

## ***Interactive comment on “Uncertainty analysis of the estimation of stony debris flow rainfall threshold: the application to the Backward Dynamical Approach” by Marta Martinengo et al.***

### **Anonymous Referee #1**

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**Summary** The study describes the uncertainty analysis of the estimation of rainfall threshold to initiate debris flow using the Backward Dynamical Approach. In general, the topic is novel and interesting to readers; whereas, quality of the manuscript is not up to the standards of an international journal. A major revision is needed to adjust the writing structure and clear the issues of the manuscript.

**Major issues** 1. The title used “stony” debris flow; it is better to explain why the study emphasize on the type of debris flow solely. 2. The Discussion content is combined with the Conclusion and poor discussed. Authors should make well discussions of your study and adjust your sections. It is suggested to adjust your writing structure in the

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form of Results and Discussion, then Conclusion. The Conclusion contents need to be rewritten. 3. Authors should read the instructions of the journal to following its style. There are many parts in the manuscript is not coincided with the journal. 4. In P2, there are many method contents here; it is better to combine with the following Method section. The final paragraph in this page is not required and can be deleted. 5. In the manuscript, the uncertainty of rainfall threshold is estimated; but, can the authors tell us how the results improve our precision of rainfall threshold for issuing debris flow warning?

**More minor issues** 1. The term debris-flow and debris flow are mixed used in the context. 2. Figure 2 is not required and can be deleted. 3. In P4, what are  $t_1$  and  $t_2$  should be explained here briefly. 4. The texts (a), (b) etc. and legend are better to move on the corner of the figures 4, 9, and 10 to spare the space.

**Opinion** In general, the manuscript is interesting to readers of the journal. Whereas, the writing structure of the manuscript needs to be adjusted and the scientific quality needs to be improved. I prefer not to accept the manuscript at present form without a major revision.

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