

Interactive comment on “Global glacier volumes and sea level – effects of ice below the surface of the ocean and of new local lakes on land” by W. Haeberli and A. Linsbauer

Anonymous Referee #1

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This is a research note rather than a full scientific paper. The authors discuss in a semi-quantitative way the effects on future sea level from melting of ice masses that are already in the ocean or in lakes. This is interesting and useful. Not surprising they conclude that lake storage of melt-water gives a millimeter scale reduction of sea level rise while the impact from tidewater glaciers where parts of the ice is grounded below sea-level is much larger, but still in the order of 1-5 cm. The latter is significant and should be taken into account. They refer to many other papers dealing with global and regional pictures of ice volume estimations, especially the papers by Huss and Farinotti (2012) and Linsbauer et al. (2012). They refer to so many figures and Tables in these two papers that it is hard to read this note without having these two papers available at

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hand.

P 5171, l. 3-5. This sentence “This rough . . .” can be taken in conclusions, not in the Introduction. P 5172, l. 15-17. I suggest to rewrite the sentence to: As a re-growth of glaciers during the coming centuries is unlikely with further rising long-term temperatures, these new lake landscapes.... This to avoid the statement about greenhouse gas and also about millennia P 5173, l.1 delete: (rather large) Fig.1 is a nice picture, but not really necessary to illustrate the points given in the paper.

Interactive comment on The Cryosphere Discuss., 6, 5169, 2012.

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