

Interactive comment on “Learning in an Interactive Simulation Tool against Landslide Risks: The Role of Amount and Availability of Experiential Feedback” by Pratik Chaturvedi et al.

Anonymous Referee #2

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The manuscript presents an interesting tool for testing the people’s propensity to invest money for protecting goods and life from landslides. The tool has been applied for analyzing the effect of feedbacks available in influencing the people’s decision-making process when asked to invest resources for landslide protection. The topic of the manuscript fits into the scopes of the NHESS Journal since it deals with the design and implementation of mitigation and adaptation strategies to reduce the impact of hazardous natural events on human-made structures, infrastructure, and life.

General comments

The structure of the paper is fair and, even if I’m not a native English speaker, I found

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the paper understandable. However, I think that some improvements can be made simplifying the sentences and re-phrasing some frequent constructs as “Although ; however”, where the semicolon does not help to understand the sentence.

I suggest to promote the section “Interactive landslide Simulator (ILS) tool” from the level of a subsection to the level of a section. Currently it is, erroneously, inside the “Computational model of landslide risk” section. More in general I would also suggest to the author to use the common scientific structure which includes “Introduction”, “Material and Methods”, “Results”, “Discussion” (currently discussion and results are in the same section).

I think that the ILS tool is very interesting but I see a major problem in the paper: there is not the possibility to test the ILS tool. My opinion is that, according to the open science, open data, open knowledge concepts, researchers should be put in condition of evaluating the ILS tool. From the paper it is not clear if the tool is a web application or a standalone program and there is not a description of the technology adopted for implementing it, nor of the intention of the authors of releasing the code and, if this is the case, adopting which license.

Another issue is about the significance of the results of the experiment. Evidences are that people using the ILS tool with feedbacks, rapidly understand that the best strategy to “win the game” is to invest the entire daily income in landslides mitigation measures. Even if this is interesting, the authors do not comment or discuss the fact that the population of the participants is made of people having high to very high educational levels. This can have a strong effect on their capacity to rapidly find the best strategy. This is particularly true where one considers that, as far as I know, the educational levels of people living in the Himalaya region is mostly low and very low. I think that representativeness of the participants to the experiment should be discussed more in detail.

Lastly: figures are enough rough and should be improved and better described in the

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captions.

Specific comments

L138: I think you need to add that $0 < M < 1$

L162: It is not clear to me what the Total Estimated Hazard is. Please define it.

L162: Landslide Hazard Map: what is this? Not clear how this is related to the LSZ and to the THED. It is even not clear how the spatial probability is included in the tool. It is a single value or there is a map?

L172: Is “become less than” correct? I suppose should be “become greater than”. If not please try to explain why must be “less”.

L182: please change “their total wealth” with “the total wealth of the participants”

L207: “decision-maker”. Are you meaning “partecipant”? If yes please change the text accordingly.

L241-243: the sentence is not clear. Please rephrase.

L243: “see Figure 2”: please explain how the figure helps in understanding the text.

L262: “(W)”: it is not immediate to understand that “W” is the parameter of the equation at page 4. Please number the equations and use those numbers in the text.

L263: “was fixed to 0.8”: in figure 2, W is 0.7.

L302: the first sentence was already stated at the start of the 3.2 subsection.

L313: please describe the meaning of the statistical parameters (derived from statistic tests) inside the brackets.

L330: what “CI” means?

L385-386: unclear. Please rephrase.

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