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Assessment of Arctic-HYCOS hydrological observation system and integration in the Arctic-Hype model

The Arctic-HYCOS project provides river discharge data at gauging stations representing freshwater flow-to-ocean and changes in arctic hydrological regimes.

The Arctic-HYCOS project is part of the World Hydrological Cycle Observing System (WHYCOS) network in the transnational basin of the Arctic.
<https://hydrohub.wmo.int/en/projects/Arctic-HYCOS>

- Observations are integrated in the hydrological model Arctic-HYPE to provide estimates of flow in ungauged basins and pan-arctic forecasts of river discharge in near real time
- Arctic-HYCOS observation system was assessed with regard to spatial, temporal, and total water flow representation
- Data access enhanced by integration in the IAOS developed in INTAROS

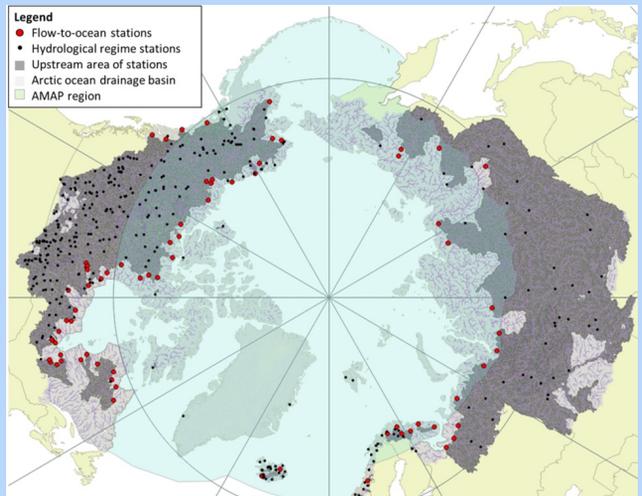


Figure 1. Arctic-HYCOS hydrological station network

Users of Arctic-HYCOS are

- Arctic communities (improved flood forecasting, freshwater resource management)
- Ocean and Climate modelers (improved estimates of freshwater inflow to ocean)
- Studies of climate change impacts on Arctic freshwater systems
- Arctic-HYPE model analysis and forecasts are available from SMHI (<http://hypeweb.smhi.se>)

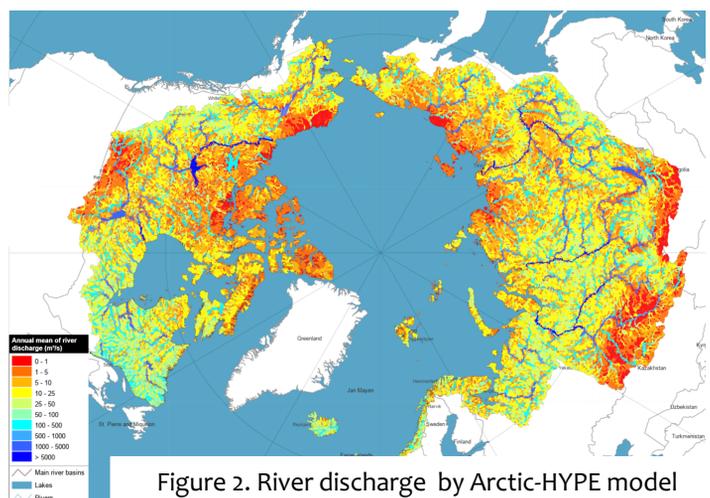


Figure 2. River discharge by Arctic-HYPE model

