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People's experience of climate change impacts and community led adaptation in drought prone northern Bangladesh

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Bangladesh is one of the worst affected countries of climate change in the world. Bangladeshi communities' climate change experiences were mainly evidenced from the perspective of tropical cyclones and floods, leaving a conspicuous lack of grounded research in drought prone northern Bangladesh. This research has attempted to identify local level climate change perceptions, symptoms and effects of climate change as well as community led adaptation strategies with drought events in Nilphamari district of northern Bangladesh. Both qualitative and quantitative data were used for this research. Primary data were collected through questionnaire surveys, in-depth interviews, Focus Group Discussions (FGDs) and case studies. Data were analyzed by using MS Excel and SPSS software version 21.0. To evaluate the change, likert-type response anchors were used and it was calculated through weightage methods. The findings suggested that most of the local communities do not have a clear idea about climate change, but they perceived it by experiencing extreme drought events. Through interviewing with 188 local residents who live with continuous droughts, the research suggests that temperature was increased, rainfall was decreased, the intensity of drought was increased and the occurrence of monsoon flood was decreased. The local communities experienced recurrent flash floods in recent decades. Approximately, 68% of respondents opined that cold waves have increased. Most of the respondents (86%) perceived that drought was the most occurring hazard in Nilphamari district. Drought was associated with the losses of agricultural production, aquaculture and fish production as well as the shortage of drinking water and losses of fruit producing trees. The local communities have undertaken both short term and long-term adaptation strategies to survive in drought condition.

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