

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

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

MPI-OM Max-Planck-Institute Ocean Model initial and boundary condition data

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

/pool/data/MPIOM

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

The data can be used by any DKRZ user but are not associated with a particular license.

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

MPIOM/HAMOCC data is provided as climatology or time-series, either globally/zonally uniform or as spatial distribution data, in different horizontal (TOY, GI6, GR30, GR15, TP10, TP04 and TP6M) and vertical resolutions. It also contains instructions and scripts for generating MPIOM/HAMOCC compatible data from source input (SOURCE directory).

Forcing data derived from Reanalysis are available for at least 1979 - 2020. Several data sets comprise additional periods. Currently, ERA5, ERA40, ERAint, ERA20C, NCEP, German OMIP are available. Data is provided in NetCDF or GRB format, except for the scripts and some text files.

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 MPIOM/HAMOCC in the versions provided by MPI-M. Though MPIOM/HAMOCC applications will increasingly be ported to ICON, for the upcoming years many institutions associated with DKRZ will depend on it. Furthermore also ICON-0 uses SOURCE directory.

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

Details of the MPIOM/HAMOCC model are described as part of Marsland, S., Haak, H., Jungclaus, J., Latif, M. & Röske, F. (2003). The Max-Planck-Institute global ocean/sea ice model with orthogonal curvilinear coordinates. Ocean Modelling, 5(2), 91-127. doi:10.1016/S1463-5003(02)00015-X

Ilyina, T., Six, K. D., Segschneider, J., Maier-Reimer, E., Li, H., and Núñez-Riboni, I. (2013), Global ocean biogeochemistry model HAMOCC: Model architecture and performance as component of the MPI-Earth system model in different CMIP5 experimental realizations, *J. Adv. Model. Earth Syst.*, 5, 287– 315, doi:10.1029/2012MS000178.
Jungclaus, J., Fischer, N., Haak, H., Lohmann, K., Marotzke, J., Matei, D., Mikolajewicz, U., Notz, D. & von Storch, J.-S.(2013). Characteristics of the ocean simulations in MPIOM, the ocean component of the MPI Earth System Model. *Journal of Advances in Modeling Earth Systems*, 5, 422–446. doi:10.1002/jame.20023
Mauritsen, T. et al. (2019), Developments in the MPI-M Earth System Model version 1.2 (MPI-ESM1.2) and Its Response to Increasing CO₂, *J. Adv. Model. Earth Syst.*,11, 998–1038, doi:10.1029/2018MS001400

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)

Current volume: 15TB, with an expected increase to 20 TB in the future.

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

The resources are granted until 11/2025.