

## Author's Responses to Comments from the Anonymous Referee 1

Comments made by Anonymous Referee 1 are provided in black text.

Author responses are provided in blue text (line and page numbers refer to the clean version).

**General Comments.** This manuscript presents the brief communication of the 1998 flood in China. This topic is related to the scope of this journal. The authors discussed the rapid urbanization and climate change pose new challenges and rethink whether China is prepared for the next mega-flood. However, this manuscript still need to addresses and clarifies several points before it can be accepted. The following comments may help enhancing the quality of this work.

**Accepted:** Thanks for confirming the relevance of our manuscript and the suggestions for further improvement. We have thoroughly revised our paper, addressing your valuable comments and suggestions.

**Detailed Comment 1.** Scientific writing: The manuscript must be professionally proofread and edited. In addition, the authors may pay attention to some aspect of the conventional research writing. Although it is a brief communication, the structure of the manuscript should be enough, especially the connection between the sentences, the components/structure of the key parts (Abstract, Introduction, body, Conclusion).

**Accepted:** Thanks for the suggestion. After revising the manuscript, an additional, thorough, proofreading of the manuscript has been carried out by one of the co-authors (Ward), who is a native English speaker and has extensive publication experience in scientific journals. Furthermore, in the revised version we improved the following aspects:

- We rewrote the Abstract to make it more self-explanatory (also following your *Comment 4*).
- We have improved the connections between sentences and sections to enhance the logical flow. With regards the structure, we checked the journal's guidelines and several recent papers of the type 'Brief Communication', and found that the structure is in accordance with these. This structure is typical for an opinion paper with a 'Brief Communication' type; several similar examples are listed below (Please check the references below).

Reference:

Aerts, J. C. J. H.; Botzen, W. J. W., Brief communication "Hurricane Irene: a wake-up call for New York City?". *Nat. Hazards Earth Syst. Sci.* 2012, 12 (6), 1837-1840.

Mysiak, J., Surminski, S., Thielen, A., Mechler, R., and Aerts, J.: Brief communication: Sendai framework for disaster risk reduction – success or warning sign for Paris?, *Nat. Hazards Earth Syst. Sci.*, 16, 2189-2193, 2016.

Mysiak, J.; Castellari, S.; Kurnik, B.; Swart, R.; Pringle, P.; Schwarze, R.; Wolters, H.; Jeuken, A.; Linden, P. v. d., Brief communication: Strengthening coherence between climate change adaptation and disaster risk reduction. *Nat Hazard Earth Sys* 2018, 18 (11), 3137-3143.

**Detailed Comment 2.** This brief communication discussed the 1998 flood in China, how about the recent flood, such as flood in 2018 in China. The southern China suffered server

floods in 2018. It is suggested to make a comparison between the 1998 flood and 2018 flood in China. The following references may help to strengthen this study. “Flooding hazards across southern China and prospective sustainability measures.”

**Accepted:** Thanks for this suggestion. We have added references to the floods that occurred in 2018 and in other recent years in the revised manuscript. First, we now discuss how the severe floods in 2018, particularly in western China, were an alarm for the arid/semi-arid region to increase risk awareness and improve adaptation (lines 22–23 on page 4). Second, the revised manuscript includes a new reference to the massive evacuation in Shanghai for Typhoon Anbi on July 22th, 2018 as an example of the huge effects that China has made to improve evacuation (lines 2–3 on page 3). Third, we include new information on flood protection investments from 1998 to 2016 at lines 26–30 on page 2 and in Figure 1 (lines 5–7 on page 3). We also included information on the changes in flood losses between the 1990s and 2010s at lines 9–17 on page 3 and in Figure 2 (lines 1–2 on page 4). Some of the details of the 2018 flood are not included in the figures and the comparison, because detailed data for flood protection investments and flood losses in 2018 have not yet been released. Please note the 2018 flood losses were lower than the past five-year average (The Central Government of PR China, 2019).

Additionally, we added the insightful reference you recommended as further evidence of increasing flood risk in China (lines 15–16 on page 3) and the strategies China should adopt to address the emerging challenges (lines 11–16 on page 5).

Reference:

The Central Government of PR China. 2019. The 2018 natural disaster losses are lower than the average of the past five years. [http://www.gov.cn/xinwen/2019-01/10/content\\_5356406.htm](http://www.gov.cn/xinwen/2019-01/10/content_5356406.htm) (accessed on February 24, 2018)

**Detailed Comment 3.** The short communication should discuss the perspective of flood disaster management, e.g. flood risk assessment and prediction. The following publications are referred: “Flood risk assessment in metro systems of mega-cities using a GIS-based modeling approach” “Assessment of geohazards and preventative countermeasures using AHP incorporated with GIS in Lanzhou”

**Accepted:** We enhanced the discussion on flood management with the information of the recommended papers, and added one of them as reference. Note the limited number of references (up to 20) allowed in ‘Brief Communications’.

**Detailed Comment 4.** The abstract is too short. Although this is a short communication, the problem, method and results should be included in the abstract.

**Accepted:** Thanks for this comment. Following your suggestion, we rewrote the Abstract. Note that there is a 100-word maximum limit, which explains the brevity. It now has 100 words and reads as follows:

“A mega-flood in 1998 caused tremendous losses in China and triggered major policy adjustments in flood-risk management. This paper aims to retrospectively examine these policy adjustments and discuss how China should adapt to newly emerging flood challenges. We show that China suffers annually from floods,

despite large-scale investments and policy adjustments. Rapid urbanization and climate change will exacerbate future flood risk in China, with cascading impacts on other countries through global trade networks. Therefore, novel flood-risk management approaches are required, such as a risk-based urban planning and coordinated water governance systems with public participation, in addition to traditional structural protection”.