

## Biography Markus Stöfel

My research focuses on [Climate Change Impacts and Risks in the Anthropocene](#) (C-CIA), with the aim to understand, document and quantify fundamental environmental processes, and the drivers of change. Much of the research of my group involves the development of applications of tree-ring techniques and the use of various unmanned aerial vehicles (UAVs). We observe, document and analyze environmental and climatic changes both at the local and the hemispheric scales and by covering daily to seasonal, decadal, centennial and millennial timeframes.

In a nutshell, my research is related to climate change impacts, time-series and dynamics of hydrogeomorphic and earth-surface processes at altitude and/or high latitudes, as well as on dendroecology and wood anatomy of trees and shrubs. More particularly, I have been working over the past few years on the impacts of climatic changes on periglacial mass movements, the effects of volcanic eruptions on climate (temperature, precipitation), peatland evolution over the Holocene and its link to hydroclimatic changes, the effects of climate and global changes on biodiversity, biomass or sequestered carbon in the Himalayas, Myanmar and the Andes, or on causes and effects of erosion in badlands or along the Mediterranean coast. As such, the work of the C-CIA team has contributed to the understanding of the large set of impacts of environmental and/or climatic changes on humans and societies.

### Research interests and fields of excellence

- Climate change impacts and risks, in particular magnitude–frequency relations of mass-wasting processes in alpine and high-elevation environments (debris flows, rockfall, snow avalanches, landslides, floods, and GLOFs)
- Climate-cryosphere linkages and their impacts on integrated water resources management
- Climatic impacts of large, tropical volcanic eruptions on Common Era societies (temperature, precipitation, oceanic circulations, subsistence economy)
- Alpine meteorology and climatology (precipitation, thresholds, extreme events, climatic change)
- Adaptation and mitigation strategies in the Anthropocene, integrated disaster risk management
- Media and communication sciences, outreach and dissemination, publishing
- Project management, fund raising (~9 million CHF since 2006), networking, PR