Priority Variables Consultation

The CMIP International Project Office (CMIP IPO) invites you to take part in this consultation on priority variables for inclusion within a core set of variables forming the baseline for exchange of climate model data, in any intercomparison project, in accordance with FAIR data and Open Science principles. This consultation is relevant to those involved in developing and operating climate models, data infrastructure and those utilising climate model outputs. We anticipate this is of relevance to those providing access to and/or utilising the outputs of climate models within commercial, public and third sectors as well as within academia.

Summary

Consultation on priority variables for inclusion within a core set of variables forming the baseline for exchange of climate model data, in any intercomparison project, in accordance with FAIR data and Open Science principles. Relevant to those involved in developing and operating climate models, data infrastructure and those utilising climate model outputs.

Respondents: those providing access to and/or utilising the outputs of climate models within commercial, public and third sectors as well as within academia.

This consultation is made up of 4 sections:

- **Part I: Defining the context and structure of the core variable list**
- **Part II: Feedback on specific variables** (optional)
- **Part III: Feedback on current and future process**
- **Part IV: About the respondent**

Context

The Coupled Model Intercomparison Project (CMIP) has grown considerably and now serves a wide range of communities, all with their own specialised requirements for data. The CMIP Data Request function, led by Martin Juckes of UKRI-STFC, is establishing a process to address the challenges presented by having too many variables listed as top priority while meeting the needs of both data providers and users.

It is envisaged that a core set of variables can form a baseline for exchange of climate model data, in any intercomparison project, in accordance with FAIR data and Open Science principles. Establishing this baseline will address the community intention discussed at WGCM 2019 in Barcelona of giving more

authority and meaning to variable prioritisation.

The intention is to publish the core variable set, together with an explanation of the process for modifying and extending the core set and discussion of the role of the core variables in the context of the larger CMIP Data Request activity, as a Geoscientific Model Development (GMD) paper.

The core variable list will be based on the outcome of this consultation process. Starting from a list of over 1200 "priority 1" CMIP6 variables, a subset of 140 variables has been generated by an automated screening algorithm combining 4 criteria (1. Download volumes 2. file counts 3. Number of models supplying the data 4. Inclusion in C3S service). This methodological approach is outlined here: https://bit.ly/MIPVarMethodology.

Contributors are not constrained by this list, they may propose that variables be removed and others added, but the list is intended to provide some focus by giving an indication of the variables which are widely used according to the selected metrics. The expert consultation process is important to strike a compromise between competing metrics. We wish the final list to reflect a community view of priorities.

Consultation timetable:

- Consultation opens Tuesday 23 August. The online form is available at: https://bit.ly/WCRP-CV-Phase2OnlineForm.
- Consultation closes at at 18. 00 UTC on Friday 23 September
- CMIP IPO prepares a summary report for paper author team