



## Permafrost Hydrology and Wetland Dynamics

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### 6D - The Hydrology of Mountain Permafrost

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Permafrost is a critical component of the cryosphere, affecting mountain hydrology and alpine ecosystems. The accelerating permafrost degradation observed in alpine regions raises concerns about potential consequences for downstream water resources. This session aims to bring together researchers and practitioners from diverse fields to discuss the implications of mountain permafrost thaw for mountain water budgets, hydrological processes, and downstream water resources.

The session will cover a range of topics related to the hydrological behaviour and significance of alpine permafrost, the connections of mountain permafrost to surface waters and groundwater, and potential risks associated with mountain permafrost degradation on water resources and downstream communities. The session will cover the different mountain permafrost features such as rock glaciers, periglacial talus, ice-cored moraines, thermokarst, and frozen rock walls.

We invite presentations focusing on field-based studies, modelling and practical applications at both local and global scales. The session will provide an opportunity for participants to exchange ideas, share knowledge and expertise, and discuss challenges and opportunities related to permafrost research. We particularly encourage submissions from early-career researchers and practitioners, and those working in interdisciplinary fields that intersect with permafrost research. The session will foster collaborations and partnerships among participants from diverse backgrounds and identify research priorities and opportunities for future research in the alpine environment.

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