

## ***Interactive comment on “Potential flood volume of Himalayan glacial lakes” by K. Fujita et al.***

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The manuscript “Potential flood volume of Himalayan glacial lakes” by Koji Fujita et al. comes with a remote-sensing based technique aimed to evaluate the risk of outburst floods from Himalayan glacial lakes. The selected approach has not been applied before and it therefore represents a useful contribution to the research of natural hazards associated with glacial lakes.

The manuscript is at present difficult to read from section 2 onwards because it is not clearly structured - some changes are suggested for improvement:

It should be explained clearly at one place what you did with the five lakes in your training group. At present this information is split into single sentences spread within the whole text. Keep the research design and technicalities (details of DEM generation

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etc.) separate – it's completely mixed at present (e.g. p. 19, l17 to p20 l6).

The whole section “Error evaluation” is difficult to understand in terms of what was done why. Reformulate.

Minor comments:

The abbreviation SLA stands for both steep lakefront area and steep lookdown area at present. Choose one of these and stick with it.

Sentence at p20 l5-6: it is not clear why you did this. Elsewhere you say that for the pre-GLOF state of the five training lakes you used Hexagon imagery.

P20 l15-20 this is the crucial part where you derive the 10 degree threshold. Reformulate so that it is 100% clear how exactly you came to number 10 – at present it is not visible in Table 1. You could e.g. draw a figure where you would show a section across the moraines of these five lakes (in the style of Fig. 1) pre and post flood.

P20 l27: make it clear that these are three of the five training lakes.

P21 l2-4: Reword so that it is more easily understandable that 23 out of 44 lakes, classified by Mool et al. (2001a, b) as potentially dangerous, are deemed safe by you since you identified that they do not have SLA.

There is a logical twist at p23, l26-27. If you are discussing the stability of moraines damming glacial lakes you cannot include bedrock-dammed lakes.

The first part of the conclusions (p 23, l14 to p24, l7) should be moved to the discussion; only the remaining part brings conclusions of the ms.

Refs:

Reference to Clague and Evans (1994) does not appear in the text. Check the punctuation in the reference list. After the list of authors you sometimes have only a period or only a colon.

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Figs: A figure of a lake excluded from the study (3b) is unnecessary. Panels c and d of Fig. 3 that are referred to in the text (p23, l4 resp 12) do not exist.

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