

History, status and future development of monitoring and risk reduction related to unstable rockslopes in Norway

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Abstract:

As the national authority responsible for landslides risk management, the Norwegian Water Resources and Energy Directorate (NVE) has responsibility for hazard mapping and operative monitoring and warning of catastrophic rock avalanches and related secondary effects. Large rock-slope failures are common events in the inner fjord areas of Norway and represent a serious risk. Historically such events have generated catastrophic displacement waves and during the last 100 years more than 170 people have lost their lives in western Norway.

The risk management of these specific risks have of course been influenced by the dramatic historical events, but for the last 30 years even more by the knowledge through observations and documentation of unstable slopes at the end of the last century and beginning of the 20th century. The implementation of a national hazard mapping and risk classification project based on a standardized methodology has given a more systematic approach to the prioritization of monitored sites. The monitoring systems now include a relatively wide spectre of technical systems both on site and remote.

The history of how we have coped with these treats will be seen in context to a hazard management process in terms of residual risk, technological development and future societal needs.