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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Identifying robust bias adjustment methods for extreme precipitation in a pseudo-reality setting" *by* Torben Schmith et al.

Torben Schmith et al.

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Referee comment #3 on "Identifying robust bias adjustment methods for extreme precipitation in a pseudo-reality setting" by Torben Schmith et al.

We will start by thanking the referee for a fair review. We will comment (marked with »> . . . «<) on each review items below.

Overall comment

Overall, I recommend a better embedding of the manuscript in the current literature, both in introduction (e.g. much work has been done on comparing different bias correction methods, which could be included) and the section 5.1 could easily be expanded. I also would like to see expansion on why different methods give different results. There

seems to be no analysis or discussion of what features of different methods contribute to greater or lesser skill. In my view the manuscript would be improved if this were addressed.

»>We will meet the advice of a more thourough embedding in the relevant. This will be followed by adhering to the y in particular referee #2. To disentangle why different methods give different results requires more analysis requires extensive analysis and has to be left to future work. We have given an appetizer of this kind of work in section 4.3.«<

Minor comments

105-106: It is true that future model performance cannot be tested directly. However, split-sample testing is probably the best tool we have for this, particularly when a suspected climate change signal is present in recent historical data.

»>as we see it, split-sample testing is an alternative to our approach. We will be happy to receive any arguments, why it should be the best tool.«<

»>We will incorporate all followings remarks about figure layout and wording into a revised manuscript:«<

Figure 2,3: I find the colour scale used in these figure inappropriate. Yes, extreme precipitation events are projected to increase, but the scale make the increases look quite alarming. A percentage scale, and/or scale starting at zero would be more appropriate.

372-373, this sentence describing relative errors is a little unclear, I would suggest writing "Relative errors from the OBS method are in the range of 20%-40%" or similar.

395 and elsewhere: I'd use "percentiles" rather than "fractiles", e.g. 95th percentile rather than 0.95 fractile

The writing is generally of a high quality, but with a few corrections needed, such as: 48: "GCMs are" 182: "statistics are" I recommend a thorough proofread to catch any

other corrections

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