

Dear editor of Earth System Dynamics

We would like to thank you and anonymous reviewer for your valuable feedback on our manuscript “*Divergent predictions of carbon storage between two global land models: Attribution of the causes through traceability analysis*”. We have addressed the editor’s minor comment and corrected typos as suggested by reviewer. All the changes made are highlighted in red color. We hope the revised manuscript is appropriate for publication in Earth System Dynamics.

Yours Sincerely,

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Editor's comments:

Editor Decision: Publish subject to minor revisions (review by Editor) (29 Mar 2016) by Richard Betts

Comments to the author:

Thank you for your revised manuscript, which has been reviewed again. I'm pleased to say that in my judgement it is now acceptable for publication, if the minor points of clarification I made myself in Editorial Comment C1215 can be addressed.

Specifically, please provide an explanation of why two different climate forcing datasets were used, and an estimate of the impact of this on the results.

Response:

The two modeling teams had trained their respective models with specific meteorological forcings in their default settings. However, both models were run till they reached equilibrium state, based on which our analysis was conducted. We acknowledge that this may lead to some bias in certain regions. However, we mainly focused on the long-term global means of all variables at steady state and we believe that this won't affect our main conclusions.

In the revision (page 16; line 6-9), we have added more discussions on this potential source of uncertainty as follows:

“It should be noted that there is some difference in the two meteorological forcing in certain regions, which may propagate into the simulations by the two models. Nevertheless, the main conclusions are robust since we mainly focused on the long-term global means of all variables at steady states.”

Reviewer comments:

Anonymous Referee #1

The authors have addressed my two main comments on the manuscript, and overall I think the revisions have improved the manuscript. I think the paper should be accepted with some minor typographical revisions (see below).

There are a few typos in some of the added text: For example, there is an extra ')' on Line 19, Page 15; and labels 1) and 3), but no 2), for Objectives listed at the end of Section 1.

Response:

All the minor corrections have been made.