Participant Call November 10, 2022

Participants: Aura Lupascu, Paul Makar, Christian Hogrefe, Ummugulsum Alyuz, Jesse Bash, Chris Holmes, Roberto San Jose

Grid intercomparison (Activity 1)

- Participant updates on reruns, postprocessing, data upload, and analysis
    - Holly email update - 10712 (GEOS-Chem): "We have made progress, but have not yet completed the files for upload. We have identified a few variables that were not output (these variables are only needed for conversion of another variable), so we will be starting runs for those variables shortly. These runs should not take nearly as long as the original runs as we are only requiring output for 5 variables. In the meantime, we will continue work on outputting the other variables in ENCORE formatting. We anticipate that we will need a few more weeks to have all required components ready for upload, but we will keep you updated."
    - Richard email update - 10707: "I have finally managed to upload our model results to the JRC-server (aqmeii4/10707). Currently concentrations and meteo files are uploading. Depositions and resistances will follow directly after that."
    - 10708 (WRF-Chem UPM): Since the last call, Roberto's group uploaded the full 0241 (NA2010) run results.
    - Ummugulsum - 10710: Had expected to upload results by the end of this week. Processing slowed down due to memory issues. Will start uploading fields next week. Paul and Christian asked to prioritize processing and upload of 002 (deposition fluxes) if possible.
    - Paul and Christian: dry and wet deposition fluxes for base cations were updated for CMAQ and GEM-MACH (now consistently exclude sea salt)
- All newly uploaded files are on the sftp server until a batch transfer to the new ENSEMBLE server (https://jeodpp.jrc.ec.europa.eu/ftp/jrc-opendata/ENSEMBLE/data/model-data/) will occur after all uploads are finished
- Christian uploaded the plots Iannis prepared using currently-uploaded gridded fields and Paul's WMO MMF presentation to a new "results" folder on the sftp server
- Discussion on bad precip hour for CMAQ M3Dry 2010: the CMAQ M3Dry 2010 model runs (10700) had bad precipitation input data (precipitation upwards of 100 cm/hr for large parts of the domain) for one hour, September 24 2010 00:00 GMT. The bad data was discovered long after the run and post-processing had finished, and thereafter had intentionally been retained in the .ens.bz2 files uploaded to the JRC server so as not to hide this bad data used by the model. This meant that the monthly and annual total precipitation fields calculated by enform_aq and included in the .ens.bz2 files had bad values, too, but data analysts could still use the hourly data in the ens.bz2 files to decide how to handle this situation, e.g. calculating totals excluding that hour. However, recently it was suggested to reprocess these files with that one bad hour replaced by adjacent values to make things easier for data analysts. Call participants agreed with this approach, so Christian will recreate the two .ens.bz2 files for precipitation in 10700/0241/002 and10700/0241/005, as well as the receptor extractions for precipitation, using precipitation values from the preceding hour.
- Paul updated the group on a recent email exchange with Christian and Stefano on how to handle data sharing for critical load analysis following a call he had with providers of critical load

data. The group had no objections to Christian's suggestion in the following email exchange on how to handle the situation:

  - Paul's question: "Can some of the summary flux data from the AQMEII4 ensemble be provided to those "outside" of AQMEII4, in order to generate ecosystem impacts estimates?"
  - Christian's response: "If it's for the purpose of your paper, and given that these folks would be co-authors, I'd say sure, it's up to you how you want to organize the workload – give them shapefiles of model output so they can calculate the critical load exceedance which they then pass back to you to be included in the manuscript, vs. the alternative of them giving you the critical load databases and you doing the critical load exceedance calculations yourself. Either way, they'd be "part of AQMEII" for this manuscript so I don't see problems with going with the first option, if that's what you prefer. If it goes beyond that, i.e. if they plan on using this model data you share with them for any other publication or public release, that'd require case-by-case communication and approval by all model data providers, coordinated through you, Stefano, and me."

- There was also some follow-up discussion on the potential future use of AQMEII4 fields for the WMO MMF effort. The group agreed that it is desirable for AQMEII4 data to be used in other efforts following the publication of planned AQMEII manuscripts, using the same basic approach of coordinating any such potential "outside" use of the data with the model data providers through Stefano and Christian.

<u>Point intercomparison (Activity 2)</u>

- An Activity 2 call was held October 25. Olivia was unable to join today's call Activity 1 call but provided an email update afterwards saying that the work on the manuscript is progressing well, with just one model still missing and a potential for minor updates from two other models. A draft of the manuscript may be circulated in December. The next Activity 2 call will be held on November 29.

The next Activity 1 call will be on December 8, 9:00 EST / 15:00 CET