

EGU2020-8543

<https://doi.org/10.5194/egusphere-egu2020-8543>

EGU General Assembly 2020

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



CDOs for CMIP6 and Climate Extremes Indices

Fabian Wachsmann

Deutsches Klimarechenzentrum, Datenmanagement, Hamburg, Germany (wachsmann@dkrz.de)

The Climate Data Operators [1] tool kit (CDO) is a worldwide popular infrastructure software developed and maintained at the Max Planck Institute for Meteorology (MPI-M). It comprises a large number of command line operators for gridded data, including statistics, interpolation, or arithmetics. Users benefit from the extensive support facilities provided by the MPI-M and the DKRZ.

As a part of the sixth phase of the Coupled Model Intercomparison Project (CMIP6), the German Federal Ministry of Education and Research (BMBF) is funding activities promoting the use of the CDOs for CMIP6 data preparation and analysis.

The operator 'cmor' has been developed to enable users to prepare their data according to the CMIP6 data standard. It is part of the web-based CMIP6 post-processing infrastructure [2] which is developed at DKRZ and used by different Earth System Models. The CDO metadata and its data model have been expanded to include the CMIP6 data standard so that users can use the tool for project data evaluation.

As a second activity, operators for 27 climate extremes indices, which were defined by the Expert Team on Climate Change Detection and Indices (ETCCDI), have been integrated into the tool. As with CMIP5, the ETCCDI climate extremes indices will be part of CMIP6 model analyses due to their robustness and straightforward interpretation.

This contribution provides an insight into advanced CDO application and offers ideas for post-processing optimization.

[1] Schulzweida, U. (2019): CDO user guide. code.mpimet.mpg.de/projects/cdo , last access: 01.13.2020.

[2] Schupfner, M. (2020): The CMIP6 Data Request WebGUI. c6dreq.dkrz.de , last access: 01.13.2020.