

## WGNE Conference Call

14 September 2020 10:00-11:30 Geneva time

### Draft minutes

Attendees: Carolyn Reynolds (Co-chair), Keith Williams (Co-chair), Anne Verhoef, Ariane Frassoni, Caio Coelho, Daehyun Kim, Fanglin Yang, François Bouyssel, Francois Engelbrecht, Günther Zängl, Julio Bacmeister, Kirsten Findell, Elena Astakhova, Masashi Ujiie, Nils Wedi, Ron McTaggart-Cowan, Michel Rixen (Secretariat)

Excused: Jian Sun, Charlotte DeMott, Marion Mittermaier, Daniel Klocke, Mike Ek, Xubin Zeng, Paolo Salio

#### 1. Update on actions for 2020091400 WGNE call

##### Action Items from WGNE-34

**Action 1:** Ariane, JWGFVR & GAW to consider verification of aerosol/air quality forecasts and propose a way forward. Ariane suggests WGNE groups fill out the table to compile information about ongoing air quality/aerosol verification for future discussions with JWGFVR and GAW. **Update from Ariane:** The teleconferencing with GAW was held in May. I did not have time to follow up on the table with Marion and Caio because I've focused on the progress of activities like the organization of the accounts for data delivery and discussion on the protocol and domain with modelling groups. The compilation of information about ongoing air quality/aerosol verification metrics under modelling groups is a planned activity that should be executed in the next months. Ongoing.

**Action 3:** Carolyn to develop a follow-up systematic errors survey in discussion with Daniel Klocke (GASS) & WGNE members. **Carolyn to reach out to groups representing other model components to understand what surveys have been done and if there is interest in an earth-system survey. US CLIVAR Process Study and Model Improvement Panel is also interested in such a survey. If there is sufficient overlap it might be worth coordinating efforts. Charlotte offers to email Carolyn directly. On-going**

**Action 4:** co-chairs to provide names of WGNE members (or people in their centres) who could be involved with TC initialization review to DAOS. **Masashi working with Lili Lei on the report for DAOS, with input from Julian Heming and Ron McTaggart-Cowan, future input from Jim Doyle. Done-closed.**

**Action 5:** François and Carolyn to see if they can find someone to work on surface fluxes project. François to send email to WGNE members to see if it would be possible to include funding for the surface flux analysis in a Schmidt proposal 2nd phase. **François and Carolyn will ask WGNE members for volunteers to examine the surface flux data. Charlotte Demott (MJO TF) has volunteered. GLASS may also contribute, focusing on the fluxes over land. Done-closed.**

**Action 9:** Julio to present longer timescale (day 5-30) bias evolution at WGNE-35. **Ongoing.**

**Action 10:** Masashi / Eunha to follow up with WMO TC programme to sustain effort and contributions. Ongoing, Mich to follow-up with Eunha.

**Action 13:** Try to get a member of JWGFVR to be on the Climate precipitation panel and vice versa. In the mean time exchange information as work progresses. Issue getting in touch with Peter Gleckler. Mich will follow-up with Karl Taylor. Ongoing.

**Action 14:** Identify potential ocean equivalent of GASS/GLASS (perhaps COMMODEORE Ocean?) and in other disciplines (hydrology, etc). Nils reports that at the COMMODEORE Conference held in Hamburg 28-31 January 2020 (see <https://www.conferences.uni-hamburg.de/event/76/>), there were a lot of ocean modelling groups present, and willing to contribute and participate in setting up an 'ODCMIP' like exercise. Please see also (and contribute to) <https://sites.google.com/view/commodore-test-cases/home> (lead by INRIA, Laurent Debreu). We should find an ocean or other ex-officios from appropriate groups. Francois E. notes that scientists at the AGU ocean science meeting and CLIVAR ocean panel are very interested and willing to support WGNE's earthy system remit. We should try to get representation of CLIVAR ocean panel OMDP at WGNE in Boulder? We want both climate simulation and ocean modeling representation in WGNE and we may be able to find someone who can represent both. Mike Ek notes that GLASS represents more than terrestrial processes. SOLAS (surface ocean lower atmosphere group) might be another good group to work with. Hydrology modeling expertise ex-officio could come from GLASS. Co-chairs need to follow-up to make sure we invite ocean reps to WGNE35. Ongoing.

**Action 15:** WGNE Co-chairs to recommend extended scope of future WGNE around Earth System model development and to propose corresponding draft ToRs and Membership. WGNE positional papers and WCRP modelling positional papers completed and circulated. Closed.

**New Action:** Ariane continues to work with CPTEC/INPE to host WGNE-36 meeting in 2021. There are uncertainties that have been introduced because of the COVID-19 crisis but they are still hoping they can host. As WGNE35 will be virtual, and NCAR has said they may be able to host WGNE36, Ariane reports that CPTEC has no preference for 2021 or 2022 and we should make the best decision for WGNE. Any reason to wait to make this decision before WGNE35?

**New Action:** Co-chairs, Boulder reps, Mich: Revisit WGNE35 in Boulder in a few months to make a final decision. Some countries banning international travel many months out. NCAR closed to visitors until at least September. JWGFVR to decide soon on what to do with their planned workshop and tutorial in Brazil in November. WGNE35 will be virtual, NCAR could possibly host next year (see above), closed.

**New Action:** Members to forward the call for the CMIP Office in their network (<https://www.wcrp-climate.org/news/wcrp-news/1567-news-cmip-ipo>). Closed.

### **Actions from WGNE-33**

**Action 15 – All members** to alert their seasonal forecasting groups to S2S proposal for simulations with and without SPPT. Awaiting update on protocol. Some centers interested, others will not participate. Berner and Pegion have a pilot study approved in NCAR and NOAA models which can serve to guide a wider comparison. Awaiting protocol. Carolyn will forward more information when it becomes available. Status unchanged, although it is possible that the format could be broadened to consider other types of uncertainty (or in other components). Ongoing.

## 2. Update on WCRP reform and model-data home

See [https://www.wcrp-climate.org/images/documents/WCRP\\_Implementation\\_Plan/PPT/WCRP-Our-Climate-Future-July2020.pptx](https://www.wcrp-climate.org/images/documents/WCRP_Implementation_Plan/PPT/WCRP-Our-Climate-Future-July2020.pptx)

Keith emphasized the new 5 Lighthouse Activities, seen as some kind of outputs of WCRP with strong societal relevance. WGNE will likely contribute to all of these, as all involve modelling to some extent. Digital Earths is of particular relevance to WGNE and was presented in more detail by Nils during the last teleconference. It involves high resolution exascale modelling, pushing the boundaries of simulations and data assimilation bringing observations in the mix. The proposed new structure includes a new home on model-data, alongside the traditional 4 core projects which all have an office. The current view is that this home would assemble the current Councils and Working Groups. There is also a question whether groups like GASS and GLASS would belong here or remain within their current GEWEX home. The new homes would be established in the first half of 2021 and the new structure later in 2021. Consultations are on-going to refine those plans.

Mich provided an update on the call for hosting the CMIP-IPO, the deadline of which is 15 Sep. The main question is how the CMIP home would develop alongside or with this new model-data home. There are currently 4 options of the model-data home being proposed and analyzed. There is a call scheduled on 28 Sep with the JSC leadership, a number of Councils and WG co-chairs to further discuss those options. This will then be further elaborated on towards a presentation at the extraordinary session of the JSC 30 Nov-4 Dec. He briefly presented the current stage of the note which was developed to support the various options. He thanked all contributors, in particular Nils for reinforcing the need for and importance of model development. The 4 current options can be summarized as follows:

- 1) Model-data home with CMIP w/office
- 2) CMIP revised framework to serve as model-data home w/office
- 3) Separate Model-data home and CMIP home w/office
- 4) Joint Councils approach wo/office

Currently the CMIP-IPO would be the only immediate option to compensate for the imminent staffing shortage within the WCRP Secretariat.

Keith then proceeded by giving a short update on the WMO Research Board to which all WWRP, WCRP and GAW report and which is currently developing 5 concept notes, one on Earth system modeling, one on exascale and AI, one on Earth system observations, one on science to services and one on innovation in regions. The various task forces will have to report progress at the TCC meeting the week after the WGNE session.

Nils wondered whether WGNE will take on the role of coordinating AI activities on behalf of the RB. Keith commented that AI is a broad topic beyond its use within WGNE, e.g. AI for post-processing.

Carolyn thanked Nils for agreeing to step in as co-chair (pending final confirmation from Research Board).

**ACTION: Keith and Nils will discuss offline and consult with Peter on how to proceed regarding the reporting on this, and could recycle recent slides.**

### 3. WGNE-35 preparation

Given the current pandemic, the WGNE-35 session will be held remotely, which is a bit challenging given that members are spread across many time zones. It was suggested to balance unsocial hours throughout the week. It was suggested to mimic the JSC41 remote session in some way, e.g. 3 hours (with 15 mins break) per day over the full week 2-6 November, ensuring reasonable local time for speakers. Mich will take care of logistics, identifying best options via a doodle poll. Nils recommended varying the programme to make it exciting. Keith commented that it would be hard to fit opening talks and members presentations.

Priority topics mentioned include: updates on ongoing projects, focus on exascale and AI – and link to WCRP LHA on Digital Earths, Earth system modeling and components (hydrology – via GLASS?, ocean – OMDP), science presentations from NCAR, updates on GASS and GLASS.

In the context of AI, Fanglin mentioned the Vulcan project (<https://www.vulcan.com/Our-Work/Climate/Climate-Modeling.aspx>).

Ariane suggested also some webinars for science presentations prior to the session (like WWRP HIW has done), possibly before the WGNE-35.

François E. said IPCC follows a similar approach for their (now remote) meetings, 2 hours per day for 5 days, repeated twice in their case, but always at CET convenient times.

**ACTION: Carolyn, Keith, Nils and Mich to develop draft agenda and seek feedback**

### 4. Report from recent meetings (HIWeather, others)

Ariane noted the HIWeather 2020 Workshop planned on-line on 1-3 December 2020, preceded by a series of preparatory webinars. More information available at <http://hiweather.net/article/18/1.html>. The deadline for registration closes on 30th September. WGNE Members are encouraged to attend:

- 11 November 20:00-22:00UTC: Warning evaluation, joint with the November 2020 around-the-clock International Verification Methods Workshop Online (<https://jwgfvr.univie.ac.at>)
- Week beginning 16 November (date and time TBD): Forecasting hazards
- Week beginning 23 November (date and time TBD): Hazardous weather processes

See also email sent by Ariane with more details.

There was an associated meeting on 3<sup>rd</sup> July where WGNE activities were advertised (blue book, exascale, systematic error survey for Earth system components).

Carolyn wondered whether any topics were of particular interest. HIW is looking forward to maintain a close connection. Vice-versa, some HIW projects, such as NAWDEX in which Ron is involved in is of particular interest to WGNE.

Caio mentioned the annual JWGFVR meeting held in May through a series of teleconferences having one of its main topics the organization of this online round the clock international verification methods workshop 9-13 and 16-20 November, after the WGNE-35 session. 87 abstracts were received. The programme will include contributed and keynote presentations. See <https://jwgfvr.univie.ac.at> for more details.

Ariane mentioned a field campaign on submesoscale variability, ABL, wind gusts, cold pools, with an associated summer school, cancelled and postponed to next year.

Mich invited everyone to use the mailing list to advertise events and convey information to the entire WGNE so this can then also be posted on the WGNE web page.

## **5. Secretariat support for WGNE**

Mich provided some update from the WMO and WCRP sides. Paolo, Chief of the WMO World Weather Research Division is moving to EUMETSAT as Chief Scientist to replace Ken Holmlund who is joining WMO as Chief of the Space Programme. As a result, WWRP is getting short in staff. There is currently a hiring freeze on WMO recruitments (which may not apply to the vacancy of the Head of WCRP). The WCRP Secretariat is also being restructured and contracts for both Michel Rixen and Mike Sparrow will likely end in Dec this year resulting in uncertain secretariat support to modeling activities, including WGNE. There is a possibility to 'outsource' those functions via the CMIP Office being established, but this will depend on the selected option for the model-data home.

Keith mentioned that co-chairs of WGNE and other Working Groups are writing various support letters to the WMO leadership to convey their concerns about the secretariat support to their activities, as the financial and staffing pressure is creating major gaps in the support to the community. He further invited members to work with their corresponding WMO Permanent Representative to raise those concerns with the WMO Secretary General. At the same time, it is worth checking whether countries are paying their dues, as this has a direct impact on staffing.

In response to Nils enquiring on the timeline for the CMIP Office, Mich clarified that a decision is expected by end of November with the office being established early 2021 sometime.

Ron made the point that WGNE members would not be able to handle the workload of the Working Group without secretariat support. Mich made the parallel with CMIP for which a minimum of 3 FTE was estimated. Keith remarked that if the situation resolves itself, the current plan with research is to have a more junior person supporting WGNE.

List of WMO Permanent Representative is available here: <https://cpdb.wmo.int/data/members>

The WGNE members thanked Mich for his invaluable support of their activity for many years.

PS Personal note from Mich: many thanks to all for your support!

## **ANNEX**

### **Outcomes from GAW/WGNE meeting on the Aerosol Project from Ariane Frassoni:**

1. The analysis of results and verification is proposed to be done in two phases: the first phase will take into account only meteorological variables and in the second phase, air quality/aerosol properties;
2. Send out an email addressed to modelling groups suggesting they declare the intention to be part of the experiment (not done, modelling groups confirmed);
3. In addition to the metadata requested in the protocol, encourage modelling groups to provide emission datasets (done);
4. The North American domain described in the protocol as a TBD task will be discussed among Paul and Georg to coordinate the experiment in the domain (in progress);
5. Alexander Baklanov suggested consulting AQME Phase II special issue on ACP and GMD as a way to review progress on air quality/aerosols verification (in progress);
6. Advertise modelling groups on the deadline to deliver model data (done);
7. Contact ICAP colleagues to make them aware of the experiment (done by Angela);
8. Coordinate the WGNE-S2S-SAG Aerosol experiment with PREAFIA (to be done);
9. Writing a paper in BAMS journal compiling information on the experiment and modelling capability of confirmed participating modelling groups (in progress).

#### Progress on the project:

- There are 12 modelling groups confirmed (6 on regional and 6 on global component) and 4 to be confirmed. Last confirmation came after last email sent out to potentially interested groups on 05 September;
- Paper writing is in progress. My plan for the next weeks is to share the first draft with Francois Engelbrecht and Angela Benedetti and finally ask around confirmed modelling groups participants to take part in the writing.
- We should include a session to discuss model verification, as we have done on the WGNE Blue Book publication in 2018. I plan to follow up on the verification review and contact Marion and Caio to take part in the review/recommendations. The table compiling the information about ongoing air quality/aerosol verification should be revisited.
- All accounts are available for modelling groups at CPTEC server, but we are already waiting for some modelling groups to contact us to request login information.