Earth Syst. Sci. Data Discuss.,
https://doi.org/10.5194/essd-2019-258-AC3, 2020
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Open Access Earth System Science Data Discussions

Interactive comment on "An update of IPCC climate reference regions for subcontinental analysis of climate model data: Definition and aggregated datasets" *by* Maialen Iturbide et al.

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Received and published: 4 July 2020

Along the next lines, the different comments posed by the reviewer SC2 are reviewed point by point.

Comment: Overall these new regions are a sensible improvement on the previously used regions.

Response: We thank the referee for the time devoted to review our manuscript, and the positive feedback provided.

Comment: However, I am surprised to see central and eastern Australia put into the

same region. They are distinct from each other climatically but also in many other ways. I was even more surprised to read "The possibility to include a new region for eastern Australia to treat separately this wetter region was also considered, but was not implemented due to the limited size of the resulting region." A small amendment to include a separate Eastern Australia (EAU) region could be done as shown below. This region is similar in size (bigger in some cases) to the existing regions BOB, ARS, ARP, SAM, SSA – so the statement above does not seem to be justified by the current region map. I urge the authors to reconsider leaving out the EAU as this region is climatically distinct from the arid central Australia region and will be extremely useful to anyone interested in Australian climate (Fig. 1).

Response: Thank you for your comment on the need and suitability of the new region. We agree with the reviewer and have revisited the idea of including a new region for Eastern Australia (EAU) following your suggestion (note that there is a similar suggestion from another reviewer; SC1). We have checked the size of the proposed region and, as claimed by the reviewer, it is bigger (it contains over 20/100 gridboxes for 2°/1° resolution) than other regions included in the original proposal (see Figure 3 of the manuscript). Therefore, EAU (Eastern Australia) will be included as an additional region in the revised manuscript.

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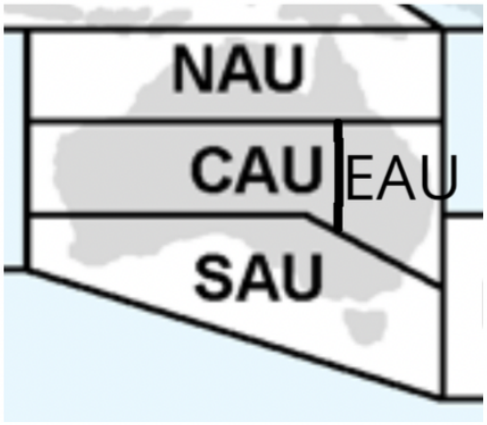

Fig. 1.