



Advanced prediction in the Arctic and beyond: Half way 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 H2020 project APPLICATE. The project started in 2016 with a budget of 8M€ aims to improve the representation of key processes in coupled atmosphere-sea ice-ocean models, to deliver enhanced numerical weather forecast, seasonal to interannual climate predictions and centennial climate projections. The linkages between the Arctic and mid-latitudes are explored through a coordinated multi-model approach using coupled atmosphere-ocean models. APPLICATE also provides 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 collaborations with other programs (e.g., within the EU-funded Arctic Cluster), and the project has also a strong user engagement and training components.

In this presentation, we will give an overview of APPLICATE activities and 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. The results achieved so far demonstrate a vibrant engagement of young researchers in the field of climate science and the role the project plays in forming these scientists.