



Project acronym: PeatHydro

Project title: Peatland-groundwater hydrological connectivity and influence on instream carbon processes in Zackenberg research catchment

Project leader: Hannu Marttila, University of Oulu, Finland

Discipline: Earth Sciences & Environment: Water sciences/Hydrology

Station(s): Zackenberg Research Station (Greenland/Denmark)

The objective of PeatHydro -project is to provide novel insight into how hydrological connectivity between the catchment-peatland-stream interfaces alter biogeochemical processes and how hydrological processes will influence DOC transport in Zackenberg research area. Our measurement campaign in Zackenberg is built on previous knowledge from the station, and further expands the on the catchment-peatland-stream connectivity and its role in fluvial carbon transport processes in the high-arctic. PeatHydro is an associate project with microbiological study proposal from University of Oulu, Genetics and Ecology unit and provides significant input to ecological studies planned in Zackenberg. The improved hydrological understanding will directly support future greenhouse gas (GHG) and carbon sequestration studies conducted in Zackenberg. Furthermore, comparative studies will be conducted between Zackenberg in the high-Arctic with the northern boreal zone at Oulanka Research station (part of INTERACT network) and in sub-arctic conditions at the Pallas catchment.