Geofluids

Special Issue on

Advances in Shallow Landslide Hydrology and Triggering Mechanisms: A Multidisciplinary Approach

CALL FOR PAPERS

On steep slopes, the vadose zone is often affected by rainfall induced shallow landslides, which can cause widespread direct and indirect damage to the terrain and infrastructure, as well as urban and rural developments. They are the results of hydrological or subsurface flow process and mechanical (stress equilibrium) process. Some models attempt to link dynamics of hydrologic status and pathways with the mechanical state of a hillslope and the onset of failure. However, the hydrological dynamics leading to shallow landslide initiation, the hydraulic properties at the slope scale and the role of hysteretic effects as well as the soil nonequilibrium processes in slope stability assessment are still not completely understood and require further investigation.

Furthermore, these open questions are generally treated separately by earth scientist, hydrologist, agronomist, and geotechnical engineers, whereas a multidisciplinary approach is key in the study of these issues in the vadose zone.

This special issue will collect high-quality original research articles and review articles reflecting the advances in landslide hydrology from both the earth sciences and soil mechanics perspectives and their influence on behavior and triggering of shallow landslides.

We encourage the submission of interdisciplinary and multidisciplinary papers involving different researchers (including agronomist, hydrologist, geologist, and geotechnical engineers) that focus on numerical and theoretical simulation and laboratory experiments as well as field work.

Potential topics include but are not limited to the following:

- Landslide hydrology at different scales (e.g., slope, catchment)
- Field hydrological monitoring of slopes
- Seasonal, annual, and interannual hydrological dynamics of a slope
- Hydromechanical triggering model of shallow landslides
- Antecedent hydrological conditions that predispose to landslide triggering
- Numerical modelling to study the hydromechanical response of shallow landslides in the vadose zone
- Porous media dynamics
- Landslide water balance model

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/geofluids/bgb/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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