

Exploring landscape dynamics in the Eastern Swiss Alps (Albula region, Grisons) during the Lateglacial and early Holocene

*Ralph Böhlert¹, Markus Egli¹, Max Maisch¹, Dagmar Brandová¹, Susan Ivy-Ochs^{1,2},
Michael Plötze³, Wilfried Haeberli¹*

¹ *Geographisches Institut, Universität Zürich-Irchel, Zurich, Switzerland*

² *Teilchenphysik ETH-Hönggerberg, Zurich, Switzerland*

³ *Institut für Geotechnik, ETH-Hönggerberg, Zurich, Switzerland*

Contact: ralph.boehlert@geo.unizh.ch

The Lateglacial environment was – in particular also in the Alps – subjected to fast climate changes, comparable to the ones presently occurring. Thus, a detailed understanding of the landscape evolution and dynamics during this period including the Holocene transition is of great interest.

Whilst the sequence and morphostratigraphy of glacier retreat and the relative chronological framework of this time span is widely accepted, only a few and still questionable absolute data (radiocarbon and exposure dating) exist so far on selected events of alpine landscape formation. The main goal of the project is to enlarge and improve the existing database at carefully selected sites. Glacial (moraines) and periglacial (rockglacier) landforms as well as related features with information about their geomorphic surface dynamics (i.e. soil development, weathering) will be dated using both relative and numerical dating methods. Cross-checking the different methods will provide a better control of the results and opens the possibility to calibrate the relative methods. Furthermore, it is intended to incorporate the findings into climate modelling approaches.