

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC3  
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## **Comment on nhess-2022-167**

Anonymous Referee #3

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Referee comment on "Quantifying unequal urban resilience to rainfall across China from location-aware big data" by Jiale Qian et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2022-167-RC3>, 2022

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This paper uses the location-aware big data from the Tencent Chinese social media platform to explore the spatial distribution of urban resilience in China. The paper is interesting, the link rainfall intensity and urban resilience it is a very topical problem. The scope of the study is significance for emergency response, and it investigate a very large area. The text is well-organized and well-written.

I have some general comments:

Urban resilience is a very complex concept. I can't find how the author define urban resilience in this study and how can they relate resilience to the anomalies in human activities induced by the heavy rainfall. Please, try to explain better.

The authors cite the supplementary material as fundamental part of the manuscript. Please select the figures you consider to be important and try to add to the text (as for example figs 4 and 6).

The cities classification into different types HL, ML, HM, LL is not described, while it is very important for the discussion section

I would suggest to add a discussion regarding limitations and future perspectives of this study since the authors do not investigate some important relation between the physical factors and the human activities. For example, it could be crucial to relate the indices the author found with physical data, altitude of the city, the average slope, while for the human activities they could investigate the number of emergency call, or the number of car accident, for citing someone.

Please add a legend with acronyms explanation