

Interactive comment on “Spatial pattern analysis of landslide using landscape metrics and logistic regression: a case study in Central Taiwan” by Y.-P. Lin et al.

Anonymous Referee #1

Received and published: 13 June 2010

General comments:

1. This paper applied landscape metrics to analysis of the spatial distribution of landslides. The authors introduce terms such as edge density and shape index but do not explain what these terms mean in landslide research. For example, in the conclusions section, the authors state that “Although the overall patch [i.e., landslide] shapes in low-occurrence and sustained landslides are irregular, the edge boundary in new landslide[s] is large.” What does the statement mean to landslide researchers? How does an ‘irregular’ landslide differ from a ‘regular’ landslide in terms of landsliding? What

C1134

kinds of landslides tend to have longer perimeters (edge boundaries)? Are shape and perimeter really important to landslide research?

2. The authors make statements that are not supported by data. For example, in the conclusions section, the authors state that “Susceptibility maps reveal that low-occurrence landslides are close to stream channels. However, high-occurrence landslides are more likely to be close to ridge lines.” This statement is not supported by results presented in Table 4; in fact, distance to ridge was not even mentioned as an explanatory variable. Another example is from P. 10, where the authors state that “It is found that the MPS is negatively correlated with the occurrence number in small occurrence number (occurrence number ≤ 4) landslide[s] but is positively correlated with the occurrence number in large one[s].” This statement is based on Fig. 5; no correlation analysis was actually performed.

Specific comments: The paper is riddled with many confusing terms (e.g., the mean size of each landslide), grammatical errors, and bad sentences. The annotated copy of the paper shows some of the examples.

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/7/C1134/2010/hessd-7-C1134-2010-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 3423, 2010.

C1135