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Earth System Dynamics
Discussions

Interactive comment on "Global meteorological drought and severe drought affected population in 1.5 °C and 2 °C warmer worlds" *by* Wenbin Liu et al.

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First of all I would like to thank authors and reviewers for their contribution to Earth System Dynamics.

As the authors could read, the reviewers valued the work and consider that it is worthwhile of publication, but they formulate a good number of comments. Some are requests for specification of methodological details, which will be surely satisfied. However, the reviewers also expressed a number of bigger concerns.

Among others,

- Review 1 expresses concerns about systematic biases, and the authors respond

  that "In this case, application of bias correction method(s) towards the historical and future periods would be somewhat redundant." I am not convinced by this justification. Both the physics and the impacts of precipitation and drought are highly non-linear.

- Reviewer 2 expresses concerns about resolution, and the authors reply by providing the simulation context which has forced this choice of resolution.

We all fully understand that some methodological choices are forced by the circumstances, techniques and resources available. However the authors consider their paper to be targeted to policy makers. They therefore endorse a role of expert, and this is the expert's job to synthesize the caveats attached to their study, with regard the to possible use of their study for policy decisions. This needs to be done in plain and clear language.

As a side note, the authors state that they "first generalized the multi-model results using the multi-model ensemble mean". The word "generalized" should be replaced by "synthesised", as a multi-ensemble mean is by no mean a generalisation.

The authors are now invited to submit their revised document, which will be sent again to the reviewers.

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