



Proposal for a method to estimate the triggering susceptibility to debris slides-rapid earth flows: two case-studies in Campania (Southern Italy).

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Debris slides-rapid earth flows are quite a frequent phenomenon in Campania and present a serious hazard to the community as evidenced by the large number of victims and the huge economic damage caused over the last few years.

Of increasing importance, therefore, are those forecasting studies that deal with research for new methodologies aimed at defining the areas most susceptible to such phenomena.

Such studies turn out to be essential to determine the risk conditions of some greatly urbanized areas and are propaedeutic to the correct planning and management of the territory.

In this work a new method for the evaluation of the triggering susceptibility to this type of landslide is proposed. It derives from the methods already put into practice by Amanti et al., (1998) and by Calcaterra et al. (2003), but it presents substantial modifications arising from the analysis of a great quantity of geomorphological data, collected from over 170 debris slides – rapid earth flows in recent years (Di Crescenzo & Santo, 2004).

A number of geothematic detailed scale maps (1:2000; 1:5000) were produced: geological map, pyroclastic cover thickness map, slope morphometry map, geomorphological map, from which the predisposing factors considered the most significant in triggering landslides were extracted. Among these factors, in addition to those nor-

mally used in literature, a new morphometric parameter was also considered, correlating the altitudes (or the quotes?) of local ridges to the areas with greater triggering susceptibility. (Di Crescenzo & Santo, 2004).

A numerical value (“score”) was then attributed to the different predisposing factors and, with the use of a GIS, 4 classes of triggering susceptibility were defined (low, medium, high, very high).

The method was tested in two significant areas: the Lattari Mountains (Pimonte) and the Surrentine Peninsula (Tramonti), which have been characterised by various slides-rapid earth flows in the past and it provided encouraging results.