

***Interactive comment on “Distributed specific sediment yield estimations in Japan attributed to extreme-rainfall-induced slope failures under a changing climate” by K. Ono et al.***

**Anonymous Referee #2**

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Not only one regression is used in this study, there are at least two: (1) slope failure probability and subsequent sediment yield (2) extreme rainfall and slope failure probability

How are the annual sediment yields estimated? Do only slope failures contribute to the sediment yield or are there other sediment sources acting all over the year? Yearly sediment deposition can only be correlated to yearly rainfall data, the number of extreme rainfall events, the days with rainfall above a chosen threshold etc. Extreme sedimentation do have a recurrency interval of more than 30 years (30 years means

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frequent events). The climate change scenarios used in this study are unknown outside of Japan. What are the main results of this studies? No one can create climate hazard maps for the future! Which hazard will be evaluated? Who will be endangered? What does this mean: ...an elevated turbidity concentration of over 100 degrees was recorded....? Why should the annual sediment yield be normally distributed throughout the recording interval when you correlate the probability of slope failure to "extreme" rainfall events? Can the mentioned basins be reached directly by slope failures or has the material be transported by subsequent floods? What does this mean: ...therefore, areas that will cross the lower edge of the rising limb in the future..? The produced susceptibility map of slope failures is validated?

Figures are unclear, mainly because of the scale, but also because of the content (fig. 1, 2)

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 7121, 2010.

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