Hydrology and Earth System Sciences Discussions

Interactive
Comment

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.

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Received and published: 3 August 2010

Reviewer 4 General comments

1) Please give your paper to a native English speaker to correct errors in English language.

Reply: Grammatical and writing style errors in the original version have been corrected by our colleague who is a native English speaker.

2) There are several inconsistencies in the text to which other referees already referred

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to 3) I would propose to use "frequency" instead of "occurrence number" (also in Figures and Tables). 4) I would also propose to use "low-frequency" and "high-frequency" instead of "low-occurrence" and "high-occurrence" respectively (also in Figures and Tables).

Rely: To be consistence, "frequency" was used instead of "occurrence number" "low-frequency" and "high-frequency" were used instead of "low-occurrence" and "high-occurrence."

5) How would you justify the division of the factor "lithology" into separate classes before putting them through the logistic regression? 6) How do you justify the decision to use the metamorphic formation as a reference category in the modelling? Shouldn't it be more correct to divide all lithological units in similar proportion first part for the model development and second part for model testing or as you put it a reference category in the modelling?

Rely: We followed the suggestion in model process. From the testing results, we selected Metamprphic formation as the reference in entire landslide and low- frequency landslides models. Moreover, the Alluvim formation was selected as the reference in high- frequency landslides model. Table 1 shows logistic regression model results with entire, low- frequency and high- frequency landslides.

7) Susceptibility, hazard and risk are three different terms with different meanings. You should distinguish between them and clearly state which of the three did you "produce" Rely: Thanks for the comments. The study discusses about landslide susceptible areas in a landscape scale. The modifications were in the reversion.

Please also note the supplement to this comment:
http://www.hydrol-earth-syst-sci-discuss.net/7/C1682/2010/hessd-7-C1682-2010-supplement.pdf

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