

We thank the reviewer for their comprehensive and constructive comments on our work. Below, we respond to their comments in blue font and describe how we will address these comments in the revised manuscript in black font. References to specific lines refer to the initial manuscript.

#Referee 3

R3C1: The paper presents detailed database on the GLOF events, based on large number peer-review papers satellite and aerial image analyses and other sources. This is undoubtedly great contribution to the data collection on GLOF and should be published and be available to other researchers.

R3A1: We thank the reviewer for acknowledging the value of our database and the accompanying manuscript.

General Comments:

During reading the paper several questions arise:

R3C2: 1. When you write about standardized protocol for reporting characteristics of GLOF (“Our data collection process emphasizes the support of local experts in contributing previously undocumented cases, and we recommend applying systematic protocols when reporting new cases”), do you have some special questionnaire (protocol), that can be added to the paper? Or do you mean that it is recommended to other researchers just to collect the same 57 characteristics of GLOF as in your study? It is a little bit confusing.

R3A2: We regard our database as a suggestion for other researchers as to which information could be collected when reporting a GLOF. Our choice of our 57 parameters reflects a compromise between data availability, reporting trends, physical or risk-related relevance, and thus inadvertently contains subjective elements. No GLOF in our database has complete information on all these parameters, and it seems unlikely that any future appraisal will capture all this information for a given GLOF in the future, especially if they were detected retrospectively with remote sensing and lack ground truth.

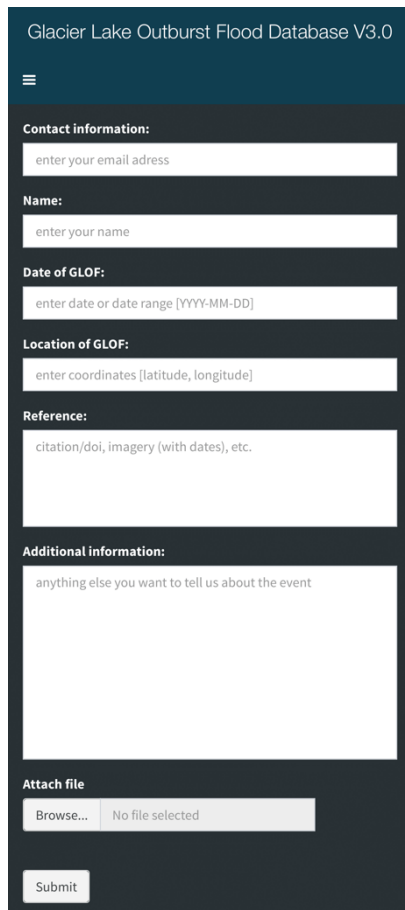
Furthermore, we believe that the only way for implementation of a wide-ranging, ideally globally applied, standardized protocol is to go into discussion with other researchers in this specific field and make a recommendation based on a community perspective. We are going to attend the GSA Penrose conference (<https://www.jsg.utexas.edu/penrose-2023/>) soon, and hope to get feedback on essential variables that need to be gathered when observing new GLOFs or detecting previous GLOFs in hindsight (see **R1A3**).

R3C3: 2. I agree with referee 1 (Adam Emmer), that it is not clear, how can local researchers from different regions contribute data about new events to your database. Such additional option can do database more “active” and at the same time more sited.

R3A3: We would like to refer the reviewer to our reply **R1A3**, which we copy here for convenience:

We agree that active input from the research community is key to successfully maintaining our database and avoiding major data gaps. We followed the reviewer’s idea and implemented a submission form on our website <http://glofs.geoecology.uni-potsdam.de/> to ease the reporting of missing events for other researchers (see screenshot below). We will review each submitted case or reference individually and add them to the next version release of the database. To inform the reader about this option, we will add to the data availability section (L373): *“Our database is an ongoing project, and we offer a web-based, interactive map that grants access to the most recent state of the database (<http://glofs.geoecology.uni-potsdam.de>). This website includes a submission form that*

enables the user to report missing or recently occurred GLOFs (Fig. 12).”. Considering future updates, Zenodo will remain the version-controlled access to our database. Zenodo allows us to update our database under a new version using the same DOI, and we will release a version 3.1 as soon as a sufficient amount of new data has gathered. Furthermore, we plan to discuss schemes for standardized reporting and joint contribution within the GLOF community at an upcoming Penrose conference on outburst floods (<https://www.jsg.utexas.edu/penrose-2023/>).



The image shows a mobile application interface for the 'Glacier Lake Outburst Flood Database V3.0'. The form is titled 'Glacier Lake Outburst Flood Database V3.0' and includes a hamburger menu icon. The form fields are as follows:

- Contact information:** A text input field with the placeholder 'enter your email address'.
- Name:** A text input field with the placeholder 'enter your name'.
- Date of GLOF:** A text input field with the placeholder 'enter date or date range [YYYY-MM-DD]'.
- Location of GLOF:** A text input field with the placeholder 'enter coordinates [latitude, longitude]'.
- Reference:** A text input field with the placeholder 'citation/doi, imagery (with dates), etc.'.
- Additional information:** A larger text input field with the placeholder 'anything else you want to tell us about the event'.
- Attach file:** A section with a 'Browse...' button and a status indicator 'No file selected'.
- Submit:** A 'Submit' button at the bottom of the form.

Figure 12: Submission form on <http://glofs.geoecology.uni-potsdam.de> that users can use to report missing or recently occurred GLOFs.

R3C4: 3. Can you provide some additional explanations and examples about future prospectations in the use of the database on the GLOF events? Now it is written in the conclusion only as “Following this approach, our collated database allows for objective comparisons on different spatial or temporal scales. Potential analysis based on the data might concern trends in GLOF occurrence, magnitude and impact, providing a valuable base for future hazard, risk assessment, and early warning”. The rest is up to the reader's and user's imagination. But you are certainly have valuable experience with the previous version of your database and there are some examples in the literature, which can be added either to the introduction or to the conclusions.

R3A4: We thank the reviewer for pointing this out. We will extend the following paragraph in the conclusion as follows (L382): “Following this approach, our collated database allows for objective comparisons on different spatial or temporal scales. Potential analysis based on the data might concern trends in GLOF occurrence, magnitude and impact, providing a valuable base for future hazard, risk assessment, and early warning. (...) Local analyses could address GLOF recurrence intervals to better reconcile them with design floods in river hydrology. On a global and regional scale, our database could

help quantify the impact of global warming on the frequency, timing and magnitude of GLOFs, and investigate links between population growth and reported GLOF impacts.”