

Med-CORDEX Reporting document for 2019-2020

“Med-CORDEX is an open club of Mediterranean climate model developers and users ; self-organised and based on voluntary efforts. It is currently endorsed by WCRP CORDEX, MISTRALS, Med-CLIVAR and MedECC.”

Actions performed in 2019

Med-CORDEX phase 2 simulations

- The description of the Med-CORDEX phase 2 simulations including 5 modelling pillars can be found in Somot et al. 2018b and on www.medcordex.eu/simulations-phase2.php
- Baseline runs: 11 modelling groups are participating with fully-coupled Regional Climate System Models (RCSM), 10 RCSM are ready to be used, 6 evaluation runs have been performed for this phase 2 as well as 6 historical/scenario runs.
- FPS-convection: 11 evaluation runs are completed over the alpin domain as well as 6 historical/scenario pairs (end of the 21st century, RCP8.5, 10-year time slices).
- FPS-aerosol: simulations have been performed for the 5 defined protocols, in particular 6 pairs of runs are available for protocol 1B (scenario with aerosol climatologies) and 8 runs for protocol 2A (case study with interaction aerosols)
- FPS-airsea: various Baseline runs have been performed and sensitivity tests to the sea representation and air-sea coupling representation are in preparation
- Concerning the Free Modelling Zone runs, 15 modelling actions are listed with model outputs available on request (see the list on www.medcordex.eu/list-activities_Med-CORDEX-FMZ.pdf)

Med-CORDEX dissemination

- Up to now, the Med-CORDEX database (phase 1 simulations) includes 85 datasets, 14 institutes, 7 To uploaded, 36 To downloaded by 250 users
- The Med-CORDEX dissemination can rely on a mailing list of data users, a web page for news, database statistics and an explicit data policy
- The Med-CORDEX phase 1 simulations contribute to MedECC-MAR1 (to be published in 2020), IPCC-AR6 (to be published in 2021) and C3S (simulations to be included in the Climate Data Store in 2020)
- Between 2011 and 2019, 99 scientific articles have been published using Med-CORDEX simulations including a Climate Dynamics special issue in 2018 (list available on www.medcordex.eu/publications.php)

Med-CORDEX organization

- The Med-CORDEX Steering Committee includes 6 members from Italy, Germany, France and Spain. The Med-CORDEX SC meets remotely every 2 months.
- The 6th Med-CORDEX workshop was held in Toulouse at the end of November 2019 with 89 participants on-site and 28 remote participants. This is the biggest Med-CORDEX workshop so far. More information here <http://www.meteo.fr/cic/meetings/2019/medcordex2019/index.html>
- The 3 Med-CORDEX related FPS (convection, airsea, aerosol) had their annual meeting

- during the 6th Med-CORDEX workshop allowing some cross-FPS fertilization.
- The 3 Med-CORDEX related FPS (convection, airsea, aerosol) have their own emailing list for communication
 - The FPS-convection and the FPS-aerosol have their own wiki page on which information can be found concerning the participants, simulation protocol and model outputs
 - <https://www.hymex.org/cordexfps-convection/wiki/doku.php>
 - <https://www.hymex.org/cordexfps-aerosol/wiki/doku.php>

Actions planned for 2020

Med-CORDEX organization

- Annual workshops for the FPS-convection in Prague in Nov 2019 and for the FPS-aerosol
- Preparation of a joint workshop with Baltic Earth in Spring 2021 including the next FPS-airsea workshop

Med-CORDEX dissemination

- Scientific publications of the first multi-model studies based on the phase 2 simulations (Baseline runs, FPS)
- Start of the publications on the ESGF for phase 2 simulations (Baseline runs, FPS)

Med-CORDEX simulations

- Completion of the planned simulations for phase 2 at least for the evaluation runs (Baseline runs, FPS)
- Availability of large ensemble of scenario simulations for phase 2 (Baseline runs, FPS)

Reference:

Somot S., Ruti P., Ahrens B., Coppola E., Jordà G., Sannino G., Solmon F. (2018b). Editorial for the Med-CORDEX special issue. *Clim. Dyn.* 51(3):771-777, doi: 10.1007/s00382-018-4325-x, <https://link.springer.com/article/10.1007/s00382-018-4325-x>