2010.
24. Padma Multipurpose Bridge Project: Volume III – Summary of the Social Action Plan, Bangladesh Bridge Authority, September 2010.

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* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

L. For more information contact

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