



Surveying perceptions of landslide risk management in Norway

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Enhanced precipitation due to climate change leads to increase in both frequency and intensity of landslides in Norway. A proactive approach to risk management is therefore required to significantly reduce the losses associated with landslides. Opinions and perceptions from practitioners on the performance of landslide risk management can provide insights on areas for improvement in the landslide risk management strategies in Norway. The Risk Management Index (RMI), proposed by Cardona et al. (2004), is a well-established method to measure perceptions of disaster management of selected actors holistically. The RMI is measured based on opinion questionnaires to technical staff, decision-makers, and stakeholders involved in all stages of risk reduction strategies. It is a composite index that considers a wide variety of strategies to manage risks, including structural and non-structural measures, acceptance strategies, disaster management, and risk transfer. The RMI method was modified to be implemented in landslide hazards and to fit with Norwegian conditions. An opinion survey was conducted in autumn 2015 to measure perceptions of landslide risk management in Norway. Perceptions were surveyed for two time periods: 2015 and 2050, and are based on national, county, and municipality levels.

Based on the survey results, performance of landslide risk management at any administrative levels in Norway is perceived to improve from 'significant' in 2015 to 'significant' to 'outstanding' in 2050. Knowledge and technology, climate, risk perceptions, and anthropogenic activities are mostly considered by respondents for their 2050 perceptions. Several aspects of landslide risk management in Norway can be improved. For example, landslide hazard evaluation and mapping should be prioritised in Norway. Upgrading, retrofitting, and reconstruction of assets may also be included in the landslide risk reduction strategies. In addition, there should be more focus on inter-institutional organisation as well as allocation and use of financial resources for dealing with landslides at local levels.

Although the survey was considered too difficult by some of the respondents, it can be regarded as a starting point to develop a common terminology/language in landslide risk management in Norway that allows mutual understandings among people with different backgrounds. The approach of surveying perceptions of landslide risk management can also be expanded to the public to enable comparisons of perceptions between experts and the public. Furthermore, the methodology can be applied to other types of natural hazards in Norway, such as floods.

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