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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Determination of rainfall thresholds for shallow landslides by a probabilistic and empirical method" *by* J. Huang et al.

Anonymous Referee #1

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Article Summary: This manuscript presents an analysis of rainfall data and landslide occurrence for the Huangshan region in the Anhui Province of China. The analysis identifies a simple, yet seemingly useful metric that relies on rainfall intensity and cumulative precipitation alone to assess landslide probabilities. The strength of this approach is evaluated with the limited data that is typically available for this region and similar landslide-prone regions throughout the world. The contribution is to develop practical functions to quantitatively inform a four-step landslide alert system that will minimize risk and losses associated with rainfall-induced slope failures.

General Assessment: In terms of the scientific contribution, the results are not particu-

larly novel, since more sophisticated analysis on this topic has already been published. The manuscript itself is short and focused, reasonably well written, and provides sufficient information to understand the potential utility of the proposed warning system. The figures are clear, though somewhat repetitive given the limited new content presented in each. There is very limited discussion of background information on landslide warning systems (20 reference total) and absolutely no discussion of how the present system compares to previous warning systems. It would be worth analyzing how the derived rainfall threshold functions compare to previous studies in terms of their actual rainfall intensity and duration values as well as their accuracy. In its present form the manuscript does not provide much probabilistic evaluation of how appropriate the threshold is. Although the topic is important and the contribution would be of interest to readers of NHESS, the manuscript reads more like a technical note or brief communication than like a full research article.

Specific Concerns: There is not much information about the type of landslides or when and how they occur in this particular region. Several typos and English language errors should be corrected for improved clarity and readability. Figures 2 and 4 present a lot of the same information and could potentially be combined. Figure 3 is not informative and could be removed. Figures 5-8 present new information in small incremental steps and could be combined into just one or two figures.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 3487, 2015.