Australian Centre for Sustainable Catchments
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Research Title:

The Socio-economics of Flood Adaptation Strategies in West Rapti River Basin, Nepal under Climate Change

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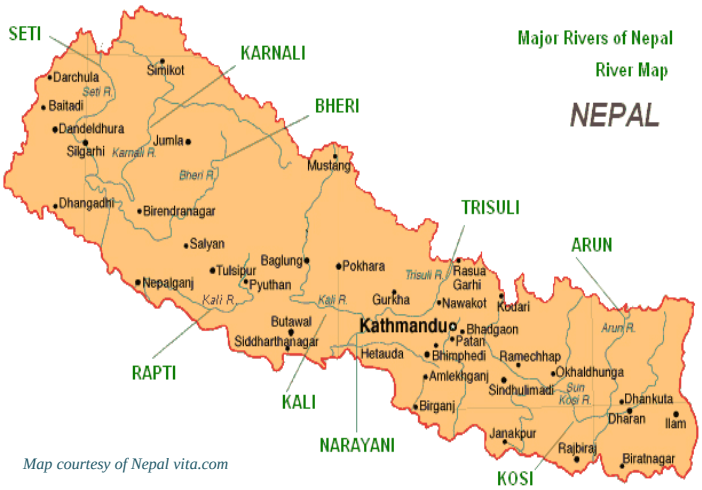
Abstract



Climate change will lead to an intensification of the hydrological cycle, resulting in drier dry seasons and wetter rainy seasons, and subsequently heightened risks of more extreme and frequent floods and drought. Many natural systems are being affected by global, regional and local climate change and increased temperature putting the rural livelihood at risk. People have argued that the poorest countries and people suffer the earliest and the most. Nepal is highly climatic vulnerable among the poorest countries.
The trend in Nepal reveals a significant warming in recent decades.
Higher intensity of rains but less number of rainy days and unusual rain with no decrease in total amount of annual precipitation has been experienced in recent years.
Since there is direct relation between the rainfall pattern and river flow, possibility of having higher frequency of high flows and droughts is increasing. West Rapti river basin with catchment area about 6,500 km^2, one of the river basins lying in the mid-western part of Nepal, has general characteristics of other large river basins. This basin is one of most flood prone basins of Nepal. Magnitude of flood disaster in this river is increased in recent year. This study focuses on the assessment of the potential impact of flood and develops a priority area map based on land use practices. In addition, examine the willingness to pay by the residents, analyse the potential adaption strategies for local level, and prepare overall framework for global community to avoid impacts of flood due to climate change.