

BANGLADESH

COMMUNITY-BASED ADAPTATION TO CLIMATE CHANGE THROUGH COASTAL AFFORESTATION IN BANGLADESH

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(expected)

Bangladesh is one of the most vulnerable countries to the impact of climate change. According to the NAPA findings in Bangladesh, and supported by numerous other scientific-based assessments, the primary anticipated impacts as a result of projected climate change, including variability, range from increased saline water intrusion and inundation of coastal lands. Key risks identified include drainage congestion, reduced freshwater availability, disturbance of morphologic processes, and increased intensity of flooding. These key risks are classified as arising from a) gradual long-term climate change, and/or b) changes in the frequency and intensity of extreme events (climate variability).

In addition to placing coastal communities at higher risk, these projected changes will affect the development potential of coastal regions in Bangladesh. Exposure to climate risks will be pronounced for several reasons. According to estimates by a World Bank assessment of climate change impacts in Bangladesh, a small

change in peak discharge may result in about 20 per cent increase in the area flooded. Similarly, riverbank erosion is exponentially related to maximum flood levels. There is also low awareness and lack of capacity, including mechanisms to respond to anticipated impacts. Building resilience requires changes in attitude and strategic institutional arrangements, for example in terms of integrated planning and management that incorporate the risk posed by climate change, including variability. At the same time, coastal development in Bangladesh has been sub-optimal for both climate- and non-climatic reasons.

On the one hand, vulnerability has increased due to anthropogenic activities, particularly due to massive conversion of mangroves into commercial shrimp farms and fuel-wood demands (e.g. where mangroves are exploited for fisheries) which has reduced mangrove cover that otherwise function as a natural protective barrier to coastline erosion. Along coastlines, salt making industries and sand mining activities have led to the shifting and/or degradation of coastal sand dunes thereby undermining their effectiveness as physical barriers against flooding, and also as sedimentary stocks allowing for beach reorganization. The continuous increase in soil and water salinity due to receding coastlines as a result of unauthorised settlements is also contributing to the further degradation of natural defences.

PROJECT ACTIVITIES AND EXPECTED IMPACTS

The objective of the **Community-based Adaptation to Climate Change through Coastal Afforestation in Bangladesh** project is to reduce vulnerability of coastal communities to the impacts of climate change-induced risks in four upazilas in the coastal districts of Barguna and Patuakhali (Western Region), Bhola (Central Region), Noakhali (Central Region), and Chittagong (Eastern Region). The project will implement effective community-based adaptation measures in coastal areas that reduce vulnerability and improve adaptive capacity to climate change and sea level rise. The project will use demonstration measures aligned with local conditions, which will encompass community-based systems for the management of protective ecosystems, sustainable use of climate-sensitive natural resources and diversification of vulnerable livelihoods. The project outcomes will include a) Enhanced Resilience of Vulnerable Communities and Protective Systems to Climate Risks, b) Climate Risk Reduction Measures incorporated into Coastal Area Management Frameworks and c) National Policies Revised to Increase Climate Risk Resilience of Coastal Communities.

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pass community-based systems for the management of protective ecosystems, sustainable use of climate-sensitive natural resources and diversification of vulnerable livelihoods. Envisaged demonstration projects will focus on opportunities for community-based afforestation, mangrove regeneration and plantation management, erosion prevention and participative protection of coastal sediment barriers, reduction of man-made stresses on coral reefs and protective ecosystems, diversification of crops and agricultural practices, optimisation of freshwater and irrigation management, and improved information flows in climate information and early warning systems.

The project will also enable a strategic revision of national and sub-national policies and programs to incorporate climate change risk considerations and adaptation strategies into financial decision processes, and to develop coordination and harmonization amongst different sectoral interventions. The project will enhance the adaptive capacity of local communities to anticipate dynamic climate-related threats and protect their livelihoods, as well as improving the Individual, institutional and systemic capacity at all levels of public administration to plan for and respond to climate change risks in coastal areas.

FOR MORE INFORMATION

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