



Universität  
Basel

## Research Project

### Exchange of measurement approaches for soil erosion and carbon export at Korean and Swiss mountain ecosystems

#### Third-party funded project

**Project title** Exchange of measurement approaches for soil erosion and carbon export at Korean and Swiss mountain ecosystems

**Principal Investigator(s)** [Alewell, Christine](#) ;

**Organisation / Research unit**

Faculty of Science

Departement Umweltwissenschaften

Departement Umweltwissenschaften / Umweltgeowissenschaften (Alewell)

**Department**

**Project start** 01.12.2009

**Probable end** 30.11.2010

**Status** Completed

The primary goal of the proposed research is to establish a Korean-Swiss cooperative research network focusing on the biogeochemical study of soil erosion and carbon export in mountainous terrain. The project also aims at developing a science-based risk management system for landslides and sheet erosion and their consequences for carbon export on steep hillslopes in response to climate change.

Meetings and researcher exchange will constitute the core components of the project, in combination with targeted field research as a pilot study. The Swiss PI has been using stable carbon isotopes as an early warning system for sheet erosion in the Swiss Alps (Schaub and Alewell, 2009) and used the combined evaluation of Cs-137 and stable carbon isotope data to estimate carbon degradation during sheet erosion (Alewell et al., 2009). The latter novel approaches employing both stable and radiogenic isotopes will be tested in a similar mountainous setting in Korea. The Korean PI will focus on carbon fluxes via sheet erosion and landslides in the context of climate risks and soil C sequestration. These approaches, which are currently being tested at the Korean field site, will be transferred to the Swiss Alpine sites (research sites of the University of Basel group). Specialties and new research ideas will be exchanged through laboratory visit and field trips following an initial scoping meeting in Korea. Project outcomes and future collaboration plans will be discussed in a second workshop in Switzerland.

**Financed by**

Other sources

Add publication

Add documents

Specify cooperation partners