Abstract Details

Corresponding Author : Dr. Andrea Zannoni (andrea.zannoni@irpi.cnr.it)

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Title: Preliminary results of the monitoring activity on a high-risk landslide

Abstract:

Abstract. Passo della Morte landslide is located on the left flank of th Tagliamento River valley some 50 km NW of Udine (Carnian Alps). Th of Mt Tinisia involved in the landslide is mainly constituted by dolomit calcareous triassic formations underlying to a thick quaternary cover by morainic and scree slope deposits. The landslide can be defined as rotational rock-block slide with a sliding surface at a depth of more th m. It develops from an altitude of 1200 m a.s.l. to the Tagliamento ri at 600 m a.s.l therefore the damming of the valley is also a serious th The mass movement involved a road tunnel that is going to be finishe the N.R. 52. For this reason its dynamic evolution is of paramount importance for the local communities and for the Friuli-Venezia Giulia which is going to fund the monitoring activity. Due to this high-risk si the National Road Administration has already made some investigatio indicating displacements of several centimetres per year. In order to s and monitor the landslide a 3 year survey program employing traditic techniques (e.g. inclinometers, TDR, topographic networks) and innov methodologies such as LIDAR surveys and SAR interferometry has be planned. A geophysical survey using electrical resistance tomography also been carried out. Moreover after a geomorphological analysis bas aerial photograph interpretation and detailed fieldworks a wide instab the entire flank of Mt Tinisia has been detected. From the data collect the study of the stratigraphic sequence, it appears that the slope was interested by mass movements since the retirement of the Wurmian g in fact the course of the Tagliamento river seems to be deflected by a post-glacial landslide. For this reason the monitoring network has bee extended to the whole area.

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Co-Authors

No.	Title	First Name	Family Name	Organization
1	Dr.	Fabrizio	Tagliavini	GRJL