

Interactive comment on “Inconsistencies between observed, reconstructed, and simulated precipitation over the British Isles during the last 350 years” by Oliver Bothe et al.

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Dear reviewers, dear editor,

Thank you for your candid and helpful judgment, comments, and suggestions.

Here, we provide an initial reply to your reviews. More detailed replies will follow. For the time being, we would like to outline our plans for a revised manuscript with this initial reply addressing the basic concerns raised in the reviews.

All of your comments made it obvious that we have to substantially increase the clarity and improve the structure of the manuscript. This relates to the format and content of

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the introduction and the method sections as well as the aims, scope, expectations, and the conclusions of the manuscript as a whole. It also includes a clearer presentation of the results in terms of plots and structuring.

Regarding the aims of the study we would like to already clarify that our main points are a) motivating the advantages in using the SPI for comparing various sources of information in paleoclimate research and b) finding that the sources of information lack consistency for the case of a rather small domain on the British Isles.

Remediating the structural and other weaknesses of the manuscript likely requires more than just a simple restructuring, i.e. it needs a thorough rewriting of at least the introduction and the methods section. We also have to more clearly delineate our work from some previous papers and more clearly motivate the relevance of some of our work.

A number of comments relate to the arrangement, the amount, and the type of analyses presented and data included. For the moment, we plan to downsize the role of the temperature data, the analyses on the PMIP3-simulations, and the correlation analyses. Potentially, we are going to move the analyses on the PMIP3-simulations and the temperature data completely to an appendix or a supplementary document. At the moment, we plan to present the information about the parameter fits in some kind of auxiliary material as well.

Regarding analyses on additional data, we have to check the robustness of our results by also considering the Met Office's sub-divisional precipitation series included in the England and Wales data, and the long observational series for Kew Gardens and Pöde Hole. It is open whether this will result in including the additional analyses in the manuscript.

You suggested to include more long observational series and additional reconstructions. On the other hand you noted that we possibly tried to present too much in a single manuscript. Our aim is not a comprehensive analysis of all available data for the

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British Isles. Our intention is to show for a small region the (in)consistencies between the various information sources. For the moment, we do not plan to include additional reconstructions or regions on the British Isles but rather to optimise our presentation of our chosen focus.

We will provide separate responses to all your detailed comments later in the coming weeks.

We are convinced that these proposed modifications are going to strengthen the manuscript and hope they reflect your intentions and conform to your comments.

On behalf of all co-authors,

Yours sincerely,

Oliver Bothe

Interactive comment on Clim. Past Discuss., <https://doi.org/10.5194/cp-2018-27>, 2018.