

# Reply to the editor's comments: gmd-2021-290

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## Summary of changes

We would like to thank the editor for the remarks about our response to the two reviewers' comments and the remaining errors in our manuscript. We adopted most of the remarks.

Blue text below is our response to the editor's comments (reproduced in black).

5

Dear Author, I would like to thank you for the revised manuscript that answers most of the point raised by the referees. However, before considering publication of your manuscript, I would like you to consider the following points and produce a new manuscript answering them. With best regards, Sophie Valcke

Thank you, Sophie. Your comments are really helpful. We'd happy to revise our manuscript according to your remarks.

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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.

Sorry for causing your confusion. We've created Zendo dois for all the corresponding software and added them after the github repositories.

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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.

A paragraph has been added in Section 1 to introduce why we need the workflow described in this manuscript.

25

L127 : I don't see anywhere in the text where you changed "ensemble" for "collection" or "multi-model" as proposed by the reviewer

Oh gosh! We are really sorry that we forgot to clarify the usage of “ensemble”, “collection” and “multi-model” in text. They have been corrected in text and figures.

30

L152 : Figure 1 is missing. Reintroduce Figure 1 and explain what was changed in its captions.

My apologies. We didn't notice that Fig 1 is missing through the creation of the marked-up version via latexdiff. It's visible in gmd-2021-290-manuscript-version3.pdf. We've now added Fig 1 back and marked the changes in its caption.

35 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.

9112 is the total amount of variables that have been uploaded by the whole community. It is difficult to say how many files should be uploaded per model, because each model supports different number of variables and simulations and doesn't contribute to all PMIP experiments. We have now changed it to the URL of the ESGF CMIP6 PMIP data holdings webpage.

40

L170 : I don't see any sentence moved to the top of the paragraph starting with “Since each experiment ...”; please be more precise.

We didn't realise that. My apologies! We made a mistake by adding the sentences in a wrong version of the manuscript. They have been added correctly now.

45

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 .  
It has been removed.

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 ...”

Thanks for pointing out our misunderstanding. The whole sentence has been put back and “This has the disadvantage ...” has been replaced by “This means ...”

L225 : Change “in each year” for “for each year”.  
55 Done.

L227 : Change “delineation of regional monsoons adopted” for “delineation adopted”  
We've deleted “of regional monsoons”.

60 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?  
Sorry for causing confusion. « previously called the ‘PMIP Variability Database’ » was meant it was used in another published

paper written by one of us, Chris Brierley and his colleague. It now has been corrected and referenced to the literature.

65 L265 : You did not answer the remark to break up this 5-line long sentence; please do so.

The long sentence has been broken up to two.

L271 : Put “https://mybinder.org/“ between parentheses and also few lines below put “https://docker.com/“ between parentheses.

70 Brackets have been added.

L290 : remove the comma after “long-term”

We’ve removed the comma.

75 L300 : as you have “differences” in your sentence, change “minus” for “and”

“minus” has been replaced by “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;m please do so

80 Sorry we didn’t answer the question. The regridding steps were different, because they were written by different people. Now the codes have been updated, which now use the same kind of regridding as in step 4.

L330 : I think the mention “last assessed on 30th Nov 2021” is not useful here; consider removing it.

We agree. The assess date has been removed.

85

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 ...”

Thanks! We’ve rewritten this sentence following your suggestion.

90

L351 : Change “to which the monsoon reaches” by “reached by the monsoon”

Done.

L356 : What work? Replace by “the work presented in this manuscript”?

95 We’ve changed “this” to “the” and added “presented in this manuscrip” after “work”.

L359 : You forgot to change “are” by “is”  
“are” has been changed by “is”.

100 L401 : « contain » should be « contains »  
A “s” has been added.

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

105 L12 : remove the semi-colon after « (Fig. 1) »  
“;” has been removed.

L17 : I think « PMIP3-PMIP5 » should be replaced by « PMIP3-CMIP5 »  
110 You are right. We’ve corrected this typo. Thanks!

L89 : replace « who » by « which »  
Done.

115 L119 : I think the possessive form « ’s » should be used only for persons, change « domain’s extent » for « domain extent »  
It has been removed.

L145 : same as above : change « manuscript’s methodology » for « manuscript methodology »  
Corrected.

120 L173 : Put capital P for Python  
P has been changed to capital.

L184 : add missing parenthesis after « variable »  
125 “)” has been added after variable.

L215 : as you are using « as well as providing » later in the sentence, I think « storing » would read better than « that stores »  
“that stores” has been changed to “storing” for parallelism.

130

L241 : What does « oft-computed » mean?

This niche adverb means that the calculation is often performed by the community. We have now changed it some something more generally understandable.

135 L252 : « Examples uses » instead of « Example Uses »

The section title has been changed.