

# Update on Recent Developments of the Year of Polar Prediction (YOPP)

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Chair of the WWRP PPP Steering Group

Alfred Wegener Institute | Helmholtz Centre for Polar and Marine  
Research



# Polar Prediction Project (PPP)

## ***Mission statement:***

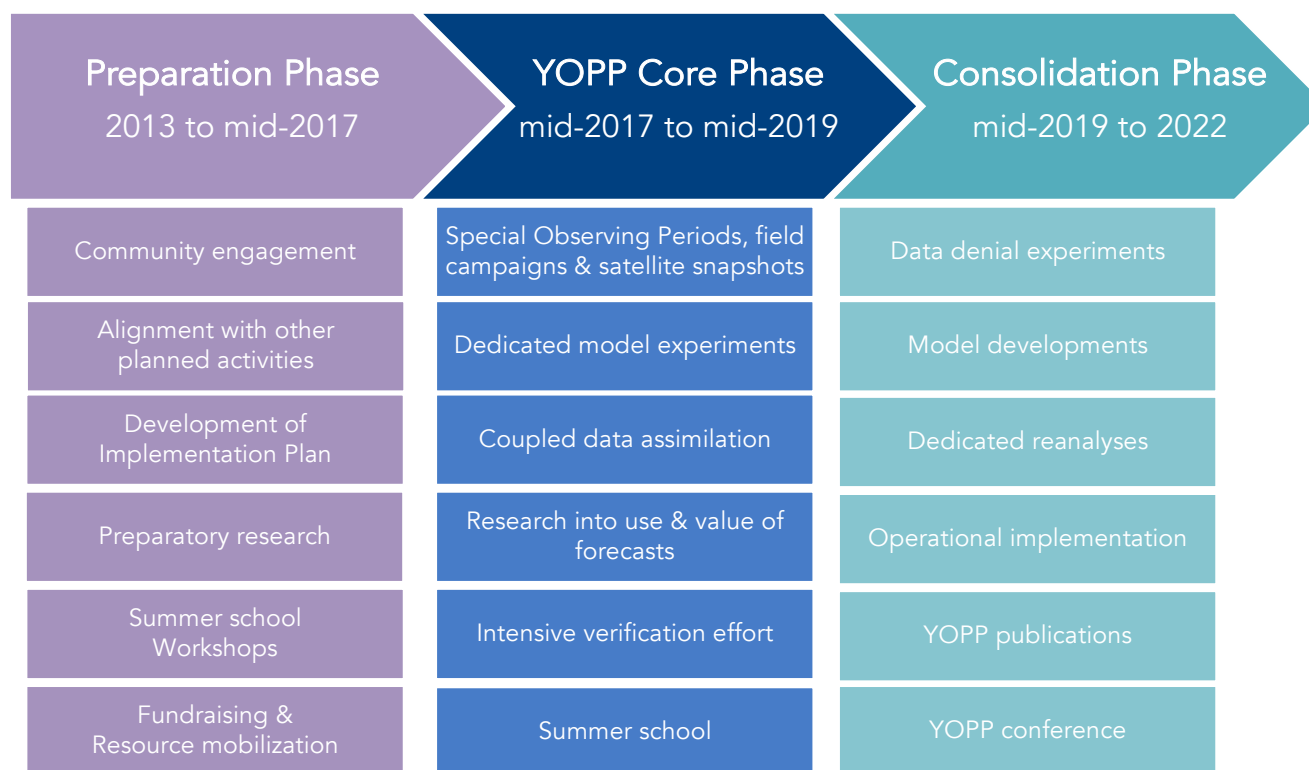
*Promote cooperative international research enabling development of improved weather and environmental prediction services for the polar regions, on time scales from hourly to seasonal.*

# Year of Polar Prediction (YOPP)

## ***Mission statement:***

*Enable a significant improvement in environmental prediction capabilities for the polar regions and beyond, by coordinating a period of intensive observing, modelling, prediction, verification, user-engagement and education activities.*

# YOPP Timeline





# YOPP Consolidation Phase: Key elements



# YOPP Consolidation Phase



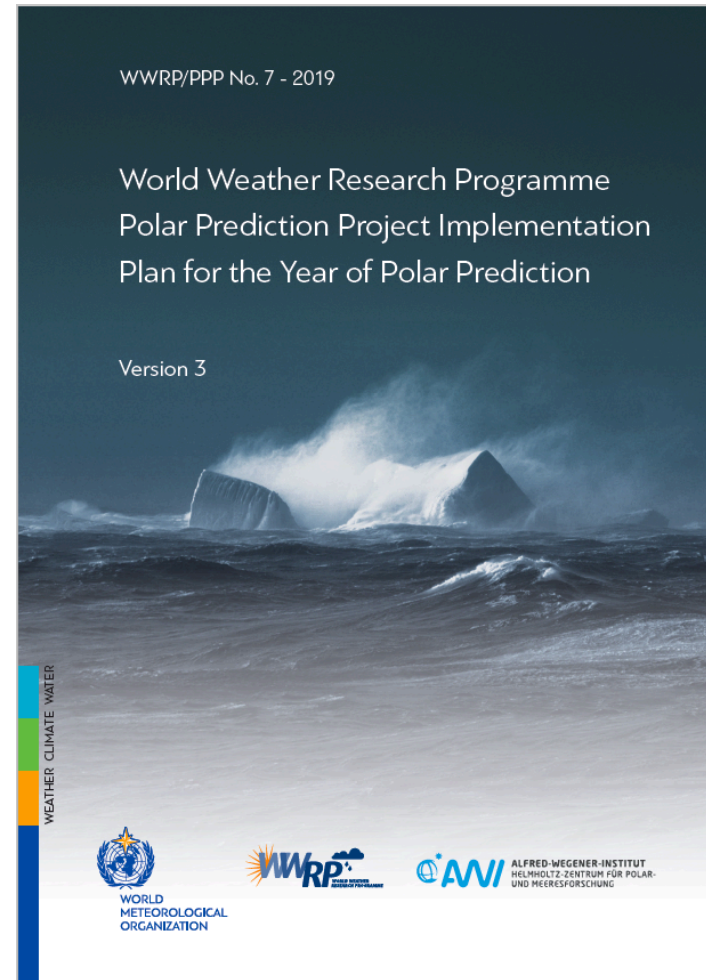
PPP-SG, Reykjavik, 2018



PPP-SG, Helsinki, 2019

## YOPP Implementation Plan – Version 3.0

- Revised section on YOPP Consolidation Phase
- published in December 2019



# YOPP Core Phase: Special Observing Periods (SOPs)

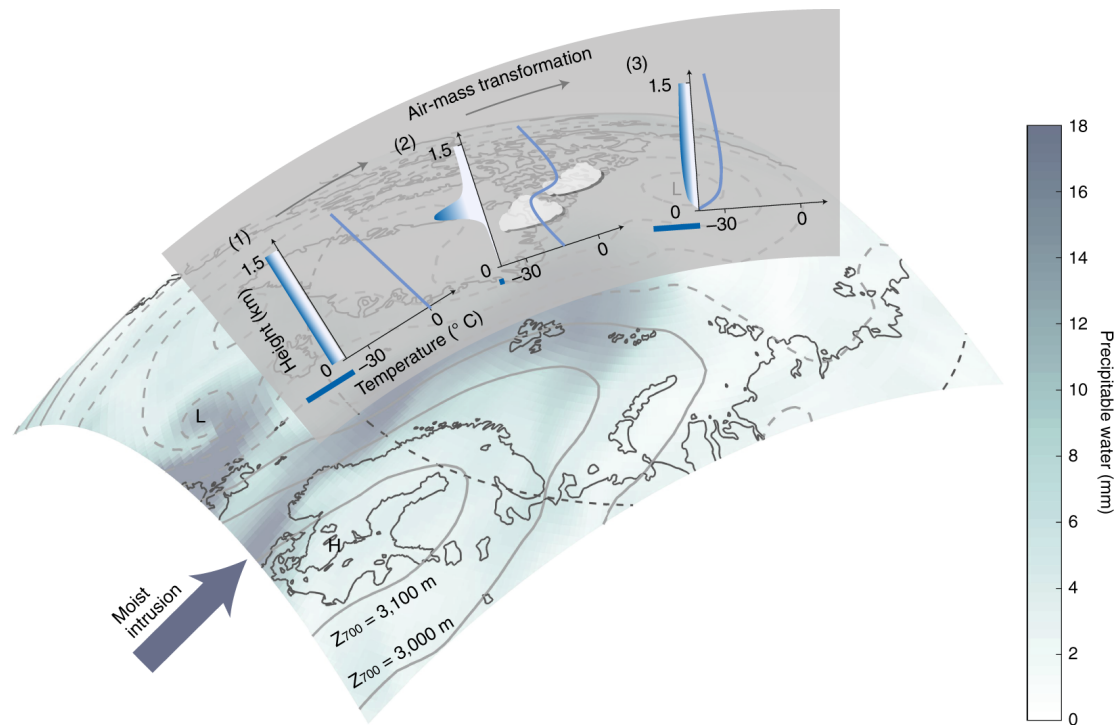
## Three SOPs

- Arctic winter 2018
- Arctic summer 2018
- Antarctic summer 2018/19



# YOPP Core Phase: Targeted Observing Period (TOPs)

## Air mass transformation and MOSAiC





# YOPP Core Phase: YOPPSiteMIP

**Mission:** Coordinate process-based model evaluation based on high-frequency multi-variate observations at some selected Arctic and Antarctic supersites, during YOPP, with the aim to deepen our understanding of the representation of polar processes (both in the atmosphere, land, sea-ice or ocean components, and in the coupling at their interfaces) of environmental prediction systems

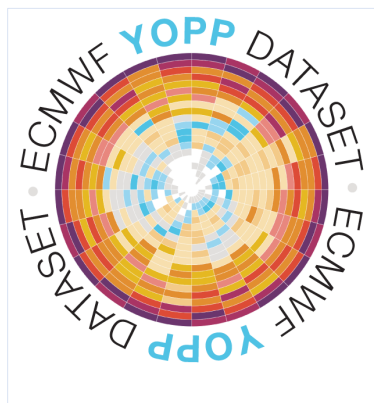
## YOPPSiteMIP meeting summary, outcomes and actions

17 to 19 September  
Department of Meteorology, Stockholm University  
Stockholm, Sweden

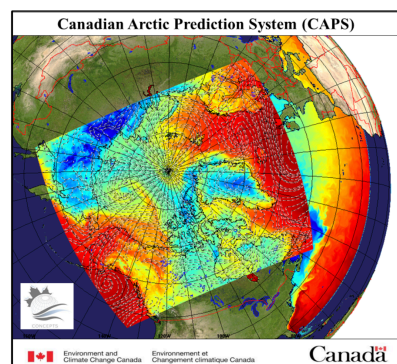


# YOPP Core Phase: YOPP Model data sets

ECMWF

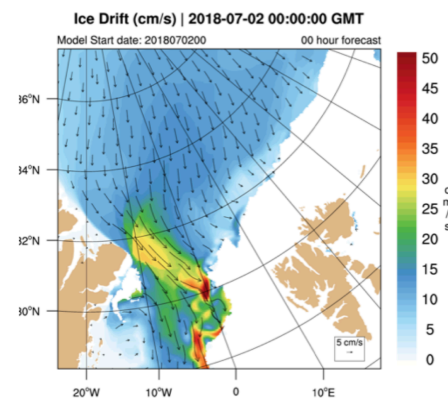


ECCC



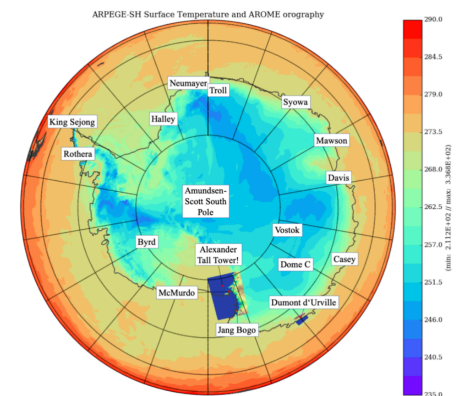
Newly coupled atmosphere-ice-ocean forecast CAPS available by ECCC (figure: Greg Smith/ECCC).

U.S. NRL



02 July 2018 00Z CICE ice drift analysis (cm/sec) (source: NRL).

Météo France





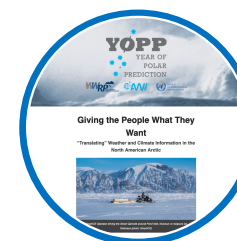
# Communication

>1,550 followers twitter  
>560 followers instagram

Social Media  
@polarprediction

Website  
www.polarprediction.net

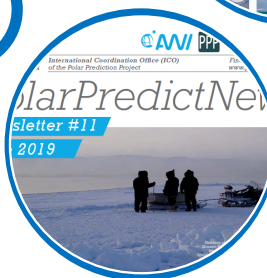
700–800 visits/month



Mailing Lists

office@polarprediction.net

>660 subscribers



Newsletter  
PolarPredictNews

13 issues published  
since Oct. 2018



Polar Prediction

Matters 16 contributions since Sept. 2017

<https://blogs.helmholtz.de/polarpredictionmatters/>

# YOPP Podcast *The IcePod*



- On Spotify, Apple Podcast etc,
- Also on local community radio station Radio Weser.TV



- In support of MOSAiC as a YOPP-endorsed project
- Interviews with scientists involved in YOPP and MOSAiC
- Enhance communication of the science activities within YOPP during MOSAiC and beyond

# PolarPredictNews



WORLD  
METEOROLOGICAL  
ORGANIZATION

*International Coordination Office (ICO)  
of the Polar Prediction Project*

*Find more information at  
[www.polarprediction.net](http://www.polarprediction.net)*

## PolarPredictNews

**Newsletter #13**

**Dec. 2019**

MOSAIC School participants are installing an Atmospheric Surface Flux Station (ASFS) at one of the three MOSAIC sites that have been set up around Polarstern now drifting with the central Arctic sea ice for a year. The ASFS measures the surface energy budget between the snow/ice surface and the atmosphere. The station also collects basic meteorology and positioning information (GPS) useful to derive metrics important for the ice dynamics, such as the surface stress caused by wind. The ASFS is a miniaturized version of the „met tower“ installed at the main MOSAIC camp at Polarstern (photo: Thea Schneider).



WMO OMM

# Determining success

In order to help us determining the success of PPP and YOPP towards the end of the Consolidation Phase, we would like to ask you to include the following statement in the acknowledgements part of your future articles:

**'This is a contribution to the Year of Polar Prediction (YOPP), a flagship activity of the Polar Prediction Project (PPP), initiated by the World Weather Research Programme (WWRP) of the World Meteorological Organisation (WMO). We acknowledge the WMO WWRP for its role in coordinating this international research activity.'**

Besides, we would like to ask you to cite the following paper whenever you consider it applicable as it provides a good overview of the scientific rationale and the main components of YOPP:

Jung, T., Gordon, N.D., Bauer, P., Bromwich, D.H., Chevallier, M., Day, J.J., Dawson, J., Doblas-Reyes, F., Fairall, C., Goessling, H.F., Holland, M., Inoue, J., Iversen, T., Klebe, S., Lemke, P., Losch, M., Makshtas, A., Mills, B., Nurmi, P., Perovich, D., Reid, P., Renfrew, I.A., Smith, G., Svensson, G., Tolstykh, M., Yang, Q., 2016: [Advancing Polar Prediction Capabilities on Daily to Seasonal Time Scales](#). Bulletin of the American Meteorological Society. doi: 10.1175/BAMS-D-14-00246.1

# Welcome to AWI

# YOPP Consolidation Phase



Funding & tender opportunities  
Single Electronic Data Interchange Area (SEDIA)

English **EN**

Register

Login

Oct 27, 2017

Polar climate: understanding the polar processes in a global context in the Arctic and Antarctic Regions

ID: LC-CLA-17-2020

**Focus area:** Building a low-carbon, climate resilient future (LC)

Type of action:

◦ RIA Research and Innovation action

Deadline Model : two-stage

Opening: **12 November 2019**

Deadline: **13 February 2020 17:00:00 Brussels time**  
2nd stage Deadline: **03 September 2020 17:00:00 Brussels time**

Closed

The project results are expected to contribute to:  
... the IPCC scientific assessments, the **consolidation phase of the Year Of Polar Prediction (YOPP)** and to the Copernicus Climate Change (C3S) services, ...