

October 8, 2024

Dear Dr. Zhang:

We have completed the revisions to our manuscript, “Distribute paleoscience information across the next IPCC reports.” The revised version includes changes that were suggested by the two referees and by the community commenters. We already wrote a detailed point-by-point reply to each of the comments as part of the interactive discussion available on the EGUSphere preprint site. The revisions are shown as tracked changes to the original text in the uploaded file. The revisions include:

Opinion piece. We changed “Rapid Communication” to “Opinion” in the title, as requested. We also added “in this opinion piece, we...” to the abstract.

More balanced presentation. We added a lengthy section with the heading, “response to arguments favoring a separate chapter” to expand our discussion of the opposing viewpoint. The section considers the issues presented by the reviewers who commented on accuracy, completeness, visibility and related topics.

Opportunities for new directions. We expanded on the specific information from paleoscience that we see as having potential for stronger inclusion in future reports. For example, we point to the need for expanded use of evidence from paleoscience for assessing model fitness for purpose and confidence in projections. We also highlight an example of such a community-led effort in support of a key IPCC topic.

Avenues for input. We now discuss avenues for participation in addition to those already included in the original version.

Validity of the textural analysis. Our manuscript explains that our keyword search leads to the same conclusion as that of one of the preprint referees who surveyed the two SPMs for mentions of paleoclimate information. In addition, we added the frequency of citations to this journal, as provided by the second referee, to the discussion and to Table 1.

Benefits of integration. We added text to the revised manuscript to strengthen the point about multiple lines of evidence that must come together in support of assigning confidence levels to high-level, policy-relevant climate science conclusions.

Impracticality of both a dedicated chapter and distribution. We added a paragraph to the revised manuscript to address this suggestion by explaining that there are too few paleoscience Lead Authors to cover both bases and reiterating our view that paleoscience expertise in AR7 would be most effectively deployed where it leads to integration of paleoscience knowledge and demonstration of its relevance.

AR6 author procedures. We added some sentences to expand on the process that AR6 paleoscience authors used to help coordinate their efforts. This includes the important role played by Contributing Authors.

Additional reference. We now cite the Esper et al. (2024) perspective piece, which called for a separate paleoclimate chapter in AR7.

Link to climate modeling. We called out the connection with CMIP7 and PMIP 5.

Paleo topics covered in AR6. We now state that it is our opinion that the coverage was greater in AR6 as evidenced by the breadth of topics that considered paleoscience information as listed in the table of contents hosted on the PAGES website.

Table 1. We now include a Table instead of an Appendix and we call it out more frequently.

References. We adjusted the style to the one used by *Climate of the Past*.