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Reply on RC2

Sansar Raj Meena et al.

Author comment on "Assessing the importance of conditioning factor selection in landslide susceptibility for the province of Belluno (region of Veneto, northeastern Italy)" by Sansar Raj Meena et al., Nat. Hazards Earth Syst. Sci. Discuss.,
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Comment on nhess-2021-299

Anonymous Referee #2

I have gone through the manuscript and found that the quality of work is very good and applied. I have some observation needs to be correct before its goes to final publication.

- The words features and factors are used interchangeably in the paper. Better to stick to one word.

Ans: Thank you for your suggestions. We use the words "conditioning factors" throughout the manuscript to avoid further confusion.

2. Definition between pre and post predictions are not clear. Making it difficult to read and understand the context sometimes.

Ans: The "pre-predictions" refer to the moment before actually training the model and thus, we refer to some literature that performs factor importance prior to model training. Similarly, "post-predictions" refer to factor importance after model training, which we perform in our study here. Nonetheless, we have edited these two words in the document to avoid confusion.

3. An image of the affected area for example could be very insightful to comment on the extent of the damage over the area.

Ans: Thank you for your comment. We have added some images in figure 1.

4. Scale of the maps that are taken into the experimentation are missing.

Ans: We have added the scale information in the manuscript.

5. Explanation of the methodology can be better, especially the starting paragraph.

Ans: We have re-arranged the paragraphs along with the conceptual framework diagram to make a more comprehensive and suitable readability experience.

6. The mapping units are not defined as of yet, which must be mentioned.

Ans: We have added this information in the manuscript. We have done the analysis at pixel level for our study area.

7. Better explanation of the models is required, mostly in the case of LSM and how these models learn and predict using the models for LSM.

Ans: We have explained the models better keeping in mind the usage of them in the context of LSM. Please refer to sections 3.2.1 and 3.2.2.

8. The reasoning for 0.3 as the threshold must be reasoned better.

Ans: We have given the reasoning of this in line 398-400. But to recall, we tried countless values as a cut-off or threshold value to see which of the conditioning factors gave the best accuracy for the susceptibility after removal of the factors based on the cut-off value.

9. Graph axes have no labels.

Ans: We have added the y-axes labels in the graphs. We refer you to figures 6 and 10.

10. No definition of training and testing datasets for model prediction. Need a section for that.

Ans: We have added the definition of training and testing datasets for model prediction in section 2.2.