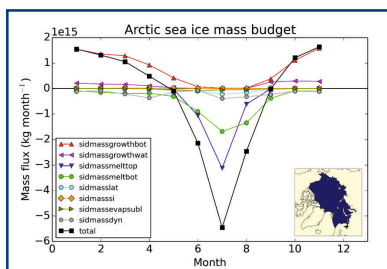


Highlights of the APPLICATE project include:

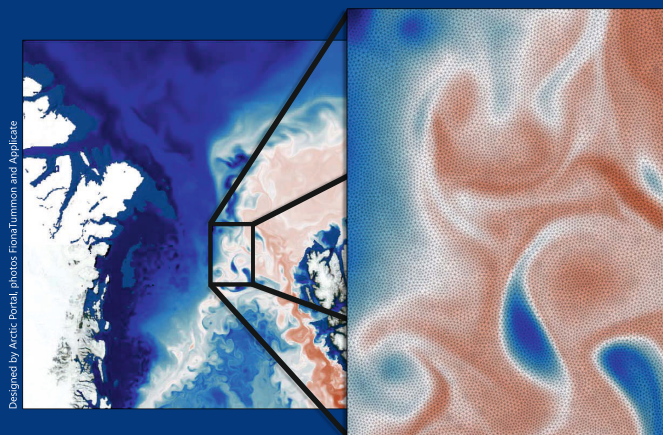
- ★ Development of process-oriented and user-relevant metrics and diagnostics.
- ★ Development of a coupled atmosphere-sea ice-ocean single-column model.
- ★ Contribution to the development of the Polar Amplification Model Intercomparison Project (PAMIP).
- ★ Evaluation of the importance of assimilating sea ice concentration and sea ice thickness for Arctic seasonal prediction.
- ★ Investigation of the impact of atmospheric observations on medium range forecasts in polar and lower latitude regions.
- ★ Finalization of baseline forecast experiments (Stream 1) on which the impact of APPLICATE developments will be tested (Stream 2).
- ★ Establishment of a data management system and post processing environment.
- ★ Production and dissemination of the ECMWF-YOPP Analysis and Forecast Dataset.
- ★ Engagement with stakeholders through a user-group, a user blog, case-studies and participation to dedicated events.
- ★ Organisation of a training school and numerous webinars.
- ★ Determination of the present limits of predictability in the Arctic from daily to sub-seasonal time scales.



Improved knowledge of the sea ice volume/mass budget in climate models helps to better understand the spread in climate simulations and the drivers of Arctic sea ice decline.

SIMP: A Sea-Ice Model inter-comparison Project of the mass budget of Arctic sea ice and snow in CMIP6 models.

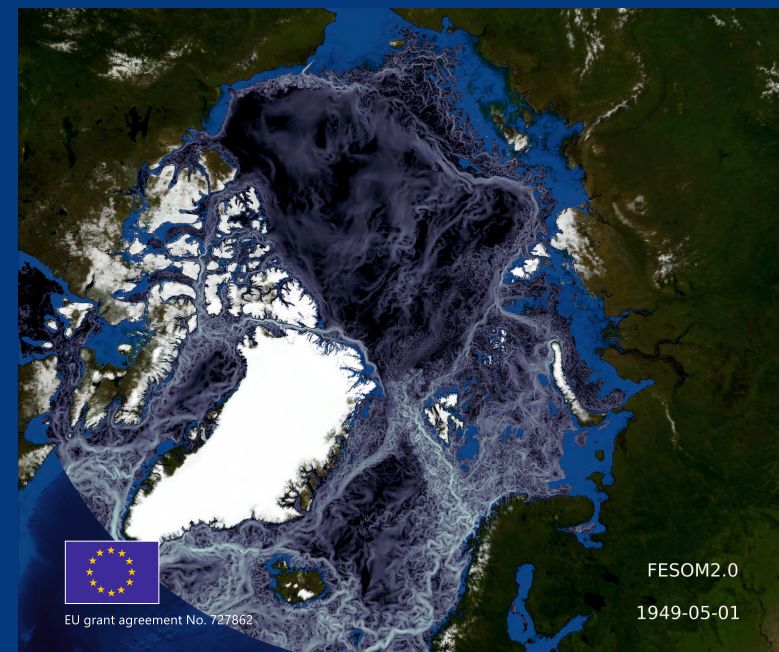
16 PARTNERS FROM NINE COUNTRIES



APPLICATE.eu

Advanced prediction in polar regions and beyond

UNDERSTANDING ARCTIC'S CONNECTIONS TO WEATHER AND CLIMATE ACROSS THE NORTHERN HEMISPHERE



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EU grant agreement No. 727862

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What is **APPLICATE**?

EU-funded project under the Horizon 2020 Research and Innovation programme with a budget of €8M. A four-year project, started 1. November 2016

A consortium of 16 expert organisations from nine different countries

APPLICATE's objectives:

- ★ Assess weather and climate prediction models using observations and provide guidance for model development
- ★ Develop enhanced predictive capacity for weather and climate in the Arctic and beyond through improving weather and climate models
- ★ Determine how Arctic climate change influences weather and climate in the mid-latitudes of the Northern Hemisphere through atmospheric and oceanic linkages
- ★ Provide guidance for designing the future Arctic observing system
- ★ Communicate knowledge generated by the project to stakeholders
- ★ Train early career scientists in close collaboration with the Association of Polar Early Career Scientists (APECS)



- ★ Establish an effective dialogue with a network of key stakeholders in order to obtain feedback to help improve modelling and forecasting
- ★ Widely disseminate the results of the project to those who can benefit from improved Arctic observations and enhanced weather and climate predictions
- ★ Work in cooperation with European and international scientific partners
- ★ Contribute to the Year of Polar Prediction and IPCC assessment reports
- ★ Build a seamless community

We welcome stakeholder feedback!

Those who benefit from the work of the **APPLICATE** project include:

- ★ Climate scientists and modellers
- ★ Operational forecasting centres
- ★ Emergency services
- ★ Any business sector that is vulnerable to climate and weather from the Arctic to the mid-latitudes (tourism, shipping, agriculture, insurance, etc.)
- ★ Local and regional governments, businesses, communities, policy makers, indigenous people, NGOs and more in the Arctic and mid-latitudes

Are you a climate scientist, modeller, weather forecaster, or a user of climate and weather services? Then you are an **APPLICATE** stakeholder!

The **APPLICATE** consortium welcomes feedback from all stakeholders from outside the project to contribute to its work to improve climate and weather forecasting in the Arctic and mid-latitudes.

You can get involved by joining our blog or by providing us feedback directly at:

Dr. Luisa Cristini at the Alfred Wegener Institute (AWI)
Email: luisa.cristini@awi.de
Tel.: +49(0) 471 4831-1681

Halldór Jóhannsson at the Arctic Portal
Email: halldor@arcticportal.org
Tel.: +354 461 2800

PUBLICATIONS - www.applycate.eu/publications

DATA - www.applycate.met.no

You can find our Polar Prediction Matters blog at:
<https://blogs.helmholtz.de/polarpredictionmatters/>

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APPLICATE's strategy:

