LOCAL AND REGIONAL LANDSLIDE RISK ANALYSIS ON THE SWABIAN ALB, GERMANY

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Landslides have been investigated in the Swabian Alb for several years. These investigations give information on landslide distribution and landslide susceptibility on the regional scale. In addition, geomorphic investigations were carried out for various landslides and a hydrologic model was applied to the Mössingen landslide.

Using these data as the basis this study aims to move forward from geomorphic landslide investigations to landslide risk analysis, thus directs to give verified information on landslide hazard H and to incooporate also elements at risks E including the respective damage potential and vulnerability V. Specific project aims include soil mechanical investigation of a single landslide, measurement and modelling of recent landslide kinematics, analysis of climatic thresholds, responsible for the reactivation of old or triggering of new landslides, landslide hazard modelling, risk analysis (R = HxExV), and validation of regional results using statistical methods and historical data. Applied methods contain (a) drillings, penetration tests and sampling (incl. analytical analysis), (b) geophysical investigations (geoseismic, geoelectric), (c) detailed mapping, (d) inclinometer measures, (e) tachymetric and GPS measurements of control points, (f) local and regional slope stability modelling. The development of a sustainable and integrative risk management is the main goal, thus to define strategies and measures to reduce landslide risk is envisaged. This study contributes to the project Integrative landslide risk analysis and risk evaluation in the Swabian Alb, Germany.