Title: Assessment of Indigenous Knowledge and Technology Used for Climate Adaptation and Resilience in Bangladesh

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Abstract: Bangladesh is seventh among the most climate vulnerable countries according to the Global Climate Risk Index 2021 and every year it faces heat waves, SLR, salinity intrusion, drought, flood, cyclones and storm surges as consequences of climate change. People of coastal areas and char areas have been struggling constantly to cope up with their lives and livelihoods with the adverse impact of climate change through practicing different adaptation techniques. This research addresses how people are using indigenous pieces of knowledge and technology to become climate resilient in coastal and char areas. Given the limited time and resources available for this project, three case study sites from each of the coastal and char areas were selected to conduct a detailed and in-depth analysis. Field data was collected to analyze the existing challenges of the local communities due to the adverse climatic conditions using Focus Group Discussion (FGD) and Key Informant's Interview (KII). The sample size was calculated as 380 for each of the coastal and char areas based on the population size of the area, which was distributed to union level using a stratified sampling method. The respondents for the survey were selected based on who are living in the area for at least 30 years and facing in terms of livelihood change, frequency of displacement, health vulnerability, and safe water scarcity. Respondents for FGDs were selected from the local people based on their experiences with the effects of climate change and their responses to overcome the challenges posed by these effects. The size group was limited to 10-15 ensuring participation of women, community leaders, local government representatives and government officials. The aim of conducting KII was to gain a comprehensive understanding of specialized responses to climate change from experienced professionals working in the area. DC, UNO, relevant other government officials, union council chairman and NGO officials were the selected participants for KII. The survey, FGD and KII revealed that sufferings of coastal and char area people knows no bounds. The farmers and fishermen are the most vulnerable communities due to climate change effects like cyclone, flood, tidal surge, SLR, salinity intrusion and drought. Those locally led adaptation techniques need to be recognised and the local community require support from authority to make them

climate resilient. The vulnerable people need financial help immediately after a climate change event occurs to recover their houses, availability of safe drinking water, and health care services. Access to climate adaptive agriculture, building sustainable infrastructures, promoting industrialization for creating employment are crucial needs both for coastal and char areas to confront and sustain with the inimical situation of nature. More advanced research is essential to figure out changing patterns of climate change events in coastal and char areas of Bangladesh.