


GM7.1 | PICO

**Geomorphic processes in the context of land cover dynamics, climate variability and evolving topographic patterns** ▶






Analysing the geomorphic response to environmental change is crucial to improve the understanding, interpretation and prediction of surface process activity. Environmental drivers such as land cover and land use change, climate variability and tectonic activity are mutable in space and time, which renders the analysis of their impact on Earth surface dynamics anything but trivial. In turn, geomorphic processes have a strong impact on both natural ecosystems and artificially transformed land surfaces, with consequences ranging from increasing environmental diversity to economic damage. This session aims to cluster latest advances in land surface research that address interrelationships between land cover dynamics, climate, evolving topography and geomorphic processes. Herein, the focus is set on the analysis, modelling and prediction of land surface processes that are linked to:

- 1) Natural and anthropogenic land cover dynamics, including land use changes, management practices, cultivation of field crops or grassland management, soil reinforcement of different vegetation types and parameterisation of prediction models.
- 2) Climate variability on a variety of spatial and temporal scales, from freeze-thaw cycles, monsoonal precipitation and extreme climatic events to Plio-Pleistocene glacial cycles and Late-Pleistocene to Holocene climatic changes.

Studies are welcome that pay heed on the geomorphic response to changes in land cover or climate, as well as the resulting feedbacks between land cover, climate and Earth surface dynamics over different temporal and spatial scales.

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Co-organized as BG2.21/NH3.25/SSS13.11

Convener: Elmar [Schmaltz](#)  | Co-conveners: Günther Prasicek , Stefan Steger , Jörg Robl , Pierre Valla 

▶ PICOs  | Mon, 08 Apr, 16:15–18:00  PICO spot 1