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Typologically-differentiated landslide susceptibility assessment for the territory of Georgia

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Mass movement is one of the major natural hazards affecting mountainous regions, which lead to the damage to infrastructure, economical harm and life loss. Georgia is highly affected by landslides because of the complex geological and geomorphological structure, the high geodynamic activity of the region and the possibility of important rainfall events.
Up to now, most of the research has been carried out on landslide hazard assessment in Georgia consisted in landslide qualitative description, data collection and inventory mapping.
The objective of this work is to propose a national scale and typologically-differentiated landslide susceptibility map based on a spatial database constructed in the framework of the "Pan-European and nation-wide landslide susceptibility assessment" project of Council of Europe. The development of such a map has a significant importance from the scientific view as well as from the practical vision for Georgian stakeholders.
A database with more than 3300 mass movement events have been created during the project. The database contains information on the location, date, event type and intensity of the event. The database distinguishes slide, falls and flows processes. A first susceptibility map is created using three types predictors (lithology, slope, landuse) for different climatic and topographic regions of the country. Further, the dependence of the mass movements location to triggering factors such as GPA (ground peak acceleration) and precipitation is investigated. The results of the analysis are presented and discussed.