



The use of special forest maps in landslide hazard assessments in the Swabian Alb (Germany)

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The Jurassic Escarpment of the Swabian Alb is very prone to landsliding. This is mainly caused by limestones overlaying marls and clay. Beside some large events (up to 6 Mio. m³) which occur relatively seldom, quite a lot of smaller events cause significant economic damage to forests, roads and houses. Thus, the preparation of local and regional landslide hazard and finally risk maps is progressing. Recently, a “new” source of landslide information was discovered: special forest maps (Forstliche Standortskarten). The mapping of the special forest maps started in 1950. The aim of these maps is to investigate the specific local environmental conditions (focussing on soil and climate) which influence the forests and their specific plant associations. These maps serve as a basis to ensure the growth of an almost native forest, best adapted to the local environmental conditions. In the meantime the whole public forest of Baden-Württemberg is mapped as well as some private forests. Creating the special forest maps also landslides in respective areas are mapped. They are classified into four groups: active, temporarily inactive, dormant and large rock falls. All data is available in the FOGIS, a Forest GIS.

Within this study, the potential use of this large and very valuable dataset for landslide hazard assessments is discussed. Preliminary frequency-magnitude statistics are provided. Furthermore, first correlations of the active landslides with regionalised rainfall data are presented. This study contributes to the project Integrative landslide risk analysis and risk evaluation in the Swabian Alb, Germany (InterRISK).