

## ***Interactive comment on “Adopting $I_3-R_{24}$ rainfall index and landslide susceptibility on the establishment of early warning model for rainfall-induced shallow landslides” by Lun-Wei Wei et al.***

### **Anonymous Referee #1**

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Dear Editor, I carefully read the paper and I believe it is an interesting work. The work is about the identification of rainfall thresholds for landslides triggered by typhoon rainfalls, to be used in an early warning system (EWS) It is well written, but some part should be better explained. General comment The objective of the paper is clear and the outcomes are well described, but they need further analyses to be used in landslide early warning system. The topic of the paper fit with scope of NHESSS, but it still need to undergo major revision before publication. The main issue of the work is the lack of a real validation, since authors consider only rainfall events that triggered

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landslides, but they should consider, if possible, even events that not triggered landslide, to validate the early warning system in terms of False alarms, missed alarms and correct alarms. To identify these categories, they should define a threshold to identify a “no alarm zone” and an “alarm zone” (e.g. green area of fig. 6, 8, 9 could be considered as no alarm zone, while yellow to red areas as alarm zone). Without such a validation a functional EWS cannot be considered as effective or ineffective. Another important point author should clarify is how they identified the exact time of landslide, since it is necessary to calculate the 3-hours rainfall intensity. They located landslide with several approaches as the use of SPOT5 satellite imagery, but in this case is not possible to identify the exact occurrence time of the landslides. For detailed comments and technical issues, please refer to the attached file. Best Regards

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2017-428/nhess-2017-428-RC1-supplement.pdf>

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