

PP CARMA virtual discussion, 1st July 2021

Minutes of the discussion

In this informal discussion, the status of project with respect to the last PP-CARMA meeting that took place during ICCARUS 2021 was discussed. The project, after a year long extension will conclude in Sept 2021.

- Production of ComA1, ComA2, NoComA

For MAM 2021 all models will be included except ARPA-PT and ARPAE models. Current problems with RHM that need to be confronted over next weeks. **Keep correct Nomenclature!**

- MCH and FF production (issues: several cycles, ensemble, area, stratification test list of stations)

The list of stations even if can include more or less all stations of CA2, still reports them the station lat lon with differences from the WMO list that is used by MEC. If data alignment is used, then these stations are deleted from the comparison. For this reason, Amalia will run separately the Rfdbk for MCH and then Dimitra will connect the data. Also Amalia will communicate with Felix to use if polygon instead of station list can be used in CP in the future,

- Upper air plots to be included in Common Plot at least for MAM2021.

Amalia will check if related page is created by Theodore, empty it from unrelated graphs and include the CP for all countries that are sending FF for upper air too. **Keep correct Nomenclature!**

- National station stratifications in Rfdbk or production of Rdata in each service.

The NoCom area verification is produced and distributed by some services (ask for the rest of the services-make list of what we do not have in order to contact the services). IMS problem with station list, only WMO IMS stations can be used for this activity. Geographical maps are also available on shiny server in the **bystation plots**.

- Include 6h precipitation for all intervals

Amalia will have to discuss this issue with Felix and during upcoming GM and include the task in SPRT CP activity.

- Global models FF preparation/Rfdbk status:

FF are available for ICON global and IFS, but files are very large and produced with the operator for global model (uses smoothing, which implies verification would be done in favour of the global model); a new operator should be introduced.

Last Update: After consultation with Felix, FF for ICON-GLOBAL are available and will be uploaded to the ftp server and checked if can be used. Due to the 2-way nesting, he considers that differences in the scores are really small and there is little additional value, so we could use the files. For IFS, the problem is the amount of input data. They produce feedback files for IFS directly at ECMWF using MEC in global mode. Due to space restrictions, they cannot use the model fields in full resolution Tc01279 (~9km), instead using

T1279 (~18km), with a time step of 6h. So these files are not really comparable to CARMA files with MEC in local mode. Felix proposes to use IFS input only over Europe and run MEC in local mode at ECMWF, which I would support. He currently cannot do that and he also proposes to wait for the ECMWF migration to the new computer.

Amalia will:

- ✓ Check how big the necessary IFS data would be and extract a set to test on local machine (with MEC settings recommended by Felix, of course).
- ✓ Test at ECMWF by preparing the scripts and either Flora or Dimitra to run the test with your resources, because I only have access to test suite resources (Romania is not a full member) and those are already 78% used, so I would not touch them.

First agreed to try to see if it is feasible to extract the data and run it locally on my machine.

As the inclusion of IFS global is part of the extended project plan, this is an important point to be concluded before the GM or else report on this unresolved problem.

- Guidelines and final scripts for CP needs

Amalia will start preparing the guidelines, short and concentrated to the scripts that one has to use from start to end to produce the correct Rdata files for shiny server.

- CARMA in CP SPRT activity after Sep 2021

Flora will prepare the proposal that will be then reviewed by Amalia and an estimation of the annual FTEs needed will be given. Activities should include:

- Retrieve obs from MARS and convert to netcdf (daily basis)
- Create FF for global models: IFS and ICON for all seasons
- Align FF files and run Rfdbk
- When alignment will be problematic, RFDBK will have run separately and connect in a next phase all outputs for graphs production.
- Upload corrected named files on shiny for ComA-1, ComA-2, NoComA for all different statistical outputs (continuous, categorical, by station, upper air, etc.)
- Incorporate new features in CP activity: conditional verification , 6h precipitation in all intervals
- Update the system with new versions of Rfdbk and distribute to users new versions of MEC for FF production