



SESSIONS EUCOP6_ 2023

Session title: Permafrost land-ocean interactions: fluxes, transport processes and degradation pathways

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Summary: Thermokarst, retrogressive thaw slumps and bank erosion of rivers, lakes and coasts re-mobilize large quantities of previously freeze-locked carbon, nutrients and pollutants. This has great significance for permafrost-carbon-feedback considerations as well as for the ecosystem response to increased (i) sediment load, (ii) nutrient supply, and (iii) pollutant exposure. Hydrological processes play a crucial role in determining the rate and type of material released from thawing permafrost, affecting its biogeochemical role and eventual fate in aquatic systems. In this session, we welcome contributions that: quantify and characterize the release of organic matter (OM), nutrients and/or pollutants from abrupt permafrost degradation and riverine discharge, present watershed budgets incorporating both terrestrial and coastal matter fluxes and transport modes, assess the composition, bioavailability and decomposability of OM, assess the biogeochemical fate of permafrost-derived carbon, nutrients and pollutants in terrestrial waters and in the coastal zone.

We welcome contributions that focus on field-based studies and modeling efforts, or a combination thereof.