Dear NHESS Editor Olivier Dewitte,

We sincerely appreciate your time and effort in evaluating our manuscript. We are also grateful to the reviewer(s) for their insightful and helpful comments to improve the quality of our manuscript. We have carefully considered the following minor comments from you and the reviewer.

Thank you again for your professional handling of our manuscript.

Yours sincerely,
Prof. Dr. Guoqing Zhang on behalf of all authors

Editor:
In addition to the suggestions from the reviewer, I would like to suggest the following technical item for Line 48. Replace "alpine lakes" by "plateau lakes".

Response: Done.

Referee #1:
(i) exceptional outburst volume 5.42 km^3 - please put this in regional / global context of outburst floods and highlight the magnitude of studied events.

Response: We thank the reviewer for this suggestion to provide a visual comparison of the magnitude of this outburst volume. According to a global inventory of glacial lake outburst floods (GLOFs) (Lützow et al. 2023), the largest recorded GLOF occurred in Iceland in 1726, with an estimated volume of ~25 km^3, making it the only known event exceeding 5 km^3. A similar magnitude is the outburst event of an ice-dammed lake at Russell Fiord, North America, in 1986 with a peak flow of 105,000 m^3/s over one hour (Mayo 1989). In the Tibetan Plateau, documented outburst volumes are significantly smaller, with the largest event mainly in the Karakoram, but only ~0.3 km^3 (Lützow et al. 2023). The outburst volume of 5.42 km^3 from the Zonag event is indeed exceptional in both regional and global contexts. We have added some sentences to emphasis the importance in the Section "4.2 Consequences of Zonag Lake and Selin Co outburst" as follow:

"*The outburst volume of 5.42 km^3 from the Zonag event is exceptional in both a regional and a global context. According to a global inventory of glacial lake outburst floods (GLOFs) (Lützow et al. 2023), the largest recorded GLOF occurred in Iceland in 1726, with an estimated volume of ~25 km^3, making it the only known event to exceed 5 km^3. The outburst of an ice-dammed lake at Russell Fiord, North America, in 1986, with a similar water storage of ~5.4 km^3 before breaching, released water with a peak discharge of 105,000 m^3/s in one hour (Mayo 1989). In the Tibetan Plateau, documented outburst volumes are much smaller, with the largest event mainly in the Karakoram, but only ~0.3 km^3 (Lützow et al. 2023).*".

References:
Lützow, N., Veh, G., Korup, O., 2023. A global database of historic glacier lake outburst floods. Earth Syst. Sci. Data, 15(7): 2983-3000. doi:10.5194/essd-15-2983-2023.

Mayo, L.R., 1989. Advance of Hubbard Glacier and 1986 Outburst of Russell Fiord, Alaska, U.S.A. Annals of Glaciology, 13: 189-194. doi:10.3189/S0260305500007874.

(ii) the two new paragraphs in Section 4.3. are confusing. Are the lakes that produced the outbursts really endorheic? Satellite images show that there is surface outflow before the outbursts and the outburst was caused by erosion / breaching of it, no? Because the lakes are having surface outflow, they are not endorheic by definition. If this outflow is seasonal, they are rather perrenial. The whole system is, perhaps, endorheic (?). Please make this clear and revise this rather confusing classification in section 4.3.

Response: The lakes producing the outbursts are indeed endorheic by definition, as they have not surface outflow under natural conditions. Although the surface features around these lakes may appear to be an outflow channel on satellite imagery, further zooming out of the image confirms that the lakes are not connected to the channel (see Figure R1 below). The outburst events were caused by erosion and breaching of the natural boundaries of the lake. Furthermore, the region where these lakes are located is part of an endorheic basin. Within this basin, there is a mix of lake types, including both endorheic (dominant in number, with no surface outflow) and exorheic (with clear overflow channels) lakes.

Figure R1. Selin Co and pre-existing channels are not connected prior to the outburst.