

## Response to the minor revision

Dear editor Steven Bouillon,  
dear referee #2 Simon Mudd,  
thank you for your comments. We have adopted all the suggested comments.

We will upload two versions in the resubmission: a version with all changes tracked and a version with all changes accepted.

If the editor approves the responses then we are pleased to have our manuscript published in BioGeoSciences.

Kind regards,

Kirstin Übernickel and Co-authors

**Referee #2:** Simon Mudd, 05 Aug 2021

### minor revisions:

I have now read the authors' responses to my queries, and am satisfied with their answers. I do think the lack of full excavation might substantially underestimate sediment fluxes, but the authors make this quite clear in the text and it is also clear that full excavation was not an option at their field sites. The more speculative passages have been removed. And I think the data compilation will be very useful to future workers in this area. I look forward to seeing this paper in print in the future. I have only minor recommendations for changes:

Dear Simon Mudd,

Thank you very much for your time that you spent on our manuscript, the positive evaluation of our work and the revision remarks. We have adopted all suggested comments. All changes to the manuscript are visible in the track changes version that we upload as well.

Line 50: Is the “of composition” necessary in this sentence?

Removed.

Line 65: Remove comma after “impossible”

(now l. 57) Removed.

Line 111: Delete comma after list and replace “credits” with “includes”

(now l. 95) Deleted and replaced.

Line 115: Another use of the “composition”. I’m not quite sure what you are trying to convey. Would “the effect of local burrowing species” not work as well? If the composition part is really meaningful can you include an extra sentence to explain this?

(now l. 99) Thank you. We removed “composition” where the expression referred to the local burrowing species.

Line 214: I suggest: “The ecosystem is disturbed by (illegally) grazing cows.” (a less passive sentence)

(now l. 191) Changed.

Line 639: Clunky sentence. Maybe “Our data compilation was complicated by the fact that the primary aim of most of the included studies was not to quantify rates of sediment transport by burrowing.” (or something like that).

(now l. 560) Adapted.

Line 641: delete “especially”. Not needed.

(now l. 561) Deleted.

Line 689: Suggest “create mounds” as opposed to “do mounding”

(now l. 607) Changed.

Line 691: “is a minimally invasive...”

(now l. 610) Changed.