

Co-organized by:
Institute of Earth Surface Dynamics
Institute of Geography and Sustainability
Interdisciplinary Centre for Mountain Research (CIRM)
Swiss Geomorphological Society

Monday, March 25th, 2019

Landslides and climate changes in the Dolomites since the Lateglacial

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The lecture deals with the influence of climate changes on landslide occurrence in mountain regions since the Lateglacial. After some methodological considerations, the results of long-term geomorphological investigations and landslide dating carried out in two study sites of the Eastern Dolomites (Italy) will be illustrated. By analysing the temporal distribution of landslides, it was possible to correlate increased landslide activity with the climate changes occurring at the boundary between the Late glacial and the Holocene and between the Atlantic and the Subboreal, and to compare the results with those derived from other European regions. The causes and types of mass movements taking place during these periods were substantially different, reflecting the different morphoclimatic conditions that characterized the region when these landslides were triggered. Finally, notwithstanding the importance of non-climatic causes, such as geological factors and possible human influences, it will be shown that most of the dated landslides can be considered as indicators (or even proxies) of climate changes.