

README concerning the CCLM-CRCS dataset available via DKRZ resource /pool/data  
(Date: 25/10/2021)

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Title of the Dataset

COSMO-CLM and ICON-CLM initial and boundary conditions as well as condensed results of high-resolution evaluation experiments (CRCS Working Group of CLM-Community)

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Path to the dataset

/pool/data/CLMcom/CCLM-CRCS

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Owner / producer of the dataset

Members of CLM-Community

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Data usage license

The data are provided for use with the ICON-CLM and COSMO-CLM models. By agreeing to the CLM-Community agreement (become member of CLM-Community: <https://wiki.coast.hzg.de/clmcom/become-a-member-105349265.html>), the reuse of the CCLM-CRCS dataset available via /pool/data is permitted.

Special treatment for the data in subdirectory /observationalData/:

Except for the SARAH2 and the TRY dataset, the access to the data is restricted. The data were only provided to the CRCS group of the CLM-Community for the purpose of evaluation on high-resolution grids. It is not allowed to spread the datasets to other persons / locations. Therefore, the datasets should be treated by separate file permissions (readable only for group 'clmcom').

Special treatment for the data in subdirectory /usedSourceCode/:

The usage of source code and programs related to COSMO-CLM and ICON-CLM is regulated by the CLM-Community agreement (<https://wiki.coast.hereon.de/clmcom/terms-conditions-98599061.html>) and by the ICON software license (see [https://code.mpimet.mpg.de/projects/iconpublic/wiki/How\\_to\\_obtain\\_the\\_model\\_code](https://code.mpimet.mpg.de/projects/iconpublic/wiki/How_to_obtain_the_model_code)). Therefore, the content should be treated by separate file permissions (readable only for group 'clmcom'). It is important to store model versions including compiled binaries for special (high resolution) community purposes here to secure that all contributing CLM members stick to one common version for the according purpose.

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Content of the dataset

CECPC5.0/: files used in the project CECPC5.0 (parameter testing at convection permitting scale with COSMO-CLM 5.0)

subdirectory 'configuration\_CEG': the model configuration for all experiments done for the Great Alpine Region

subdirectory 'configuration\_CEL': the model configuration for all experiments done for the Lowlands

subdirectory 'forcing\_CEG': the forcing for the domain CEG which contained data from the COSMO-7km reanalysis of the DWD archived to /hpss/arch/bg1155/CRCS/CECPC5.0-forcing/

subdirectory 'forcing\_CEL': the forcing for the domain CEL which contained data from the COSMO-7km reanalysis of the DWD archived to /hpss/arch/bg1155/CRCS/CECPC5.0-forcing/

subdirectory 'output\_CEG': the model output of all experiments for the Greater Alpine region

subdirectory 'output\_CEL': the model output of all experiments for the Lowlands (covering Belgium, Luxembourg, parts of France and Germany)

subdirectory 'evaluation': The evaluation experiments with the HZG-EvaSuite containing subregion mask, configurations, running scripts and the results. In addition, an evaluation report is there.

ETool\_v3/: ETool version 3 which had been adjusted by Erwan Brisson to the convection-permitting scale

external\_parameters/: collection of files with external parameters for high resolution applications of COSMO-CLM. The project name where the parameter file is used is given in the file name.

FPS\_Convection/: files belonging to the CLM-Community common efforts for FPS Convection

FPS\_CMOR/: output files for FPS-Convection from Merja Toelle, more postprocessing needed, will be deleted by Merja Toelle later on (after transfer to Juelich).

FPS\_Convection\_config/: configuration files and CCLM2CMOR tool which are used in FPS Convection

observationalData/: collection of observational data which were used / will be used for the configuration tests. This datasets are quite useful for ICON-CLM and COSMO-CLM model evaluation.

usedSourceCode: collection of model source code files and sometimes also precompiled binaries for the DKRZ supercomputer

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#### Data usage scenarios

The data are provided for the use with ICON-CLM and COSMO-CLM model. The data are the basis for setups of ICON-CLM and COSMO-CLM. Anybody running the models of the CLM-Community requires access to the data. The coordinated configuration experiments for the new versions COSMO6.0 and the ICON-CLM shall make use of this storage in /pool/data.

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#### Methods used for data creation

Regional atmospheric models in high spatial resolution and evaluation software of the CLM-Community.

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#### Issues

n/a

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#### Volume of the dataset and possible changes

18TB and up to 40TB for the new model versions of COSMO-CLM and ICON-CLM.

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#### Time horizon of the dataset

The data are in use and should be stored for the next 5 years. The content of the directories will be adjusted to the common tasks of the CLM-Community which are not connected to other projects.