



## **Negotiating geophysical hazards in Nepal: An interdisciplinary approach**

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It is widely accepted that the impact of natural hazards reflects not only the nature of geophysical processes but also the social conditions that prevail. The need for collaborative research to address these complex interactions between the natural and human systems is well recognised, however moving from theory to practice presents a number of significant challenges. How researchers frame problems; develop their research questions; select the methodologies to explore these questions; and privilege certain knowledges over others, can be seen to vary between physical and social science. Drawing on a case study examining the vulnerability of rural communities to landslides in the Upper Bhote Koshi Valley, Central Nepal, this paper explores how these barriers can be overcome and the benefits of undertaking interdisciplinary research within the natural hazards field.

This research investigates the different framings of landslide risk and vulnerability from different stakeholder and disciplinary perspectives. Specifically, we ask: 1. Who is vulnerable to landslide hazard? 2. Why do people occupy landslide prone areas? 3. How do 'at risk' rural communities perceive and respond to landslide hazard and risk? The findings, based on a series of participatory methodologies, challenge a number of assumptions made regarding landslide vulnerability in mountain communities. Within the Upper Bhote Koshi Valley clear transitions in settlement patterns, rural livelihoods and thus the occupation of landslide prone areas have been seen over time. For the majority of households, their decision to occupy these areas is driven by the economic and social benefits associated with the Arniko Highway which runs through the valley, linking Nepal with Tibet. Landslide vulnerability therefore emerges not just from societal marginalisation but also from situations of relative prosperity. The findings suggest that occupants of landslide prone areas have a good understanding of landslide hazard and its associated risks in this highly dynamic environment. However, these risks are contextualised in relation to other, often more pressing, social concerns. We therefore argue for a more deliberative and reflexive approach to landslide risk management which avoids singular framings of what the problem and hence the solution might be. We suggest that this can only be achieved through interdisciplinary collaboration and the privileging of different knowledge types.

Key words: Nepal; landslide; vulnerability; risk perception; interdisciplinary research