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Comment on nhess-2022-154

Anonymous Referee #2

Referee comment on "Assessing uncertainties in landslide susceptibility predictions in a changing environment (Styrian Basin, Austria)" by Raphael Knevels et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2022-154-RC2>, 2022

This paper investigated the uncertainty cascade in storylines of landslide susceptibility emerging from climate change and parametric landslide model uncertainty. In general, this paper is interesting and rich in content. However, there are many mistakes in the basic concept of landslide susceptibility, hazard and risk assessment. In terms of landslide susceptibility prediction modeling process, the writing of this paper is rather rough. In terms of organizational structure, the thesis is difficult to understand. Therefore, it is recommended to reject the paper.

- Landslide susceptibility refers to the spatial probability of landslide occurrence affected by landslides themselves conditioning factors, without considering triggering factors such as heavy rainfall, earthquake, et al. Landslide hazard refers to the spatial and time probability of landslide occurrence under condition factors and trigger factors. Hence, this paper focus on landslide susceptibility affected by land cover change and heavy rainfall. I believe this paper has problems with the basic concepts of landslide susceptibility.
- The writing ideas of this paper are very confused, and it is difficult for people to understand the specific steps and methods of the research. Especially in the introduction and methods section.
- Where are the input and output variables of landslide susceptibility prediction modeling described in this paper? How is the uncertainty problem concerned in this paper quantified? Where are the environmental factor maps of landslide susceptibility and landslide susceptibility outcome maps? These problems are not well reflected.
- The figures are not clear enough.
- The references are not new enough and are not representative enough.
- The uncertainty characteristics are assessed by which indexes? These description are not clear.
- There is insufficient analysis of feasible solutions to the problems in this paper.