

Interactive comment on “Assessing downstream flood impacts due to a potential GLOF from Imja Lake in Nepal” by M. A. Somos-Valenzuela et al.

Anonymous Referee #1

Received and published: 27 December 2014

Dear authors, short comments: page 13021, line 6: here is described moraine and "ice-cored outlet complex" . I suppose that this is moraine as well. Is it front moraine ? Not clear, why "outlet complex" ? It looks like a supraglacial lake from the Fig. 1, but this is not mentioned clearly (only on p. 13021, l. 15). Please write clearly what type of the lake is in the beginning before the description of the lake. Several lakes are mentioned in the Introduction but only Imja is in Fig. 1. And here is "Imja Tsho" and in the text only Imja. Is Tsho = Lake ?? Not clear? What is the elevation of the lake level ? Page 13024, lines 1: here is the influence of piping and earthquakes described. Next sentence introduced "other factors", nevertheless the same factors (!) are mentioned again (lines 4 +5). Page 13030: line 15: some villages are mentioned (e.g. Phakding), but not in the Fig. 1. Page 13031: l. 26: the situation 30 years ago is described –

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it will be good to have a new Fig (e.g. a sequence of several satellite images from various years) in the paper where glacier retreat and growing lake will be visible. Page 13032, lines 3-10: remedial works are mentioned here to reduce the GLOF hazard – but it looks like that the authors think only about the rapid, not controlled outburst of the lake to reduce the water level for 20 m. Whereas from the Discussion is clear that they know also about the slow, controlled water level drop. Page 13032, line 14: The “top of the moraine” is all the time the same – it is not wider or less wide because of the elevation of the water level, because it is a geomorphologic term connected with the moraine itself not with the presence or absence of water inside the moraine. On the other hand it is clear that the part of the moraine which is higher than the water table in the moraine could be more or less wide. It is necessary to rewrite the sentence.

General remark: I expect that other papers which used HEC-RAS model (in different regions with GLOFs) will be mentioned or in the Introduction or in Discussion in order to know that authors know these papers.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 13019, 2014.

HESD

11, C5832–C5833, 2014

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