Uhlir, Christian

Exceptional gravitational mass movements within the Austrian UNESCO Geoparks

Universität Graz, Österreich;
christian.uhlir@plus.ac.at

As part of the ÖAI project Movemont, gravitational mass movements (GMM) are recorded in the UNESCO Global Geoparks (UGGps) Karawanken, Erz der Alpen & Steirische Eisenwurzen. The aim of these field surveys is:
a characterization of the GMMs as a basis for an assessment of their social relevance (opportunities and risks), to verify the modeling tool to be developed in the project for a GIS-based simulation of the dynamics of GMB,
and to study biodiversity in mass movements of different dynamics.
Using high-resolution laser scanning analysis, previously unknown unusual GMBs were identified and mapped in detail in the field.
An emphasis was placed on slow-flowing mass flows, complex deep rock slides and slope deformations as well as the dynamics within long runout landslide deposits.
What was striking was that the older the maps of the geological survey where, the worse the recording and assessment of GMM was - until the 1990s it was mainly mapped the basement and the Quaternary. At best, scarps and errosion edges are presented without reference to the type and dynamics of the GMM and often relocated material is dipicted as bedrock.
In summary, the following exceptional GMMs can be assigned to the UGGps:
In the calcareaous alpine area of the UGGps Karawanks, complex deep rock slides and slow-flowing mass flows are occurring.
In the greywake zone of the UGGps, an area of exceptionally large landslide deposits in combination with an accumulation of translational and rotational slip was observed – probably an indication of a previously unknown earthquake event.
In the limestone alpine area of the UGGps Steirische Eisenwurzen, beside the larrge long runnout landslide Wildalpen mainly complex deep rock slides and slope deformations are occurring.

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