

Interactive comment on “Case Study: Risk Analysis by Overtopping During an Upstream Landslide in Peñitas Dam, Mexico” by Humberto J. F. Marengo and Alvaro A. Aldama

Anonymous Referee #1

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The presented manuscript deals with the case study of Penitas dam, where a landslide blocked the Grijalva river and lead to severe problems, not only for the adjacent hydroplants but for general safety of downstream inhabitants. The work is separated in two sections: the derivation of an explicit expression for maximum flood head calculation and the case study analysis where different peak flow regimes taken from literature are considered.

Generally speaking, the manuscript is extremely difficult to follow. First and foremost, the linguistic quality is so low, that it impedes a fluent reading and often obstructs the clarity of the made statements. Furthermore, the two parts stand almost detached

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from each other (or it just was not clear to my confused eyes) such that the work itself is hard to grasp and to deduce the relevant and important novel findings. Moreover, the presentation quality is such, that paragraphs and entire sections are missing, legends of tables are floating around and typos are ubiquitous.

As NHESS is kind of a general audience publication, generally, content like the proposed merits publication, but only if substantially tuned to a broader readership. The numerical derivation of the maximum flow head should be presented in a more specific journal, where the review process can also judge more accurately whether the derivation is novel and scientifically sound. To be honest, not every equation was double checked within this review process, but I sincerely believe that a paper with 52 equations is not suitable for publication in NHESS.

While many topics are touched as well as in the numerical part as well as in the case study part, the presented work is poorly linked to existing/similar work.

As can be found in the technical corrections (see attached file), the list is exorbitantly long. It kind of felt as I performed the first proof reading. With all due respect to the authors, this is not an acceptable manuscript quality to be submitted to any journal. A proof reading at least from a native speaker is required, such that a referee can deal with the scientific content rather than being language corrector.

As NHESS stand for generally high quality publications, I have no alternative but to recommend that the manuscript must be rejected.

If the authors decide to re-submit the work I would propose the following: Split the work. Send the numerical part to a dedicated hydraulic journal and let it be reviewed there. The case study part fits to NHESS, but needs major revisions with respect to other publications and events. Generally, spend more time and effort in preparing a readable manuscript.

Please also note the supplement to this comment:

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<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-191/nhess-2019-191-RC1-supplement.pdf>

Interactive comment on *Nat. Hazards Earth Syst. Sci. Discuss.*, <https://doi.org/10.5194/nhess-2019-191>, 2019.

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