



Geomorphological analysis of sinkhole and landslide hazard in a karst area of the Venetian Prealps- Italy

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In the pedemountain area of the Asiago Plateau (Venetian Prealps – NE Italy) sinkholes and landslides represent in many cases a complex response to karst processes. Field survey showed that both soil and bedrock are involved, mainly represented by colluvial-alluvial sediments and carbonate rocks. Preliminary observations also reveal the key role of piping and cave-collapse phenomena and the importance of human remedial measures. Within study area, these processes cause damage mainly to agricultural and pasture activities and expose peoples and farm animals to very high hazards.

This work provides preliminary results of geomorphological analysis carried out to define sinkhole and landslide hazard and his connections with karst processes. During first phases of the research program, an inventory of interesting phenomena has been elaborated employing GIS technologies. The database has been constantly revised and enriched with new field measurements and thematic maps (i.e. geomorphological, geo-structural, hydrogeological, caves development maps). Specifically, field survey focused on the morphodynamic definition of instability elements allowing to recognize a wide range of morphotypes (mainly with regard to sinkholes) and polygenic morphologies (i.e. mixed sinkholes-landslides configurations). Geomorphological analysis also revealed specific evolutionary trends of instability processes; they could be useful employed to program more effective mitigation strategies.