Project: **1088**
Project title: **DKRZ_MIP_Pool_Analysis**
Principal investigator: **Stephan Kindermann**
Report period: **2021-11-01 to 2022-10-31**

The DKRZ_MIP_Pool_Analysis project wants to provide support for short term data analysis activities closely related to the exploration of existing DKRZ data collections (accessible via /pool/data) with specific focus on the CMIP6 (and CORDEX) collections stored as part of the DKRZ data project ik1017.

In the reporting period individual users and research teams with no pre-existing project allocation at DKRZ were enabled to access the DKRZ pool and perform small scale data analysis near to the data. This project proposal is coordinated at European level with similar efforts at IPSL (France), STFC (UK) and CMCC (Italy) as part of the IS-ENES3 project to provide coordinated European support for CMIP related data analysis activities.

Individual users were supported with a light weight (short term, small compute profile) access to analysis capabilities mostly via the DKRZ jupyter-hub installation (see https://is.enes.org/sdm-climate-analytics-data/). These users only need to pass a lightweight registration process and are reviewed and selected locally at DKRZ.

Research groups with larger computational demands had to send proposals responding to specific IS-ENES project calls which are then reviewed by the established IS-ENES review boards (separate technical and scientific board) based on well-defined selection criteria.

In the reporting period about 20 people registered for the service and additionally around 70 people were supported in specific training events. Overall, around 6000 node hours from the available 15000 node hours were used. Thus, the compute resource requirements were overestimated.

The supported training workshops included the IS-ENES3 summer school (https://www.iit.demokritos.gr/is-enes-summer-school/) with about 40 post-graduate students as well as a dedicated course on CMIP6 data evaluation based on the ESMValTool.

As part of this effort a collection of support material (e.g. jupyter notebooks) was enriched, updated and made publicly available as part of the DKRZ documentation and the IS-ENES3 github repo.

In summary this project proved very useful as a light-weight possibility to support users and user-groups wanting to access the DKRZ CMIP data pool (especially the CMIP6 data collection) to generate derived data products without the need to download huge amounts of data. The project also supported training events where this application scenario was in the focus. The required processing allocation to support this was overestimated and will be reduced in the follow up proposal.

The IS-ENES3 project and the European Consortium of CMIP data providers plan to continue the service until mid-2023 and also follow up training events are planned for 2023. For this an extension of this project is requested.