#### Nat. Hazards Earth Syst. Sci. Mapping Individual Earthquake Preparedness in China (nhess-2017-391)

#### Authors' Responses to the Reviewers' Comments

We thank the anonymous reviewer for your constructive feedback. We have addressed all your concerns, incorporated your suggestions, and below is a detailed memo documenting the changes we made to the manuscript. Please note that we only answered the negative comments/concerns in this memo.

The changes in the manuscript are highlighted in yellow.

## **Reviewer1**

**Comment 1**: This paper explored the individual earthquake preparedness behavior in China using a national sample. It will add valuable knowledge to current understanding of earthquake mitigation and preparedness. The research methods and results are appropriate, and well presented. However, I do have several concerns and suggestions to make this paper better. I suggest to accept this paper with minor revision. If the authors can address my concerns appropriately, I hope no need to review it again. 1. Few type errors, like page 2, line 20, the citation is in Chinese.

Authors' Response: Thanks very much for this correction, we have changed the citation information into English.

**Comment 2:** *The introduction section, especially the paragraphs in page 3 and page 4, can be written more concisely.* 

Authors' Response: Thanks very much for this constructive suggestion. We have rewritten some of the sentences, and deleted the unnecessary words to make these two paragraphs more concisely.

**Comment 3:** The authors should clearly state their research questions or hypothesis in the end of the introduction section.

**Authors' Response:** Thanks for the reviewer's kindness comment. We have re-written the last paragraph of the Introduction section by clearly stating our research questions as follows:

"By analyzing this national representative sample, we characterized the individual's earthquake preparedness in China. In detail, the central questions of concern are: (1) will residents in the west of China (proximity to earthquake) have higher degrees of preparedness in general? (2) Would people with higher risk perceptions to an earthquake (e.g., the concern of disaster risk reduction and the concern of building safety) have a higher degree to preparedness; and (3) is participation in public affairs associated with higher degrees of earthquake preparedness? Besides the national representativeness of the data, we novelly explored the correlation between public involvement and the adoptions of disaster preparedness activities in China.

**Comment 4:** The discussion section could be more interactive. How this study could enhance the earthquake mitigation and preparedness practice in China and worldwide should be discussed with several sentences in the discussion section.

Authors' Response: Thanks for the reviewer's constructive comment. We have added one sentence in the last paragraph of the discussion section:

"The findings of this paper also provide valuable implications for disaster risk reduction practice: people with higher degrees of participation in public affairs would also like to invest more in disaster preparedness. The involvement in disaster risk reduction activities cannot be separated from the involvement in other public issues."

**Comment 5:** 5. When the authors discussed the limitations, I think there are more things can do on this topic in future since there are not many studies on this topic from China yet. Thus, I would like to see one or two more discussions on the research limitations, and potential future research directions.

**Authors' Response:** Thanks for the constructive suggestion. We have added one more limitation: "Third, the preparedness at organizational and community level should be investigated as well."

# **Reviewer2**

**Comment 1:** Although the statistics used are valid - it is not clear what the research questions are. These should be clear and then the results should be presented in the order of these questions.

**Authors' Response**: Thanks very much for the constructive comment. We have rewritten the last paragraph of the Introduction section, and stated our research questions clearly. The results were presented in the order of the research questions.

The last paragraph of the Introduction section is as following:

"By analyzing this national representative sample, we characterized the individual's earthquake preparedness in China. In detail, the central questions of concern are: (1) will residents in the west of China (proximity to earthquake) have higher degrees of preparedness in general? (2) Would people with higher risk perceptions to an earthquake (e.g., the concern of disaster risk reduction and the concern of building safety) have a higher degree to preparedness; and (3) is participation in public affairs associated with higher degrees of earthquake preparedness? Besides the national representativeness of the data, we novelly explored the correlation between public involvement and the adoptions of disaster preparedness activities in China."

**Comment 2:** Was there a power analysis conducted prior to data collection? Please clarify.

Authors' Response: We appreciate this comment. Honestly, we did not conduct power analysis prior to data collection, because we planned to collect a large sample data, and thus the number of observations would be and actually is much larger than the minimum needs.

**Comment 3:** Finally, there are also some minor technical issues that need to be addressed (for example, use of contractions in the paper).

Authors' Response: Thanks for this comment. We have addressed all the contractions issues and other technical issues, reporting the full names when they appeared at the first time.

## **Reviewer3 (Online short comment)**

**Comment 1**: Basically, this paper is interesting. Especially the questionnaire data from almost all the provinces of Chine, sample following the population structure, are valuable and one of the results that participation in public issues is positively related to preparedness is quite interesting even in the socio-political context of China. I think that this paper could be accepted with some minor revisions and that to make this paper better the followings should/could be revised: (1) the novelty of this paper is not necessarily clear even though it can be understood easily. Not only uniqueness of the data but the novelty of question(s) should be written more clearly in the introductory section in relation to the purpose of this paper.

*Authors' Response:* Thanks a lot for reminding us of this important point. We have rewritten the last paragraph of the introduction section, to make the novelty of the paper and the research questions clearer.

"By analyzing this national representative sample, we characterized the individual's earthquake preparedness in China. In detail, the central questions of concern are: (1) will residents in the west of China (proximity to earthquake) have higher degrees of preparedness in general? (2) Would people with higher risk perceptions to an earthquake (e.g., the concern of disaster risk reduction and the concern of building safety) have a higher degree to preparedness; and (3) is participation in public affairs associated with higher degrees of earthquake preparedness? Besides the national representativeness of the data, we novelly explored the correlation between public involvement and the adoptions of disaster preparedness activities in China."

**Comment 2:** (2) *The literature review is very much convenient for understanding the research trends, but it should be more focused on the topics directly related to the purpose of this paper.* 

*Authors' Response:* Thanks very much for this constructive suggestion. We have rewritten the introduction section, especially the paragraph 3 and 4 to make the literature review more concise and directly related.

**Comment 3:** (3) For Fig. 3 and Fig. 4, it is better to use a choropleth map, not a chart map (bar chart). And, if possible, a brief explanation could be added in Section 3.1 (p.7) referring to Fig. 1.

*Authors' Response:* Thanks for the reviewer's kindness comment. We have replaced the Fig.3 and Fig.4 using choropleth maps. We also added one brief explanation refereeing to Fig.1 at the end of Section 3.1.

"Compared to the historical earthquake records in China (Fig. 1), the people in the west of China, where have more earthquake records had higher degree of preparedness."

**Comment 4:** (4) It might be desired to put detail explanations in the discussion part, about why public participation is related to preparedness in the context of China, referring to some social theories.

*Authors' Response:* Thanks for the reviewer's constructive comment. We have added more discussion about public participation and the disaster preparedness in the discussion section.

**Comment 5:** (5) Discussion of the paper's limitation should be moved to the concluding section. *Authors' Response:* Thanks for the reviewer's suggestion. We noticed that the many relevant articles published in this journal had the limitation in discussion section. So we would like to keep it in the discussion section rather than the conclusion section. But we would like to communicate with the reviewer for potential change if the reviewer insisted.