

README concerning the dataset MPIESM available via DKRZ /pool/data resources

Date: 21 April 2022

T I T L E O F T H E D A T A S E T

MPIESM (linked to former name COSMOS) Max-Planck-Institute Earth System Model initial, boundary condition, and model configuration data

P A T H T O T H E D A T A S E T

/pool/data/MPIESM

O W N E R / P R O D U C E R O F T H E D A T A S E T

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D A T A U S A G E L I C E N S E

Data generated by MPI-M is provided under the CC-BY-NC-SA 4.0 license (<https://creativecommons.org/licenses/by-nc-sa/4.0/>). Their usage is restricted accordingly.

There is no specific citation available for this data set.

Individual subsets (such as CMIP6 data)

come under their own citation, detailed in the files' metadata.

Details of the MPIESM model are described in

Mauritsen, T. et al. (2019), Developments in the MPI M Earth System Model - version 1.2 (MPIESM1.2)

and Its Response to Increasing CO₂, J. Adv. Model. Earth Syst.,11, 998-1038,

doi:10.1029/2018MS001400

C O N T E N T O F T H E D A T A S E T

MPIESM model state (restart) data is provided for all CMIP6 CMIP and ScenarioMIP experiments

by DKRZ and MPI-M to allow reproduction of results.

MPIESM input data is provided as climatology or time-series, either globally/zonally uniform or as

spatial distribution data, in different horizontal (T31, T63, T127 and T255) and vertical or spectralband

resolutions. It also contains instructions and scripts for generating compatible data from

source input, and configuration data for the model setup, in particular for model coupling.

Data is provided in NetCDF format, except for the scripts and some text files (e.g. Land Cover

Types, Measuring Station Lists). Contents (variable selection) and format (gridding) of the data

files is specific to MPIESM requirements,

For recent data, only restart and coupling data is stored in MPIESM, while input data for the different model components (ECHAM6, MPIOM) is stored in their respective /pool/data project. Older data typically employs 'tar' archives, holding both input and restart information.

D A T A U S A G E S C E N A R I O S

Access to this data is essential for all users of MPIESM in the versions provided by MPI-M. Though MPIESM applications will increasingly be ported to ICON, for the upcoming years many institutions associated with DKRZ will depend on it (see <https://mpimet.mpg.de/en/science/models/mpi-esm>) Model use requires consent to our software license agreement (https://mpimet.mpg.de/fileadmin/projekte/ICON-ESM/mpi-m_sla_201202.pdf)

M E T H O D S U S E D F O R D A T A C R E A T I O N

See above or contact dataset owner.

I S S U E S

No

V O L U M E O F T H E D A T A S E T (A N D P O S S I B L E C H A N G E S T H E R E O F)

The current data volume is about 0.5 TB.

T I M E H O R I Z O N O F T H E D A T A S E T O N / P O O L / D A T A

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Current resources have been granted until March 2027.