

Geosci. Model Dev. Discuss., referee comment RC2  
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## **Comment on gmd-2021-343**

Anonymous Referee #2

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Referee comment on "LAND-SUITE V1.0: a suite of tools for statistically based landslide susceptibility zonation" by Mauro Rossi et al., Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2021-343-RC2>, 2022

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This paper is written in detail and provides a practical tool including data preprocessing, variable analysis and landslide susceptibility zonation for people who engaged in landslide susceptibility assessment. However, this paper is more like the software instruction manual which mainly introduced the extension of LAND-SE. In general, there are few studies on model innovation, whether physical model or empirical statistical model development in this paper.

This software suite LAND-SUITE mainly based on statistically-based landslide susceptibility assessment models. As the prediction from statistically-based models is not only influenced by input variables, training sample distributions, but also the number and representative of samples, how to carry out landslide susceptibility assessment under the condition of lack of samples is also one of the problems that need to be solved. I would like suggest the authors further discuss the physically based models in this paper, or consider physical model as one of the directions of software extension in future research.

Line 35-36, "As a matter of fact, a standardized methodology, procedure and software for susceptibility assessment is still missing." How to define the standardized methodology for landslide susceptibility mapping?

Line 41, "In the literature, are available....". Grammar mistake.

In Fig. 8, it is clear that landslide susceptibility map from LDA and LRM is quite similar, while the spatial pattern of landslide susceptibility map from QDA and NNM is similar in most places. The NNM result mainly contribute to the final CFM result. Please further explain the possible reasons.