Natural Hazards and Earth System Sciences Discussions

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Comment on nhess-2021-188

Anonymous Referee #1

Referee 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-RC1, 2021

The object of this study is to present a framework for performing system-level vulnerability and risk assessments of a railway system under flooding. The developed framework couples simulated flood events with state-of-the-art network analysis to measure system isruptions caused by floods to identify risk hotspots.

The article has the following advantages: clear thinking, rigorous logic, reasonable design and technical route, standard writing, full and accurate data, reliable analysis conclusion.

Some suggestions:

1) As to Title, "System vulnerability and risk assessment of railway systems to flooding" is failed to reflect the characteristics and innovation of the full text, it is suggested to change "System vulnerability and risk assessment of railway systems to flood events based on national and river basin scale in China".

2) Part 2, the data used in this paper is not clear, They should be listed in one table or more one.

3) In discussion, only text is listed in this part, It is suggested to make a comparative analysis by subject in order to strengthen the practicability and expansibility of the proposed method and framework.