

Interactive comment on “How size and trigger matter: analyzing rainfall- and earthquake-triggered landslide inventories and their causal relation in the Koshi River basin, Central Himalaya” by Jianqiang Zhang et al.

O. Marc (Referee)

odin.marc@unistra.fr

Received and published: 9 July 2018

The work by Zhang et al., presents two landslide inventories obtained with satellite and aerial imagery over a large catchment (Koshi River) in the central Himalaya. One inventory contains rainfall triggered landslides (RTL) as observed in 1992 and in 2015, while the other contains earthquake-triggered landslide (ETL) from the 2015 Gorkha earthquake. They compare both dataset relative to landscape properties (altitude, slope gradient and aspect, soil cover, etc) and derive a susceptibility model from each inventory to assess whether both susceptibility model agree and can be inter-changed or

C1

not. The authors also propose a size cutoff and performs various analysis for landslide smaller or larger than this cutoff. Overall I think some of the question discussed in the paper may be worth to be investigated and published within NHSS, however the current manuscript is unclear or lacking details in many places, and for me the 2 main results stated by the authors ("size and trigger matter") are poorly supported by their current analysis. In depth revisions are clearly needed in my opinion, and I propose below several directions to clarify and improve the analyses. Whether or not the authors claims will stand after these re-analysis is unclear as of now.

Please find my detailed review within the attached document.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2018-109/nhess-2018-109-RC1-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2018-109>, 2018.

C2