

Response Letter

Dear Editor,

Here we submit the reviewed version of our manuscript entitled “Code accessibility and code quality across phases of the models of the Coupled Model Intercomparison Project” (Manuscript ID: egusphere-2025-6108) submitted to Geoscientific Model Development. We appreciate the positive evaluation of the relevance of this work and the suggestions made by the reviewers to improve clarity, transparency, and presentation. A letter with answers to your comments follows.

Thank you for your consideration.

On behalf of all the coauthors,



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Specific comments:

1 - In section 5, "Code Analysis," I would like to have a clarification, in general terms, of what the FortranAnalyser analyzes to score the models. Moreover, if possible, give an intuition of what a high score code would be. This is because the authors claim that a score of 4.014 is "relatively high," but I have no reference to compare this value with.

A detailed description is provided in a dedicated article published in Software Impacts (García-Rodríguez et al., 2024)

2 - In section 5, "Code Analysis," I would like to have a clarification, in general terms, of what the FortranAnalyser analyzes to score the models. Moreover, if possible, give an intuition of what a high score code would be. This is because the authors claim that a score of 4.014 is "relatively high," but I have no reference to compare this value with.

We thank the reviewer for pointing this out. Table A1 is now correctly rendered and fully legible.

3 - In the references, the last accessed text is written in Spanish.

Thank you for founding this mistake. It has been corrected.

4 - At the beginning of Section 3 (L.89/99), I am confused about the different numbers. First, it is written about "59 out of the 262 models", and then "18 out of 121". What is the difference? Are the second numbers only about the subset of coupled models? But then in L.114, there are "59 out of the 121 couples models" mentioned. How is this connected? Maybe you can make that clearer.

Now the manuscript includes a clarified explanation about these concepts.

5- In Section 4 about the programming languages, it would be very interesting to add an outlook or expectation about changes when hybrid models are added to the pool of CMIP models.

Section 4 has been modified by adding our expectations about these changes.

6 - In Section 5, it would be helpful to have some examples of lacks in the code quality which are found by the analysis tool. And which parts or topics should be focused on primarily by the modelling groups to improve their model code?

We published a paper containing all this information in Software Impacts (García-Rodríguez et al. (2024)) focused on the analysis tool.