SOCIAL MULTI-CRITERIA EVALUATION TO IDENTIFY APPROPRIATE LANDSLIDE RISK REDUCTION MEASURES: APPLICATION FOR THE RWENZORI MOUNTAINS, UGANDA

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In 2015, the Sendai Framework for Disaster Risk Reduction (DRR) urgently called for more investment in DRR because the global exposure of persons and assets to natural hazards, like landslides, has increased faster than that vulnerability has decreased over the past decades. Recent study has exposed the lack of scientific evaluation data for selecting landslide risk reduction measures, e.g. in the form of cost-effectiveness, cost-benefit or multi-criteria analysis. The objective of this article is to develop a participatory methodology framework for identifying appropriate landslide risk reduction measures based on shared local and scientific knowledge. More specifically, this article proposes a two-phased social multi-criteria evaluation which combines a participatory multi-criteria analysis with an institutional analysis for its design and a discourse analysis for interpreting its outcomes. This article provides results from the field testing of this methodology framework in the Rwenzori Mountains region (Uganda) to illustrate both its usefulness and practical challenges. This article contributes to the scientific literature on decision-making for disaster risk reduction as it proposes a social multi-criteria evaluation to support decision-making. It also contributes to the understanding of landslide risk management in the Rwenzori Mountains as it presents the first attempt to identify appropriate landslide risk reduction measures for the region.

Keywords: disaster risk reduction; decision-making; mass movements; multi-criteria analysis

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