

Prof. Carlo De Michele
Editor
Hydrology and Earth System Sciences
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Dear Prof. De Michele:

Thank you for handling our manuscript entitled *Rainfall-induced shallow landslides and soil wetness: comparison of physically based and probabilistic predictions* (hess-2020-624). We are also grateful to the reviewers for their thoughtful and constructive comments. In response, we have revised the manuscript thoroughly and addressed every comment in the open discussion (point-by-point responses can be found there). In particular, we want to draw your attention to the following general areas of revision:

1. We re-did some analyses with new variables, focusing on the hydrometeorological thresholds (Figures 7-9).
2. We eased the direct comparison between the two hydrological estimates used (PREVAH and TerrSysMP), adding the same plot considering the saturation provided by each modeling framework (Figure 5).
3. We removed parts of the analysis which were confusing the message (e.g., TWI downscaling) and expanded or strengthened others as suggested by the reviewers.

This resulted in new sections of the manuscript, as well as removal of others, and changes in the Figures. All the changes can be found in the “track changes” version of the manuscript submitted. Figures 4 and 6 of the original manuscript were removed, following the reviewers comment about their complexity. Figure 5 was improved (new Figure 4), Figure 7 was simplified and combined with a different plot that allows a direct comparison between the two hydrological estimates (new Figure 5). The new Figures 7, 8, and 9, show the results concerning the exploration of the combination of antecedent wetness and rainfall characteristics for the prediction of landslides in a probabilistic approach, recommended by reviewer 2.

Given these revisions, we are convinced that our revised manuscript is much improved and are pleased to resubmit this version for your further consideration. We hope that you will find it suitable for publication in Hydrology and Earth System Sciences and look forward to hearing your decision.

Thank you and best regards,
Elena Leonarduzzi
(cc'd Brian W. McArdell and Peter Molnar)