Reply on RC2
Wei Li et al.

Author comment on "Spatial Distribution of Vulnerability to Extreme Flood: in provincial scale of China" by Wei Li et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2022-136-AC2, 2022

There was a great job of explaining what models have been done before, which gave this manuscript good research significance. In addition, the manuscript has a clear structure, proper language expression, and it is pleasant to read. I have only a few suggestions for the manuscript.

Response:
Thank you for your recognition of the manuscript, which is of great significance to help and encourage us to further conduct in-depth research.

(1) Add more explanations on the advantages of Variable Fuzzy Set theory and Cloud-improved Entropy weighting method to reflect the necessity of using improved methods.

Response:
According to your comment, the advantages of Variable Fuzzy Set theory and Cloud-improved Entropy weighting method have been supplemented, as shown in lines 99-109 in the manuscript marked with changes.

(2) Whether the vulnerability of provinces and the probability of EF can be combined in further research to improve the guiding significance for the government.

Response:
Thank you for your professional advice. As you said, it is more instructive to combine probability with vulnerability, which is the direction of our next in-depth research.

(3) Some contents need to be added to the manuscript: PI and SI indicators in Table 1, and explanations of a and p in Table 5. All in all, I think this manuscript can be published after some minor modifications.
**Response:**

Thank you for your valuable comments and recognition of the manuscript. According to your comment, the relevant contents have been added in the manuscript marked with changes.