



Landslide recurrence in Calabria (southern Italy): event series in the perspective of climate change

O. Petrucci (1) and M. Polemio (2)

(1) CNR-IRPI, Via Cavour 4/6, 87030 Rende, Cosenza, Italy, (2) CNR-IRPI, Via Amendola 122/I, 70126 Bari, Italy

An 85-year series of landslide events occurred in Calabria (southern Italy) has been used to individuate the main rainfall triggered landslide events occurred in this period. The aim is to assess if a trend can be recognised in this series and put in relation this trend with climatic change.

The methodological approach is based on the cross checked analysis of two databases: the landslide database and the climatic database. The first part of the analysis try to distinguish among single landslide phenomena, mainly triggered to local loss of slope equilibrium, from landslide activations affecting wide areas during prolonged and/or intense rainfall.

For this latter group of phenomena, the analysis of triggering rainfall has been carried out in order to investigate if triggering rainfall conditions are invariant or change from activation to activation

The carried out analysis allowed us to individuate some regional areas systematically hit from landslide events and permitted us to choose some test areas, located in sectors of the region characterised by different geological, geomorphological and anthropogenic framework.

Basing on the analysis of these spots, the region has then been divided in some districts which show an homogeneous behaviour concerning the relationships between landslides and rainfall. Besides, the trend of the landslide activation in these areas has been outlined.