

***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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Dears reviewer and editor, following I include specific responses to your comments and corrections. Attached pdf file is the corrected manuscript include all modifications. Thank you very much for your great contribution in ours manuscript.

Best Wishes

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German Aguilar

Specific Answers to Reviewer 3

Line 3-4, p6: question: This statement refers to debris flows reaching the main valley, isn't? I mean, it probably there were 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 manuscript: « ... debris flows were generated in the tributary junctions....».

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 solve in the corrected version: The relationship is negative between the volume of sediments and the relief factor.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-239/nhess-2019-239-AC6-supplement.pdf>

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-239>, 2019.

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