CMIP AR7 Fast Track Consultation: Modelling centres

Thank you for your willingness to help the CMIP Panel set expectations of modelling centre/groups contributions to CMIP7. Before completing this survey, please read the supporting information document here. Only one response should be submitted for each modelling centre/group. To help facilitate development of your collective responses the survey questions can be found in a pdf format here; however, only responses submitted via the survey form will be considered. Your responses are very important. We appreciate your time in completing this survey and submitting before 22nd December 2023.

Drop-in sessions will take place at 05:00 and 17:00 UTC 30th November where members of the CMIP Panel will be available to answer your questions – you can register and submit questions in advance here.

Data protection notice

The data collected in this form is processed and held securely by the CMIP International Project Office (IPO). Your data will be automatically deleted on closure of the CMIP IPO project at ESA, scheduled for 28th February 2027. Any personal data provided on this form will only be shared with, and handled by, the CMIP IPO, CMIP Panel, WGCM Infrastructure Panel, and WCRP Secretariat. Results from the survey may be published; however, data will be anonymised prior to publication. If information we have about you is inaccurate, out of date, or incomplete, you have the right to have it rectified. For any requests, concerns, or questions regarding this notice please contact cmip-ipo@esa.int.

I confirm I have read and understood this data protection notice.

○ Yes

○ No

Section 1: Respondent information

ⓘ Which CMIP modelling centre/group are you representing?

Please select your modelling centre ID from the list appearing when you press "Add model" button. Choose Other if you are representing a new institution.

[+ Add model]

Ⓝ If other, enter your modelling centre/group

[   ]

Name

[   ]

Position/role

[   ]

Do you plan to contribute simulations to CMIP7?

○ Yes

○ No

👁 What model configurations do you expect to use for CMIP7 simulations?

Please provide information on what model configuration you would use (based on the "source type" definitions)

- ☐ AER
- ☐ AGCM
- ☐ AOGCM
- ☐ BGC
- ☐ CHEM
- ☐ ISM
- ☐ LAND
- ☐ OGCM
- ☐ RAD
- ☐ SLAB

Is your modelling centre/group capable of running with CO2 emissions?

- ○ Yes
- ○ No

👁 If yes, would you plan to run all historical/scenarios as emission forced runs or also run concentration forced runs?

- ○ Emissions forced runs only
- ○ Both emissions and concentrations forced runs

Section 2: Fast Track v1 proposal experiment review

A summary of the proposed CMIP AR7 Fast Track experiments together with a short description of the motivation for the inclusion of each and an estimation of the required model years can be found in the supporting information document.

Is your modelling centre/group interested in running the Fast Track simulations targeted at IPCC needs?

A best estimate for CMIP Fast Track data delivery, based on previous cycles, would be the end of 2026 at the earliest.

- ○ Yes, all experiments and all requested data
- ○ Yes, but not all experiments/data
- ○ No

👁 If "No" can you provide a reason?

[ ]

👁 If "Yes, all" or "Yes, but not all experiments/data" would your centre/group prioritise running them (including ESGF publication of CMIP-compliant requested data ahead of the deadline for inclusion in the IPCC assessment process)?

- ○ Yes
- ○ No

If "Yes but not all experiments" is this decision due to:

- [ ] There are too many experiments
- [ ] We do not agree with the inclusion of some experiments
- [ ] The data publication workflow/workload is unclear
- [ ] Insufficient computational/CPU or storage available
- [ ] Other

If other, please provide detail

[   ]

Individual experiment feedback

For each experiment below please indicate whether your centre/group is likely to run the experiment, provide a comment on the experiment (particularly if you have stated your centre/group will not run it) and, if relevant, provide information on what model configuration you would use (based on the "source type" definitions)

DCPP

[ ]

DCPP initialised prediction comment

[   ]

Scenarios x5

[ ]

scenarios x5 comment

[   ]

AerChemMIP (piClim-X)

[ ]

AerChemMIP piClim-X comment

[   ]

For piClim-X, where X represents the number of experiments, how many would you be willing to do

- ( ) 1
- ( ) 3
- ( ) All 17

AerChemMIP (hist-piSLCF)

[ ]

AerChemMIP hist-piSLCF comment

[   ]

AerChemMIP (hist-piAer)

[ ]

AerChemMIP hist-piAer comment

[   ]

AerChemMIP (SSPX-SLCF)

[ ]

AerChemMIP SSPX-SLCF comment

[   ]

C4MIP (1pctCO2-bgc)

☐

C4MIP 1pctCO2-bgc comment

C4MIP (1pctCO2-rad)

☐

C4MIP 1pctCO2-rad comment

C4MIP (TCRE in case of flat10)

☐

C4MIP TCRE in case of flat10 comment

C4MIP (esm-1pct-brch-1000PgC or flat10-zec)

☐

C4MIP esm-1pct-brch-1000PgC or flat10-zec comment

CFMIP (amip-p4k)

☐

CFMIP amip-p4k comment

CFMIP amip-piForcing

☐

CFMIP amip-piForcing comment

CFMIP abrupt-2xCO2

☐

CFMIP abrupt-2xCO2 comment

RFMIP (piClim-aer)

☐

RFMIP piClim-aer comment

RFMIP (piClim-histaer)

☐

RFMIP piClim-histaer comment

RFMIP (piClim-histall)

☐

RFMIP piClim-histall comment

Does your centre/group plan to run the Fast Track with a CMIP6-class model or a more recent version?

Considering for CMIP6-class models the DECK already exists whereas for a more recent version DECK would have to be re-run.

○ CMIP6-class model

○ More recent model version

Given minimum participation through the DECK is 1125 (coupled) plus 136 (atmos) years, how many simulated years would your centre/group accept as realistic for FastTrack?

Please refer to the "Potential computational load" section of the supporting information document LINK

○ Less than 3000

○ 3000 - 5000

○ 5000 - 10000

○ Other

👁 If other, please provide an indication of acceptable Fast Track simulated years for your centre/group

Do you think there are experiments missing from the proposed Fast Track selection?

○ Yes

○ No

👁 If yes, please provide detail on the experiments you would like to be considered.

Please include the experiment name e.g. hist-aer (if from CMIP6 please use the experiment id found here), MIP acronym e.g., DAMIP, justification of its relevance to IPCC and an estimate of model years required to run.

Please add any other feedback on the Fast Track v1 proposal here

Section 3: Data Request Fast Track requirements

Please review the "Potential data production workload" section of the supporting information document before completing this section

Is your centre interested in joining in efforts to co-design the data request to help balance requirements against capacity?

- ○ Yes
- ○ No

Which of the following statements about the scope of the CMIP Data Request most closely reflects your experience?

Given that the CMIP6 Data Request, with 2000+ variables, was widely seen as being "too much" and the objective of evaluating and assessing climate models which simulate Earth's climate system with ever increasing complexity.

- ○ We were able to use the tools provided to extract information we needed...
- ○ The complexity of the request and the frequent updates made it impossib...
- ○ It was difficult to identify clear priorities in the early stages of the CMIP6 c...
- ○ The overall scope of the CMIP6 data request was too large and should be...

👁️‍🗨️ Please suggest how the overall scope might be reduced

[   ]

Would you repeat Fast Track experiments later in the CMIP7 cycle to support an expanded harmonised data request?

- ○ Yes, all
- ○ Yes, but not piControl
- ○ No

Please provide any additional feedback on the Data Request below

[   ]

Section 4: Model documentation requirements

Please review the "Model documentation and errata developing requirements" section of the supporting information document before completing this section.

A proposal has been put forward to develop a Minimum Viable Model Documentation as a requirement for publishing data on the ESGF. Would your centre/group support this proposal?

○ Yes

○ No

👁 If no, what are your plans, if any, to support user needs?

[ ]

👁 If yes, does a maximum of 4 hours per modelling centre sound like an acceptable amount of time to spend on this?

○ Yes

○ No

👁 If no, please provide details on what your centre/group thinks is an acceptable amount of time to spend on supporting documentation

[ ]

Section 5: Carbon footprint

Does your modelling centre/group take into consideration or monitor the carbon footprint associated with running CMIP simulations?

○ Yes

○ No

👁 If yes, what does your monitoring entail?

[ ]

What could the CMIP IPO do to help you monitor and reduce your carbon footprint associated with running CMIP simulations?

[ ]

Section 6: Final comments

If you have any final comments that you would like to share please detail below:

[ ]