

## **FLOODS, MUDFLOWS, LAHARS, DEBRIS FLOWS IN CAMPANIA REGION, SOUTHERN ITALY.**

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Catastrophic sedimentary processes represent a significant aspect of geologic hazard in Campania region (Italy). We report a striking historic example of such rapid mass flows and hydrogeologic disasters. The Campanian area, including Campanian plains and surrounding Apennines chain, since the Upper Pleistocene has been affected by subsidence, partially compensated by alluvial sedimentation and volcanic mass transport from the Somma-Vesuvius and Campi Flegrei volcanoes, resulting into post-Wurmian seaward progradation. In the two-thousand year-long historical times, catastrophic landslide and flooding events have been often reported in the chronicles and are recorded in the archeologic stratigraphy. Major catastrophic events, reported in the chronicles, volcanically induced mudflows, occurred in 472 a.D. However tens of other events are reported with a peak in the period ranging V-VIII century in the medieval, modern age and through the present time. Analysis of historical report integrated with field recognition and laboratory analysis reveals that the events range in a relatively wide size interval includes near all types of events induced by extreme precipitation, volcanic activity, large earthquakes, slope instability, and anthropic modification. Our analysis provide new elements for mapping the areal distribution of the deposits, with particular attention to the areas affected by special recurrence of events in order to plan a mitigation strategy.