

12 May 2021

RESPONSES TO EDITOR COMMENTS (Leena Järvi, 11 May 2021)

Thank you for the great work you have made in responding the reviewer comments. There are a few minor points to be addressed before I can accept the manuscript to GMD: 1) Could you add the equations used to calculate the performance scores (RMSE, BIAS and std) in section 2.1.3, and 2) In code and data availability section, the initial and boundary layer data should be cited as suggested on the website (https://rda.ucar.edu/datasets/ds083.2/#metadata/detailed.html?_do=y). Please, correct this. I also had a look on the OSO CESBIO website but as it is written in French it is difficult to see whether there is some more appropriate referencing methods than simply linking the website as this is not the best practice. Could you have a look and think whether there would be more sustainable way to refer the dataset?

We would like to thank the editor for these final suggestions. We have taken them into account in the new submitted article (an additional version with “tracked changes” has also been submitted).

- 1) We have added the equations of RMSE, BIAS and std in the appropriate section (and slightly changed the associated text).

- 2) We have updated the citation of the initial and boundary data used (NCEP-FNL). Besides, we have added the citation of the ERA-INTERIM data also used in one of the pre-experiments added after the review process.

We have asked to the CESBIO team in charge of the land-use dataset, but, unfortunately, they do not have DOI for the 2011 dataset used in our study, only the website is available to be cited (and the article Inglada et al., 2017).

We have corrected some small typo errors in the manuscript, clearly visible in the “tracked changes” version.

We hope that this new version of the manuscript is now ready for publication in GMD.

Best regards,

Carlos Román-Cascón and co-authors.