

Task Team on Regional Activities (TTRA)  
9th Conference call, 1 October 2020, 14-15:30 (CEST)

**Participants:** Daniela Jacob (chair of the meeting), Silvina Solman, Clare Goodess, Irène Lake, Lindha Nilsson, Krishna Raghavan, Peter van Oevelen, Ken Takahashi, José Santos, Li Jing, Paul Bowyer, Gaby Langendijk; Narelle van der Wel & Anke Schlünsen-Rico (Notes)

**Apologies:** Lisa Alexander, Mike Sparrow, Beatriz Balino, Bill Gutowski, Stefan Sobolowski

### Agenda

1. The design and development of the template with ANDEX and GWF as case studies
2. What kind of ingredients do we need to consider to delineate the flow of information in two way between basic research and stakeholder?
3. How can we consider all time and space scales on which information is available and/or needed and used?
4. The way forward: how to do this

### Summary of decisions and actions

1. The TTRA agreed to shift the discussions from future structural organisation of WCRP to a content-driven discussion regarding the scientific connectivity between the different groups in WCRP
2. The TTRA agreed to co-design a template in dialogue with ANDEX and GWF. The GWF can provide an insight on how they tackled some of these issues, and the TTRA can then use lessons learned in the discussions with the ANDEX project and the Hydrometeorological Services in South America and see how does the GWF "methodology" fits our case.
3. We do have an operational weather forecasting community but we don't have an operational climate forecasting prediction/projection community. The template could help to develop this idea.
4. The goal of the template is to capture the flow of information between researchers and stakeholders (both the operational climate service community and the end-users) considering all time and space scales so that to include forecast and climate change scenarios. The template will contribute to fulfill WCRP objective 4: "Bridging Science with Society". Another way of putting it is: "Connecting the 3 legs: understand how the flow of information goes from the basic science in leg 1 to the more applied scientific activities in leg 2 to the outreach and consulting oriented activities in leg 3 (and how the information from leg 3 feeds back to leg 1)".
5. Preliminary categories/questions to include in the template:
  - Two layers of stakeholders: Operational community and end-users
  - Climate services - operation science dialogue
  - Layering type of research - different pathways and time scales depending on the research
  - Multiple sources of information - very little guidance on best information. How to build guidance material, particularly for end users?
  - Regional optimization of the information, particularly for regions with common climate drivers: stakeholders picking up what is most easily available - not always the best and not coordinated - leads to regional inconsistencies.
  - Lack of projections or lack of access to quality/sufficient projections (science/knowledge)
  - Upscaling of best practices
  - Capacity development/exchange

**Kommentiert [PvO1]:** Overall comment: We have had some really good discussions but I sense the energy is dissipating (maybe I am wrong)... Anyway, what concerns me is how to make sure that what we discuss is being taken up by the wider community and considered by the JSC. I comment further on this also but the way the modelling folks went about it with their document and options for a new home is one way to achieve that.

**Kommentiert [PvO2]:** Although I agree that discussing the „what“ is important we should not shy away from the discussion on structure. I very much liked what the modelling community has done for the modeling home and presenting various options. We should talk in the not too distant future about this. I like to get clarity on that. Currently CORDEX is very clearly defined I can see that becoming blurred for example. In addition, the role of CORA in support of regional activities across the board is something valuable. Just a starter for a conversation...

**Kommentiert [LI3]:** Agree with Peter and specifically we keep coming back to that it's very unclear regarding CORDEX and CORA or at least it is unclearly stated so far. It has not really been discussed in the group what we want and the 'what' is of course extremely important but can't be accomplished without the 'how'.

**Kommentiert [BMBB4]:** This is what I gather from the transcript. Please correct me if I am wrong....

**Kommentiert [PvO5R4]:** This is crucial to get right. Not easy to do.

**Kommentiert [LI6]:** And again – this formulation of me sort of underlines the importance of a structure to support this.

**Kommentiert [LI7]:** Think there is a huge demand for this and at the same time a bit delicate not to step on some toes so to say.

**Kommentiert [LI8]:** Could perhaps include 'projects' like the African demonstrator, 'user cases'...

- Bears the potential to come up with new cooperation/collaboration proposals for some regions and fits within WCRP Academy Lighthouse Activities.
- Enhancing the connection to Future Earth community.
- Considering the different perspectives (pathways, intermediate/final users) associated with the 3 first WCRP strategic objectives in order to connect their corresponding science to society:
  - Fundamental understanding
  - Near-term prediction
  - Climate change projections
- 6. The TTRA is to review existing documents on this topic (gaps, best practices, etc) in order to avoid duplicating previous efforts or overlap with existing activities. Suggested readings are:
  - i. [WMO Climate Services Information System \(CSIS\) reports from 2017](#),
  - ii. [WMO Executive Council draft document on regional infrastructure \(to be approved\)](#).
- 7. It was suggested to expand to the group with experts in climate predictions, also to help lead the work of the TTRA.
- 8. The main topic of the next meeting of the TTRA shall be the template: what is missing, how far we got and if we want to continue in this direction.

**Kommentiert [PvO9]:** Do not know yet what this light house activity will be ...but from GEWEX point of view capacity development should be considered for everything we do... preferably in collaboration with existing entities and structures

**Kommentiert [PvO10]:** Not sure what is exactly meant here... regional climate predictions? Or? See my top comment on energy in the task team... expanding it might be counterproductive. (I realize we need experts but this is a slippery slope... I rather have a document where some of these experts can comment on instead of bringing in everyone everywhere...)

**Kommentiert [PvO11]:** See my previous comment: I think we should do both (structure and content) despite the time resources and additional effort required. We are going to have to address it at some point. Better to be ahead of the game.

**Kommentiert [LI12]:** Agree that it might be better to have experts comment on a draft as it is maybe not completely obvious to someone who has not been involved from start what we want to do here...I mean it was rather shady for us involved and in some ways still is.

#### Actions

- CORA to draft the text to inform about the background of the inquiry and expectations from GWE and ANDEX contacts. To be circulated first among the TTRA members for comments and approval. ASAP
- Van Oevelen and Solman to contact GWF and ANDEX respectively, by email first. Consider inviting the GWF and ANDEX contacts to the next TTRA telecon
- WHO? To invite scientists working on climate predictions to expand the expertise of the TTRA
- CORA prepares a doodle poll to book the next TTRA telecon in week 47 (16-20 November)

Please see below the transcript of the meeting.

**Transcript**

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Daniela: It has not been clear what is happening with the restructuring in WCRP and confusion over the names of the Homes and Core Projects. I understood this wrongly, as there is no difference with the old Core Projects and the new homes. There will be 6 entities, called Core Projects or Homes, but it is not decided as this is in the transition phase.

All equally important and filled with science. At the same time Helen, the IPOs and the secretary they were very active in the organisation of regional consultations and we have send out the names of active people for the regional consultations as well as for the LHA and I heard that the first contact to the regional focal points will start the week after next week. So Helen, Detlef and the secretary will contact the regional focal points and discuss how those town Hall activities could be organized. There is some movement ongoing, and some more clarifications will be expected.

The idea, which Silvina and I discussed last night, that is where the agenda is coming from.

*Agenda*

- 1.- The design and development of the template with ANDEX and GWF as cases
- 2.- What kind of ingredients do we need to consider to delineate the flow of information in two way between basic research and stakeholder?
- 3.- How can we consider all time and space scales on which information is available and/or needed and used?
- 4.- The way forward: how to do this

First of all it's important that we agree on the minutes from last time.

Peter: If we do it formally than we need to have an updated version of the minutes with the comments. Do you prove minutes as written or do you prove all the comments that have been given on the minutes? That's a bit of a tricky issue. I'm fine with the minutes but if we go formerly this way ...

Daniela: You are right. You mean the comments from the email discussion after the minutes have been ...

Peter: Yes exactly and on the minutes itself.

Daniela: So should we go that way? Because we haven't done this formally the last times, didn't we?

Peter: No and that's why I'm trying to say actually I think the minutes are fine, take it a little bit informally, otherwise we get too much discussion probably.

Daniela: Ok. Since we have only 1 hr today we would like to bring forward the discussion which we had stopped last time, on the connection of the 3 legs. I think it's important, since the 4th objective in the strategic plan, bridging science and society needs to be filled a little bit with life. I think it was a great idea here in the task team to go along cases, or ideas and case studies and last time ANDEX and the GWF were mentioned as cases we have not discussed with them as far as I'm aware of. I saw Peter, you were asking about this and obviously you are right but the idea today was to come back to this point and to probably agree on that we really would like to go forward with the ideas last time, that we try now to understand how the flow goes from the basic science in leg 1 to the more applied scientific activities in leg 2 to the more outreach and consulting oriented leg 3. I think that would help us a lot to understand the different flavours of information which is needed. That's what Silvina and I we wrote down, last night unfortunately, we couldn't distribute it earlier on this agenda. The topics which we wanted to discuss and then I handover to you, Silvina, to maybe comment on this: Should we try to design and

develop such a kind of template with a long sum cases like ANDEX, GWF and maybe others in order to understand what the ingredients are? We need to consider to delineate the flow of information between research and stakeholders. And also it's quite important for us how can we consider all time and space scales so we can talk about forecast, but also about climate change scenarios and the type of information, the demand for information for the various time scales is quite different and also the type of products which will then be needed and the research. If this would be the content which we are discussing today, then at the end we should discuss how we are going forward, how do we develop this template, how do we inflate it, with whom do we have to consult, are we the right group here to do this or shouldn't we bring in other people, do we want to build a working group in the task team? With this I would handover to you, Silvina.

Clare: May I have a question for clarification before you move on? Regarding the agenda, the points 2 to 4, do they relate specifically to this idea of case studies or are they posted within the broader context of the home?

Daniela: The current idea was to start developing the answers to questions 2 and 3 utilizing the case studies. So they are related to the template and what we would like to understand, no matter if it will sit in a home or in a Core Project or somewhere in between. This is an information which we need to fulfill the objective 4. I really liked the momentum which we had last time when it came to developing the content and the scientific connectivity between the different groups involved here and included in the task team here whereas before and in some other rounds we only discussing new structures of WCRP. But we were not able to bring our scientific content forward. That's why the idea was that this is something which is sitting, which we need as an information, no matter in which home it will sit and that's why the idea was that we go forward with the template as we had decided last time on our task team meeting.

Clare: So we will come back to the wider structural issues in a futur meeting?

Daniela: Yes, that was the idea because we are circulating around this problem how should we organize best and the idea was that this will probably help us to see also to see which time and space scales are involved, who is involved, which dialogues are needed. So it might help us also to position ourselves structured within WCRP better.

Silvina: I guess you have presented all the thoughts and the potential way forward very clear. I would just like to add that the idea of working with case studies is coming from the last meeting in Geneva last year where we started thinking on doing some colaborative analysis among the different Core Projects and then it became this new idea of trying to understand how is already working the flow of information, in these 2-way interaction between basic research and users. So we started with ANDEX and GWF cases which has been discussed in our last meeting though as Peter raised very well, we should contact people from those communities in order to start working with them. So if all agree I would invite some of the leaders of this 2 projects to explain what we are thinking about how to interact with them and what kind of information we are going to request from them - I don't know if you all agree with this?

Peter: I think that this group needs to get very clear on what - and I think the template idea is great - to see what is it for after and which questions do we need to ask. When we have that sort of clear then we can use ANDEX and GWF to test if these are the right questions and if they work for both cases. One way is asking stakeholders, what they need but end-users don't know always what it is they actually need until you get not better informed or what is available or possible. This is really a difficult area of trying to provide the necessary information - it's not always clear beforehand what that information is - and this is one of those struggles. I think this makes it such a complicated issue.

Silvina: This is why we also need to get stakeholders on board because if not, we are not doing this 2-way-interaction. So we need people from the ANDEX and GWF activities but also we need to get on board in anyway the users or real stakeholders.

Kumar: In fact, I can take advantage of my previous life at WMO. When we say stakeholders or users, I think we should look at them at least in 2 layers: One layer is the operational community. These communities actually help us to sustain the information. Their requirements are somehow different, they are not technical. The endusers help us actually to demonstrate the benefits. WMO has standing commitment in climate services. The Climate Services Information System (CSIS) infrastructure has to be explicitly linked with the research projects. They actually help you to keep things going on. Another important aspect that I want to bring your attention is that the WMO Executive Council is abroad to approve a major document on regional infrastructure. I put a link in the chat box.

[https://meetings.wmo.int/EC-72/\\_layouts/15/WopiFrame.aspx?sourcedoc=/EC-72/English/1.%20DRAFTS%20FOR%20DISCUSSION/EC-72-d04-1\(2\)-STRENGTHENING-GFCS-CSIS-draft1\\_en.docx&action=default](https://meetings.wmo.int/EC-72/_layouts/15/WopiFrame.aspx?sourcedoc=/EC-72/English/1.%20DRAFTS%20FOR%20DISCUSSION/EC-72-d04-1(2)-STRENGTHENING-GFCS-CSIS-draft1_en.docx&action=default)

It gives a rough idea on how WMO is planning to establish their infrastructure. They also have a regional focus. So there is a lot of overlap in the way they are looking at things but with a different direction and that has to be kept in mind.

Daniela: So this is already the start of the template more or less because what we exactly would like to do today is to collect the categories - or as Peter said the questions which we want to ask but also the kind of groups which need to be involved and how could we structure such a template. I think we have this more operationally oriented area, we have the more scientifically oriented, then we have the different time scales, the short-term forecast scales, protecting scales, the different local to global scales. So it would be nice if we could collect the words, which we think are important to be on this template, so that we can structure that a bit - the questions to be asked but also the kind of words like operational community or research. And then we can see where do we have the joint, where can we use joint infrastructure, where can we share knowledge and how is the next user chaine. We are not talking about an end user only, we talk about a next user from the basic science to the let's say maybe, basic climate science to the climate impact science, to the climate adaptation science, to the risk vulnerability. So this is all not an end-user in the way of a stakeholder as a Maire of a city. So we have different flavours here and it would be nice to collect from you the ideas of what you think what is important to be looked at in this template, to clarify the roles of these 3 legs and the interaction, the bilateral flow and the dialogue between those legs.

Kumar: The stakeholders should be seen as 2 layers, one is the operational community and the impact community which can be end users of the impact science

#### *1. Two layers of stakeholders: Operational community and end-users*

Silvina: What I wanted to rise was this idea of climate services because within WCRP we are not going to deliver climate services, we are not going to get the expertise to deliver climate services itself, it's not the main task of WCRP doing research for users but not providing. So how to reach the operational community is more related with the WMO activities and I'm not sure if we should also go in that direction.

Kumar: What is important is that there is a search to operations and the operation to the search directions. The operational community doesn't have opportunities to do the search and obviously they have not solutions. There are useful platforms created under the guideness of WMO.

Daniela: I think for the climate services it's "operation, science and dialogue", it's the same as "service, science and dialogue". So it's a bit similar, maybe you can write:

## 2. Climate services - operation, science, dialogue

It's only a placeholder for us.

Ken: We need to consider operational community, maybe intermediate users. But I think the 3rd point on the agenda is really relevant for this discussion because it depends a lot on what timescales are for the delivery of the scientific information. We are talking about research on climate variability and predictability. We necessarily have to go through the operational community in order to deliver guiding information as a service to the end users. So if we want to make the bridge from science to society we have to have the operational community in the middle. We have to make a difference between the different types of research we could provide and the pathways for each of these to the society.

Daniela: Some key words to remember what was said:

## 3. Layering the type of research - different pathways and timescales depending on the research

Claire: To follow up from what Kumar said, and this from my perspective was being involved in some discussions around the climate service information systems. I have already been in a lot of discussions and there is a lot of knowledge about gaps and some summaries of previous discussions. Some of these discussions was to bring some expertise more on climate projections. It's a bit different because the community is more dispersed, it's more amongst academical institutions and much more heavily involved in climate projections but I think we have identified a number of areas where exist this communities with looking to WCRP to provide some expertise and guideness. There was a document with bullet points like model selection, using multimodal ensembles, bias adjustment and so on. So I think there is already quite a lot of work being done on identifying the gaps, a sort of information that needs to be provided. There are also important issues about capacity building as well particular for small operational centers. My worry is having again discussions which already have been done.

Daniela: I want to focus again the discussion, because the idea was to look at the flow between the different scientific arms in WCRP, which in the regional part, have been called the 3 legs - that's our original. We are not discussing about what is needed for climate services and what's available and how do you have to do it and what's the best trustworthy way. So the template idea was, as far as I understood - and maybe Peter you might to want come in here, because I think it was you during the last meeting saying "we know a lot, we do a lot basic research, but also a lot stakeholder dialogues" but let's see **how the flow is different in different communities, different continental settings, different disciplinary settings. If we map this, we see how**, for i.e. we can make visible the excellent basic research which has led through the more sustainable decision of a dedicated infrastructure or whatever element in a dedicated region. Because that was something within is in this bridging science and society. There was this flavour to open up the importance of WCRP's activities for society and this is a bit what we were trying to collect as far as I understood. The document, Clare, you were talking about it would be nice if they could be shared here in the task team too, on **the climate service information systems**. I fully agree we do not want to reinvente the wheel. So we would like to see where are **the gaps and why are some best practrices** or some failure not been shared or why is some of the basic research done in WCRP not as visibly seen in the societal dimension and how can we connect this.

Kumar: Actually there are 2 mayor gaps. One is that there are multiple sources of information and there is little guidance on what is the best way. The other gap is more in terms of casual scales. Because so much information is available. The individual stakeholders are picking up whatever is easily available and they use it. As an example, if you take South Asia, most of the countries are dependent on the Monsoon **and each country goes independently and picks up information available on the Monsoons**. They select different models. So there is a regional inconsistency, disinformation between decision makers and policy. Disinformation is not properly guided. If you take South Asia, you should establish a scientific

basis to consolidate the information on the Monsoons, that are usable by all the countries in a similar way.

4. *Multiple sources of information - very little guidance on best information. How to build guidance material*
5. *Stakeholders picking up what is most easily available - not always the best and not coordinated. Leads to regional inconsistency (regional optimization of information is needed)*

Daniela: How would you include this in the template? Because we would like to ask for this type of information, be able to ask different cases on how what they did in this regard. Let us know which wording we could put into the template.

Kumar: Yes, a word that we use in CSIS/Planning "**regional optimisation of the information**". We have to find a way to optimize information on a regional basis, particular regions where we have common climate drivers.

Peter: To answer sort of somebody's question in the context of ANDEX and GWF and taking into account what has been said, my first comment is: We do have an operational weather forecasting community, we don't have an operational climate forecasting prediction/projection community. So the way the information is handled with is very different when you talk about weather forecasting purposes, climate predictions and projections. Keeping that in mind I think GWF has looked at sort of how we can expand our basic research to understand the processes in the region much better. Improve our models, and how can we do that in context with the local communities. In particular, in Canada they are also looking at the indigenous communities and saying, what are the needs there, what are the national needs versus the regional needs, versus the various community needs. I think it would be a good work to go in dialogue with them, within to that process. This is relevant to what we are discussing here and they are really developed. This is a very well funded project we are talking over 150 million dollars. So this is not a template that would easily work everywhere else because there is basically not a lack of funding. Taking that idea to South America and remembering the discussion I had with people from the Development and World Bank, I was asking what do they use and what it turns out was many of their projects use just one climate model for example and there is what comes into play what Kumar was saying: You get these conclusions, these reports and you realize where this information is coming from ... I think in South America we can have the opportunity there to build something along with the weather services and see how can we improve our basic research, how can we address the very and regional issues with the current structure and what is additionally needed. I don't have answers to that, I have only questions how to do that because we are really in the beginning stage of this but I do know that WMO is also struggling and actually getting the right thing established in this regions, typically in South-Asia, Central Asia, because we have

- (a) very sparse of special network
- (b) We don't have an operational climate service or even a standardized regularly regional run high resolution climate models depending upon their external factors.

So taking all this things into account we can address just some of these issues. But like I said GWF is a nice way to look at how they tackle some of this issues and sort of use that and go to discussion with for instance the ANDEX folks and the South American Hydromet Services and see how does that fit here.

Daniela: I also think starting the dialogue with GWF, the ANDEX and another cases projects and communities is very important because what I hear at the moment is also the involvement from the CORDEX community for example, I mean you are saying we do not have at hand standardised ensemble predictions for downstream services in all regions which I fully agree but we have more than we think or than many people use. In the climate services community a lot of work has been done which is probably not fully integrated in the WCRP discussions which we currently have here. This is also important to

leverage on and to connect to those communities in dedicated regions and the cultural settings are very different. In Europe we have very clear guidance, guidelines or technical recommendations for infrastructural investment. The investment will not be paid if you haven't used an ensemble of climate projection or climate change information for the development of the infrastructure project. Some regions have been pushed a lot, and other regions have probably not pushed as much in this direction but I also know that in the USA there are different dialogues. I think the template might help us to identify the barriers of this flow of information, I think it's not always a lack of information - the basic knowledge and science is often there - but it is not used. So we have this 2 different aspects. I really like the idea of comparing the operational weather community with an operational climate prediction/protection community which the template could help to develop and this will probably strongly based on the discussions in the climate service information system within WMO but also outside WMO there is a lot of experience in the climate service partnership and in others where are the similarities and what can be seamlessly been used and the individual differences which has to be taken into account.

*6. Lack of projections or lack of access to quality/sufficient projections (science/knowledge)*

So we have now 6 points to consider for the template. Irene in the chat is talking about the flow of information, the upscaling of best practices, the indication how to use the information, the guidance and the capacity building, which we haven't discussed today, we did it in another meeting. Should there be a slot in the template talking about the capacity, to be able to use what is available or to enhance the enabling conditions?

*7. Upscaling of best practices*

*8. Capacity development/exchange*

Peter: I think that's crucial, if you want to use regional data and information then you need the regional capacity to understand that. I think that's the mistake we made in some regional steps, outside groups do the modeling and do the forecast.

Daniela: This could also help us to come up with a few new cooperation and collaboration proposals for dedicated regions to connect better the very important regional experiences, knowledge, data and cultural setting with probably some worldwide existing knowledge from the scientific community - maybe we could come up with something like this on this regard?

Irène: This would fit very well with WCRP Academy Lighthouse Activities if we have that element included. I wanted just to ask another thing when we were talking about available high risk simulations: In Sweden and a few countries in Europe, we have to do some simulations for adaptation purposes. This is something that we are obliged to do pretty soon. I'm not sure if this is something that is happening also outside Europe. Of course this wouldn't be available for quite some time, takes time to do it but maybe that's something that could be available for us?

Daniela: This is important and it's related to the connection to the national adaption and mitigation plan, its connecting UN-activities.

Krishan: Following all the points, the regional capacity to advance basic research is very important, especially when we are talking about participation, i.e. climate change and water precipitation changes, particularly in the Tropics and Monsoon regions. There is still a lot of basic research to do and regional capacity has to be developed. We are realizing even in the CMIP community, when we look at the Monsoons precipitation, how much we are advanced. So unless we do this basic research advance of understanding and build the regional capacity it's going to be a challenging problem. I think, this is something we should mention in the template.



Daniela: Also enhancing the connection regionally to FE community, we can also link this to the beyond WCRP because this is also a part which is important to list.

Ken: I was looking at the WCRP strategic plan and I realize that I also want to mention the need of fundamental understanding as part of the science we need to somehow connect the society. Looking at the 3 strategic objectives we should have fundamental understanding, near term, climate prediction and long term projections. So maybe we could have a framework based on those 3 - because I think, they have different characteristics that could require a different treatment as well. It's easier for the climate community to go strict to the end user in a third pathway which would be climate projections but from the basic sciences to the user or the society or even the climate predictions for society.

*9. Considering the different perspectives (pathways, intermediate/final users) associated with the 3 first WCRP strategic objectives in order to connect their corresponding science to society.*

*1. Fundamental understanding*

*2. Near-term rediction*

*3. Climate change projections*

Daniela: I would spend a few minutes on the way forward. There are 2 organisation points:

Silvina, Clare and who ever likes to join, we would like to make a suggestion for such kind of template. If someone is good in creating a template, please send an email to the CORA-Team and let us know because next time it would be nice to discuss the template and see what is missing, how far we got and also if we want to continue. Now you see that the content of the discussion of the task team has shifted from a kind of a structural organisation to this more content driven discussion. We have so much expertise around the table, it's important to bring it together. So I would like to ask you if this is a good way forward and if we should continue the way forward? But also send us suggestions about who is missing, whom should we bring into this discussion.

The other point we like to ask you is help sharing this group because at the moment we have unclear situation who is actually pushing the group forward. It's Clare, Silvina and myself at the moment but it would be nice to have 2 more people here because we are dominated by CORDEX-expertise or climate change expertise in Silvina and my cases, Clare more on the statistical data side, maybe someone else would like to take over the lead.

Silvina: I agree what you are proposing, I feel that we need someone pushing from the prediction arena into this leading group in order to avoid pushing too much into one of the objectives from WCRP. Relating to the template, I like very much the idea that Kumar raised about the need for guidance material. So it would be important to include how to build the guidance material because it will be different depending on who is going to be guided - building the guiding material particularly for the end users.

Clare: I just circulated a document which was circulated in the early stages when the task team was set up - Kumar is familiar with this document - which comes from a meeting way up in 2017, one of this climate service system related meetings, a list of issues where that community was looking to WCRP, it was actually written for the JSC meeting, I think it has not been taken forward. A lot of bullet points are still highly relevant, they relate some points Kumar have mentioned. Perhaps some material can be taken and added to this template document.

Kumar: I think actually Paco would be excellent representing climate prediction.

Daniela: So you agree that we go forward with this discussion, the development of this template, with trying to build what is already existing within the climate service information system but also in other areas, that we really focus in a way that we would like to test the template and have it filled relatively soon, to see if it brings us forward. Do you agree with this?

Silvina: Silence means "yes".

Daniela: We have a bit of homework now. Anke will send out these minutes as mini-minutes as a kind of to do list:

- We have to design the template
- We would ask you for experts, documents or material which could be of interest in this discussion
- Peter and Silvina, maybe it's up to you when we want to contact people from GWF, ANDEX, TPE. It's very important not to come up in the first contact with a fully designed template, even the design of the template should be in dialogue with them, but we have to tell them something what we are after. So when should we start to contact them, Peter or Silvina?

Peter: I would say asap. GWF has already done a lot of this stuff, similar with ANDEX. My first priority would be contact John Pomery.

Silvina: We should contact them asap, maybe with a short summery of what we are expecting from them, send an email first and maybe they can join in our next telecon, maybe they want to learn more and we should explain them our main ideas we are discussing within this group and then share with them this template, so they can even modify it and in a next step we can fill in the template.

Daniela: I think this is a good plan. I would suggest that Anke and Narelle try to draft a little preamble on what we are aiming for, what we have discussed and why we were discussing this and we will circulate the text to you. If we agree on this, it would be our reasoning for why we are having this kind of template which we would like to develop together with the others. If you agree we can then share it via email, modify it a bit, make sure that we all agree and then and then we can use it for contacting ANDEX and other projects. In the meantime we can structure and cluster a bit the topics we all have, prepare the template which is at the moment more a list of topical blocs which need to be considered and then we can share it with them to develop it further.

If this is ok with you, that would be my proposal to go forward. Then we should meet maybe about 10 days before of the JSC meeting and then we could report on the JSC meeting. We have to do a bit via email. We have to inform the others - there were several people missing - to make sure and explain what we are currently working on.

Anke Schlüsen-Rico (CORA), 7.10.2020