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Advanced prediction in the Arctic and beyond: One year into the APPLICATE project

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The Arctic is changing rapidly carrying the potential to influence weather and climate in mid-latitudes. It is therefore crucial to predict these changes and their impacts. Recognizing this priority, a European consortium of scientists set out to advance our capability to predict the weather and climate in the Arctic and beyond in the framework of the EU-funded project APPLICATE. The project aims to improve the representation of key processes in coupled atmosphere-sea ice-ocean models, in order to deliver enhanced numerical weather forecast, seasonal to interannual climate predictions and centennial climate projections. The linkages between the Arctic and mid-latitudes is explored through a coordinated multi-model approach using coupled atmosphere-ocean models. APPLICATE will also provide guidance for the design of the future Arctic observing system to improve our capacity to reanalyse the climate system and enhance models' predicting skills. The APPLICATE Consortium is also engaging in clustering activities to exploit synergies with other programs, and the project has also a strong user engagement and an outreach and training components.
In this presentation, we will give an overview of APPLICATE activities as part of our effort to understand changes in the Arctic and their far-reaching impacts for both environment and communities. We will summarise the main achievements of the project since the start in November 2016 and outline the work of the various task teams until the end of the project in 2020.