Responses to Survey on the WCRP Strategic Plan from the WGRC

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Our general view is that in order for WCRP to sustain a visibility and relevance in the changing landscape of climate research, and especially in light of the substantial acceleration in linking science to society and developing knowledge for decision needs, it is imperative that the WCRP proactively engages with and supports an explicit effort on regional research and information. This was the initial intent of the WGRC, which due to circumstances was never adequately enabled, and as a result contributed to the present need for the WCRP's new strategic plan.

Response to survey questions:

1. What needs to be expanded upon in the WCRP Strategic Plan in terms of specific activities? What are the key steps, tasks and actions (and approximate timeline) that are needed for the Strategic Plan to be implemented?

Whilst the Strategic Plan briefly notes some issues relating to scale (e.g., 'a range of scales' in Objective 1, 'regional climate hotspots' in Objective 2, 'downscaling' and 'regional and extreme phenomena' in Objective 3, 'local to global' and 'all regions of the globe' in Objective 4) it does not explicitly refer to the issue of 'climate information for regions' or the extensive WCRP discussions on a 'Framework for WCRP Regional Activities' which took place in 2016 and 2017. However, these issues must be part of the Implementation Plan if the WCRP is to satisfy its goal under Objective 4: "We will support innovation in the generation of decision-relevant information and knowledge about the evolving Earth system."

In this context, we urge participants in the WCRP Implementation and Transition Meeting and JSC40 to revisit the <u>Recommendations on a Framework for WCRP Regional Activities</u> which were tabled at JSC38 (a longer report from the <u>scoping meeting</u> held in Hamburg October 2016 which developed these Recommendations is also available).

Assuming that the recommendations of the 2016 meeting are considered adopted, it would be important for the Transition Meeting/JSC40 to consider how the three proposed Legs to support regional activities fit with the four objectives of the WCRP Strategic Plan. For convenience the 3 proposed Legs are:

- Leg 1: Foundational Climate Science (Curiosity-driven knowledge/Fundamental research)
- Leg 2: Application-inspired Climate Science (Research for 'actionable' knowledge)
- Leg 3: Trans-disciplinary Engagement

For example, Leg 3 clearly maps to objective 4, while Leg 1 maps to objectives 1, 2 and 3, and Leg 2 would sensibly map to objectives 2 and 3.

2. What would be an ideal WCRP structure to implement the new strategy? How fit for purpose are the current suite of Core Projects, Working Groups, Grand Challenges etc.? What works well and what should be changed?

The Working Group on Regional Climate (WGRC) was set up in 2013 with the broad mission to 'co-ordinate regional climate research and science-based knowledge development for decision makers' but essentially stopped work when resourcing for WGRC was suspended in 2015/2016. A document submitted to JSC37 by the WGRC includes a useful summary of the WGRC activities and lessons learnt about information for regions – the first two sections of the document provide useful background material for the Transition Meeting/JSC40.

We strongly promote the view that the WGRC, or a similar Working Group on Information for Regions (WGIR) as proposed in the Recommendations on a Framework for WCRP Regional Activities (see response to Question 1), should be a high priority and incorporated prominently in the revised WCRP structure. For the WCRP to transition to the realities of current climate science agendas and remain relevant, visible, and well supported, the WGRC must be well linked into the regional issues of information and knowledge needs in the societal decision space. This requires an explicit engagement as intended for the WGRC or the proposed WGIR.

The original <u>WGRC Terms of Reference</u> were overly lengthy and wide ranging and initially caused issues in what activities to prioritise. A new ToR for the WGRC/WGIR would need to be reviewed and revised, taking into account the setting up of CORA and changes in CORDEX (including the now well-established IPOC).

The <u>membership of WGRC</u> was deliberately diverse and broad encompassing early career scientists and social scientists. This is essential in order to bridge the foundational science of the WCRP to the broader community. Such diversity needs to be retained, and even expanded further, particularly with respect to objective 4 of the WCRP Strategic Plan.

To be effective, any WG needs to properly resourced with funding available, for example, to hold face-to-face meetings and in the case of the WGRC/WGIR to engage with the external points of connection required to effect the engagement of the WCRP with regional activities and organizations. Virtual meetings can be productive to some degree when a WG is well established (and help reduce carbon emissions), yet they are not well suited to discussion on complex and nuanced issues. In the case of the WGRC, the past withdrawal of resourcing and support meant that the WG effectively ceased operation.

A recurrent problem in the WCRP discussions on climate information for regions has been lack of focus and appropriate implementation mechanisms. As a way to develop mechanisms to advance the research on developing information for regions, JSC36 requested the WGRC to take responsibility as an implementing agent of FoCI (Frontiers of Climate Information) Projects with a city/regional focus. The WGRC subsequently tabled an Implementation Framework for Frontiers of Climate Information (FoCI) Projects at JSC37. The Recommendations on a Framework for WCRP Regional Activities endorsed by JSC38 include recommendations relating to the development and organization of calls for FoCI Projects. It is important that the Transition Meeting/JSC40 revisit the FoCI Project concept and consider how it could be incorporated in a revised WCRP structure (ideally under the auspices of the WGRC/WGIR).

3. What is needed to successfully transition from the present state to the new WCRP?

Use should be made of the considerable expertise and knowledge that has developed through earlier WCRP activities. In the context of climate information for regions, and objective 4 of the WCRP Strategic Plan, we urge the Transition Meeting/JSC40 to draw on the written material from earlier discussions on the WGRC, the recommendations on a Framework for WCRP Regional Activities which were tabled at JSC38, as well as the Frontiers of Climate Information (FoCI) Projects that are all still available on the WCRP website (see, in particular, documents tabled at JSC37 and JSC38).