

# International workshop on polar-lower latitude linkages and their role in weather and climate prediction

## Barcelona, 10-12 December 2014



### Guidance document

#### 1. Workshop description

The main goal of this invitation-only workshop is to identify the main challenges that prevent the community from making progress on the topic linkages between polar and lower latitudes in a weather and climate prediction context, and to discuss a coordinated set of actions to address them. The workshop is structured in sessions with scientific talks and breakout group (BOG) sessions addressing three scientific topics:

- Atmospheric processes and mechanisms: Severe weather and climate events in mid-latitudes might be related to major changes in high latitudes including loss of Arctic sea ice, reduced late Northern Hemisphere spring snow cover and changes in the Southern Hemisphere atmospheric composition.
- Oceanic Processes and Mechanisms: Skill in predicting important mid-latitude variables could be harnessed from high-latitude oceanic processes at subseasonal-to-decadal timescales.
- Implications for Prediction and Services: A better understanding of the links is key to obtain insight where and to what extent future investments in forecasting system development in polar regions (e.g. observing system and coupled models) can provide benefit for the prediction of weather and climate in lower latitudes and hence different service sectors such as energy and agriculture.

The topics are fully described in the workshop web site <http://polarprediction.net/linkages>. The outcome of the workshop will be a brief report addressed to the scientific community and the main funding bodies with a set of recommendations of what are the most urgent actions to make progress in this rapidly-evolving field. This will also help WWRP, WCRP and GFCS in its own reflection on future activities and the major areas where efforts in research, modelling, analysis and observations are needed.

Workshop participants will provide their views on debates held on the three topics chosen, which are considered as essential for the progress in the link between polar and lower latitude regions in a prediction context. Existing scientific material and existing challenges will be briefly described in the document to be prepared ahead of the workshop.

The workshop registration is free.

#### 2. Preparatory activities

##### a. Keynote presentations and challenger talks

There will be two keynote presentations of around 30 minutes for each topic, which will set the scene. The keynote presentations will be followed by several shorter and sharper talks on outstanding research issues that the community should consider for future work. Material from the presentations will be made available to the BOG chairs, and early contacts of speakers with the appropriate BOG chairs will be encouraged.



## b. Breakout groups



A substantial part of the workshop will be devoted to the BOG sessions. The scientific committee has planned one BOG per scientific topic, except for the “Atmospheric processes and mechanisms” that will have two BOGs. Chairs are particularly encouraged to engage with early-career scientists during the BOGs. All BOGs will report back to the plenary.

Each BOG will have one chair and one rapporteur selected among those volunteering. The chair has freedom to organise the session and could schedule presentations during the BOG session. An agenda will be prepared in consultation with the scientific organising committee. The debate will start from the issues identified in the pre-workshop document. More specifically, the role of the chair is to:

- Prepare an agenda for the BOG
- Guide the discussions, keep the discussions focused, avoid too large distractions
- Address different views and maintain balance
- Steer the group towards a set of agreed key points (a bullet list), which will be presented to the plenary
- Work with the rapporteur to provide input to the workshop report and scientific publication to come out of the workshop

As for the BOG rapporteur, his/her role will be to:

- Take notes of the discussions
- Prepare with the chair the bullet list to be presented to the plenary
- Prepare a 1-2 page summary of the discussions together with the BOG chair

Both are expected to take part in the workshop report and publication.

Although any participant can take part in BOG discussions during the workshop, it is useful to have some indication of BOG membership ahead of the meeting. The BOG participant list will be made available in advance following the participants’ choice at the time of registering, although the final distribution will look for a similar number of participants in each BOG.

## c. Pre-workshop document

A document will be distributed ahead of the workshop describing the main issues that should be discussed during the BOG sessions. This brief (a couple of pages per scientific topic) document, which will be prepared by volunteering participants, is not expected to be a description of the state-of-the-art, but rather a way for the participants to steer the workshop and to increase the efficiency of the BOG sessions. A leader, assisted by two early-career scientists, will be identified for each topic to collect the information that will be included in the document.

The volunteers contributing to the pre-workshop document are expected to use all the information available from previous related meetings. This information, along with additional documents, has been collected in the following page [http://ic3.cat/wikicfu/index.php/PPP#Other\\_related\\_meetings](http://ic3.cat/wikicfu/index.php/PPP#Other_related_meetings).

## 3. Workshop material

The local organising committee will collect all the material shown at the workshop. The material will be distributed electronically to all meeting participants every day after the meeting adjourns. All the meeting material will be made available to the participants within a few days after the workshop’s end.