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.
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:
- Establish an effective dialogue with a network of key stakeholders in order to obtain feedback to help improve modelling and forecasting
- Widenly 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

APPLICATE’s strategy:
- Establish Baseline
  - New metrics & diagnostics
  - NWP
  - Subseasonal to seasonal prediction
  - CMIP5/6
- Develop Enhancements
  - Optimized Arctic observing systems
  - Improved initial & boundary conditions
  - Enhanced models
- Test Enhancements
  - Enhanced NWP
  - Enhanced Subseasonal to Seasonal Prediction
- Recommendation
  - Presentations
  - Reports
  - Publications
  - Contribution to assessment reports
- Enhanced Predictions
  - CMIP6-Interim & CMIP7
  - Enhanced operational:
    - NWP
    - Subseasonal to Seasonal Prediction
    - Interannual to Decadal Prediction

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