

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC2
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Comment on nhess-2022-143

Anonymous Referee #2

Referee comment on "Progress and challenges in glacial lake outburst flood research (2017–2021): a research community perspective" by Adam Emmer et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2022-143-RC2>, 2022

1) general comments

The consortium of authors provides an up-to-date insight into the development of scientific reporting and research related to the phenomenon of floods from glacial lake outbursts worldwide. In doing so, the comprehensive study analyzes the time period from 2017 - 2021 in a continuation of previous work, noting important trends. The study was launched on the occasion of the first GLOF conference in 2021 and is based on the evaluation of more than 500 scientific articles recorded in the authoritative scientific publication databases Web of Science and Scopus. The evaluation is very comprehensive and well structured. However, it lacks the classic division of chapters into results, evaluation, and discussion after the introduction and data and methods. A difficulty is the consistent delimitation of the time period and the consideration of articles that have been submitted but not yet final published. Here, an identical procedure is also of great importance for future similar work.

A glacial lake outburst flood becomes more and more of a compellingly dangerous process as the article progresses. Not sure if this impression is intentional or could be softened a bit. A graph showing the temporal development of the published articles per region would enrich the article in chapter 4.1. The presentation of the tables could be improved and made more attractive. In the final part of the relatively long discussion, strong emphasis is placed on sensitivities of an indigenous population and hurdles of the assessors with respect to hazard communication. These aspects, while very exciting, do not necessarily belong to the paper and would be worthy of a separate publication at best. The paper is linguistically well written with a good reading flow. The list of references is not surprisingly very long. Here, it would be worth considering to position the entirety of the references in an appendix and to mention only the really relevant papers in the article.

Basically: one wishes for conferences with a similar output and such a good overview also in other related research areas!

2) specific comments

Chapter 2.1 mentions the difficulty in dealing with scientific articles in languages other than English, which are not (completely) recorded in the databases. It also mentions the abundance of technical reports, gray literature, and local and indigenous knowledge. It is not clear how this will be dealt with.

Chapters 3 and 4 represent results. They could be named accordingly (with creation of additional subchapters).

In Table 2, the 3rd part states the challenges in management, preparedness and warning. What is the management of non-events or good-natured glacial lake outbursts?

In the same Table 2, the comment in the first section on observed Trends and Progress already seems to me to be a strong interpretation and not a neutrally presented result.

Maybe add a graph with number of events per region over time in chapter 4.1.

From chapter 4.2 on, I have the impression that the text changes to a discussion of the results. At the end of the chapter, clarification of when a glacial lake outburst becomes a GLOF would be even more precise.

The discussion of the human dimension context in chapter 4.5 and chapter 4.7 is relatively long at the end of the paper, but in my opinion it is not in the center of the study. Possibly shortening or even transferring it to a separate article should be considered.

3) technical corrections

Figure1 should be improved for publication

Table2 needs improvement for better readability. List references separately.

page8, line172: number «abstracts» with (A) and number «titles» with (B). This creates the reference to Fig. 2.

page20, line393: Line break before: "First, local communities..."

page22, line454: Line break before: "The fact that research..."

page22, line470: Number should be (vi)

page23, line492: Disclaimer: Please state who or what ICIMOD is.