EUCLIPSE

EU Cloud Intercomparison, Process Study & Evaluation Project

Grant agreement no. 244067

Deliverable D1.4 – Final output of ESM simulations

Delivery date: 12 months

Experiment Name and Description	Experiment number	CFMIP monthly 3D (A1c_cfmip)	CFMIP monthly 4xCO2 2D	CFMIP monthly 4xCO2 3D	CFMIP monthly inline (A1d,f,g)	CFMIP monthly offline (A1e)	CFMIP daily 2D (A2a,c,f)	CFMIP daily 3D (A2b,d,g)	CFMIP 3-hourly orbital offline (A2e)	CFMIP 3-hourly inline (A4)	CFMIP time-step station data (A3)
AMIP (1979-at least 2008)	**3.3**	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO
4xCO2 AMIP AMIP (1979-2008) conditions (expt. 3.3) but with 4xCO2	**6.5**	KNMI CNRM IPSL MPI UKMO			KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO		KNMI CNRM IPSL MPI UKMO
AMIP plus patterned anomaly consistent with CFMIP, patterned SST anomalies added to AMIP conditions (expt. 3.3)	**6.6**	KNMI CNRM IPSL MPI UKMO			KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO		KNMI CNRM IPSL MPI UKMO
AMIP plus 4K anomaly as in expt. 3.3, but with a uniform 4K increase in SST	**6.8**	KNMI CNRM IPSL MPI UKMO			KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO	KNMI CNRM IPSL MPI UKMO		KNMI CNRM IPSL MPI UKMO

Legend:

Not planned	(red)
Planned	second half october (yellow)
Run	published by mid october (orange)
Available	(green)

It can be seen that the vast majority of the diagnostics from the four core simulations have either been already posted in the DKRZ data portal or are completed and in the process of been submitted to the portal. Below, a brief summary of progress of the CMIP-5 simulations for all WP1 participating group is presented.

UKMO. All of the EUCLIPSE experiments which were marked as high priority are completed, and basic outputs from these were made available on the ESG in May 2011. We are working our way through the remaining data conversions, and delivered all of the monthly CFMIP outputs from these experiments to the BADC ESG node in August. We expect to complete the process by the end of 2012.

CNRM. All CFMIP2 experiments have been completed and most basic outputs, including COSP, have been published on the CNRM ESG data node (table cfOff is still missing). All CMIP5 simulations have been also completed and all land surface and atmospheric outputs have been also published on ESG. No COSP outputs will be produced for these coupled simulations.

At the **DKRZ** the storage area of 50 TByte space for storing model output data was implemented. The access is possible by sftp. For all participants a user account was created within the appropriate DKRZ project. Beyond the CMIP5 project there will be some extra output done by extra post processing. The objectives for this post processing are developed by Euclipse WP2. All participants are able to transfer their data into the institutes' directory space, all other users are able to read and download them using sftp.

There are two DELL blades (Quad Core Opteron) available as storage and computing resources for the Euclipse project. Their actual urls are euclipse1.dkrz.de (available) and euclipse2.dkrz.de (can be made available on demand in the near future).

LMD. All EUCLIPSE simulations have been run with the IPSL-CM5A-LR GCM, and many CFMIP outputs
are already available on the ESG. We had to re-run some of the simulations to extract some particular diagnostics that were either not computed the first time (e.g. 4xCO2 2D and 3D radiation diagnostics, station data) or not archived within the first ensemble of outputs (e.g. some 3D physical tendencies). Some of these simulations are now completed (e.g. AMIP), others are running. As soon as these additional outputs will be CMORized, they will be made available on the ESG. What also remains to be done is to run COSP offline for the year 2008, with all simulators activated (for the moment, only daily and monthly COSP outputs computed in-line for CALIPSO, PARASOL and ISCCP are available on the ESG) and the outputs in orbital format. We are currently working on this, and we plan to make the outputs available on the ESG by the end of 2011 or early 2012.

EC-Earth. History and scenario runs with the coupled configuration of EC-Earth version 2.3 for CMIP5 have just been completed. Nowthe post-processing of the standard output files using CMOR is done. Meanwhile the modifications to the code for the EUCLIPSE runs with version 2.3 have been merged and the group is verifying the results before starting the actual runs.

It must be emphasized here that CMIP-5 has been a unique exercise, unprecedented in both the number of model runs as well as the size of the saved diagnostics. As a result, delays have been occurring with all modeling groups around the world participating in the program. Coordination through EUCLIPSE has allowed the European program partners to coordinate their efforts and facilitate the running of the experiments, particularly those in the core of the CFMIP/EUCLIPSE programs.