Topic: ANALYZING HOUSEHOLD LIVELIHOOD VULNERABILITY AND ADAPTATION TO FLOODS IN WEST BENGAL

ABSTRACT

Floods in India are regular phenomenon that occurs in almost all parts of the country, causing significant damage to human lives, assets and ecosystem. Rapid change in weather patterns and decline in forest cover are considered to be the main reasons for frequent floods and associated damage to both human and natural system. With increased frequency of floods and resultant damage, adoption of appropriate adaptation measures is the key to protect vulnerable people and their livelihoods. In recent years, the focus of adaptive strategies tends to have shifted from traditional hard structure like embankments, levees, dams etc., to self-sustaining ecosystem based measures. Forest cover is one such ecosystem-based adaptive measure to control flood damage being widely discussed in empirical literatures. However, the link between forest covers and flood damages is still unclear and yet to be settled in empirical literatures. The present study fills this research gap by examining this association using data from Indian states and the flood affected districts of the eastern Indian state of West Bengal, taking into account the social, economic, climatic and infrastructural parameters. The findings suggest that forest cover tends to reduce the extent of flood damage and hence has the ability to protect human lives and properties during flood events. Further, in order to understand the vulnerability to a particular natural disaster, it is imperative to examine the impact of climate extreme on livelihoods of the people and the way they respond to these extreme events. In this context, the study aims at examining the household livelihood vulnerability and adaptation to floods. In order to develop a comprehensive livelihood framework to measure the degree of livelihood vulnerability of the flood affected households, the study uses both vulnerability framework proposed by the IPCC and Sustainable Livelihood Framework developed by the DFID. A composite Livelihood Vulnerability Index (LVIs) is estimated by combining the household level data, and a comparative analysis is carried out between the two flood affected districts of West Bengal and overall state level scenario. The results suggest that the overall exposure is higher as compared to the adaptive capacities and sensitivity of the households to floods.

Key words: Floods; Forest cover; Livelihood; Vulnerability; Adaptation; West Bengal; India