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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Integrating spatial and temporal probabilities for the annual landslide hazard maps in Shihmen watershed, Taiwan" *by* C. Y. Wu and S. C. Chen

Anonymous Referee #1

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The issue analysed in this paper is relevant and fully within the scope of NHESS. Although the various methods employed in the analysis are not particularly original, their integration is sound and permits a refinement of landslide hazard assessment in the studied region.

I am reporting some specific comments below.

The study area (Shihmen watershed) is not mentioned in the abstract, whereas the last sentence points out that high landslide probability occurs in the Taigang River watershed. Basic information about study area, such as location, watershed area, etc.,

should be provided, whereas, Taigang watershed, which is no more mentioned in the paper and is shown only in figure 1, could be omitted from the abstract.

The results are presented in two sections of the paper: section 4 and section 5. The title clearly indicates that section 4 is intended to present results. The title of section 5 could be modified to underline that also this section includes results presentation, e.g. “Results of annual landslide probability”.

Section 2.1, page 475, line 24: “GIS hydrology module” it is not clear what module the authors are referring to.

Section 3.3. the authors could consider presenting a figure showing the temporal pattern of precipitation for the Typhoon Aere, for instance a plot of cumulative rainfall versus time. More details could be provided about the choice of rainfall durations. Rainfall for durations exceeding than 24 hours were not significant?

Section 5 Page 486, lines 1-4. These sentences are rather cryptic; they should be revised, and probably extended to better introduce the integration of time series of maximum annual rainfall in the analysis. Page 486, lines 12 and 15. “different recurrence intervals”: what recurrence intervals have been considered? How have they been selected?

Figure 1: the geographical location of the studied watershed in Taiwan should be enlarged.

Figure 2 could be complemented by the results for one more variable, possibly a variable excluded in the second step of the screening (absolute value of Dj < 0.1).

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 471, 2013.