

Year of Polar Prediction (YOPP) Summit

— Briefing Document for Participants —

1. Purpose of this document

The purpose of this Briefing Document is to provide a concise overview of the Year of Polar Prediction (YOPP), and to give all participants some background information on the structure of the Summit and the expected outcomes from each of the sessions, as well as the Summit as a whole.

2. What is YOPP?

YOPP is an international initiative aimed at *Enabling a significant improvement in environmental prediction capabilities for the polar regions and beyond, by coordinating a period of intensive observing, modelling, verification, user-engagement and education activities.*

YOPP is an international community effort that involves natural and social scientists, stakeholders as well as representatives from international organisations, funding agencies and operational weather and climate prediction centres.

YOPP can be seen as a legacy project of the International Polar Year (IPY). However, in contrast to IPY, YOPP is much more focussed on the prediction problem on daily to seasonal time scales.

YOPP encompasses three different phases: a preparatory phase (until mid-2017), the main YOPP period (mid-2017 to mid-2019), and a consolidation phase (Figure 1). The focus of the YOPP Summit will be on the planning of the preparatory and main YOPP phases.

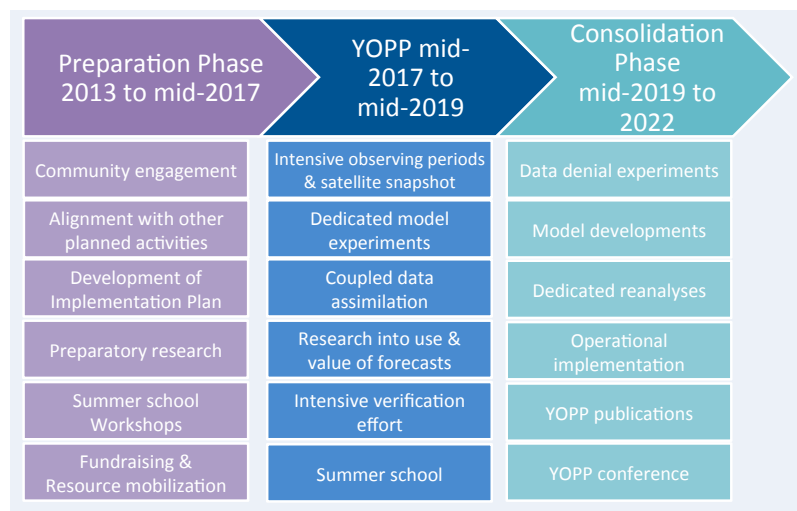


Figure 1: The three different phases of the Year of Polar Prediction, including selected key elements.

YOPP will

- cover an extended period of coordinated intensive observational and modelling activities;
- strongly engage in forecast-stakeholder interaction, and verification;
- have an educational and outreach component;
- foster relationships with partners, provide common focussed objectives, and be held over a bit more than a one-year period in association with a field campaign providing additional observations;

- coincide with, support, and draw on other related planned and previous activities for polar regions.

The main objectives for YOPP are to

- enhance the observational system
 - improving the polar observing system to provide good coverage of high-quality observations in a cost effective manner;
 - gathering additional observations through field programmes aimed at improving understanding of polar key processes;
- progress in understanding processes and dynamics
 - developing improved representation of polar key processes in uncoupled and coupled models used for prediction, including those which are a particular hindrance to high-quality prediction for the polar regions, such as stable boundary layer representation, surface exchange, and steep orography;
 - Improving the understanding of linkages between polar regions and lower latitudes and assessing the skill of models representing these;
- advance the operational forecasting system
 - developing improved data assimilation systems that account for challenges in the polar regions such as sparseness of observational data, steep orography, model error and the importance of coupled processes (e.g., atmosphere-sea ice interaction);
 - exploring the predictability of sea ice on time scales from days to a season;
 - improving verification of polar weather and environmental predictions to obtain quantitative knowledge on model performance, and on the skill of operational forecasting systems for user-relevant parameters; and efficiently monitor progress;
- promote a services delivery and capacity building framework
 - improving the understanding of the benefits of using existing prediction information and services in the polar regions, differentiated across the spectrum of user types and benefit areas;
 - providing training opportunities to generate a sound knowledge base on polar prediction related issues.

For the implementation of YOPP special emphasis is placed on:

- development of strong linkages with other initiatives;
- strengthening of linkages between academia, research institutions and operational forecasting centres;
- establishment and exploitation of special research data sets that can be used by the wider research community and forecast product users;
- linkages with space agencies;
- establishment of a common data archive infrastructure;
- promotion of YOPP with funding agencies;
- promotion of interactions and communication between research and stakeholders; and
- fostering of education and outreach.

Further reading: A more detailed description of YOPP is available in the YOPP Implementation Plan, which can be downloaded from: <http://www.polarprediction.net/yopp.html>

3. What is the purpose of the YOPP Summit?

The YOPP Summit is a high-level event, which will be a key element in the planning for the Year of Polar Prediction.

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The purpose of the Summit is:

- to provide an overview about the present level of planning;
- to engage with stakeholders and identify expectations and requirements;
- to bring the community interested in YOPP together;
- to gather formal commitments from parties interested in YOPP;
- to present the key-elements of YOPP and revise the research priorities, if necessary;
- to agree on at least two intensive observing periods;
- to coordinate YOPP with other planned activities;
- to agree on the YOPP data legacy;
- to review the YOPP education and outreach component.

The outcomes and decision of the Summit will be incorporated in Version 2.0 of the YOPP Implementation Plan, which will be published later in 2015.

4. How is the Summit structured and what are the expectations from the different sessions?

Day 1 of the YOPP Summit:

Monday 13 July 2015	
1300-1325	Session I: Welcome and introduction
1325-1400	Session II: Background
1400-1600	Session III: User relevant aspects
1630-1830	Session IV: YOPP observing component
1840-2000	Icebreaker

The Summit will start with a number of brief introductory statements and presentations in Session I-II. This is followed by two major sessions in which *User relevant aspects* (Session III) and the *YOPP observing component* (Session IV), respectively, will be presented in a number of invited presentations. These presentations (10 minutes each, excluding discussions) will focus on different key elements of YOPP. Presenters have been asked to briefly introduce their topic and then continue by making specific recommendations for YOPP. If applicable, presenters are also invited to make concrete commitments to YOPP. Stakeholders are asked to provide specific recommendations to the prediction community in general and YOPP in particular. Discussions involving all the presenters and the audience conclude each of the sessions.

Day 2 of the YOPP Summit:

Tuesday 14 July 2015	
0830-1020	Session V: YOPP modelling component
1050-1150	Session VI: YOPP data component
1300-1330	Session VII: YOPP education and outreach
1330-1620	Session VIII: Partner initiatives
1620-1800	Breakout groups A

On Day 2 of the Summit there will be three more major sessions on key-elements of YOPP, namely the *YOPP modelling component*, the *YOPP data component*, and *YOPP education and outreach*.

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This is followed by presentations from selected partner initiatives. These presentations are very brief (no more than 4 minutes each) and centre around the following questions:

- What are the expectations for YOPP?
- How can each partner initiative contribute to YOPP (formulate commitments, if possible)?
- Do you have specific recommendations for YOPP?

Along with Session III-IV from Day 1 of the Summit, the discussions in Session V-VII and the presentations from the partner initiatives are meant to lay the ground for further discussions in the breakout group sessions.

The breakout group sessions will be a very important element of the Summit, to engage all participants in the planning process. The breakout discussions are expected to lead to a number of recommendations and decisions that will be presented and discussed in the plenary/planning session. It is planned that each of the two breakout groups “Observations” and “Modelling, Data Assimilation, Linkages and Prediction” will be split into two sessions running in parallel. The breakout groups “Education and Outreach”, “Funding” and “Data” will be run sequentially to allow people to attend multiple breakout groups.

Tuesday			Wednesday		
1625-1815	BOG1 User Aspects & Verification		0830-1000	BOG1 User Aspects & Verification	
1625-1815	BOG2a Observations	BOG 2b Observations	0830-1000	BOG2a Observations	BOG 2b Observations
1625-1815	BOG 3a Modelling, Data Assimilation, Linkages and Prediction	BOG 3a Modelling, Data Assimilation, Linkages and Prediction	0830-1000	BOG 3a Modelling, Data Assimilation, Linkages and Prediction	BOG 3a Modelling, Data Assimilation, Linkages and Prediction
1625-1715	BOG 5 Education and Outreach		0830-1000	BOG 4 Data	
1715-1815	BOG 6 Funding				

Day 3 of the YOPP Summit:

Wednesday 15 July 2015	
0830-1000	Breakout groups B
1030-1230	Final planning session
1230	Summit end

The breakout group discussions continue on Day 3 of the Summit. They will start with a short summary of the main outcomes from the previous day. This will help newcomers to the breakout groups to get up to speed and join in the final discussions, providing their views and making concrete commitments.

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The breakout group sessions each conclude by agreeing on a set of recommendations for YOPP, including those that should feature in Version 2.0 of the YOPP Implementation Plan. There are two important issues that will need to be discussed in all breakout groups:

- Number, length and timing of YOPP intensive observing periods, and
- YOPP data strategy.

After the coffee break the final planning session will be held. This session starts with the presentation and discussion of the outcomes of the breakout groups. In this context, specific commitments will be highlighted. This is followed by statements from funding agencies. The Final planning session concludes by wrapping-up the YOPP Summit discussions and by agreeing on a list of specific actions (next steps).

Important note for presenters: In order to help the session chairs to stick to the schedule, all presenters are urged to keep within the given time limit. Please send in your presentation to ntournier@wmo.int preferably by 10:00 am on 10 July 2015.

5. Further information

Live streaming of all the presentations and plenary discussions will be available at <http://www.wmo.int/yopp>

The latest agenda version is available from the PPP website: <http://www.polarprediction.net/yopp/yopp-summit.html>

If you do have any further questions or suggestions please feel free to contact us by e-mail: yoppsummit@polarprediction.net

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