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Landslide risk reduction strategies: an inventory for the Global South

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Landslides constitute a serious problem globally. Moreover, landslide impact remains underestimated especially in the Global South. It is precisely there where the largest impact is experienced. An overview of measures taken to reduce risk of landslides in the Global South is however still lacking. Because in many countries of the Global South disaster risk reduction (DRR) is at an emerging stage, it is crucial to monitor the ongoing efforts (e.g. discussions on the Post-2015 Framework for DRR). The first objective of this study is to make an inventory of techniques and strategies that are applied to reduce risk from landslides in tropical countries. The second objective is to investigate what are the main bottlenecks for implementation of DRR strategies.

In order to achieve these objectives, a review of both scientific and grey literature was conducted, supplemented with expert knowledge. The compilation of recommended and implemented DRR measures from landslide-prone tropical countries is based on an adapted classification proposed by the SafeLand project. According to Vaciago (2013), landslide risk can be reduced by either reducing the hazard, the vulnerability, the number or value of elements at risk or by sharing the residual risk. In addition, these measures can be combined with education and/or awareness raising and are influenced by governance structures and cultural beliefs. Global landslide datasets have been used to identify landslide-prone countries, augmented with region-specific datasets. Countries located in the tropics were selected in order to include landslide-prone countries with a different Human Development Index (HDI) but with a similar climate.

Preliminary results support the statement made by Anderson (2013) that although the importance of shifting from post-disaster emergency actions to pre-disaster mitigation is acknowledged, in practice this paradigm shift seems rather limited. It is expected that this is especially the case in countries with a low HDI. Thus far, identified bottlenecks for implementation and maintenance seem to be: 1) no access to capital for government and households, 2) limited awareness of possible measures, and 3) lack of law enforcement. This contribution presents an overview of the potential and applied landslide DRR measures in tropical developing countries as a crucial step towards more knowledge sharing in reducing landslide risks.

References:
Vaciago, G. (2013). The SafeLand Compendium of Landslide Risk Mitigation Measures. In C. Margottini, P. Canuti, & K. Sassa, Landslide Science and Practice: Volume 6, Risk Assessment, Management and Mitigation (pp. 683-691). Berlin: Springer.
Anderson, M. (2013). Landslide Risk Reduction in Developing Countries: Perceptions, Successes and Future Risks for Capacity Building. In C. Margottini, P. Canuti, & K. Sassa, Landslide Science and Practice: Volume 7, Social and Economic Impact and Policies (pp. 247-256). Berlin: Springer.