WGNE37 Action and discussion Items

1. How best to collaborate with Digital Earth LHA? Convective organization might be a cross-cutting link? There is a lot of overlap with GASS plans, is GASS a natural link (e.g. foster regular information exchange across GASS, DE LHA and WGNE (*Nils+Ariane had a first discussion with ESMO and Digital Earth LHA*); GASS focusses on cloud circulation and climate sensitivity, new obs, new approaches for mesoscale convective organisation of clouds (e.g. EUREC4A on low clouds); diurnal cycle over land; organisation of deep convection, see https://docs.google.com/document/d/1g6uMUjtuvn_oaj9HwfhPfFkHfuikBasAPpkMvyIr8lE/edit#heading=h.ucuimco4okp5; Technology; digital cities (Daniel, Nils, Andrew, Chris)
2. How to proceed with potential attribution work, perhaps through collaboration with Explaining and Predicting Earth System Change LHA (Francois to propose); Weather in a future climate, is there scope to extend DIMOSIC concepts (tbd, Nils);
3. Membership considerations (ESMO governance): (Nils, Ariane to discuss with Nico)
    a. Replacements for Carolyn, Francois, and Elena (joined in 2014) *selection/indication to be discussed with WGNE members*
    b. Elena and colleagues have done an awesome job on the WGNE website and Blue Book (https://wgne.net/bluebook; wgne.net), what happens when Elena retires from WGNE? (*Elena kindly agreed to continue in 2023 but will need support on the Blue Book*)
    c. Consider expanding expertise to include wider Earth system modelling components.
    d. Consider ex-officios from other system component communities (e.g., OMDP)
4. JWGFVR (Barbara)
    a. JWGFVR leverage GLASS and YOPPsiteMIP efforts: advance process-based verification by exploiting existing supersites measurements (YOPPsiteMIP, SRNWP, …) as well as satellite data. Keep up-to-date on GLASS interaction (Mike, Nils)
    b. How will the new members affect priorities, report next WGNE
5. Do we need a follow-on systematic error priority survey? The WGNE systematic error workshop breakout groups found it difficult to prioritize. Perhaps, rather consider identifying systematic errors that are of priority to several centres and create a history of how and if errors have been reduced by the time of the next WGNE workshop (Romain); Could ask centres to submit a list of papers published in the last 5-8 years, these papers should be associated with systematic errors identified and/or solved/improved (Ariane)
6. Do we want to make changes to the WGNE table, additional centres (Fanglin to suggest simplification as difficult to answer for some), add coupled components (Tim to suggest coupled elements)? (Guenther)
7. Continue WGNE surface flux (Charlotte, Tim, Marion) / WGNE Aerosol intercomparison as resources allow (Ariane, Mike)
8. WGNE S2S Aerosol project participants met together on the 19th of December to discuss the outcomes and next steps for the project. A paper is planned in 2023 in BAMS with science of aerosols, general information on the project and preliminary results. It was asked to all participants if we should continue working on the project even after WWRP/S2S project end, and the group came to a positive answer as other modelling groups have been joining the initiative. There are many scientific questions to be answered at least for the next two years or so.

9. How can we collaborate with DAOS? Mentioned IHAPP, convection permitting DA; SAGE, ocean predict -> initialisation; PCAP, ocean-ice-atmos coupled DA; DestinE - high res ensembles?
10. OMDP, Informal working group on initializing the ocean for MJO prediction, role of mixed layer depth as proxy for air-sea fluxes? (Tim)
11. Regular member bias correction survey/update as a separate talk next WGNE to address systematic biases (Ariane); also nudged climate runs was mentioned for story lines (GASS)
12. Physics-dynamics coupling, link to dedicated community , e.g. http://splash.princeton.edu/pdc2022/index.html (Peter L to report at next WGNE?); *A survey is in preparation (Peter, Romain)*
13. Continue to build ESMO contribution and structure and co-design priorities across all model, data and observation activities (workshop planned, tbd Q1 2023)
14. Calendar items 2023 for WGNE members? e.g. CFMIP/GASS July 2023; Open science conference, Fall 2023; ESMO annual meeting ~April 2023; conv-permitting workshop Bergen 29-31 Aug 2023, …
15. Next WGNE (joined with JWGFVR) meeting in Brazil, Ariane to sample dates, *suggestions are one of 2 possible weeks in November 2023. Nico to prepare a form and doodle poll to be shared among WGNE/*JWGFVR *to decide on best date*
16. Engagement with new WWRP projects? 1) Polar Coupled analysis and prediction for services (PCAPS) 2) Subseasonal applications for agriculture and environment (SAGE) 3) Hydrology (minutes to days time scales) 4) Urban Prediction project (minutes to weeks, Ariane) 5) Community project connect to people, physical and social science (other wgne member volunteers to associate with these, during 2023)
17. Where would WGNE delegate to other expertise within ESMO (tbd, Nils, Ariane)
18. Timeline of Aerosol Impact project, Dec 2024, even if end of S2S in 2023 (see above item 7, Ariane)
19. Overview on applications and products, e.g. wind droughts - energy management, solar energy inputs, hydrology (*special talk or session at WGNE-38 from Brazil*); matching of products with inputs from ESMs that drive them and thus informing e.g. ML folks and others on the one hand and ESM developers on the other? (tbd, poss link to LHA+ESMO, volunteer for a talk at next WGNE?); also testing of complex systems in new measures relevant to applications.
20. Continue TC evaluation (explore http://nwp-verif.kishou.go.jp/wgne_tc/index.html, ID: verif PW: wgne2022); finalizing joint paper on TC intialisation (Masashi-san)
21. Foster HPC development in developing countries and the uneven distribution of computing resources? Paper and suggested solutions (Nils did mention at SC22)
22. WGNE - WGCM connection points: (Nils, Ariane, keep updating)
    a. Data access and observations
    b. Shared project updates
    c. Verification/Validation of models
    d. Coupling of Earth-System components
23. MUMIP, the funded UK-France component of the project starting July 2023, update at next WGNE (Romain, Hannah)

24. Role of Tibetan Plateau was mentioned/suggested at the systematic error workshop and gathering both observations and modelling from WGNE members if there is interest? (Kalli Furtado, MetOffice, was interested, CMA, others interested?; tbd)
25. GDPFS update at next WGNE meeting
26. Are the ensemble updates useful? If so, need to find a volunteer to replace Carolyn as a collector of that information. (volunteer?)
27. Discuss/consider time frequency of survey updates, ensemble design/exascale/ML-AI/new ones, to every two years update and staggering so not all in the same year (all)