

## Reply to RC1 (reviewer comments in grey)

In this work, the authors revised the state of the art on the impact of climate change on flood risk, posing major attention to Australia.

The review is very well written and in line with the scope of the Journal, and there is no need for significant changes before publication.

In my opinion, the manuscript can benefit from a few minor changes:

We thank the reviewer for their assessment and thoughtful comments. Please find below our reply in blue and proposed modifications underlined.

- in light of having a coherent structure, maybe it is worth adding the “Systematic review” subsection to sections 4.3.1 and 4.3.6

Sections 4.3.1 and 4.3.6 were excluded from the strict requirements of the systematic review as, although relevant to design flood estimation, they are not explicitly included in Australia’s flood guidance. We only commented on sea level rise section at Line 161. To clarify, Line 161 would be expanded to explain why Section 4.3.1 (background to the processes affecting Australian extreme rainfall) is excluded. Also, the beginning of Sections 4.3.1 and 4.3.6 would have a sentence added at their start to explain why they are not part of the systematic review, but still included in section 4.3.

- please add a reference to the sentence at lines 557-559, to justify the “...it is well known...” part

Agreed. We would remove “it is well known” and also add a reference to the following: Linacre, E., Geerts, B., 1997. Climates & Weather Explained. Routledge, London; New York.

- please consider adding a (graphical) summary of the review in terms of total number of articles per year, per topic, etc. I know that those numbers are provided within the manuscript, but maybe having a figure summarizing them can help readers

Agreed. We would provide a stacked bar chart summarising the literature in Table S2. The x-axis would be the year, and the bars would be coloured by the topic of the manuscript.

- I would like to see some more comments on the reproducibility/transferability of this study. As the results are very much connected with the authors' expertise, what are the key problems in reproducing (or eventually updating) this review? Are the used methods transferable to other countries? Do you think that the results might be influenced by the experts involved?

Agreed. Text would be added to the discussion, likely in an additional section, discussing the barriers to adoption and transferability, also placing this study in the context of global attempts to update flood guidance.

- In section 5.2 you briefly addressed the biases involved in the study, and in lines 960-961 you said “The outcomes of the per-researcher analyses were consistently similar”. Is it possible to have a more quantitative picture of such a similarity, as well as some more details on the sensitivity testing (line 959)?

Agreed. A table will be added to the supplementary material of the individual researcher quantitative results and a further summary of the methods of averaging adopted by each researcher would also be provided.

I am confident that addressing the above points could help in further improving an already very good manuscript.

Thank you again for this assessment and the time taken to thoughtfully provide feedback on our manuscript.