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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Physically based approaches incorporating evaporation for early warning predictions of rainfall-induced landslides" *by* Alfred Reder et al.

Anonymous Referee #2

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Based on my reviewing, I think this manuscript at least needs some revisions before being accepted for publishing.

The improvements should be addressed as following:

1) In the methodology part, after introduction of the 3 models (BEM, IEM and NEM), an index or a combination of several indexes which will be used for judging the landslide occurring or not should be clearly pointed out in the text, then readers can find these criterions in the following result part and related figures, and have a better understanding the improvement of the BEM, IEM models.

2) More detail discussions should be provided in the result part, especially for the possi-

ble limits of the models. As it is stated in the conclusion part, "The models' performance has been assessed by using them to interpret the case history of a landslide and examine their ability to indicate any hydrological peculiarity at the time of the landslide", then arising a question: does the threshold approach in this manuscript is a universal criterion or just feasible in the study area with the soil combination shown in Figure 2? More explaining about the models limitation will make the conclusion more convincing.

3) It would be better if the assessment of slope stability under different models conditions can be provided. How does the suction influence on the slope stability?

4) Suction level or value is an important alarm threshold for landslides induced by rainfall, as these words appear many times in the methodology part, result part, but they are missed in the conclusion part. Conclusion part should include the special important thing which obtained from the study.

5) The units to variables in the equations are missed.

6) Can Figures 16, 17and 18 be shown in one Figure (e.g. 3 model results are shown in one Figure)? Then the difference of 3 models results can be told obviously as well as the novelty of the BEM, IEM models.

7) Figure 3, the sub-title of (e) is missed.

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