

Interactive comment on “Study on the combined threshold for gully-type debris flow early warning” by Jian Huang et al.

Jian Huang et al.

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Received and published: 2 November 2018

Nov. 01, 2018 Editor Nat. Hazards Earth Syst. Sci.

Re: nhess-2018-241 Dear Editor, With this letter, we are submitting the revised version of the captioned manuscript. All comments from the editor have been well addressed. Details are given in the attached response to editor's comments.

The co-authors really appreciate the invaluable comments and do believe that the manuscript has been greatly improved accordingly.

Thank you very much for reviewing.

Best wishes, Jian Huang

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Manuscript: nhess-2018-241 Title: Study on the combined threshold for gully-type debris flow early warning Authors: Jian HUANG, T.W.J. van Asch, Changming WANG, Qiao LI

Revision - editor' response General Points: 1. Paper is well written and it is as per the scope of the journal. Editorial panel has observed some minor corrections which hamper the high quality publication. Answer: Thanks for the editor's comments. The problem has been revised in this revision.

Specific Points: 1. Fig. 2 (a) North arrow and Scale bar is missing. Answer: The problem has been revised in this revision. Please refer to the Fig.3(a). 2. If possible, different elevation heights can be presented by DEM map. Answer: The DEM map has been added in this revision. Please refer to the Fig.2(a). 3. Provide the slop map of the study area. Answer: The map has been added in this revision. Please refer to the Fig.2(b). 4. Fig. 3 Location of YL06 is missing. Answer: The YL06 has been added in Fig.3 in the revision. 5. Line 177, rainfall intensity 73.5 mm/hr instead of 73.5 mm. Answer: It has been revised in this revision. 6. Line 194 and line 210, pore pressure value for SY01 is differed. Answer: It has been revised in this revision. 7. What will be effect of any hydraulic structure i.e. check dam at downstream on pore pressure, how it will be considered in existing method. Answer: During this study, monitoring sensors of pore pressure were installed at the upstream to illustrate how the deposited material start to slip, and then become a debris flow. Check dam at downstream plays a great role to mitigate the influence of debris flow. In this manuscript, we focused on the combined method for forecasting the debris flow occurrence. The effect of check dam to the method, we can do more during the next stage of study.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2018-241/nhess-2018-241-AC1-supplement.pdf>

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