David Behar 7 December 2012

Attached are my suggestions for the WGRC Terms of Reference. The focus, as you might expect from my end of things, is on clarity re: user engagement with climate science. It occurred to me after putting them together that I'm not sure the degree to which the GFCS (or WGRC) is about connecting users to climate science vs. connecting climate service providers to climate science. These are two somewhat different things. My belief is that direct conversations between scientists and end users are of great value. Where the scientists are employed at climate service organizations, and therefore get paid to have those conversations, all the better. I'm not clear the degree to which that goes on in Europe or elsewhere in the world. In any case, I think we should be encouraging direct contact between end users of climate information and those who produce it. My comments largely reflect that belief.

Thanks, and any feedback on my feedback as I feel my way forward in this new group would be very welcome.

David

# Kendra Gotangco 4 December 2012

Attached are my few comments/points to ponder on the TOR. I share the concern brought up in the teleconference about "how far down the continuum" our work extends with regards to translating research in decisions/actions. I think the working group is uniquely poised to be the "bridge" but it will require some thought and planning as to how to balance the coordination between different research and stakeholder groups.

# WGRC TOR Comments / Questions:

- 1. Would it be fair to say that this new working group on regional climate is distinct from the other research working groups in that it is positioning itself in the "nexus", so to speak, of science and society, trying to bridge the gap between the research producers and the diverse end users/stakeholders?
- 2. The TOR in #7 includes liaising "as appropriate with other relevant weather oceanographic, climate and global change research programmes sponsored by the WMO, IOC and ICSU, and communicate science priorities to funding agencies, NGOs and development agencies." The former represents mainly the physical scientists and researchers, while the latter represents practitioners on the ground or organizations supporting actions on the ground. However, there are still other groups that we may need to consider liaising with. For example:
  - a. How does the working group envision interfacing with governments or government organizations? These represent a major stakeholder / end user group as decision-makers striving towards informed, holistic, evidence-based policy, and may themselves be a coordinating body for climate change mitigation, adaptation and sustainable development initiatives.
  - b. To what extent might the working group also be liaising with research programmes in the other "societal dimensions" of climate change, e.g. social sciences, economics, policy, ethics, multi-sectoral impact assessment groups? This may be important in bridging the gap between the climate information/services provided and actual needs of different end users.

However, we may need to consider how to balance our coordination with these different types of groups, and set priorities for which networks to establish first.

3. Fostering communication among research programmes and end users is clearly a significant component of the TOR. Can the working group therefore also aim to help support research on climate science communication? Since our end users are diverse, this researchcould include analysis of multi-stakeholder perceptions, and would contribute towards developing better, and more targeted communication strategies and products. I am aware that multi-sectoral consultations were already held in the process of defining the implementation of the GCFS – the working group can build on that.

### Annette Rinke 9 December 2012

the only comment I have to ToR is to point 4: I think the information for impact assessment, decision making depends quite strong on the region.

As my expertise is more on polar regions, for the Arctic, for example coastal erosion, sea level rise, forest fires, environmental disasters (oil drilling and spilling), biodiversity are quite important topics! Others, e.g. extreme weather phenomena (e.g. things like hot days, warm spells) and disaster risk are relevant everywhere.

May be would be good to summarize the information mostly needed for different regions in one of our later activities . For this IPCC WGII is relevant.

Thanks! Annette

Clare Goodess 19 December 2012

Kendra raised some interesting questions. With respect to her second question (2a and 2b) – I think these should be discussed by the task team that we agreed to set up. This task team should also consider the comments from David – particularly as regards direct contact with end users of climate information. My view is that we certainly should be encouraging such direct contact between users and providers – but it is not clear that this is something we should be doing ourselves (except perhaps where no organisations/links currently exist to allow this direct contact). Thus I've included a mention of the Climate Services Partnership in point 2.

Annette makes some interesting points about the regional dependence of user needs (giving the example of the Arctic). This is an issue that could be perhaps be addressed in one of our reports and/or workshops.

#### Jan Polcher 19 December 2012

with the mind set on my comments on the TOR, I have revisited the Grand Challenges !

Take first a look at the with paper for "change in water availability" which I have worked on and discussed with my GEWEX hat on. The problem of observing the water available is key to that with paper and at the same level as predicting its availability. The fact that not one observing system can get the full picture is see as a challenge.

When you turn then to the regional climate with paper you see that it is overloaded with predictions and very little is said about getting the data needed in order to respond to user needs. Well you will get nice forecasts for rainfall for the next decades or centuries for rainfall for the pond in the middle of Kumasi which is the breading ground for the malaria carrying mosquito. But you have no mean to verify that what the model call precipitation has any relation with reality and how that is related to the number of mosquito or their virulence. You will not get that from the nice satellites they promises us ... not even the infection rates :-)

You might argue that the "Water availability challenge" neglects totally the human side of water. So how useful is it for agriculture, hydrological systems or human use ? But I would reply that this a question we can only address at the regional scale.

So perhaps we do not want to overload the "regional challenge" with observation issues, but at least we need to recognize the need and then point toward to the other grand challenges ... if possible. Rainfall is an easy case but if you consider other applications then water resources it will start to be difficult.

These are my 2 cents for the grand challenges.

Jan Polcher 19 December 2012

I have looked in detail at the TOR and I think it should be quite easy to add the observational issues in there. For me it would fit best in point 4 if we turn it into something like :

4. To provide advice regarding the provision of information for impact assessment, decision making and climate services, particularly as related to health food and disaster risk reduction. This in particular means ensuring observing networks are maintained over the long term and adapter to user needs.

Under the general term "user needs" I want to hide activities like model validation/calibration, downscaling procedure, process understanding, ...

Maybe I am too direct with this sentence but I feel quite strongly about associating user needs ("impact assessment, decision making and climate services") with the maintenance/adaptation of observing networks. Many users take the data needed for their application as granted and live with the philosophy "I will google it up !".

The success of meteorological applications in the 60s and 70s is largely due to the aviation application and the willingness of the users of the air space to contribute in kind or financially for the observing network ... why are most weather stations in airports ? I think it would serve us well to take some inspiration from this historical heritage.

Annette Rinke 9 January 2013-01-29

Hi Clare,

I have read the white paper. I do see all the aspects and topics very well covered! Concerning the last section ("initiatives"), where input from us is required, here are my few comments according to my background:

One question is here, how many initiatives are meaningful. May be it is better not to come up

with a bunch of initiatives, but few of them. I think all what is already written under frontier 3

is an initiative, what is very relevant. And, in principle I find this already covered in the initiative 1.

Concerning Cordex, I think so far most of the activities focus on Africa, Europe, Asia, and South America.

For those domains already multi-model simulations and nice results are available where Cordex contribution

to initiative 1 can built on. We might be interested to foster the Cordex simulations for the Arctic,

which is a hot-topic domain.

Greetings, Annette

## Kendra Gotangco

Thank you for the revised TOR - I do like the statement about stakeholders and researchers "co-producing" initiatives. I apologize also for my delayed comments on the WCRP Grand Challenges.

Initiatives 1-2 seem to be broad enough to encompass what the WGRC would like to do vis-à-vis our own TOR and Frontiers 3-4; but because they are broad, it is a little difficult for me at this stage to envision, in concrete terms, how we are going to operationalize the initiatives and what are our parameters for implementation. I think that it will be crucial for this to discuss this in more detail when we meet face to face so we can plan our specific activities over the next 3 years (e.g. discuss the goals, content, participants would be of the series of workshops mentioned in the document).

It is mentioned that there are multiple complementary activities underway. I wonder if we could start with comprehensive stock-taking or databasing of these other activities/initiatives/ partnerships/networks (at both the global and regional scales) so that we can better identify where we stand in the "landscape" of climate information and services, and how exactly we can interface/partner with others so as to reduce overlaps and maximize the use of resources.

Because of a recent conversation with our university president on sustainability, I also wonder about the focus being on "adaptation and risk management" without mitigation. I understand that the context here is providing information for IAV applications but one could argue that the goal of IAV studies is to help make better decisions about development pathways. These would necessarily include the energy sector, transport sector, industry etc., which are mitigation-related. So it would seem that mitigation, adaptation and risk management all fall within the scope of lifestyle or development decisions and climate action planning, for which climate information would be relevant. In addition, if we talk about risk management, then following the simple framework for risk as the confluence of hazard, exposure and vulnerability, then mitigation helps address the hazard component.

This comment probably applies to the TOR as well since the preamble focuses on assessing impacts and risks and planning adaptation measures; but it also transportation and energy production in the list of climate-sensitive areas. Clare Goodess 20 January 2013-01-29

#### Dear Kendra

Many thanks for your comments and apologies for the delay in replying.

As you indicate, many of the points you make should be discussed during our first face-to-face meeting and on an ongoing basis.

In relation to your second point/paragraph about complementary activities, it would be good to do some preliminary work on the identification of other activities etc in advance of our April meeting. We were already proposing to include links to some of these on the web site, for example - which should be launched shortly. But I think we need to be careful particularly in how far down the spatial scale we go in cataloging activities. We don't want, for example, to be repeating work that the CSP is doing. And it's likely that the proposed European climate services association will catlogue European activities. Probably this is part of the 'continuum' debate.

The issue of mitigation is difficult. While it's not explicitly mentioned in our ToR currently, it's certainly an issue that needs to be considered in the development of best practice guidance, for example. So again, I suggest that we have some discussion on this during our meeting.

## Tim Carter

## On preamble:

This implies to me that the only role of the WGRC is to serve the needs of the GFCS. I sincerely hope that is not the case. Moreover, it also suggests that WGRC's role in WCRP is to be the liaison point for WCRP with climate service providers and users. I wonder if this can really be so - that would place a heavy onus on this groupto take over many of the tasks previously shared among other WCRP research programmes,. I somehow doubt that this is the intention, or that other WCRP programmes would wish to abrogate their earlier responsibilities in favour of this group.

Again, this implies that the group is viewed as the research arm of the GFCS. I would hope that the remit is somewhat wider, as GFCS is still under development, as is only one conduitof many for regional climate information.

## Original ToR 2:

I would either merge this (specific) item (point 2) into current point 7 in the list, or move it to become the final point. The other points are more general, relate purelyto research developments and prioritization, and are not tied to specific institutions (those that are mentioned are merely listed as examples). Point 2 is also too detailed, and could be made much shorter and more general. In my view, the detail of how WGRC interacts with GFCS, ESSI and other international agencies and programmes should be determined later, following extensive discussions with the relevant organisations.