Nat. Hazards Earth Syst. Sci. Discuss.,
https://doi.org/10.5194/nhess-2019-239-AC3, 2019

Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Erosion after an extreme storm event in an arid fluvial system of the southern Atacama Desert: an assessment of magnitude, return time, and conditioning factors of erosion caused by debris flows" *by* G. Aguilar et al.

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Received and published: 31 October 2019

Dear Juan Luis, thank you very much for your comments and your appreciation for our manuscript. Here I include the answer to your questions. These will be considered in the corrected version:

« Line 3-4, p6: question: This statement refers to debris flows reaching the main valley, isn't? I mean, it probably there was debris flows within the catchment but no big enough

to deliver sediment to the outlet alluvial fan? »

[Reply] The percentage of catchments that generated debris flows were calculated considering if the flows reached the trunk rivers. It is very probable that was generated debris flows in other catchments and that did not reach the trunk rivers. We will clarify this in the corrected version.

« Line 14, p6: regarding positive correlation you mention: the higher the relief factor the steeper the slope within the catchment? therefore negative correlation with volumes of debris flows? »

[Reply] Indeed, there is an error that we will solve in the corrected version: The relationship is negative between the volume of sediments and the relief factor.

Best regards

German Aguilar

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