



Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 26-Jan-2022 | Report No: PIDA30146



BASIC INFORMATION

A. Basic Project Data

Country Bangladesh	Project ID P173312	Project Name Resilient Infrastructure for Adaptation and Vulnerability Reduction	Parent Project ID (if any)
Region SOUTH ASIA	Estimated Appraisal Date 31-Jan-2022	Estimated Board Date 28-Mar-2022	Practice Area (Lead) Urban, Resilience and Land
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Finance	Implementing Agency Local Government Engineering Department	

Proposed Development Objective(s)

To reduce the vulnerability of people in targeted communities to riverine and flash floods and improve the country's capacity in disaster preparedness and response

Components

Resilient Flood Shelters and Community Infrastructure
Strengthening Capacity for Disaster Preparedness and Response and Technical Assistance
Project Management, Design and Supervision, Monitoring and Evaluation
Contingency Emergency Response

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	509.00
Total Financing	509.00
of which IBRD/IDA	500.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	500.00
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IDA Credit	500.00
Non-World Bank Group Financing	
Counterpart Funding	9.00
Borrower/Recipient	9.00

Environmental and Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

Bangladesh has made rapid social and economic progress in recent decades and reached lower middle-income status in 2015. Officially reported annual growth of gross domestic product (GDP) averaged close to 6 percent since 2000. Strong labor market gains contributed to a sharp decline in poverty, with the national poverty rate falling from 48.9 to 24.5 percent between 2000 and 2016, while extreme poverty declined from 34.3 to 13.0 percent.¹ However, the pace of poverty reduction slowed in recent years even as growth accelerated, particularly in urban areas and in the west of the country. Similarly, the progress on shared prosperity slowed between 2010 and 2016 after a decade of improvements, with annual consumption growth of the bottom 40 percent trailing that of the overall population (1.2 versus 1.6 percent).

The COVID-19 pandemic caused major disruptions to economic activity in FY20 and FY21. The initial phase of the pandemic in early 2020 disrupted the supply of intermediate goods from China, reducing manufacturing output. As the pandemic intensified abroad, export orders from Europe and the United States declined precipitously. The government implemented control measures that resulted in a sudden stop of economic activity in many sectors. Consequently, real GDP growth decelerated to 3.5 percent in FY20. Early signs of a recovery emerged in the first half of FY21, after movement restrictions were progressively lifted. Merchandise exports grew by 15.4 percent as RMG export orders were reinstated and factories remained open despite recurrent lockdowns. On the demand side, growth was primarily supported by private consumption, underpinned by a recovery in labor income and robust remittance inflows. Growth in imports of consumer goods and capital goods point towards a broad-based recovery. Declining imports and large official remittances inflows, which increased by over a third in FY21, contributed to a balance of payments (BoP) surplus in FY21. With 5.4 percent in July 2021, inflation

¹ Household Income and Expenditure Surveys, 2000/01 and 2016/17.



remained benign.

The COVID-19 pandemic has put the substantial poverty reduction gains of the past decade at risk, and vulnerability to economic shocks has risen. Poverty increased from 13.9 percent in FY19 to an estimated 18.1 percent in FY20, using the international poverty rate (\$1.9 in 2011 PPP). A nationally representative phone survey showed income losses and high levels of self-reported food insecurity in FY20. In poor areas of Dhaka and Chittagong, surveys showed that adults who stopped working due to COVID-19 were 11 percent more likely to report food insecurity. As growth strengthened in FY21, household surveys point to a gradual recovery in employment and earnings. Estimated poverty remained flat, although food security improved across the country.

The economy is expected to continue to recover gradually as Bangladesh navigates the persistent effects of COVID-19 on domestic and export markets. GDP growth is forecast to reach 6.4 percent in FY22, before accelerating to 6.9 percent in FY23 as exports and consumption continue to recover. The recent surge in official remittance inflows is unlikely to persist if the net outflow of migrant workers slows in FY22 and the reliance on formal payment channels declines as travel restrictions are eased. The fiscal deficit is projected to remain above 5.5 percent of GDP over the medium term. Revenue mobilization will be supported by ongoing policy and administrative reforms to VAT and income tax, while higher capital expenditure on infrastructure megaprojects is expected to increase public expenditure. Fiscal risks include weak domestic revenue growth (if tax reforms are delayed) and higher COVID-19 related expenditure. In the financial sector, contingent liabilities from non-performing loans combined with weak capital buffers could necessitate recapitalizations of state-owned banks (resulting in higher domestic government debt) and depress credit growth. While external demand for RMGs appears to be stabilizing, the recovery is fragile and could be vulnerable to new waves of COVID-19 infections. Sustaining the economic recovery and further reducing poverty will depend in part on mitigating economic scarring through well-targeted support to vulnerable households and businesses, and on the speed of vaccination among the population.

Bangladesh's recovery is further threatened by its vulnerability to the effects of climate change. The Global Climate Risk Index ranks Bangladesh as the world's seventh most-affected country in 2000-2019². Rising temperatures leading to more intense and unpredictable rainfalls during the monsoon season and a higher probability of catastrophic cyclones are expected to result in increased tidal inundation. Flooding in Bangladesh is a near-constant phenomenon, recurring with varying magnitude and intensity, affecting a greater population than any other natural hazard. Floods and riverbank erosion affect about one million people annually in Bangladesh³. Once every three to five years, up to two-thirds of Bangladesh is inundated by floods⁴. Runoff⁵ and peak 5-day rainfall intensity (a proxy indicator for an extreme storm event) are projected to increase⁶. These extreme natural events impact people and the economy through direct effects such as loss of lives and property and indirect effects such as the loss of employment and income, reduced access to products and services, and the opportunity cost of resources that need to be diverted to relief and rehabilitation, worsening prospects of recovery in the interim and post-COVID-19 period. Repeated extreme natural events have reinforced a cycle of poverty where improvements in

² Germanwatch (2021) Global Climate Risk Index 2021.

³ *The World Bank: Climate Change Knowledge Portal*

⁴ The World Bank: Climate Risk and Adaptation Country Profile (Bangladesh)

⁵ A measure of water availability (precipitation minus evapotranspiration)

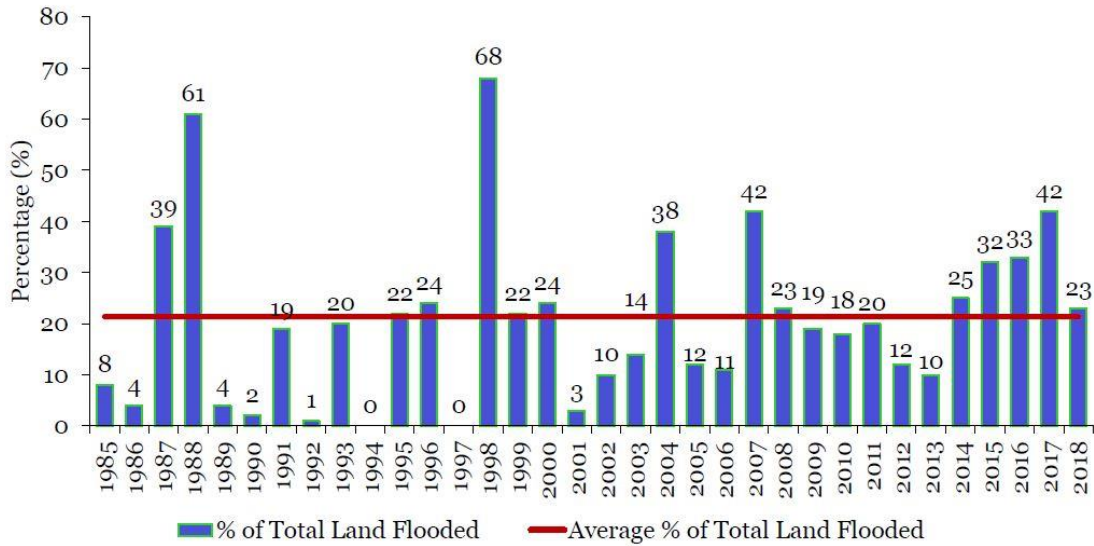
⁶ The World Bank: Climate Change Knowledge Portal



wellbeing and economic conditions that poor households incrementally build up over non-disaster periods are reversed in a matter of days or weeks. As exposure to natural disasters continues to rise, addressing these climate risks is not only key in supporting the sustainable economic development of the country, but also towards ensuring that the most vulnerable populations are not left behind.

Sectoral and Institutional Context

Frequent and recurrent flooding. Bangladesh is a deltaic country consisting of floodplains created by over 300 rivers and channels, including three major rivers: the Ganges, the Brahmaputra, and the Meghna. 25 percent of the country is less than 1m above sea level, and 50 percent is less than 6m above sea level. It is located at the foot of the highest mountain range in the world, the Himalayas, which is also the world’s highest precipitation zone. During monsoon seasons, the winds from the sea heading towards land raises the water levels in the Bay of Bengal, inhibiting drainage from these rivers into the sea. As rainfall levels are also high during monsoon seasons⁷, river flows, local rain, and raised water levels for the Bay of Bengal result in flooding of vast areas. Between 1954 and 2013, about 69 small-to-large floods were recorded⁸. Floods are especially destructive when peak flows in these rivers occur at the same time, such as in 1987, 1988, 1998, 2004, 2007 and 2017, as depicted in Figure 1 below. In terms of impacts, the floods in 1987 and 1988 affected 45 million people, caused over 4,000 reported deaths, and led to estimated damages of US\$500 million and US\$1.2 billion respectively. The particularly devastating 1998 flood inundated 68 percent (100,250 km²) of the country and affected 30 million people, leading to 1,050 reported deaths and leaving around 25 million homeless⁹.



Area Affected by Floods in Bangladesh by Year (percentage of total land flooded)¹⁰

⁷ Average Rainfall in rainy season (May to September) is about 2250 mm. Rainfall intensities in monsoon period in 1988, 1998 and 2007 were 2284, 2112, 2306 mm respectively.

⁸ Source: Management Approach to Disaster Scenario in Bangladesh: An Overview

⁹ After the flood: Official Damage Statistics of Bangladesh Flood 1998, <https://reliefweb.int/report/bangladesh/after-flood-official-damage-statistics-bangladesh-flood-1998>

¹⁰ Annual Flood Report 2018, Flood Forecasting and Warning Centre (FFWC), Bangladesh Water Development Board (BWDB)



Recent floods. Large scale floods in 2017 killed 145 people and affected about 8 million in 32 districts, placing 1.5 million people in need of immediate food assistance. In 2019, heavy monsoon rains started in July and higher water volume from upstream triggered flooding in low lying areas of 28 districts affecting 7.6 million people. Of these districts, Kurigram, Jamalpur, Gaibandha, Sirajganj, Sunamganj, Bogra, and Bandarban were hit particularly hard. Severe floods during the last week of June 2020, driven by prolonged and intensified heavy monsoon and upstream water, affected 5.4 million people in the northern, central, and north-eastern part of the country. Around 37 percent of the country's total areas were flooded affecting 33 districts and it was considered the longest flooding period in the last 22 years. The estimated losses in the agricultural and livestock sector were more than US\$116 million¹¹. The other sectors which are often severely affected by the prolonged floods are community infrastructure like rural roads, Water Sanitation and Hygiene (WASH) facilities, public buildings, drainage, etc. and infrastructure like highland/roads/embankments which are often used by affected people to take temporary shelter in the absence of flood shelters. Lightning during the flood season also has a high mortality rate with the incidence of lightning fatalities at 0.9 per 1,000,000 population per year, which is higher than in high-income countries¹². A total of 3,086 died and 2,382 injured from lightning between 1990 to mid of 2016, for annual averages of 114 fatalities and 89 injuries over the entire period¹³. According to the Ministry of Disaster Management and Relief (MoDMR), over 2,000 people died in lightning strikes in the country from 2011 to 2020¹⁴. At least 177 people, including 122 farmers, were killed and 47 others injured by lightning strikes across the country between March 31 and June 7 in 2021.¹⁵

Community infrastructure including rural roads, drainage, WASH facilities, and public buildings are vulnerable to flooding and extreme precipitation, and climate change will aggravate the situation. Road damages from the exceptional flood of 1998 alone accounted for 15 percent of total damages or about 0.7 percent of GDP¹⁶. The 2007 floods damaged over 14,000 km of roads and washed away 849 bridges, 14 union council buildings and 8 growth centers in 46 districts, with a rehabilitation cost of BDT 11,425.35 million (US\$134.4 million)¹⁷. The 2020 floods damaged 100,223 latrines, 92,860 tube wells leading to seven districts out of safe drinking water, and disrupted the functioning of 43 local markets¹⁸.

Floods disproportionately affect the poor. The ways in which disasters affect the poor are increasingly better understood. Poor people suffer disproportionately, as they often have little choice in settlement location and end up inhabiting disaster-prone areas where they are highly unlikely to move from¹⁹. Lower income populations have less disposable income, assets, and more limited access to public services, pointing to fewer overall resources with which to adapt to changing circumstances. Low-income

¹¹ Monsoon Floods: Bangladesh: International Federation of Red Cross and Red Crescent Societies, Final Report: May 05, 2021

¹² Holle RL: Lightning Fatalities in Tropical and Subtropical Regions. Prepr 29th Conf Hurricanes Trop Meteorol. 2010; 1–10.

¹³ Dewan A, Hossain MF, Rahman MM, Yamane Y, Holle RL. Recent lightning-related fatalities and injuries in Bangladesh, Weather, Climate, and Society. 2017; 9, 575-589.

¹⁴ Bangladesh: National Plan for Disaster Management: 2021-2015

¹⁵ Lightning Bangladesh's deadliest natural disaster (June 18, 2021), Dhaka Tribune (<https://www.dhakatribune.com/bangladesh/2021/06/18/experts-lightning-bangladesh-s-deadliest-natural-disaster>)

¹⁶ Islam, K. M. N., and R. Mechler. 2007. ORCHID: Piloting Climate Risk Screening in DFID Bangladesh: An Economic and Cost Benefit Analysis of Adaptation Options. Sussex, UK: Institute of Development Studies.

¹⁷ Consolidated Damage and loss Assessment, Lessons Learnt from the Flood 2007 and Future Action Plan

¹⁸ Monsoon Floods 2020 Coordinated Preliminary Impact and Needs Assessment

¹⁹ Survey Result – Community Flood Needs Assessment Study in Flood Prone Areas of Bangladesh (2020)



households which are largely dependent on agriculture, in particular, tend to suffer the largest relative losses when disasters occur, losing access to what is often their only stream of income and experiencing a substantial if not entire depletion of their savings. The same loss affects poor and marginalized people more as: (i) their livelihoods depend on fewer assets, (ii) their consumption is closer to subsistence levels, (iii) they cannot rely on savings to smooth the impacts, (iv) their health and education are at greater risk, and (v) they may need more time to recover and reconstruct. In Bangladesh, one study that surveyed 700 floodplain residents living without protection along the Meghna River showed poor people lost much more in relative terms: 42 percent of household income compared to 17 percent for nonpoor people²⁰.

The impacts of floods on vulnerable communities extend beyond short-term asset losses to long-term human capital impacts. During floods, families take cattle and belongings they can carry and evacuate to available public land, usually the grounds around public buildings and elevated roads which double as embankments. There, they stay in makeshift shelters in poor sanitary conditions, with precarious access to safe water and sanitation, insufficient and unsafe spaces for cooking and sleeping, and are exposed to a range of compounding risks from gender-based violence (GBV) to illnesses that have short- and long-term implications on health and nutrition outcomes.²¹ This ad-hoc and unplanned shelter situation also hampers access to health services, proper communication, and distribution of relief. A baseline assessment of the impact of natural disasters on Bangladesh primary schools found that 84 percent of sampled schools in disaster-prone areas experienced extended closures lasting an average of 26 days²².

Women and girls are disproportionately affected by climate change and disasters in the immediate aftermath as well as during recovery. Despite limited data, it is widely acknowledged that climate change and disasters increase GBV and improved access to GBV services are an urgent priority.²³ For example, in case of Cyclone Amphan, UN Women Rapid Gender Analysis showed that 65 percent of respondents reported increase in GBV while only 21 percent respondents reported having access to GBV services.²⁴ Disasters also widen gender gaps. It is more likely for girls than boys to be pulled out of school to help with domestic chores after a disaster (especially in rural areas).²⁵ ²⁶ A key recommendation of the Bangladesh Country Gender Assessment to enhance women’s voice and agency and engage men and boys (Pillar 4) is to enable women’s participation and leadership across sectors, especially in disaster preparedness. Specific highlighted actions to address this recommendation include ensuring shelters have safe spaces and facilities for women, women’s engagement in disaster preparedness plans, and ensuring early warning signals reach women and that.

²⁰ Brouwer, R., S. Akter, L. Brander, and E. Haque. 2007. “Socioeconomic Vulnerability and Adaptation to Environmental Risk: A Case Study of Climate Change and Flooding in Bangladesh.”

²¹ Waterborne illnesses such as diarrhea or dysentery are strongly associated with events such as flooding. These diseases, particularly among children under five years of age, can reduce the ability of the children to absorb micro and macro nutrients from food, leading to chronic malnutrition and growth faltering (Black, R.E., Allen, L.H., Bhutta, Z.A., Caulfield, L.E., de Onis, M., Ezzati, M., Mathers, C., Rivera, J., 2008. Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet* 371 (9608), 243–260.)

²² World Bank: Project Appraisal Document: FOURTH PRIMARY EDUCATION DEVELOPMENT PROGRAM

²³ Plan International Bangladesh. 2021. [Study on Women and girls' participation in community disaster risk management in Bangladesh.](#)

²⁴ UN Women. 2020. Rapid Gender Analysis Cyclone Amphan.

²⁵ UN Women, ‘WHY IS CLIMATE CHANGE A GENDER ISSUE?’ (<https://www.unclearn.org/wp-content/uploads/library/unwomen704.pdf>)

²⁶ Bagri, Neha Thirani. “Bangladesh’s Water Crisis: A Story of Gender.” *Climate News | Al Jazeera*, Al Jazeera, 25 Apr. 2017.



Previous flood management plans and strategies of the GoB have guided the development of the current flood risk management plan in the Bangladesh Delta Plan 2100. The first comprehensive strategy was outlined in the Flood Action Plan (FAP), which was prompted by massive floods in 1988-89. The lessons from the FAP were taken into the Bangladesh Water and Flood Management Strategy (BWFMS) approved in 1995. The BWFMS includes the recognition of balancing structural and nonstructural approaches to water management. The Bangladesh Delta Plan 2100 (BDP 2100) builds on the BWFMS for a comprehensive adaptive delta management strategy which highlights the need for hard infrastructure interventions and their operation and maintenance, as well as the need for adaptive capacity development of government institutions and vulnerable communities so no one is left behind. A specific strategy in BDP 2100 for flood risk management also includes a focus on safeguarding livelihoods of vulnerable communities with activities such as extending early warning services and floodproofing critical infrastructure.

The GoB has made significant strides in reducing casualties from extreme weather events and recognizes the need to invest in non-coastal flooding. Policies and investments in multi-purpose disaster shelters, Early Warning Systems (EWSs), and government capacity to mitigate the risks and impacts of extreme natural events have been shown to be effective in mitigating losses to lives and assets with initiatives such as the Cyclone Preparedness Programme (CPP) and the construction of disaster shelters leading to significant decreases in deaths over the last several decades despite comparable severity and increased frequency of natural disasters. A considerable part of Bangladesh's disaster risk management efforts has focused on cyclones as they pose acute threats to people and infrastructure, with a particular emphasis on building and renovating protective infrastructure on the coast with support from the World Bank and other developing partners. There is a need to further develop and extend these investments in infrastructure and capacity to encompass a wider range of geographies and hazards, particularly riverine and flash floods in non-coastal areas in Bangladesh as climate change increases the risks and impacts.

The proposed project builds on the GoB and World Bank's successful experiences in disaster risk management. In 1970, Cyclone Bhola, the deadliest cyclone on record, devastated Bangladesh and claimed an estimated 300,000 lives. Since its first Cyclone Protection and Coastal Area Rehabilitation Project with the GoB in 1972, the World Bank has supported the GoB to invest in disaster risk management and preparedness systems including embankments, cyclone shelters, and community early warning systems. The number of casualties from cyclones has dropped by a factor of 100 and living conditions for coastal communities have improved. However, continuous improvement of knowledge, planning, infrastructure, and investment are needed to address disaster risks which are intensifying due to climate change. After Cyclone Sidr (2007) made landfall, the GoB, with the support of development partners, placed a renewed emphasis on the construction and rehabilitation of buildings where people could safely evacuate to and shelter during cyclones. Shelters were financed by the World Bank, the Bangladesh Climate Change Resilience Fund, the Islamic Development Bank, the Army Corps of Engineers, the Swiss Development Corporation, and the GoB's Disaster Management Bureau, among others. In 2008, the Bank-financed Emergency Cyclone Recovery and Restoration Project (ECRRP) targeted immediate livelihood recovery, coastal embankments, and over 800 new and rehabilitated shelters in nine coastal districts in the south-west heavily affected by Cyclone Sidr. The following Coastal Embankment Improvement Project (CEIP) has supported the rehabilitation and upgrade of protection polders—areas of low-lying land reclaimed from the sea—to mitigate the effects of tidal flooding and frequent storm surges. The MDSP,



due to be completed in June 2023, is the single largest program for disaster shelters in the country, integrating technological innovations such as solar panels and rainwater harvesting devices, and reflecting improved sensitivity to gender, age, and disability.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

The project development objective (PDO) is to reduce the vulnerability of people in targeted communities to riverine and flash floods and improve the country's capacity in disaster preparedness and response.

Key Results

- Number of people with reduced flood vulnerability due to resilient infrastructure constructed under the project.
- Enhanced operationalization of a systematic damage, loss and needs methodology for LGED.
- Number of communities with improved basic disaster preparedness and response capacities.

D. Project Description

The proposed project will finance infrastructure and systems to increase the resilience of vulnerable populations in non-coastal areas of Bangladesh against riverine and flash floods through: (i) resilient flood shelters and community infrastructure and (ii) strengthening capacity for disaster preparedness and response of government agencies and communities.

The project area covers the most highly flood-prone districts in the Teesta-Brahmaputra-Jamuna (Nilpamari, Lalmonirhat, Kurigram, Rangpur, Gaibandha, Bogura, Pabna, Sirajganj), Padma (Rajbari, Faridpur, Gopalganj, Madaripur), and Surma-Meghna river systems in the North East (Sunamganj, Habiganj). Each of these areas, although similar, have important geographical and demographic differences and analyzing them in depth will allow the development of a diverse set of appropriate solutions that can be scaled-up.

Component 1: Resilient Flood Shelters and Community Infrastructure (US\$452 million IDA)

Following the successful experience of cyclone shelters in the coast, flood shelters will be built to replace existing primary school buildings in poor condition in flood prone areas, avoiding the need for land acquisition or resettlement to provide a safe haven from floods. The flood shelters will be multipurpose, functioning primarily as primary schools. Additionally, when feasible, the open land area of the school will be raised above the flood level by filling with suitable earth and compacting mechanically. These will also provide a safe haven for livestock. Shelter design will follow the Bangladesh National Building Code (BNBC) which includes universal accessibility in line with NPDM 2021-2025²⁷. Design parameters will also consider their potential use as shelters from heat as the likelihood of heatwaves are likely to intensify due to climate change. As is the case under MDSP, School Management Committees (SMCs) and community

²⁷ NPDM 2021-2025: Construction of flood shelters ensuring universal accessibility.



representatives will play a key role in the regular operations and maintenance of the shelters along with associated facilities.

Component 2: Strengthening Capacity for Disaster Preparedness and Response and Technical Assistance (US\$24.5 million, of which US\$22.15 million IDA, US\$2.35 million GoB)

This component will finance goods and services to increase the capacity of LGED and communities to plan, manage, and recovery from floods, and strategic studies to increase long-term disaster and climate resilience. To enhance the capacity of LGED, these include setting up contingency planning for emergency preparedness and evacuations, updating the shelter database, and improving the disaster loss and damage assessments and reporting system. To enhance the capacity of communities, activities include CBDRM activities with local organizations such as the Union Disaster Management Committees (UDMCs) on basic competencies to improve health and safety including for GBV during floods, community risk mapping, training of School Management Committees (SMCs) on shelter management, and updating and training on community operation and maintenance guidelines of shelters.

Component 3: Project Management, Design and Supervision, Monitoring and Evaluation (US\$32.5 million, of which US\$25.85 million IDA, US\$6.65 million GoB)

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: (i) establishment of a Project Implementation Unit (PIU) within the Local Government Engineering Department, and consultancy and technical assistance for construction detailed design, procurement support, and construction supervision, preparation and implementation of safeguard instruments; (ii) capacity development of the PIU and communities in participatory planning and investment; (iii) monitoring and evaluation; and (iv) technical assistance and training in such areas as disaster management and preparedness, climate change adaptation and mitigation, construction, contract management, financial management, preparation of environmental and social assessments, and preparation of safeguard instruments. It will also provide resources for strengthening the flood preparedness and management program. The management, design and M&E activities under this component will integrate climate adaptation and mitigation measures and parameters.

Component 4: Contingency Emergency Response (US\$0 million)

The objective of this subcomponent is to cater to unforeseen emergency needs. In 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 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 Response (CER) Implementation Plan that is agreed with the Bank; and (iii) LGED 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.



Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

Environmental risks and impacts of the project have been determined as moderate. Project would support land raising and construction of climate-resilient flood shelters in selected primary schools of targeted flood-prone villages in non-coastal districts, construction and/or rehabilitation of associated short access roads to shelters and other small scale resilient infrastructure as identified by the community people. These infrastructures would be spread across various locations and work at individual location would involve small scale construction work. There would be some impact during construction phase which would be mostly temporary in nature and confined within the boundary of the project locations. The anticipated impacts may include drainage congestion and water logging during the construction period, temporary surface water pollution, construction related dust, air and noise pollution etc. As shelters will be constructed within the existing school premises, community health and safety, particularly of teachers and students near the construction area would be an issue during construction. There are also likelihood of some occupational health and safety risks of workers during construction phase. Construction-related impacts, however, can be addressed through implementation of various mitigation measures.

Social risks and impacts of the project have been determined as moderate. Labors will be required for the constructions and will mostly be recruited locally and hence labor influx will be minimal . GBV/SEA/SH risk is rated as moderate given the presence of labors in the site as well as nearness of school premises. The project area is likely to have ethnic communities and cultural heritages, the impact on which will be determined during screening and is not likely to be significant. The project is not anticipated to acquire private land and all construction activities are expected to be on public land. However, there may be informal settlers occupying public land that may require resettlement. Temporary land requisition may also be likely to accommodate for labor camps, keeping material for constructions etc. Voluntary land donation may also be accepted in some instances which will be done following requirement of ESS5. The extent of such impact will be known upon the confirmation of specific location of subproject and screening of sites. A Resettlement Planning Framework (RPF) has been developed to provide guidelines for the preparation of subsequent Resettlement Action Plans (RAPs) or Abbreviated RAPs to address the issue of informal settlers? resettlement, voluntary land donation and temporary land requisition following the principles of ESF and Government Policies. The RPF has outlined the process of land donation and issue of informal settlers? compensation as per ESS5 which are not cited in Acquisition and Requisition of Immovable Property Act (ARIPA 2017). The project intervention and activities have taken into consideration the concept of inclusion. A Stakeholder Engagement Plan (SEP) with project level GRM (to address complaints related to land, small ethnic community and GBV/SEA/SH) has been prepared identifying various stakeholders and method of engagement with them. The disadvantaged and the vulnerable people have been consulted and major issues that the consultations raised were provision of jobs in the project activities, provision of WASH facilities and toilet facilities separate for women, separate accommodation for male and female, safety and security of the women and children, raising of ground level, provision for uninterrupted power supply facilities with sufficient lighting system and security measures in the shelters. All these inputs have been taken into considerations and will be addressed during planning and construction. The project activities are expected to have long term positive



impacts on the communities to address flood related disaster and the negative impacts during the operation of completed subprojects are outweighed by the positive impacts from improved resilience to natural disasters.

E. Implementation

Institutional and Implementation Arrangements

The Local Government Engineering Department (LGED) will be responsible for implementing the project. The department is a part of the Local Government Division (LGD) under the Ministry of Local Government, Rural Development & Cooperatives (MoLGRD&C). LGED is mandated with the planning and development of rural infrastructure which includes small-scale water resource infrastructure, rural roads, bridges, culverts and growth centers/markets and has been the implementing agency for all Bank-financed multi-purpose disaster shelters.

LGED will implement the project through a dedicated Dhaka-based PIU, headed by a Project Director (PD). The PD will be supported by a dedicated Deputy Project Director (DPD), Senior Assistant Engineer, Assistant Engineer as well as the associated technical and safeguard support staff. A majority of the implementation will be based on the district and upazila levels, where the associated LGED field officials (i.e., Executive Engineer, Sr. Assistant Engineer, Assistant Engineer, Sub assistant Engineer etc.) will act as the focal person(s) responsible for supervision and monitoring of work implementation in their respective districts and upazilas.

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