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Interactive comment on "A susceptibility-based rainfall threshold approach for landslide occurrence" by Elise Monsieurs et al.

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This reply is aimed at thanking the reviewer for his/her work and acknowledging the corresponding need for revision. Specific responses to individual comments will be uploaded with the revised version of the manuscript in the first half of January 2019.

We thank reviewer 2 for his/her rigorous work and feedback, they make a meaningful contribution to the improvement of our manuscript.

We acknowledge the importance of information on non-landsliding conditions for a comprehensive understanding of the meaning of thresholds for landslide occurrence. As proposed by the reviewer we will explain our choice of the applied approach more explicitly (compared to what is currently described on page 4 L25-28) and discuss the

implications in the discussion.

We appreciate the critical note on the core concept of the paper related to the "trigger-cause framework" adopted for the threshold definition using an antecedent rainfall (AR) – landslide susceptibility (S) relation. The reviewer's insights on the complex relationship between landslide predisposing factors, comprised in the susceptibility index, and soil hydrology status, to be distinguished from the dynamics of soil hydrology, are helpful and will be used to better frame our threshold approach in the revised paper.

The insufficient emphasis put on the non-linear character of the proposed AR function and the latter's link with that part of rainfall that may be identified as the true trigger of landsliding are further valid points and we will make sure to address them in the revised manuscript.

The specific suggestions are helpful in pointing out which concepts should be elaborated in order to clarify or support our message.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2018-316, 2018.