



Landslides in everyday life: An interdisciplinary approach to understanding vulnerability in the Himalayas

K. Sudmeier-Rieux, A. Breguet, J. Dubois, and M. Jaboyedoff

University of Lausanne, Institute of Geomatics and Risk Assessment, Lausanne, Switzerland (karen.sudmeier-rioux@unil.ch)

Several thousand landslides were triggered by the Kashmir earthquake, scarring the hillside with cracks. Monsoon rains continue to trigger landslides, which have increased the exposure of populations because of lost agricultural lands, blocked roads and annual fatalities due to landslides. The great majority of these landslides are shallow and relatively small but greatly impacting the population. In this region, landslides were a factor before the earthquake, mainly due to road construction and gravel excavation, but the several thousand landslides triggered by the earthquake have completely overwhelmed the local population and authorities. In Eastern Nepal, the last large earthquake to hit this region occurred in 1988, also triggering numerous landslides and cracks. Here, landslides can be considered a more common phenomenon, yet coping capacities amount to local observations of landslide movement, subsequent abandonment of houses and land as they become too dangerous.

We present a comparative case study from Kashmir, Pakistan and Eastern Nepal, highlighting an interdisciplinary approach to understanding the complex interactions between land use, landslides and vulnerability. Our approach sets out to understand underlying causes of the massive landslides triggered by the 2005 earthquake in Kashmir, Pakistan, and also the increasing number of landslides in Nepal. By approaching the issue of landslides from multiple angles (risk perceptions, land use, local coping capacities, geological assessment, risk mapping) and multiple research techniques (remote sensing, GIS, geological assessment, participatory mapping, focus groups) we are better able to create a more complete picture of the “hazardscape”.

We find that by combining participatory social science research with hazard mapping, we obtain a more complete understanding of underlying causes, coping strategies and possible mitigation options, placing natural hazards in the context of everyday life. This method is relatively simple, low cost and useful to local authorities or development agencies in planning and managing development projects, which include a hazard management aspect. We discuss some of our successes, some obstacles and ideas for future research.