Climate Change: Project Adaptation Action (PAA) Report

Part 1: Climate Change Adaptation

BASIC PROJECT INFORMATION	
Project Title: Coastal Towns Infrastructure Improvement Project	**Sector: Water supply and other municipal infrastructure and services**
Location: coastal towns of Bangladesh	Financing Plan Asian Development Bank: $52 million ADB Strategic Climate Fund: $40.4 million[1] Sanitation Financing Partnership Trust Fund Under the Water Financing Partnership Facility: $1.5 million
Brief Description: (*Max 200 words)*	Implementation Period: 2014-2020
The project will strengthen climate resilience and disaster preparedness in eight vulnerable coastal *pourashavas* (secondary towns) of Bangladesh.[2] The project takes a holistic and integrated approach to urban development and will (i) provide climate-resilient municipal infrastructure, and (ii) strengthen institutional capacity, local governance, and knowledge based public awareness, for improved urban planning and service delivery considering climate change and disaster risks. Key infrastructure investments include (i) drainage, (ii) water supply, (iii) sanitation, (iv) cyclone shelters, and (v) other municipal infrastructure including emergency access roads and bridges, solid waste management, bus terminals, slum improvements, boat landings, and markets. The Local Government Engineering Department (LGED) will be the lead Executing Agency for the Project, and the Department of Public Health Engineering (DPHE) will be a co-Executing Agency for water supply and sanitation components.	
Climate Change Classification: *Adaptation*	

SUMMARY of CLIMATE RISK SCREENING			
A. Projected changes (based on A2 and B1 scenarios)[3]			
Temperature (^{o}C) about 1.4 ^{o}C and 2.4 ^{o}C increase in annual average temperature by 2030s and 2050s respectively	Precipitation (mm) Monsoon rainfall is expected to increase by about 15% and 22% by 2030s and 2050s respectively	Sea Level Rise (masl): 21 cm and 39 cm by 2030s and 2050s respectively.	Others: Tropical cyclones will be more intense and frequent.
B. Climate Risks			
1. Flood	Description of the risk: Higher risk of floods is due to more intense monsoon rainfall, sea-level rise, and more intense and frequent tropical cyclones. Damage to housing and infrastructure due to floods.		
C. Recommendations			
Activities: 1. Urban drainage and flood control systems need to be strengthened. 2. Infrastructure such as roads, water supply, and sanitation systems needs to be climate-proofed.		Requirements for TOR: 1. Assessing increase in inundation areas due to climate change 2. Proposing climate-proofed designs for infrastructure 3. Identifying non-structural measures	

[1] Under the Pilot Program for Climate Resilience.
[2] Batch I towns: Amtali, Galachipa, Mathbaria, and Pirojpur. Batch II towns: Barguna, Bhola, Daulat Khan, and Kalapara. Towns were selected based on their vulnerability, population size, density, and level of past investments.
[3] Based on the IPCC Special Report on Emissions Scenarios.

Risk Classification: High Risk
DUE DILIGENCE
Activities: 1. A risk screening was done to identify climate related risks. 2. Climate data from regularly cited and reputable sources were considered in determining climate projections. 3. The area flooded with more than 25 cm in depth will increase by 40%-100% in sample towns in 2050 compared to 2012, to 14%-24% of the total town area, without any intervention. 4. Climate-proofed designs are proposed for roads and bridges (e.g. raising road level), cyclone shelters (e.g. raising base level, leaving ground floor open), water supply and sanitation (raising base level, emergency power back-up), and drainage and flood control systems (e.g. bigger drainage capacity). 5. Non-structural interventions are specified: Urban planning, knowledge based community awareness raising, flood monitoring and mapping, early warning systems, and activating disaster risk management committees.
PROJECT DESIGN CHANGE OR ADAPTATION RESPONSE
1. Detailed design will incorporate the climate-proofed designs for infrastructure improvement to ensure service delivery at an acceptable level up to 2040, time horizon of the project design. 2. Implementation of non-structural interventions will be supported through consulting services under the loan. 3. Incremental costs for climate adaptation will be financed by the project, using cofinancing from the Strategic Climate Funds (SCF).