



## **INTAROS: Development of an integrated Arctic observation system under Horizon 2020**

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INTAROS is a research and innovation action funded under the H2020-BG-09 call for the five-year period 2016-2021. INTAROS will develop an integrated Arctic Observation System (iAOS) by extending, improving and unifying existing systems in the different regions of the Arctic. INTAROS will have a strong multidisciplinary focus, with tools for integration of data from atmosphere, ocean, cryosphere and terrestrial sciences, provided by institutions in Europe, North America and Asia. Satellite earth observation (EO) data plays an increasingly important role in such observing systems, because the amount of EO data for observing the global climate and environment grows year by year. EO data will therefore be integrated into iAOS based on existing products and databases. In situ observing systems are much more limited due to logistical constraints and cost limitations. The sparseness of in situ data is therefore the largest gap in the overall observing system. INTAROS will assess strengths and weaknesses of existing Arctic observing systems and contribute with innovative solutions to fill some of the critical gaps in the selected networks. INTAROS will develop a platform, iAOS, to search for and access data from distributed databases. The evolution into a sustainable Arctic observing system requires coordination, mobilization and cooperation between the existing European and international infrastructures (in-situ and remote, including space-based), the modeling communities and relevant stakeholder groups. INTAROS will include development of community-based observing systems, where local knowledge is merged with scientific data. Multidisciplinary data integrated under INTAROS will contribute to better understanding of interactions and coupling in the complex Arctic ice-ocean-land-atmosphere system. An integrated Arctic Observation System will enable better-informed decisions and better-documented processes within key sectors (e.g. local communities, shipping, tourism, fishing), in order to strengthen the societal and economic role of the Arctic region and support the EU strategy for the Arctic and related maritime and environmental policies. Following the SAON goal, INTAROS will support and strengthen the EU engagement in developing the sustained and coordinated pan-Arctic observing and data sharing systems.