Farmer’s Perceptions and Decisions: An Application of Adaptation Pathway in the Context of climate-vulnerable Bengal Delta

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Developing countries, particularly low-lying coastal communities are disproportionately affected negatively by the ongoing climate impacts. While adapting to climate change can minimise the potential impacts, however, marginalised coastal communities have limited means to address the evolving circumstances. Therefore, adaptation options need to be carefully analysed in developing countries as the “one size fits all” adaptation strategy is not applicable universally, given the uniqueness of each circumstance. Considering the lack of adaptation research in developing countries, this research focuses on the farmers’ perceptions of their adaptive measures in the Bengal Delta. The coastal communities of Bangladesh, a major part of the Bengal Delta are constantly struggling with salt intrusion from sea level rise in combination with reduced dry season flows and frequent cyclones. These compounding factors continuously add difficulties for the local farmers, prompting them to look for alternative adaptation options and thus, change their local practices. The question arises of which adaptation measures and farming systems will be sustainable under climate change. When do present farming systems shift? What are possible adaptation pathways and are these equitable? We frame farmers’ decisions to adapt to changing situations in four coastal villages (Kultoli, Nowabeki, Henchi, South Kodomtoli) of the Shymnagar sub-district of the Satkhira District of Bangladesh, by using the adaptation pathway. In this study, household surveys, focus group discussions and expert interviews revealed that local salinity has increased significantly over the last few decades, which has substantially impacted traditional rice farming while permitting shrimp farming in contrast. Additionally, we also discover evidence indicating that farmer’s adaptation pathways vary depending on their socioeconomic status and their capacity to participate in adaptation. While there is consensus among stakeholders about the salinity issue, there are dissimilarities among desired adaptation pathways. This study ends with a call for developing coastal adaptation pathways based on local context.