



World Meteorological Organization

Weather • Climate • Water

# Commission for Atmospheric Science

WMO



# Societal challenges: a 10y vision

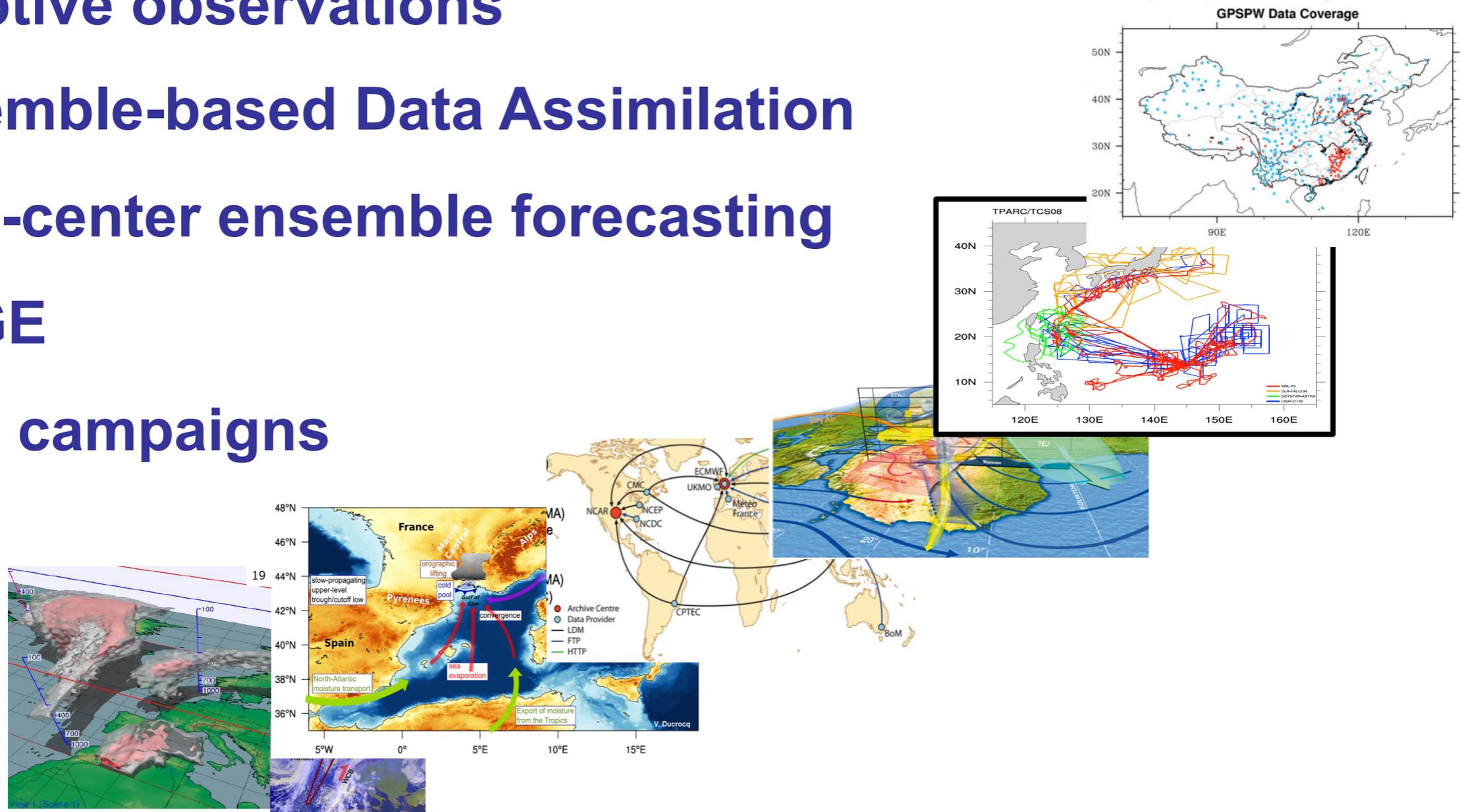
- **High Impact Weather and its socio-economic effects in the context of global change**
- **Water: Modelling and predicting the water cycle for improved DRR and resource management**
- **Integrated GHG Information System: Serving society and supporting policy**
- **Aerosols: Impacts on air quality, weather and climate**
- **Urbanization: Research and services for megacities and large urban complexes**
- **Evolving Technologies: Their impact on science and its use**





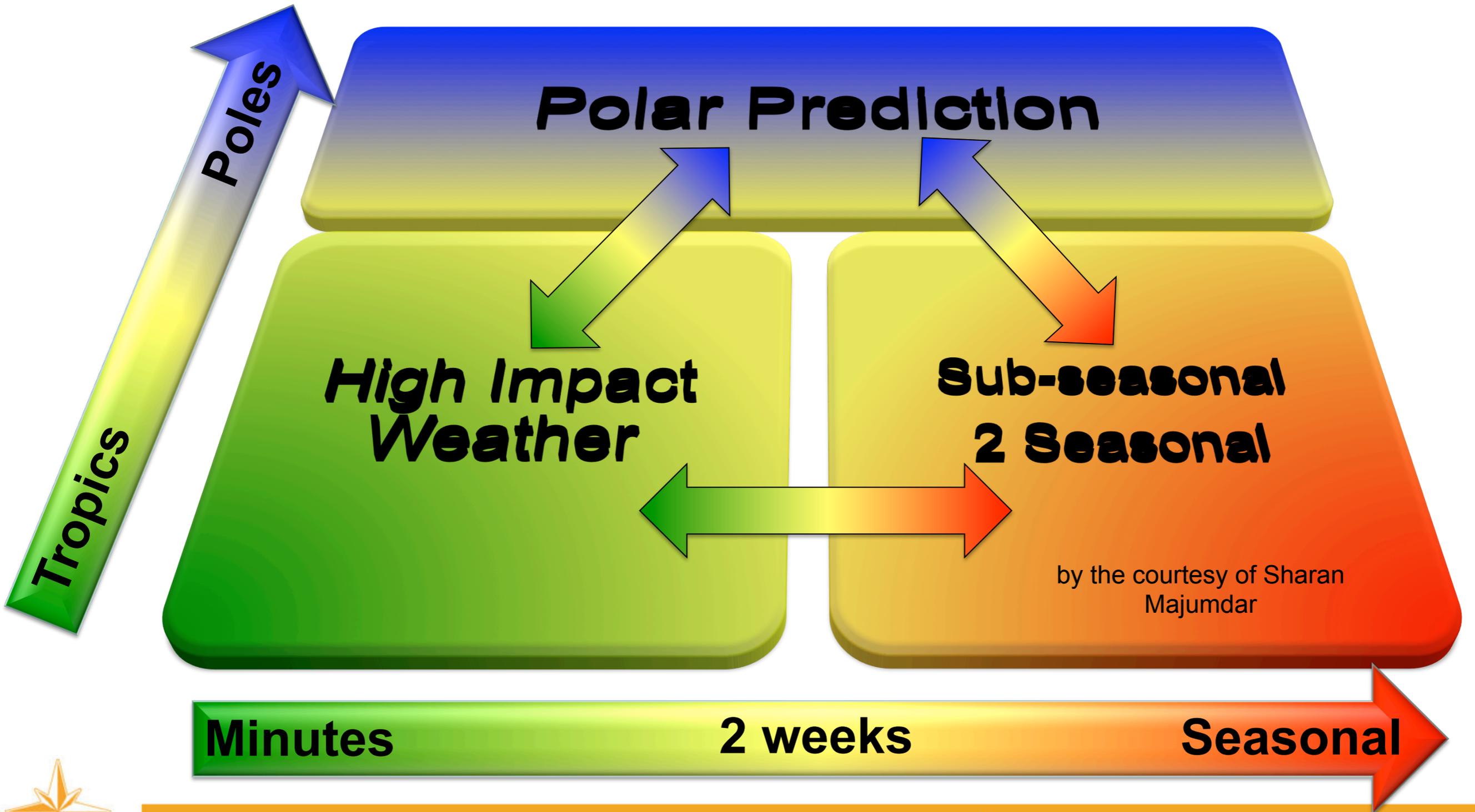
# THORPEX 10 years programme

- Adaptive observations
- Ensemble-based Data Assimilation
- Multi-center ensemble forecasting
- TIGGE
- Field campaigns





# The three WWRP strategic projects

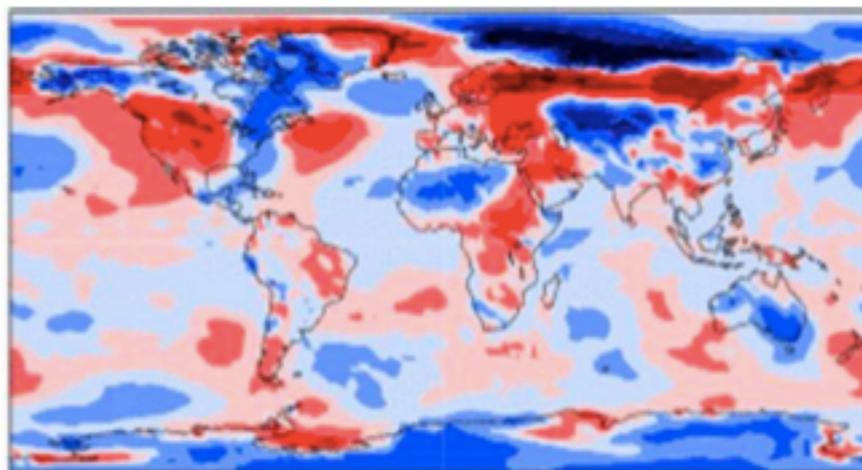




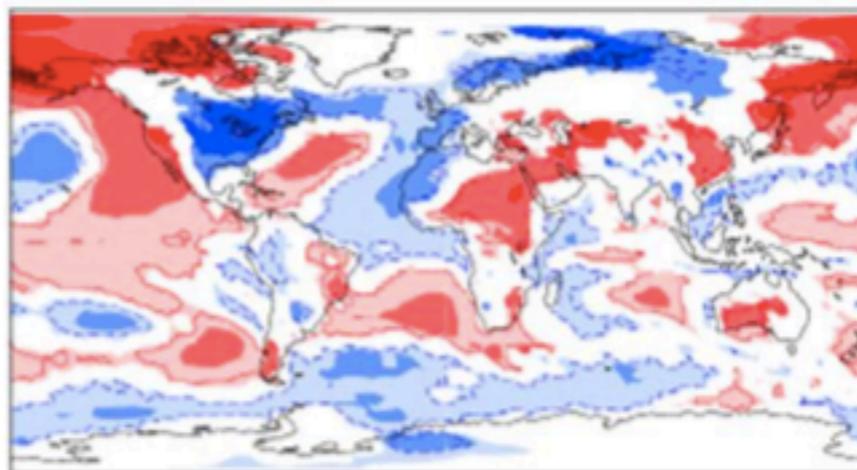
# Sub-seasonal to seasonal

## Day 12-18 2-m temp anomalies - Forecasts starting on 15/01

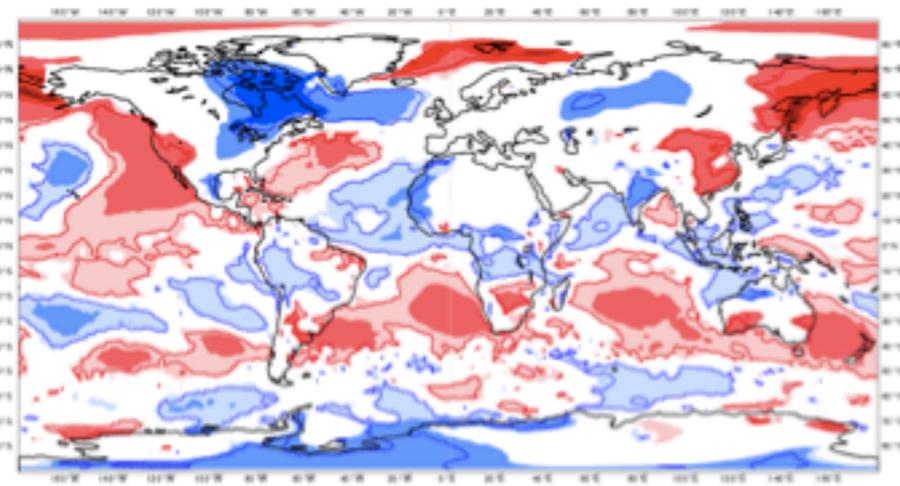
Verification



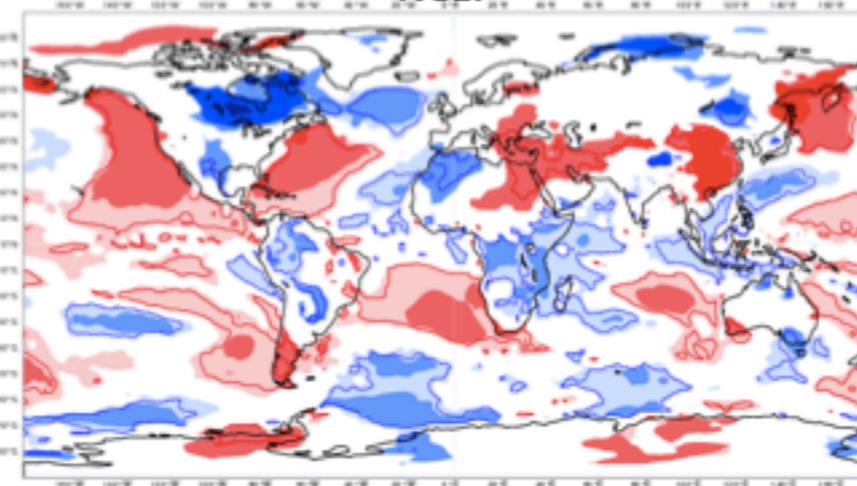
ECMWF



JMA



NCEP



SUB-SEASONAL TO SEASONAL PREDICTION  
RESEARCH IMPLEMENTATION PLAN

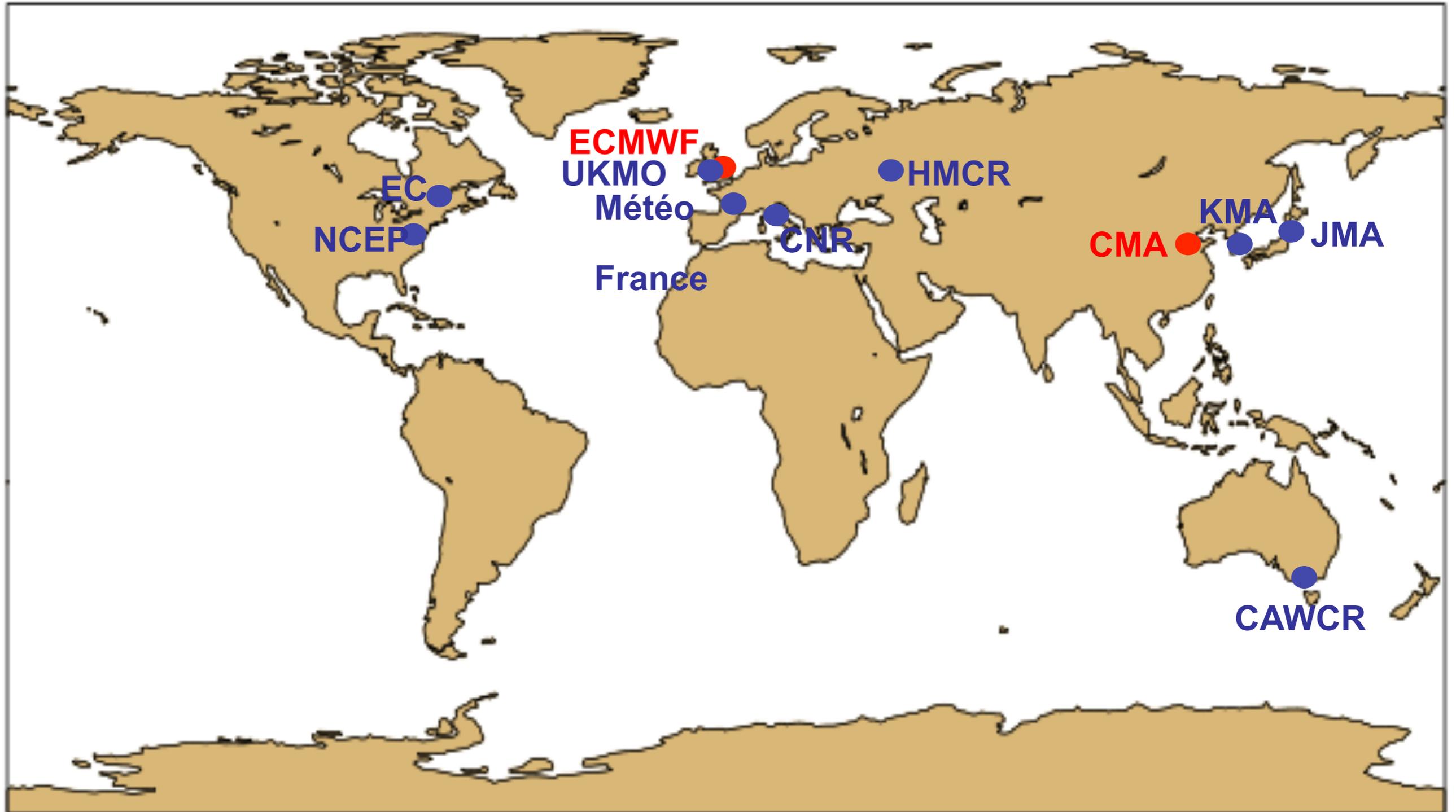




# S2S – TIGGE data base

● Data provider

● Archiving centre





# Sub-seasonal to seasonal



Workshop on Sub-seasonal to Seasonal  
Predictability of Monsoons

[HOME](#) [INFORMATION](#) [AIM](#) [FOCUS](#) [AGENDA](#) [SPONSORS](#) [ORGANIZED BY](#)

Workshop on **Sub-seasonal to Seasonal Predictability of Monsoons**

22 - 24 June 2015

National Institute of Meteorological Research  
Jeju, Republic of Korea

<http://s2sprediction.net>



Technical Commission for Atmospheric Science

Weather • Climate • Water



# Polar Prediction

## MISSION

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

This constitutes the hourly to seasonal research component of the emerging WMO Global Integrated Polar Prediction System (GIPPS).



Photos: G. Diekmann, S. Hendricks, M. Hopmann, AWI

## The WWRP Polar Prediction Project



For more information, please contact:  
International Coordination Office for Polar Prediction  
c/o Alfred Wegener Institute  
Helmholtz Centre for Polar and Marine Research  
Am Handelshafen 12  
D-27570 Bremerhaven - GERMANY  
Tel.: +49 (0) 471 48 31 17 61 – Fax: +49 (0) 471 48 31 17 97  
E-mail: [office@polarprediction.net](mailto:office@polarprediction.net)  
Website: <http://polarprediction.net>



## BACKGROUND

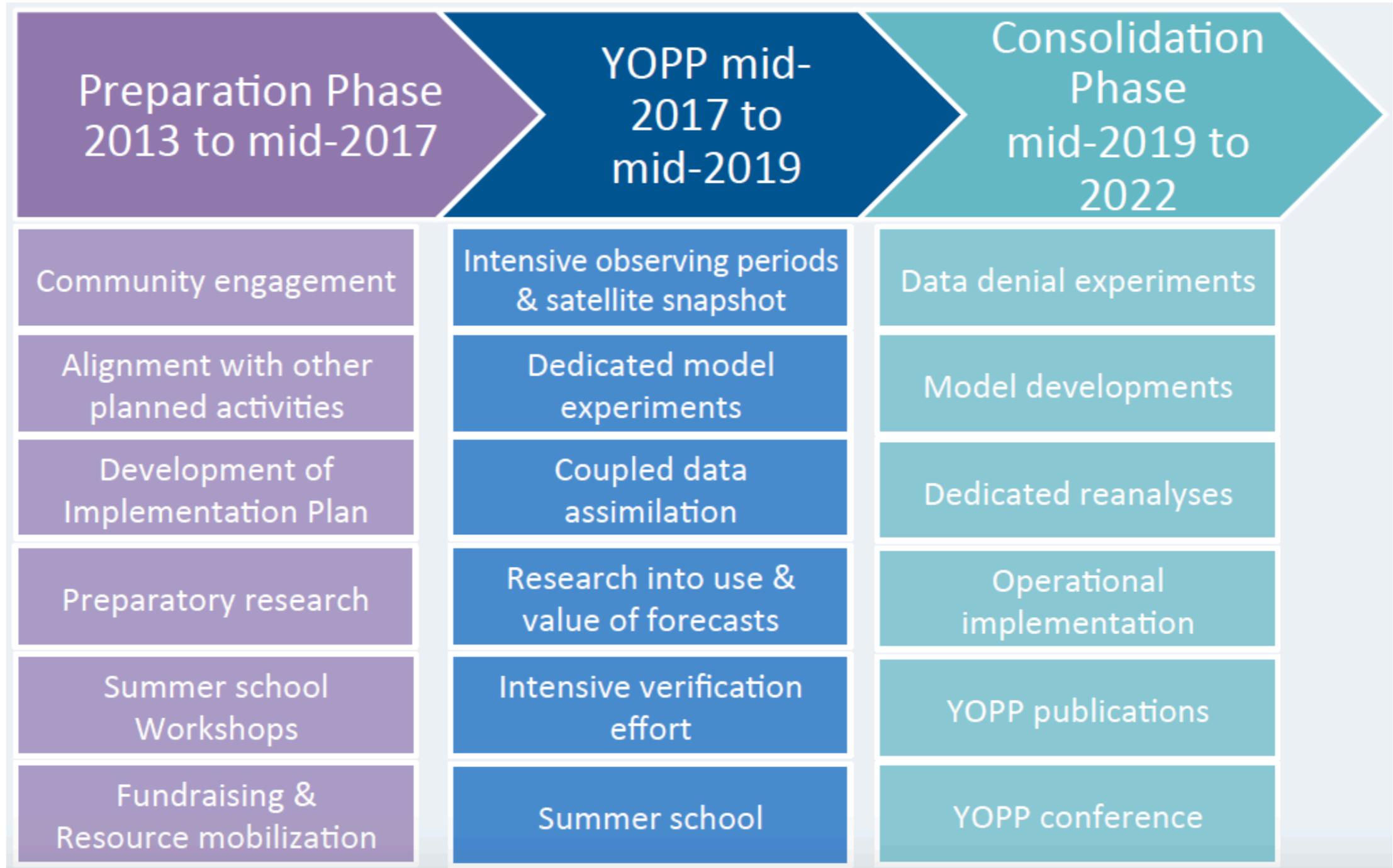
Interest in the polar regions continues to grow as the local amplification of anthropogenic climate change becomes apparent in the climatological record. Expansion of human activities in polar regions increases the demand for sustained, improved, and integrated observational and predictive weather, climate and water information in support of decision-making. Meeting the demand for such services will require the resolution of important knowledge gaps in polar regions across weather, sub-seasonal and seasonal forecasting scales.

The expected benefits go beyond the time scales (hourly to seasonal) and regions (Arctic and Antarctic) considered in the proposed research project. Anticipated improvements in the representation of polar key processes in coupled models will help to narrow uncertainties of regional climate change projections. Furthermore, improved environmental predictions in the polar regions will result in more accurate predictions for non-polar regions, especially in the middle latitudes.





# The Year of Polar Prediction





# Polar Prediction

## YOPP Summit, WMO, 13-15 July

# Polar Prediction

[Contact](#) | [Legal](#) | [Sitemap](#)



[Home](#) [About PPP](#) [YOPP](#) [Documents](#) [Meetings & Calendar](#) [Steering Group](#) [News](#)

[YOPP Summit](#)

[YOPP Meetings](#)

[Polar Prediction Project](#) > [YOPP](#)

## YOPP - The Year of Polar Prediction

The Year of Polar Prediction (YOPP) is one of the key elements of the Polar Prediction Project. YOPP is scheduled to take place from mid-2017 to mid-2019.

YOPP will

- cover an extended period of coordinated intensive observational and modelling activities in order to improve polar prediction capabilities on a wide range of time scales in both polar regions.

### Contact

[office@polarprediction.net](mailto:office@polarprediction.net)



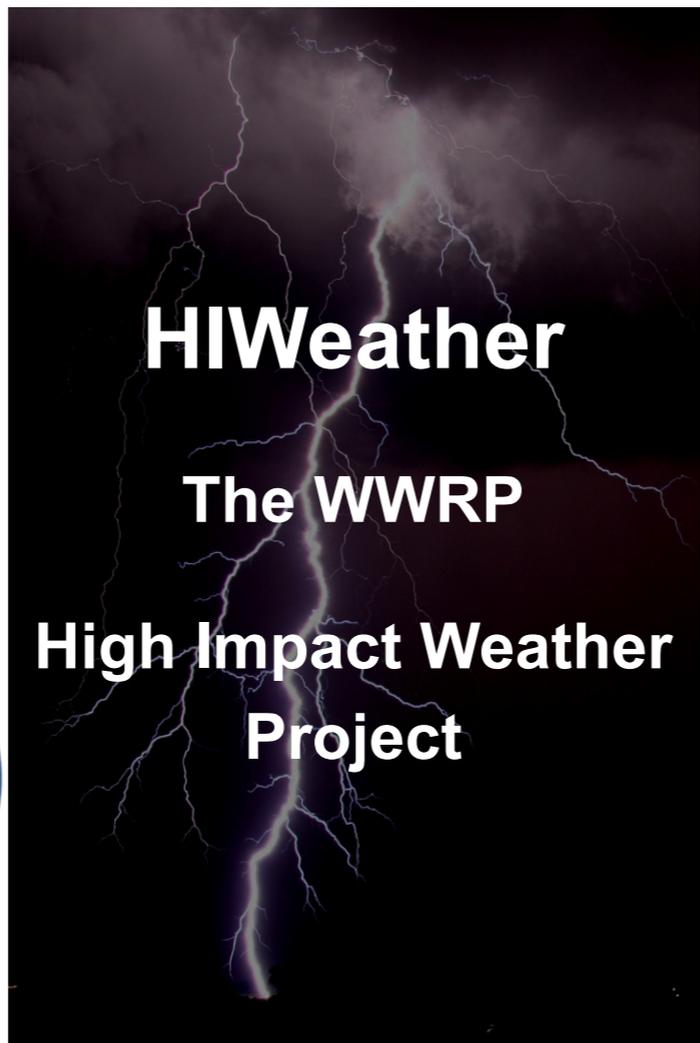
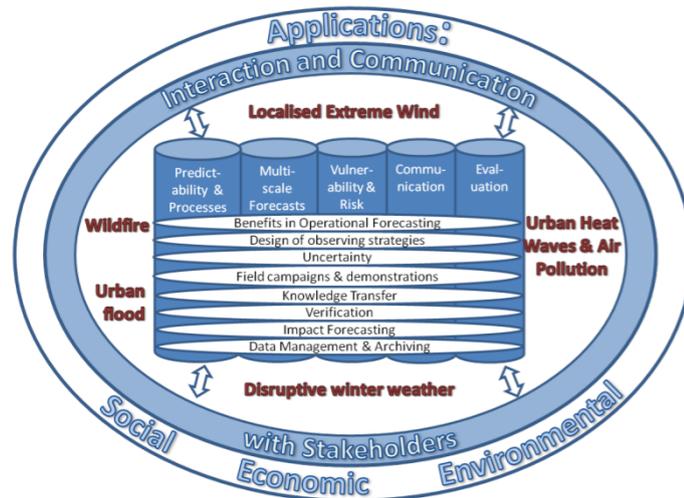


# High Impact Weather

## MISSION

Promote Co-Operative International Research to achieve a Dramatic Increase in Resilience to High Impact Weather, worldwide, through Improving Forecasts for timescales of minutes to two weeks and Enhancing their Communication & Utility in Social, Economic & Environmental Applications

## CONCEPT



## FOCUS ON SELECTED HAZARDS



### Urban Flood:

Reducing mortality, morbidity, damage and disruption from flood inundation by intense rain, out-of-bank river flow, coastal wave & surge

### Wildfire:

Reducing mortality, morbidity, damage and disruption from wildfires & their smoke.



### Extreme Local Wind:

Reducing mortality, morbidity, damage and disruption from wind & wind blown debris in tropical & extra-tropical cyclones, downslope windstorms & convective storms, including tornadoes

### Disruptive Winter Weather:

Reducing mortality, morbidity, damage and disruption from snow, ice and fog to transport, power & communications

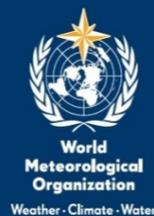


### Heat & Air Pollution in Megacities:

Reducing mortality, morbidity and disruption from extreme heat & pollution in the megacities of the developing and newly developed world.

For more information, please contact:

Prof. Brian Golding, Met Office, FitzRoy Road, Exeter EX1 3PB UK Tel: +44-1392-884659 Email: [brian.golding@metoffice.gov.uk](mailto:brian.golding@metoffice.gov.uk) Website: [http://www.wmo.int/pages/prog/arep/wwrp/new/high\\_impact\\_weather\\_project.html](http://www.wmo.int/pages/prog/arep/wwrp/new/high_impact_weather_project.html)





World Meteorological Organization

Weather • Climate • Water

**Thanks**

**[pruti@wmo.int](mailto:pruti@wmo.int)**