



## **Estimation of temporal landslide occurrence using historical aerial images in The Subcarpathians of Prahova Valley, Romania**

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Landslide hazard evaluation requires the identification of active and potential slope failures and estimation of future events occurrence. The Subcarpathians of the Prahova Valley are an area with major problems caused by geomorphological and hydrogeological processes. These processes have affected the human activity, especially in the last 20 years, causing important economic losses. The landslide hazard assessment was realized at a regional scale, because of the large surface area and the high costs of surveying. The estimation of the time dimension for landslide hazard in this area is done through the interpretation of aerial images taken at different dates. The landslides occurrences were correlated with the temporal distribution of the meteorological parameters. Based on aerial photos taken at different dates (1978, 1997 and 2005) it was possible to identify the changes of landslide activity, both in time and space. We also have used field surveys for landslide mapping. In order to mitigate the subjectivity of the human factor in landslide mapping (the investigators were more or less experienced) an uncertainty assessment was realized (Carara, 1996). All the information was introduced in a GIS system, leading to a complex spatial-temporal database of landslides activity