

## ***Interactive comment on “Regional physically based landslide early warning modelling: soil parameterisation and validation of the results” by Teresa Salvatici et al.***

### **Anonymous Referee #3**

Received and published: 4 February 2018

The paper corresponds to the journal scope. In a general point of view: the paper is not very well structured, it is difficult for the reader to understand the message of the authors and to follow the text. The text lacks consistency and some improvements are requested in order to publish the paper. Some recent references have to be included and some sentences should be simplified. More precisely and point by point: 1. The abstract and the introduction have to be rewritten. For instance, the problematic is not visible. The authors have to put the problem(s), the solution in general (with a state of the art) and after the contribution of their research. Clarify the introduction please. 2. The geographical description has to be modified. The description is not straightforward. In general you can start by the geological context with the lithology and the structure

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and after the landscape and the geomorphology of the area. After you follow by the weather and if you have information by landuse. 3. The methodology is not very well described, please revise it with a part about the HIRES model, and after HIRES data. The problem of root reinforcement can be put in the introduction or if you want absolutely speak about this topic, make a part called “background”. Moreover, the part about data is few explained. Improve it please. 4. I think there is some lack of description about the root influence in your model and the way to obtain these information. 5. I think the monte carlo approach coupled with uncertainty is not new for landslide susceptibility assessment with PBM, there are some references to include in your text as Mergili et al., 2014 or Thiery et al., 2017 with r. slope. stability or ALICE tool used this approach to integrate the uncertainty of environment (geotechnical values). You have to mention these references in your text. doi:10.1016/j.geomorph.2013.10.008 or Thiery et al. : Thiery, Y., Vandromme, R., Maquaire, O., Berneradié, S., 2017. HYPERSLINK [http://link.springer.com/chapter/10.1007/978-3-319-53498-5\\_104](http://link.springer.com/chapter/10.1007/978-3-319-53498-5_104) "Landslide susceptibility assessment by EPBM (Expert physically based model): strategy of calibration in complex environment. In: Mikoš, M., Tiwari, B., Yin, Y., Sassa, K. (Eds) Advancing Culture of Living with Landslides. Proceedings, Vol. 2: Advances in Landslide Science, Springer, 4th World Landslide Forum in Ljubljana, pp.917-926. [https://doi.org/10.1007/978-3-319-53498-5\\_104](https://doi.org/10.1007/978-3-319-53498-5_104). You can mention the last paper with TRIGRS :<https://doi.org/10.1007/s10346-017-0931-7> 6. Finally, the discussion is not a discussion. In a scientific paper the discussion emphasizes the results, the advantages of the method but also the drawbacks, the comparison with other approaches. In your text, there are any comments like that.

We suggest another structure of the text as follows: 1. Study sites 2. Background (if you choose this way) 3. Model: description, improvement and the strategy used (calibration, etc) 4. Data used or created for your study 5. Results 6. Discussion 7. Conclusion

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2017-425/nhess-2017-425->

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RC3-supplement.zip

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2017-425>, 2018.