

VULNERABILITY OF AGRO-BASED LIVELIHOODS TO CLIMATE CHANGE IN COASTAL ZONES OF BANGLADESH

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Executive Summary

The coastal zone in Bangladesh has been declared as an 'agro-ecologically disadvantaged region due to its proneness to multiple threats. This study was designed to deduce policy relevant information to address the vulnerability of agro-based livelihoods in the face of the ongoing climate change in coastal Bangladesh. The study focused on (i) determining a set of indicators of exposure, sensitivity, and adaptive capacity; (ii) assessing the vulnerability of agro-based livelihoods to climate change and (iii) developing evidence-informed policy inputs for a comprehensive coastal adaptation planning. The study covered a total of 240 households from Kashaini and Galachipa in Gopalganj and Patuakhali districts from August to September 2017. The primary data collected over a structured questionnaire. Primary and secondary data were used to construct vulnerability indices by normalization, weighting, and aggregation for composite indicators development. The key results indicate that most households were vulnerable; more particularly those in Galachipa Upazila were highly exposed to climate change induced risks such as, flooding, cyclone, and salinity intrusion and sensitive to natural and physical attributes of agro-based livelihood systems which includes rice-based monoculture, poor irrigation infrastructure, and a crop production-based income source. Although the households in the interior coast were vulnerable however, they had adaptive capacities to absorb, adapt and transform in adverse situations. The major concerns and challenges requiring policy interventions identified are (i) controlling sea-level rise and salinity intrusion by meticulous planning for coastal infrastructure development; (ii) long-term interventions for effective protection and development of local natural resources and (iii) vulnerability reduction through investments in capital, inter alia, ecological, economic and political. ■ This study illustrates reducing vulnerability is contingent on improving the socio-economic conditions of coastal households.

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