

Review of:

Modeling the effects of sediment concentration on the propagation of flash floods in an Andean watershed

By

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This article presents an analysis of flashflood propagation in a steep watershed in the Andes. The article should be of interest to the readers of this journal. The following should be considered for improving this article:

1. The objectives are not quite clear. We all understand the emphasis on the model and the effects of sediment concentration, but what is it that you are particularly wanting the reader to learn from your research? The model and color figures are nice, but there must be some scientific objective that you tried to accomplish and want to share with the readers.
2. The conclusions are long and a bit vague. There should be a clear delineation of what can be concluded from this analysis. Also, the wishful thinking at the end of what you want to do in the future should be left out. There should be a greater emphasis on what has been done and what can clearly be demonstrated from your analysis. What can be achieved in the future should be left out for your next paper...
3. The article is a bit long and there is quite a bit of excess verbiage (a good 10-15% can be trimmed out) that could be deleted without changing the technical content of your discussion. Also, once the paper is approved for publication, it seems better not to include the Appendix in this paper. This material can be useful to the reviewers at this stage of the review process, but will not be necessary in the final paper.
4. The analysis of the effects of sediment concentration is interesting, but the results at a 60% concentration seem too fluid and flowing quite fast. Depending on the amount of clay and the type of clays, the flows at such a concentration can be very different than modeled. These hyper-concentrated flows may also resembling very slow moving mud flows. It may also be useful to indicate whether this is a concentration by weight or by volume. It does make a large difference at high concentrations.

Overall, this article is very interesting and should be published once minor changes and improvements are carried out. I can re-review a modified version if needed, but the modifications suggested above may simply be implemented to the satisfaction of the Editorial Board.