



Interactive
Comment

Interactive comment on “Brief Communication: Landslides triggered by the $M_s = 7.0$ Lushan earthquake, China” by X. L. Chen et al.

X. Chen

04chxl@sina.com

Received and published: 5 December 2013

Dear Handling Editor: Dr. Glade,

We deeply thank you for your careful reading and the encouraging general comments provided on the paper. Your opinions and suggestions will undoubtedly improve the quality of the paper.

Hereafter, you will find a detailed description of the authors' replies to each comment of the reviewers.

Best regards, Xiaoli Chen, on behalf the authors.

Answer to report #1

C1962

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



(1) Some supplements have been added to the description of the geological setting for the study area. Geological criteria are used to group the formations. (2) The DEM data is SRTM 90 m, the geology map scale is 1: 200000. The remote sensing images used in this study are with resolution of 0.6 m. (3) Landslides were identified in the remote sensing images by the following characteristics: (1) landslides scarps showed newly denuded vegetation on the slopes; (2) landslides scarps showed distinct white or brown contrast as compared to the surrounding; (3) landslide debris movement paths could be clearly observed; (4) Individual boulders rock falls are not accounted in this study. (4) Definition of the rock falls, shallow slope failures and rock or soil slides is referenced from “The landslide handbook” a guide to understanding landslides (Highland, L.M., and Bobrowsky, Peter, 2008).

Answer to report #2

(1) Slope angle is generated from DEM with resolution 90m*90m, and landslides were mapped as points which representing the failure sources near the top scarps. (2) "Q" and "E" always are soft and with gentle slope in this region, but they are presented near the epicenter and landslides frequently occurred. LPD is defined as the number of landslides per square kilometer, it is a ratio value. In this study area, there are not many landslides occurring in "Q" system, however, the LPD is higher because the area of “Q” is small. (3) Section of 4.2 "Criteria" should be "Criteria". (4) Although some researches show that the landslide size has little influence on the distribution characteristics (Qi et al, 2012), sometimes landslide inventory can seriously influence statistics results especially when calculating LPD value.

Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/1/C1962/2013/nhessd-1-C1962-2013-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 3891, 2013.