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Farmers’ and academia’s views”

Flood vulnerability assessment for social inclusion and disaster preparedness

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Abstract

In recent years, natural disasters have claimed lives and disrupted economic and social structures in both developed and developing countries. Among natural disasters, floods and landslides have been the most devastating and recurring, accounting for 47% of all weather-related disasters, and affecting 2.30 billion people worldwide. India is one of the regions most affected by flooding, where the frequency of floods is increasing, mainly due to topography and socio-economic conditions. Kerala, a southern state of India, has drawn attention in the recent past due to significant alterations in the characteristics of the southwest (SW) monsoon, resulting in severe flooding and landslides. Although farmers in Kerala are frequently affected by floods and landslides, there is a lack of studies on the vulnerability of farmers in these regions to floods and landslides focusing on socioeconomic aspects. Therefore, assessing farmers’ vulnerability to natural disasters is a compelling action that should be taken to reduce disaster-related risks and ensure livelihood sustainability.

In this article, we assess the vulnerability of farmers in Kerala using a Societal Vulnerability Index for Floods and Landslides (SVIFL). A study that focuses on farmers’ vulnerability to floods and landslides which considers their social dimension in addition to the physical, environmental and economic dimensions is important for understanding how hazards interact with individuals and communities. To develop the index and compare across regions, data were collected from 520 farm households in the highlands and lowlands of Kerala. For the vulnerability assessment, 75 indicators were selected that were appropriate for each location.

According to SVIFL, the highlands of Kerala are more vulnerable to flooding and associated landslides than the lowlands. Of the four components studied, we find that the economic component has the highest vulnerability, followed by the environmental and physical components. Surprisingly, the social component has exhibited the lowest vulnerability to natural disasters in Kerala. Therefore, the development of SVIFL can be considered as a starting point for assessing the vulnerability of the farming community, which bears the brunt of climate change and natural disasters.

Keywords: Farmers, floods, landslides, vulnerability assessment

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