Reply on RC1

Gabriel Pérez-Murillo et al.

Author comment on "Evaluating the applicability of a terrain-based floodplain delineation tool for a broad-scale assessment of flood exposure of tailings deposits" by Gabriel Pérez-Murillo et al., EGUsphere, https://doi.org/10.5194/egusphere-2022-122-AC1, 2022

Dear Editor and Reviewer #1

We appreciate the time taken by the first reviewer to read the article and make comments/suggestions regarding the acceptance of the manuscript and the novelty/contributions to knowledge. We were expecting to have two sets of peer-review comments simultaneously or at least within a reasonable time difference between each other. Given the excessive delay in receiving comments from a second reviewer, we have decided to offer a partial response to comments offered by reviewer #1 only.

We would like to highlight to the first reviewer that this research was conducted in response to the global push toward mitigation of complex environmental pollution problems caused by mining waste, particularly tailings deposits. The readers need to consider that environmental pollution caused by long-term flood-tailings interactions has been relatively overlooked in recent years. This research paper contributes to filling the knowledge gap in scientific literature focused on non-catastrophic flood erosion of tailings deposits. We believe that this manuscript focuses on a relevant topic for the geoscience community, considering that tailings deposits are likely to be exposed to extreme climatological events in the coming years. Tailings deposits are normally built to be part of the natural landscape in perpetuity and to the knowledge of the authors, few efforts are focusing on analysing the effects or the fluvial erosion potential of tailings deposits on event-based modelling efforts (please refer to the introduction section).

Our research is one of its kind, offering a direct comparison of a Geomopholigical floodplain delineation tool against a 2D hydrodynamic model solving the Shallow Water equations for flood modelling in a key case study region. We have provided valuable insights into the applicability of terrain-based methods for floodplain delineation to assess flood exposure of large-artificial landforms such as tailings deposits. Therefore, we respectfully disagree with the first reviewer in his assessment of the contributions of our manuscript and his recommendations in terms of acceptance for publication.

Given the excessive delay to receive adequate peer-review comments from a second reviewer, we have decided to withdraw this submission of "Evaluating the applicability of a terrain-based floodplain delineation tool for a broad-scale assessment of flood exposure of tailings deposits" to be able to submit this manuscript to a different journal.

I appreciate the time and reviews offered by the interactive community and I invite future

readers of this pre-print overview to follow my Google scholar profile and other academic social networks to be updated on the publication of this paper in a different journal.

kind regards,

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