



Project acronym: GlaSedRun

Project title: Water and sediment flux from Arctic glacier catchments

Project leader: Jan Kavan, Masaryk University, Brno, Czech Republic

Discipline: Earth Sciences & Environment: Water sciences/Hydrology

Station(s): Polish Polar Station, Hornsund (Svalbard/Poland)

The project is focused on assessment of short-term summer mass balance of Sofie glacier and Arie glacier - both positioned in Hornsund area, southern Svalbard - and coupling the glaciological measurements with runoff measurements as an easy proxy for estimation of summer glacier ablation. High resolution observations of both variables will serve for better understanding of these processes and for improvement of hydrological models performance in glaciated catchments in Polar and Alpine regions. Suspended sediment flux will be monitored as well. Results will be compared with outcomes from 2018 project in central Svalbard to evaluate effects of different climatic forcings (comparison of more continental central Svalbard with southerly positioned Hornsund area).

The objectives were to assess the short term mass balance of the two glaciers and compare the runoff with atmospheric forcings that affect the runoff. These outcomes were supposed to serve for better understanding the runoff processes in glaciated catchments. Besides the runoff itself, also suspended sediment transport was studied.