

Interactive comment on “On how sediment supply affects step formation, evolution and stability in steep streams: an experimental study” by Matteo Saletti and Marwan A. Hassan

Anonymous Referee #2

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Overview

This paper presents the results of flume experiments investigating the effect of sediment supply on step-pool formation and stability. Despite I found it very similar to another paper recently published by the authors (all results could have been published in a same paper?), the paper shows that there is an "optimum" level of sediment supply that maximizes the number of steps, which is a new result. The topic is interesting for field practice, and this work answers to a scientific question which has been previously formulated by several authors. The paper is very well written and all results are presented in a comprehensive manner, with appropriate figures. I suggest minor

C1

revision.

Comments

I really regret that a paper focusing on step-pools does not present one photo of this morphology observed in the flume. Like in Saletti and Hassan 2019, we must trust the author and what has detected the algorithm. It is really frustrating. Line 90: which did not you feed continuously? Line 85-95 and Fig11: there is no evidence that you were at capacity. It seems that all runs were under capacity? Figure 3: what are the 3 points at the bottom of the figure? Line 128: This result seems to contradict your hypothesis (Fig1)?

Interactive comment on Earth Surf. Dynam. Discuss., <https://doi.org/10.5194/esurf-2020-30>, 2020.

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