Naming of climate projections in the CLM-Community

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Background

With the current naming conventions for the climate projections within CORDEX, the contribution of the individual institutions performing the simulations, i.e. providing manpower and computer resources, is not well visible. However, these credits are important for the institutions in order to defend the usage of fundings. Therefore, a new naming convention should be used with immediate effect.

Suggestions for the naming in the future

General comments:

- No changes for published simulations
- BUT the **modeling groups should be acknowledged**, i.e. as CLMcom-ETH or CLMcom-BTU in publications! The CORDEX Terms of Use states:
  "In publications that rely on the CORDEX model output, I will appropriately credit the data providers by an acknowledgment similar to the following: "We acknowledge the World Climate Research Programme's Working Group on Regional Climate, and the Working Group on Coupled Modelling, former coordinating body of CORDEX and responsible panel for CMIP5. We also thank the climate modelling groups (listed in Table XX of this paper) for producing and making available their model output. We also acknowledge the Earth System Grid Federation infrastructure an international effort led by the U.S. Department of Energy's Program for Climate Model Diagnosis and Intercomparison, the European Network for Earth System Modelling and other partners in the Global Organization for Earth System Science Portals (GO-ESSP)." where "Table XX" in your paper should list the models and modelling groups that provided the data you used."
- Thus, we suggest extending the acknowledgements for existing simulations where CLMcom is used as institute_id, by "The simulations provided by the CLM-Community (CLMcom) have been produced by <enter institutes, e.g. BTU Cottbus, ETH Zurich, etc.>" and/or mention the appropriate institution in the table (e.g. as CLMcom-ETH, CLMcom-BTU …). The necessary information on the institutes performing the specific CLMcom simulations is available at http://cordex.clm-community.eu.

(1) DRS elements

Table 1: Overview of the DRS elements used in the CORDEX directory structure and the filenames. Please note, that the value of each DRS element must meet the requirements defined in the CORDEX archive specifications (especially registration of controlled vocabulary). ETH is used as representative for the member institution.

DRS element	Old	New
Institution	CLMcom	CLMcom-ETH
RCMModelName	**\<model_id\> =** **\<institute_id\>-\<model_acronym\>** **\<institute_id\>** = CLMcom **\<model_acronym\>** = CCLM5-0-6 Example: CLMcom-CCLM5-0-6	**\<model_id\> =** **\<institute_id\>-\<model_acronym\>** **\<institute_id\>** = CLMcom-ETH **\<model_acronym\>** = CCLM5-0-6 Example: CLMcom-ETH-CCLM5-0-6
Example path	EUR-11/CLMcom-ETH/MPI-M-MPI-ESM-LR/rcp26/r1i1p1/CLMcom-ETH-CCLM5-0-6/v1/day/tas	
Example file	tas_EUR-11_MPI-M-MPI-ESM-LR_rcp26_r1i1p1_CLMcom-ETH-CCLM5-0-6_v1_day_20060101-20101231.nc	

(2) Attributes in NetCDF files

Table 2: Overview of the global attributes used in the header information of the NetCDF files. Please note, that the value of each attribute must meet the requirements defined in the CORDEX archive specifications (especially registration of controlled vocabulary). ETH is used as representative for the member institution. The fields config_cclm and config_int2lmare only for internal information/documentation and are not part of the official CORDEX standard. The data producer should include these additional global attributes in the header of the NetCDF files and upload the configuration files as tar file to the overview tables in the CORDEX section of the CLM-Community webpage.

Attribute	Old	New
Institution	Climate Limited-area Modelling Community (CLM-Community)	ETH Zurich, Zurich, Switzerland in collaboration with the CLM-Community
institute_id	CLMcom	CLMcom-ETH
Source	CLMcom-CCLM5-0-6	Climate Limited-area Modelling Community (CLM-Community)
model_acronym	CCLM5-0-6	CCLM5-0-6
model_id	**\<model_id\> =** **\<institute_id\>-\<model_acronym\>** **\<institute_id\>** = CLMcom **\<model_acronym\>** = CCLM5-0-6 Example: CLMcom-CCLM5-0-6	**\<model_id\> =** **\<institute_id\>-\<model_acronym\>** **\<institute_id\>** = CLMcom-ETH **\<model_acronym\>** = CCLM5-0-6 Example: CLMcom-ETH-CCLM5-0-6
Contact	cordex-cclm@dkrz.de	xxx@env.ethz.ch (*generic email address if possible*)
References	http://www.clm-community.eu/	http://cordex.clm-community.eu/

Title	**<model_id>** model output prepared for CORDEX **<driving_experiment_name>** Example: CLMcom-CCLM5-0-6 model output prepared for CORDEX RCP8.5	**<model_id>** model output prepared for CORDEX **<driving_experiment_name>** Example: CLMcom-ETH-CCLM5-0-6 model output prepared for CORDEX RCP8.5
Comment	CORDEX Europe RCM CCLM 0.11 deg EUR-11	Add something like: "Please use the following reference for this climate data: Climate projection performed by institution or name or both…."
config_cclm	none	**<domain>_<model_id>_**X_config (X = 01, 02, 03, …) Attribute describing the configuration of CCLM used for this simulation. The configuration files (YUSPECIF, INPUT_ASS, INPUT_DIA, INPUT_DYN, INPUT_INI, INPUT_IO, INPUT_ORG, INPUT_PHY, optional README with further information) must be provided as tar file (**<domain>_<model_id>_**X_config.tar) in the overview table on the CLM webpage. Example attribute: EUR-11_CLMcom-ETH-CCLM5-0-6_01_config Example tar file: EUR-11_CLMcom-ETH-CCLM5-0-6_01_config.tar
config_int2lm	none	**<domain>_<int2lm_id>_**X_config (X = 01, 02, 03, …) Attribute describing the configuration of INT2LM used for this simulation. The configuration files (OUTPUT, INPUT, optional README with further information) must be provided as tar file (**<domain>_<int2lm_id>_**X_config.tar) in the overview table on the CLM webpage. Example attribute: EUR-11_INT2LM-205-1_CLMcom-ETH-CCLM5-0-6_01_config Example tar file: EUR-11_INT2LM-205-1_CLMcom-ETH-CCLM5-0-6_01_config.tar

(3) Modifications of DRS elements for simulations with two nesting steps (preliminary)

Table 3: Modifications of the DRS elements used in the CORDEX directory structure and the filenames for simulations with more than one nesting step. ETH is used as representative for the member institution. Please note, that the information below describes the current status of the discussion within CORDEX. It is not an official standard yet! At the time of writing there is no official standard for simulations with more than one nesting step. This document will be updated once an official standard has been defined.

DRS element	Old	New
No name assigned yet (potentially Domain or CPDomain)	<CORDEX_domain> Example: NCP-12	<cprcm_domain> Example: NCP-03
No name assigned yet (potentially CPRCMModelName)	none	**<cprcm_model_id>** = **<cprcm_institute_id>**-**<cprcm_model_acronym>** **<cprcm_institute_id>** = CLMcom-ETH **<cprcm_model_acronym>** = CCLM5-0-6 Model ID of the model used for the second nesting step. Example: CLMcom-ETH-CCLM5-0-6
No name assigned yet	none	**<cprcm_nesting_information>** Element describing the number of nesting levels (n) and possible differences between simulations at same nesting level which can not be indicated otherwise (x). Example: x2n2 (n is the number of nesting levels, x flags any kind of difference between nestings)
Example path	NCP-03/CLMcom-ETH/MPI-M-MPI-ESM-LR/rcp26/r1i1p1/CLMcom-ETH-CCLM5-0-6/v1/CLMcom-ETH-CCLM5-0-6/x2n2/day/tas	
Example file	tas_NCP-03_MPI-M-MPI-ESM-LR_rcp26_r1i1p1_CLMcom-ETH-CCLM5-0-6_v1_CLMcom-ETH-CCLM5-0-6_x2n2_day_20060101-20101231.nc	

(4) Modifications of attributes in NetCDF files for simulations with two nesting steps (preliminary)

Table 4: Modifications of the global attributes used in the header information of the NetCDF files. ETH is used as representative for the member institution. Please note, that the information below describes the current status of the discussion within CORDEX. It is not an official standard yet! At the time of writing there is no official standard for simulations with more than one nesting step. This document will be updated once an official standard has been defined. The fields config_cclm and config_int2lm are only for internal information/ documentation and are not part of the official CORDEX standard. The data producer should include these additional global attributes in the header of the NetCDF files and upload the configuration files as tar file to the overview tables in the CORDEX section of the CLM-Community webpage.

Attribute	Old	New
rcm_model_id	<model_id>	<rcm_model_id> Model ID of the regional model used as boundary conditions for the second nesting step. Example: CLMcom-ETH-CCLM5-0-6
rcm_institute_id	<institute_id>	<rcm_institute_id> Institute ID of the institution performing the simulation used as boundary conditions for the second nesting step. Example: CLMcom-ETH
rcm_version_id	<version_id>	<rcm_version_id> Version ID of the regional model used as boundary conditions for the second nesting step. Example: v1
rcm_domain	<CORDEX_domain>	<rcm_domain> Model domain of the simulation used as boundary conditions for the second nesting step. Example: NCP-12
nesting_levels	None	number of nesting levels Number specifying the number of nesting levels. Example:

		nesting_levels = 2
cprcm_domain	None	**<cprcm_domain>** Model domain of the second nesting step. Example: NCP-03
cprcm_model_id	none	**<cprcm_model_id> =** **<cprcm_institute_id>-** **<cprcm_model_acronym>** **<cprcm_institute_id>** = CLMcom-ETH **<cprcm_model_acronym>** = CCLM5-0-6 Model ID of the model used for the second nesting step. Example: CLMcom-ETH-CCLM5-0-6
cprcm_institute_id	none	**<cprcm_institute_id>** Institute ID of the institution performing the second nesting step. Example: CLMcom-ETH
cprcm_institution	none	**<cprcm_institution>** Institution performing the second nesting step. Example: ETH Zurich, Zurich, Switzerland in collaboration with the CLM-Community
cprcm_nesting_information	none	**<cprcm_nesting_information>** Element describing the number of nesting levels (n) and possible differences between simulations at same nesting level which can not be indicated otherwise (x). Example: x2n2 (n is the number of nesting levels, x flags any kind of difference between nestings)
config_cclm	none	**<domain>_<model_id>**_X_config (X = 01, 02, 03, …)

		Attribute describing the configuration of CCLM used for this simulation. The configuration files (YUSPECIF, INPUT_ASS, INPUT_DIA, INPUT_DYN, INPUT_INI, INPUT_IO, INPUT_ORG, INPUT_PHY, optional README with further information) must be provided as tar file (**\<domain>_\<model_id>_**X_config.tar) in the overview table on the CLM webpage. Example attribute: NCP-03_CLMcom-ETH-CCLM5-0-6_01_config Example tar file: NCP-03_CLMcom-ETH-CCLM5-0-6_01_config.tar
config_int2lm	none	**\<domain>_\<int2lm_id>_**X_config (X = 01, 02, 03, …) Attribute describing the configuration of INT2LM used for this simulation. The configuration files (OUTPUT, INPUT, optional README with further information) must be provided as tar file (**\<domain>_\<int2lm_id>_**X_config.tar) in the overview table on the CLM webpage. Example attribute: NCP-03_INT2LM-205-1_CLMcom-ETH-CCLM5-0-6_01_config Example tar file: NCP-03_INT2LM-205-1_CLMcom-ETH-CCLM5-0-6_01_config.tar

(5) Use of DOI

We recommend that each data set (each simulation) should get a DOI. The institution which produced the data set should take care of this.

References:

CORDEX archive specifications: http://www.cordex.org/experiment-guidelines/how-to-submit-data-rcms/
CORDEX Terms of Use: http://is-enes-data.github.io/cordex_terms_of_use.pdf