

## Impact of Climatic Hazards on the Jamuna River Fisheries and Coping and Adaptation Strategies

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**Abstract :** The continuous variability of climate and the risk associated with it have a significant impact on the fisheries leading to a global concern for about half a billion fishery-based livelihoods. Though in the context of Bangladesh mounting evidence on the impacts of climate change on fishery-based livelihoods or their socioeconomic conditions are present, the country's inland fisheries sector remains in a negligible corner as compared to the coastal areas which are spotted on the highlight due to its higher vulnerability to climatic hazards. The available research on inland fisheries, particularly river fisheries, has focussed mainly on fish production, pollution, fishing gear, fish biodiversity and livelihoods of the fishers. This study assesses the impacts of climate variability and changes on the Jamuna (a transboundary river called Brahmaputra in India) River fishing communities and their coping and adaptation strategies. This study has used primary data collected from Kalitola Ghat and Debdanga fishing communities of the Jamuna River during May, August and December 2015 using semi-structured interviews, oral history interviews, key informant interviews, focus group discussions and impact matrix as well as secondary data. This study has found that both communities are exposed to storms, floods and land erosions which impact on fishery-based livelihood assets, strategies, and outcomes. The impact matrix shows that human and physical capitals are more affected by climate hazards which in turn affect financial capital. Both communities have been responding to these exposures through multiple coping and adaptation strategies. The coping strategies include making dam with soil, putting jute sac on the yard, taking shelter on boat or embankment, making raised platform or 'Kheua' and involving with temporary jobs. While, adaptation strategies include permanent migration, change of livelihood activities and strategies, changing fishing practices and making robust houses. The study shows that migration is the most common adaptation strategy for the fishers which resulted in mostly positive outcomes for the migrants. However, this migration has impacted negatively on the livelihoods of existing fishers in the communities. In sum, the Jamuna river fishing communities have been impacted by several climatic hazards and they have traditionally coped with or adapted to the impacts which are not sufficient to maintain sustainable livelihoods and fisheries. In coming decades, this situation may become worse as predicted by latest scientific research and an enhanced level of response would be needed.

**Keywords :** climatic hazards, impacts and adaptation, fisherfolk, the Jamuna River

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