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## **Comprehensive environmental observations and their integration in the Arctic-boreal environment**

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The environment in the Arctic and boreal is changing rapidly due to megatrends such as globalization, new transport route development, demography and use of natural resources. These megatrends have environmental effects, particularly in terrestrial, marine and cryosphere domains which are undergoing substantial changes. Local, regional, national and international decision-making bodies require fact-based services to tackle challenges of rapid environmental change. In this presentation we will present results from “integrative and Comprehensive Understanding on Polar Environments (iCUPE) project, which combines in-situ observations and satellite remote sensing for novel data and scientific understanding on the Arctic pollution. We will also summarize the benefits arising from integrated and co-located observations that contribute to different European environmental research infrastructures with practical scientific insights from such synthesis.