



Norwegian Copernicus Glacier Service: Svalbard Perspective

Alexandra Messerli (messerli.alexandra@gmail.com), Geir Moholdt Norwegian Polar Institute, Norway

Copernicus Glacier Service is a Norwegian collaborative project between the Norwegian Polar Institute (NPI), the Norwegian Water Resources and Energy directorate (NVE), and the University of Oslo. The project is primarily financed by the Norwegian Space Centre and will provide snow and glacier products over mainland Norway and Svalbard. The project aims to use ESA's Sentinel-2 satellite to achieve these products, but synthetic aperture radar data from Sentinel-1 and radiometer data from Sentinel-3 might also be utilised. This is particularly relevant in a setting like Svalbard where the use of Sentinel-2 is limited by the polar night in winter and frequent cloud cover in summer. The products we aim to include in the freely available service are: glacier outlines, calving-front positions, glacier facies, equilibriumline altitudes (ELAs), glacier velocities, and detection of jökulhlaups and glacier surges. This poster focuses on velocity mapping over the entire Svalbard archipelago using the ImGRAFT feature tracking toolbox. We present a full velocity mosaic from Landsat-8 and new velocity time series from Sentinel-2 over surging parts of Austfonna ice cap and fast-flowing glaciers in the Kongsfjorden region. Eventually, we aim to provide annual velocity mosaics over entire Svalbard using Sentinel-2, and higher spatio-temporal resolution data for specific regions of interest.