

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC2642

Project Name	Multipurpose Disaster Shelter Phase II (P146464)
Region	SOUTH ASIA
Country	Bangladesh
Sector(s)	General agriculture, fishing and forestry sector (10%), Primary education (22%), Rural and Inter-Urban Roads and Highways (13%), Gen eral water, sanitation and flood protection sector (30%), Other social services (25%)
Theme(s)	Natural disaster management (67%), Other public sector governance (10%), Rural policies and institutions (15%), Other social develop ment (8%)
Lending Instrument	Investment Project Financing
Project ID	P146464
Borrower(s)	Government of Bangladesh
Implementing Agency	LGED
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	29-Apr-2014
Date PID Approved/ Disclosed	30-Apr-2014
Estimated Date of Appraisal Completion	19-Sep-2014
Estimated Date of Board Approval	18-Dec-2014
Concept Review Decision	Track I - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

1. Over the past twenty years, Bangladesh has made significant gains in economic growth, development and poverty reduction. Since 1990, Bangladesh's GDP has been growing at around five percent in real terms, and the number of people living below the poverty line was reduced from 59 percent in 2000 to 43 percent in 2010. Bangladesh has also made noteworthy gains in education and health. By 2005, around 90 percent of girls were enrolled in primary school, which was slightly more than boys, and double the rate in 2000. Over the same period, child mortality fell by two thirds, and maternal mortality fell by three quarters. And between 1990 and 2010, life expectancy rose by 10 years, from 59 to 69. Despite these gains, Bangladesh remains a poor country, with a GDP per capita of US\$830.

2. **Coastal Vulnerability:** The longitudinal position of Bangladesh, combined with its proximity to the Bay of Bengal and the Indian Ocean, generate a tropical monsoon-type climate, prone to cyclones, flooding and drought. Bangladesh is also at risk for earthquakes and tsunamis, sitting at or near the juncture of several active tectonic boundaries. The summers are generally hot and rainy, while the winters are slightly cooler and dry. The dry season is from November to February, and average rainfall totals less than 10 mm in January, the driest month. The monsoon season is from June through August, where average rainfall totals increase to a peak of over 500 mm in July, the wettest month. Most regions accrue more than 1,500 mm of annual rainfall, making Bangladesh one of the wettest and most fertile climates in the world. Cyclones typically affect Bangladesh in the fall and spring, the intervals between the dry season and the monsoon season. North Indian Ocean tropical cyclogenesis occurs at least 500 km from the equator, a necessary prerequisite for a strong enough Coriolis force to sustain a low pressure center. Intensification of the storm transpires as gradient wind balance concentrates latent heat near the core. Cyclones move northward where, almost every year, at least one makes landfall in Bangladesh.

3. **Economic impact of cyclones:** Natural disasters, particularly cyclones, remain a persistent obstacle towards sustained growth in locally affected areas of the coastal region. From 1990-2008, Bangladesh incurred an average annual loss of US\$2.189 billion (1.8 percent of annual GDP) from disasters. A comprehensive Joint Damage, Loss and Needs Assessment (JDLNA) undertaken by a team comprised of the Government of Bangladesh (GoB) and international experts, estimated that the total damage and losses caused by 2007 Cyclone Sidr alone to be Bangladesh Taka (BDT) 115.6 billion (US\$1.7 billion). More than two-thirds of this was physical damage and one-third economic losses, focused on the coastal regions. Damage and losses were concentrated in the housing sector (US\$840 million, 50 percent of the total), production sectors (US\$490 million, 30 percent), and public sector infrastructure (US\$250 million, 16 percent). The most affected sectors were, in decreasing order, housing, agriculture, transport, water control structures, education, and industry. Damage and losses to private assets and livelihoods outweighed the losses and damage to public infrastructure significantly. Cyclone Sidr was the second natural disaster to affect Bangladesh in 2007, followed after monsoon floods had caused extensive damage to agricultural production and physical assets, totaling US\$1.1 billion. The Bangladesh economy sustained combined effects of the cyclone and the floods of 2007 in the estimated amount of BDT 189.4 billion, or 4.7 percent of GDP for the previous fiscal year.

Sectoral and Institutional Context

4. The coast of Bangladesh is approximately 710 km long and is home to nearly 40 million people. Cyclones affect the region with strong winds accompanied by powerful storm surges and widespread inundation over a vast area. In 2007, Cyclone Sidr had a diameter of nearly 1,000 km² at landfall. Destruction is amplified by low-lying physical geography, high-tide at landfall, climate change, high population density, and the low-income status of Bangladesh. The Meghna estuarine region is especially vulnerable to storm surge amplification.

5. **Cyclone Risk Mitigation.** After the severe cyclone of 1970, which killed an estimated 300,000 people, the Government of Bangladesh committed to improving the protection of the coastal population. In the subsequent decades, the Government constructed a network of cyclone shelters in the coastal areas, and developed an early warning system for local communities, entitled the Cyclone Preparedness Program (CPP). Between 1970 and 2007, around 1700 cyclone shelters were constructed, with the aim of providing shelter and protection from high winds and storm surges

common during cyclones. In addition, the entirely community-based and volunteer staffed CPP is responsible for early warning, search and rescue, evacuation, sheltering, first aid, relief distribution and rehabilitation activities. CPP is considered a model program in the world and has won the “Smith Tumsaroch Award-1998” for its Outstanding Performance in disaster management. The CPP has over 200 government staff and about 50,000 volunteers (about 16,000 female volunteers) over 3,000 units, and it operates in 322 union parishads and 37 upazilas of Bangladesh’s coastal districts. Bangladesh’s network of shelters provides a vital first line of defense against cyclones, alongside early warning preparedness, megaphones, and an intricate polder system.

6. Cyclones Sidr (2007) and Aila (2009). On November 15, 2007, Cyclone Sidr made landfall across the southern coast of Bangladesh, causing extensive damage to lives and property. Overall, around 30 districts and 9 million people were affected by the cyclone. Damage and losses caused by Cyclone Sidr were estimated to total about Bangladesh Taka (BDT) 115.6 billion (US\$1.7 billion). Recommendations from this Joint Damage Loss and Needs Assessment (JDLNA) outlined a longer term program for disaster risk reduction and improving resilience to extreme events. The estimated cost of this plan included both the recovery and rehabilitation of damaged infrastructure to a build back better design, as well as the longer term improvements for disaster risk reduction. The total cost for this program was estimated at US\$4 billion over a 15 year period, with a cost for the first phase of five years (2008-2013) of about US\$1.6 billion. The Emergency 2007 Cyclone Recovery and Restoration Project (ECRRP) (Credit 4507-BD) was designed to cover a portion of these costs and to target the most immediate needs in the recovery and restoration of livelihoods and critical infrastructure damaged after Cyclone Sidr.

7. ECRRP supported the Government's immediate efforts to facilitate recovery from the damage to livelihoods and infrastructure caused by Cyclone Sidr and to build long-term preparedness through strengthened disaster risk reduction and management. The project’s initial US\$109 million covered restoration of the agricultural sector in the cyclone affected areas, and reconstruction of public infrastructure, including reconstruction and improvement of multi-purpose shelters and rehabilitation of coastal embankments with "build back better" designs, as well as strengthened disaster risk reduction and management systems, and technical assistance, strategic studies and training to strengthen future emergency response and preparedness to disasters. ECRRP also supported planning and design of projects for long term disaster management such as (i) a strategic study of the coastal embankment network, providing recommendations for systematic upgrading over a period of twenty years (which formed the basis for the Coastal Embankment Improvement Project (Credit 52800-BD) that was recently approved by the World Bank); (ii) a project for the storage of food using modern silos; (iii) construction of new multipurpose disaster shelters; and (iv) ongoing River Bank Improvement Program studies to protect against flooding and river bank erosion, which are the main cause of loss of land and poverty in Bangladesh.

8. Additional Financing to scale up investments was approved in 2009, with a second Additional Financing approved in 2013. In addition, grants from GFDRR and the BCCRF, and parallel financing from KfW have contributed towards the projects expansion. Today, ECRRP with various IDA Credits and Grants is about US\$356.9 million program under which about US\$208.5 million are provided for the construction of new shelters and rehabilitation of existing shelters. A total of 330 new disaster shelters would be constructed under this program and about 460 would be rehabilitated. These are all limited to nine Sidr affected coastal districts (Bagerhat, Barguna, Barisal, Bhola, Jhalkati, Khulna, Patuakhali, Pirojpur and Satkhira). However, there is additional unmet demand for these shelters in non-Sidr districts which needs to be met. This operation would

focus primarily on the demand for shelters in non-Sidr affected districts, that is Chittagong, Cox's Bazar, Feni, Lakshmipur and Noakhali, as well as in four Sidr affected districts that are highly vulnerable to cyclones, and where there is very large unmet demand.

9. Demand for Multipurpose Shelters. Under ECRRP, studies have been carried out to estimate the projected demand for shelters in each district by the year 2020 and 2025. It is estimated that by 2020 about 4,760 new shelters are required in 14 coastal districts where Cyclone Preparedness Program is operational and 7,124 by the year 2025. Since it would not be possible to meet all the demand at once, due to the funding requirement as well as due to longer construction period in these remote areas, this requirement is prioritized in two phases. The Priority 1 and 2 shelters are identified using a multifactor scoring system such as location in disaster zone, levels of surge, distance from existing shelters, population in the location and views of the stakeholders, etc. The locations scoring higher than 70 points (out of 100) are ranked as Priority 1 and those scoring between 40 and 70 as Priority 2. A GIS map marking location of each existing and proposed location of shelters has been developed under ECRRP.

10. The Proposed Multipurpose Disaster Shelters Project (MDSP) is a large-scale, cyclone risk mitigation infrastructure project that strengthens emergency preparedness and will significantly reduce vulnerability to climate change and natural disasters. The project is expected to have an impact on long-term disaster resiliency in Bangladesh, focused particularly on the coastal region. MDSP would focus on meeting these high priority needs by providing construction of 550 new shelters and the improvement of 450 existing shelters. The project will also invest in connecting roads and communication networks to shelters, increasing accessibility and effectiveness.

11. The shelters would be multipurpose buildings (schools, administration, etc) with provision for livestock refuge sites also. The shelters should have water supply and storage, sanitation facilities, food storage and supplies needed for survival immediately following a disaster. They should be well connected with a communication network for speedy evacuation and delivery of relief supplies in a disaster scenario. As a matter of policy, all public buildings constructed in the high-risk zones should be multi-purpose and of shelter grade. The project will build upon the work done by ECRRP, using it as foundation for further expansion and development to meet the established risk mitigation infrastructure needs.

12. Coverage of Disaster Shelters Under MDSP. Under ECRRP, rehabilitation and construction efforts were concentrated in the nine Sidr-affected districts. The proposed MDSP will expand the coverage of cyclone shelters to an additional five non-Sidr affected coastal districts facing high risks from cyclones where comprehensive early warning systems are currently present. It will also cover four Sidr districts where there large unmet demand even after implementation of ECRRP. Thus, the MDSP will cover nine of the fourteen coastal districts, where the need for additional shelters is greatest. The aim of the project will be to meet at least two thirds of the required shelters demand in all coastal districts estimated as Priority 1 requirement by 2020. In the four Sidr-affected districts to be covered under MDSP, the focus would be only on the additional shelters in need of rehabilitation/improvement or construction towards the goal of meeting two thirds of the total required Priority 1 need by 2020.

Institutional Context

13. Disaster Risk Management. After the 1991 cyclones that claimed nearly 140,000 lives,

Bangladesh's ability to manage disaster risks, in particular floods and cyclones, has substantially improved. This has been the result of a gradual shift from a response-based approach to a strategy that incorporates elements of greater emergency preparedness and risk mitigation. The National Plan for Disaster Management (NPDM) (2010-2015) is centered on the following strategic pillars: (i) risk identification and assessment; (ii) strengthening and enhancing emergency preparedness; (iii) institutional capacity building; (iv) risk mitigation investments; and (v) introducing catastrophe risk financing in the longer term. The underlying principles of the NPDM are that both loss of life and the economic impact of disasters can be reduced through advance planning and investment. Further the plan should be both affordable and delivery-efficient. The proposed rehabilitation and construction of multipurpose disaster shelters is a key investment to building resilience of coastal population. The Ministry of Disaster Management is the apex institution responsible for coordinating national disaster management interventions across all agencies.

14. Under ECRRP, the Local Government Engineering Department (LGED) has been the implementing agency for the component responsible for the construction of multipurpose disaster shelters. LGED is mandated with planning and implementation of local level rural urban and small scale water resources infrastructure development programs, as well as construction of roads, bridges/ culverts and markets to social mobilization. LGED has built up significant expertise in the implementation of programs for the construction and rehabilitation of multipurpose cyclone shelters.

Relationship to CAS

15. The proposed operation is fully aligned with the Country Assistance Strategy (CAS) for FY11-14. The overarching objective of the CAS is to help Bangladesh achieve its target of reaching middle-income status and reducing poverty from 32 percent to 15 percent of the population by 2021. The proposed operation directly supports the implementation of the second pillar of the CAS, which is to Reduce Environmental Degradation and Vulnerability to Climate Change and Natural Disasters. It directly contributes to CAS outcome indicator 2.4 Enhanced Disaster and Climate Change Preparedness, which indicated that the gap of cyclone shelters in the coastal areas should be reduced by 10%. By improving access to cyclone shelters, the coastal population is expected to face reduced vulnerability to cyclones and extreme weather events.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The proposed project development objective is to improve the protection of the coastal population to cyclone and extreme weather events through improving access to effective multi-purpose shelters in fourteen coastal districts

Key Results (From PCN)

18. The following key results are expected from the project:

- (i) # of shelters constructed in target districts;
- (ii) % of the population with access to multipurpose shelters;
- (iii) km of access roads to multipurpose shelters constructed.

III. Preliminary Description

Concept Description

17. A long term approach. The long term objective is to improve protection of the entire coastal

population to cyclones and extreme weather events through improving access to effective multi-purpose cyclone shelters in all of the coastal districts. The Local Government Engineering Department has developed a strategy for improving or constructing shelters throughout the fourteen coastal districts based on priority levels and meet the requirements estimated for year 2020. The proposed MDSP plans for the rehabilitation and construction of shelters so as to meet at least two thirds of the total needs of each of the nine targeted districts in the coastal areas.

Component A: Reconstruction and Improvement of Multipurpose Shelters (US\$352 million).

18. This component will finance the construction of 550 new shelters and the rehabilitation of around 450 shelters of Priority 1 category in fourteen coastal districts. The construction of shelters will be carried out by LGED as multipurpose buildings for primary schools, community centers or other community buildings, in full coordination with local government, local communities and education departments. The component will also finance the improvement of roads and communication networks to shelters, as well as the costs associated with the implementation of Social Management Plans (SMP), Resettlement Action Plans (RAP) and Environmental Management Plans (EMP). While it is expected that there would be no land acquisition, in order to ensure that selection of the shelter site which is otherwise ideal is not constrained by the availability of the land a provision is made in this component to finance any costs associated with land acquisition and resettlement if needed. This component will finance the costs associated with consulting services for surveys, designs and construction supervision of multipurpose disaster shelters and all works covered under the project. This would include facilitating consultations with the local communities in identifying sites, needs and suitable design of the shelter as well as coordination with other government agencies and stakeholders, such as the Ministry of Education, local governments, and upazilla and union level governments.

Component B: Project Management, Monitoring and Technical Assistance and Training (US\$18 million)

19. This component will support the Government in implementing the project, and in coordinating all project related activities, monitoring, technical assistance and training. It will include: (B1) establishment of a Project Management Unit (PMU) within the Local Government Engineering Department; (B2) support for the operation of the Project Monitoring and Coordination (PCMU) within the Ministry of Planning (US\$3 million); (B3) monitoring and evaluation; and (B4) technical assistance and training in such areas as disaster management and preparedness, construction, contract management, financial management, preparation of environmental impact screenings and social assessments, and preparation of EMPs and RAPS (US\$4 million). This will involve financing of incremental staff salaries, operating expenditures, consulting services, equipment and software, etc..

20. The monitoring and evaluation (M&E) activities would provide continuous feedback to the Government, the Bank, and implementing agencies on the project's performance and impact of its various components, so that corrective actions could be undertaken in a timely manner. They will also supervise implementation of the overall EMF and SMF, careful review and monitoring of sub-project specific social and environmental management plans and impact assessments, and supervision of their implementation.

Component C - Contingent Emergency Response (US\$0 million)

21. In the case of a major natural disaster, the Government may request the Bank to re-allocate project funds to this component (which presently carries a zero allocation) to support response and reconstruction Disbursements under an Contingent Emergency Response Component (CERC) will be contingent upon the fulfillment of the following conditions: (i) the Government of Bangladesh has determined that an eligible crisis or emergency has occurred and the Bank has agreed and notified the Government; (ii) the Ministry of Finance has prepared and adopted the Contingent Emergency 30 Such a reallocation would not constitute a formal Project Restructuring. Response (CER) Implementation Plan that is agreed with the Bank; (iii) Local Government Engineering Department has prepared, adopted, and disclosed safeguards instruments required as per Bank guidelines for all activities from the CER Implementation Plan for eligible financing under the CERC. Disbursements would be made either against a positive list of critical goods and/or against the procurement of works, and consultant services required to support the immediate response and recovery needs of the Government of People's Republic of Bangladesh (GoB). All expenditures under this component, should it be triggered, will be in accordance with BP/OP 10.0 and will be appraised, reviewed and found to be acceptable to the Bank before any disbursement is made.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04		x	
Forests OP/BP 4.36		x	
Pest Management OP 4.09		x	
Physical Cultural Resources OP/BP 4.11		x	
Indigenous Peoples OP/BP 4.10	x		
Involuntary Resettlement OP/BP 4.12	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	

V. Financing (in USD Million)

Total Project Cost:	370.00	Total Bank Financing:	370.00
Financing Gap:	0.00		
Financing Source			Amount
BORROWER/RECIPIENT			0.00
International Development Association (IDA)			370.00
Total			370.00

VI. Contact point

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