

## **Review Article: Multi-Hazards and Household Preparedness Planning: Evidence, Gaps and Opportunities**

Reviewer comments:

### **General**

In the manuscript “Multi-Hazards and Household Preparedness Planning: Evidence, Gaps and Opportunities” the authors perform a literature review to assess the extent to which multi-hazard thinking is integrated in to studies of household preparedness following the Principles of Preparedness, by Sutton and Tierney (2006). The authors find that there is a geographical bias towards the Global North in studies of household preparedness. They also find that the majority of the literature does not make explicit references to how multiple hazards interact to shape preparedness strategies.

I think this paper is well embedded in the literature of disaster preparedness and that it could be valuable contribution to this literature. However, some revisions are required for the article to be suitable for publication, see my points below.

### **Text:**

Check line 201 “(See **Figure 3.Fig.3.**)” ‘

Check line 456 (space missing between “11but”

### **Methodology**

The authors state that after analyzing 138 of the 587 papers the ‘the researchers reached the thematic repetition point of data saturation’. Could the authors elaborate on how these 138 papers were selected out of the 587 papers in total? A further elaboration on how these papers were selected (for example through random sampling) could for example strengthen the claim of geographical bias in these studies.

### **Results**

The authors are inconsistent in stating the source of their results. I often read ‘Many papers (line 261)’, ‘Several studies (line 270)’. I think it would strengthen the claims made by the authors to explicitly state how many papers these findings are based.

To me it does not become clear on which information the y-axis of figure 6 is based. How is this resource intensity inferred? The link to ‘the literature’ can be made more explicit. I am also not sure whether this figure is correctly placed under the Result section of this paper, or whether it is a part of the theoretical framework as described in the introduction of the paper.

1. Does the paper address relevant scientific and/or technical questions within the scope of NHESS?

I think this paper addresses an often overlooked component of disaster preparedness in face of multiple hazards, and therefor addresses a relevant scientific question I the scope of NHESS.

2. Does the paper present new data and/or novel concepts, ideas, tools, methods or results?

The paper proposes clear research suggestions to further the field of disaster preparedness in the context of multi-hazards by making suggestions for further research. These suggestions could perhaps be made more explicit; would there also be examples of good practices in preparedness literature that could be named there? Particularly in the suggestion to broaden the definition of what constitutes a household.

3. Are these up to international standards?

I think the paper is up to international standards. However, the figures need to be improved for it to be eligible for publication (see comments under point 12).

4. Are the scientific methods and assumptions valid and outlined clearly?

The literature review is well embedded into theoretical frameworks of household preparedness in the multi-hazard context. The literature review follows a scientific method, although the selection of the 138 out of 587 papers could perhaps be better elaborated (see point under General).

5. Are the results sufficient to support the interpretations and the conclusions

I think the results are sufficient to support the interpretations and the conclusions. I do however think that the results can reported in a more consistent way, see comment under Results.

6. Does the author reach substantial conclusions?

I think the authors reach substantial conclusions that are backed by their findings in the literature.

7. Is the description of the data used, the methods used, the experiments and calculations made, and the results obtained sufficiently complete and accurate to allow their reproduction by fellow scientists (traceability of results)?

I think the methodology applied in the literature search on Web of Science is sufficiently documented.

8. Does the title clearly and unambiguously reflect the contents of the paper?

I think the title well reflects the work done in the paper.

9. Does the abstract provide a concise, complete and unambiguous summary of the work done and the results obtained?

The main findings stated in the abstract deviate from the findings listed in the conclusion section of the paper. These could be better aligned.

10. Are the title and the abstract pertinent, and easy to understand to a wide and diversified audience?

The abstract and findings are easy to understand to a wide audience. It would perhaps be good to also explicitly state the “Priority 4 of the Sendai Framework for Disaster Risk Reduction 2015–30” to increase the comprehensibility of the abstract.

11. Are mathematical formulae, symbols, abbreviations and units correctly defined and used? If the formulae, symbols or abbreviations are numerous, are there tables or appendixes listing them?

Not applicable.

12. Is the size, quality and readability of each figure adequate to the type and quantity of data presented?

The quality of the figures in this paper should be improved. For example, fonts in figure 3 and 4 appear to be stretched. The color coding in figure 4 is a bit confusing, maybe another color than a light shade of green could be used to indicate the principle was ignored included in the study. Figure 5 is a screenshot, the selection of the graph element is still visible. For consistency it would be better to in figure 2 and 4 either show the number of studies or the percentage.

13. Does the author give proper credit to previous and/or related work, and does he/she indicate clearly his/her own contribution?

Author contributions are clearly listed under line 585

14. Are the number and quality of the references appropriate?

Yes

15. Are the references accessible by fellow scientists?

Yes

16. Is the overall presentation well structured, clear and easy to understand by a wide and general audience?

Yes

17. Is the length of the paper adequate, too long or too short?

I do not find the paper to be overtly lengthy, I would consider this length to be appropriate for a review article.

18. Is there any part of the paper (title, abstract, main text, formulae, symbols, figures and their captions, tables, list of references, appendixes) that needs to be clarified, reduced, added, combined, or eliminated?

19. Is the technical language precise and understandable by fellow scientists?

20. Is the English language of good quality, fluent, simple and easy to read and understand by a wide and diversified audience?

Yes, the English language is of sufficient quality.

21. Is the amount and quality of supplementary material (if any) appropriate?

I would encourage the authors to include a supplementary table that shows all literature reviewed with this article.