

Nat. Hazards Earth Syst. Sci. Discuss., community comment CC1
<https://doi.org/10.5194/nhess-2021-188-CC1>, 2021
© Author(s) 2021. This work is distributed under
the Creative Commons Attribution 4.0 License.

Comment on nhess-2021-188

Jun Xie

Community comment on "System vulnerability to flood events and risk assessment of railway systems based on national and river basin scales in China" by Weihua Zhu et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-188-CC1>, 2021

Floods can have adverse effects on transportation systems. In recent years, we have seen an increase in the frequency of damage and disruption of railway systems caused by a flood. Therefore, it is essential to evaluate the vulnerability of the transportation system to extreme flood hazards and to identify high-risk transportation components to make the transportation systems safer and more effective for operation and maintenance. This work tries to propose a simulation framework to explore the vulnerability and risk of railway networks under floods. Thus, this research is worth publishing. Before it, I have some comments:

1. In 2.1.2, I can't figure out 'why only one event occurs per year in each basin', please describe it more clearly.
2. In 2.3, in a railway system, different railways levels do exist and are designed differently in accordance with the hazard map. Why in this work use the same failure threshold to present it?
3. I think the results in the Appendix need more description.