



ESA STSE North Hydrology: Development of multi-mission satellite data products in support of atmospheric and hydrological modeling of cold regions

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Through its Support To Science Element (STSE) Programme, the European Space Agency (ESA) is currently sponsoring the North Hydrology project. The overall goal of North Hydrology is to support the international efforts coordinated by the Climate and Cryosphere (CliC) project of the World Climate Research Programme (WCRP) to exploit the use of Earth Observation (EO) technology, models and in situ data to improve the characterization of river and lake ice processes and their contribution to the Northern Hydrology system. To attain this goal, the North Hydrology project is developing a portfolio of new multi-mission geo-information products, maximizing the use of ESA satellite data, to respond to the scientific requirements of the CliC community and the operational requirements of the weather and climate operational agencies, and the requirements of the operational user community to better characterize river-ice (and glacier temporary lakes) dynamics in flood forecasting models at the basin scale.

This talk will provide an overview of the North Hydrology project, the EO-based products it is generating (e.g. lake and river ice, land water surface temperature, ice flow dynamics and mass balance of outlet glaciers), the atmospheric and hydrological models it is using, and the EO data integration/assimilation experiments it is conducting.

More information about ESA's STSE North Hydrology project can be found at <http://env-ic3-vw2k8.uwaterloo.ca:8080/>