

Editor review of
Analyzing the PMIP4-CMIP6 ensemble: a workflow and tool (pmip_p2fvar_analyzer v1)
by Zhao et al

1) Code and Data availability : I am puzzled by this section. In the first sentence, you write : « All the codes discussed in the above workflow are available ... and from Zenodo at <https://doi.org/10.5281/zenodo.5242948> ». But then in the rest of the paragraph, you give links to github repository for different parts of the software used in the paper ; does this mean that the corresponding software is not available on Zenodo ? That should not be so. Please clarify and make sure that all software and codes used in the workflow described is available on Zenodo.

2) Remarks on your responses to the reviewer's comments (the numbering used refers to the number of the line in the document gmd-2021-290-author_response-version2.pdf) :

- L105 : I think you did not address the reviewer's comment on « Why do we need this ». Please do so.
- L127 : I don't see anywhere in the text where you changed “ensemble” for “collection” or “multi-model” as proposed by the reviewer
- L152 : Figure 1 is missing. Reintroduce Figure 1 and explain what was changed in its captions.
- L161 : You added “9112 variables had been uploaded to PMIP4 by Dec 2021” ; I think this does not answer the referee's comment. What he wants to know is how many files/variables should be uploaded per model for PMIP-CMIP.
- L170 : I don't see any sentence moved to the top of the paragraph starting with “Since each experiment ...”; please be more precise.
- L175 : I don't see the need to add “in this instance” ; for me it is redundant with “in a single larger file”; please remove it .
- L197 : I don't think the reviewer meant to remove the whole sentence. Please put it back, only changing “This has the disadvantage ...” by “This means ...”
- L225 : Change “in each year” for “for each year”.
- L227 : Change “delineation of regional monsoons adopted” for “delineation adopted”
- L250 : In the sentence added, I guess “from” should be “form” ? You write « previously called the ‘PMIP Variability Database’ » but I don't see where this is done in the manuscript?
- L265 : You did not answer the remark to break up this 5-line long sentence; please do so.
- L271 : Put “<https://mybinder.org/>“ between parentheses and also few lines below put “<https://docker.com/>“ between parentheses.
- L290 : remove the comma after “long-term”
- L300 : as you have “differences” in your sentence, change “minus” for “and”
- L310 : you are discussing the use of xarray but not answering the referee's question about whether or not the regridding is the same kind of regridding as in step 4 on page 10; please do so
- L330 : I think the mention “last assessed on 30th Nov 2021” is not useful here; consider removing it.
- L335 : What does “The latitude of the boundary is calculated by determining the change in latitude where the zonal mean summer (MJJAS) rain rate equals ...” Shouldn't it be simply “The boundary is the latitude where the zonal mean summer (MJJAS) rain rate equals ...”

- L351 : Change “to which the monsoon reaches” by “reached by the monsoon”
- L356 : What work? Replace by “the work presented in this manuscript”?
- L359 : You forgot to change “are” by “is”
- L401 : « contain » should be « contains »

3) Remarks directly on your manuscript (the numbering used here below refers to the number of the line in gmd-2021-290-ATC2.pdf) :

- L12 : remove the semi-colon after « (Fig. 1) »
- L17 : I think « PMIP3-PMIP5 » should be replaced by « PMIP3-CMIP5 »
- L89 : replace « who » by « which »
- L119 : I think the possessive form « 's » should be used only for persons, change « domain's extent » for « domain extent »
- L145 : same as above : change « manuscript's methodology » for « manuscript methodology »
- L173 : Put capital P for Python
- L184 : add missing parenthesis after « variable »
- L215 : as you are using « as well as providing » later in the sentence, I think « storing » would read better than « that stores »
- L241 : What does « oft-computed » mean?
- L252 : « Examples uses » instead of « Example Uses »