

## ***Interactive comment on “Local land-use change based risk estimation for future glacier lake outburst flood” by S. Nussbaumer et al.***

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Interactive comment on “Local land-use change based risk estimation for future glacier lake outburst flood” by S. Nussbaumer et al.

Anonymous Referee #2 Received and published: 9 November 2013

Reviewer: This is an interesting manuscript, addressing the issue of anticipating risks related to climate change. The interest of the approach is due to the following reasons: 1) it considers both physical and socio-economic changes, thus climate change consequences on hazards (in this case GLOF) are combined with scenarios of expected socio-economic developments; 2) it is based on semi-quantitative scenarios, that take into account uncertainties related to both climate and socio-economic changes; 3) it

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tries a downscaling to a local scale, that is the one needed for planning, versus a more general approach, like the just published paper by Gruber & Mergili, in this Journal.

Author response: Thank you, we appreciate this assessment.

-A couple of general comments are the followings: - even if I understand the complexity of the topic, I find the references a bit overwhelming, because of their number;

We acknowledge this comment and revised again all references. We eliminated a few references which are not critical to the understanding and correct justification and reference of the paper. We are afraid that this not yet results in a very substantial reduction of the references because many of the references are indeed necessary to provide the basis for our approach and study. We are sorry that we have not a perfect solution.

-I find that in table 1 and 3 the lines should have some space between one and the following, if not they are not easy to be read.

Ok, we adapted it.

-Specific comments are in the attached revised version of the manuscript Please also note the supplement to this comment: <http://www.nat-hazards-earth-syst-sci-discuss.net/1/C1663/2013/nhessd-1-C1663-2013-supplement.pdf>

We appreciate all these comments and considered them in the revision, and corrected the text accordingly. Just for one comment, (page 4364, line 17) we would like to stress that Figure 1b shows low intensity (<2m heights) as well as high intensity (>2m heights).

We appreciate the helpful and constructive comments by the reviewer. .

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 4349, 2013.