

Assessing Livelihood Vulnerability to Climate Change and Adaptation Strategies in Rajanpur District, Pakistan

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Abstract : Climate change has become one of the most challenging environmental issues in the 21st century. Climate change-induced natural disasters, especially floods, are the major factors of livelihood vulnerability, impacting millions of individuals worldwide. Evaluating and mitigating the effects of floods requires an in-depth understanding of the relationship between vulnerability and livelihood capital assets. Using an integrated approach, sustainable livelihood framework, and system thinking approach, the study developed a conceptual model of a generalized livelihood system in District Rajanpur, Pakistan. The model visualizes the livelihood vulnerability system as a whole and identifies the key feedback loops likely to influence the livelihood vulnerability. The study suggests that such conceptual models provide effective communication and understanding tools to stakeholders and decision-makers to anticipate the problem and design appropriate policies. It can also serve as an evaluation technique for rural livelihood policy and identify key systematic interventions. The key finding of the study reveals that household income, health, and education are the major factors behind the livelihood vulnerability of the rural poor of District Rajanpur. The Pakistani government tried to reduce the livelihood vulnerability of the region through different income, health, and education programs, but still, many changes are required to make these programs more effective especially during the flood times. The government provided only cash to vulnerable and marginalized families through income support programs, but this study suggests that along with the cash, the government must provide seed storage facilities and access to crop insurance to the farmers. Similarly, the government should establish basic health units in villages and frequent visits of medical mobile vans should be arranged with advanced medical lab facilities during and after the flood.

Keywords : livelihood vulnerability, rural communities, flood, sustainable livelihood framework, system dynamics, Pakistan

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