



Multidisciplinary study on anthropogenic landslides in Nepal

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Nepal is a country in which shallow landslide is a frequent phenomenon. Monsoon is the main triggering factor but anthropogenic influence is often significant too. Indeed, many infrastructures, such as roads or water pipes, are not built in a rigorous way because of a lack of funds and knowledge.

In the present study we examine the technical, social and economic issues of landslide management for two sites in Nepal. The first site is located in Sanusiruwari VDC (Sindhupalchock district, central Nepal) and the second one in Namadi VDC (Ramecchap district, central Nepal). Both sites are affected by landslides induced by the construction of hydropower plants. These landslides may threaten the viability of the hydropower plants. At both sites the problems are quite similar, but the first site project is a private one and the second one is a public one implemented by the United Nations Development Programme (UNDP). For both sites, bioengineering methods using Vetiver (*Vetyveria zizanioides*) plantations is the main stabilization measure.

To follow the progression of both landslides, fieldwork observations were conducted before and after the 2012 rainy season, including photogrammetric and distancemeter acquisitions. Main issues were discussed with communities and stakeholders of the hydropower projects through interviews and participatory risk mapping. Main issues include: lack of communication between the project managers and communities leading to conflict and the lack of maintenance of the bio-engineering sites, leading to less effective Vetiver growth and slope stabilization. Comparing the landslide management (technical, social and economic) of the two projects allows to point out some specific issues within an integrated risk perspective.