

CMIP6 Model Output Preparation Package

History

- 160630 / 160711: first draft by MIL
- 160712: Discussion in WIP telco, remarks from Bryan and Martin included by MIL

CMIP6 project information

- CMIP6 webpage: <http://www.wcrp-climate.org/wgcm-cmip/wgcm-cmip6>
- Overview presentation: <http://www.wcrp-climate.org/wgcm-cmip/wgcm-cmip6>
- Series of publications in a Special Issue of Geoscientific Model Development (2015/2016): http://www.geosci-model-dev.net/special_issue590.html

MIP Forcing Data

- Status can be obtained from CoG page: <https://pcmdi.llnl.gov/projects/input4mips/>
- Google Doc “CMIP6 Forcing Datasets Summary” can be obtained

CMOR3 – Ready for Testing

- CMOR 3.1.0 Release for (CMIP6, Input4MIPs, obs4MIPs, ana4MIPs and CREATE)
- CMOR 3.1.0 documentation: <http://cmor.llnl.gov>
Web site includes documentation as PDF file, installation (Anaconda and GitHub) and examples (Python, Fortran and C)
- Control vocabulary: http://cmor.llnl.gov/mydoc_cmip6_validator/
- CMIP6 controlled vocabularies in json available from GitHub: https://github.com/PCMDI/cmip6-cmor-tables/blob/master/Tables/CMIP6_CV.json

CMIP6 Global Attributes and CVs (Ready by 95%)

- WIP position Papers <https://earthsystemcog.org/projects/wip/resources/>
 - **CMIP6 ESGF Publication Requirements (final)**
 - CMIP6 Global Attributes, DRS, Filenames, Directory Structure, and CV's (version 1.0)
 - CMIP6 Data Reference Vocabulary Structure and Syntaxes
 - CMIP6_Reference_Vocabularies:lists
- Excel-file extracted from json by Karl Taylor (Mail 15.06.16, 02:52):
CMIP6_expt_list_061316.xlsx
- Global attributes are consistent with Es-doc requirements.

CMIP6 Requested Variables (Ready by 90%)

- Information on WIP pages: <https://earthsystemcog.org/projects/wip/CMIP6DataRequest>
- Data request Python API available from CEDA via SVN: <http://proj.badc.rl.ac.uk/svn/exarch/CMIP6dreg/tags/latest>
- The data request is structured by MIP, science objective and variable priority. Modelling teams need to select which MIPs and science objectives they want to support. The set of variables requested is, generally, different for each MIP and science objective.

CMOR3 – CMIP6Validator

- Documentation: http://cmor.llnl.gov/mydoc_cmip6_validator/
- First version of python LibCV/CMIP6Validator.py
- Usage: CMIP6Checker [-h] cmip6_table infile [outfile]
- Control vocabulary: http://cmor.llnl.gov/mydoc_cmip6_validator/
- The documentation for the CMIP6 Validator is still in work. It uses CDMS2 to read in the metadata and called CMOR API to validate each attribute with CMIP6_CV.json file and CMIP6 tables.

DKRZ QA

- Developed and used at DKRZ ESGF DN for CMIP5 and CORDEX with focus on long-term archiving
- Documentation: <http://qa-dkrz.readthedocs.io/en/latest>
- Installation via Conda: <http://qa-dkrz.readthedocs.io/en/latest/userguide/installation.html>
- CF conventions checker included: <http://qa-dkrz.readthedocs.io/en/latest/userguide/cf-checker.html>
- Modular spot-check service under development: <https://bovec.dkrz.de/> (login required)

Irregular Grids

- Storage in native grid including grid specification (geo-location of each grid point)
- Complete irregular grid specification is stored in a u-grid file in the fixed field section together with e.g. topography. CMOR-3 uses the u-grid file to compile the CMIP6 NetCDF/CF file.
- Modelling are requested to provide tools and information for the transformation into regular grids.
- Re-gridding Weights: Balaji and Karl prepare weights for re-gridding irregular model grids (WIP telco 160628)