Determining Arctic Freshwater fluxes with EO data and first results using Cryosat-2

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Within the Support to Science Elements framework ESA has initiated a new CLIC initiative for the Arctic Ocean (Arctic +) on determining the Arctic Freshwater fluxes using Earth Observation data.

One of the projects supported by this initiative is the ArcFlux works which started in September 2016 will be introduced in this presentation. This project aims to determining the largest component to the Arctic Freshwater budget, namely the contribution from large rivers, glaciers as well as in-out flow of freshwater through the ocean pathways.

The main objectives of the project is to: Identify the major challenges associated with estimation of the Arctic Freshwater budget and Explore, develop and validate different approaches to address the identified challenges and enhance current approaches to compute the freshwater budget in the Arctic and compute a multi-year assessment of the Arctic freshwater budget based on the developed methodology. Finally the obtained results will be evaluated and the project will develop a scientific roadmap for future research activities in this domain of estimating the FWB of the Arctic Ocean.