



## Comment on **essd-2020-370**

Anonymous Referee #2

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Referee comment on "Rainfall erosivity mapping over mainland China based on high density hourly rainfall records" by Tianyu Yue et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-370-RC2>, 2021

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Dear editor,

Thanks for the review invitation. The USLE model is used in many regions over the world. It is a general method by several indicators. The R factor, i.e., rainfall erosivity, has significant effects on the modeling results. This study maps the rainfall erosivity over mainland China by using high density hourly rainfall records. The data sources are presented well and the results would be useful for related soil-erosion research. The manuscript should be improved in several aspects before it is considered for the publication.

- The new development of USLE, especially the rainfall erosivity, should be presented and discussed in the introduction section. The meaning and rational of the study is not exhibited well.
- How can the re-calculation of R factor help to reveal the mechanism of rainfall erosivity? I suggest the authors to add a flowchart for the study.
- The validation of the results is conducted mainly by comparing with Yin's results. If the authors provide more findings from field observation, the validation would be more meaningful.
- The uncertainty of the results and methods should be added by more details in the discussion.