

Interactive comment on “Assessing high altitude glacier volume change and remaining thickness using cost-efficient scientific techniques: the case of Nevado Coropuna (Peru)” by P. Peduzzi et al.

P. Peduzzi

pascal.peduzzi@grid.unep.ch

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Thank you for your comments: Indeed the text need to be re-structured, we are working on it, with comments received directly by one reviewers and your comments.

Regarding the statistical model to estimate ice thickness, as I don't like people to feel "suspicious" about my work or results I'm sending you the table with recorded depth and modelled depth for the six cases, I noticed a change to be done in the table of the weighting, but do not affect the correlation.

The hypothesis to look at altitude, slope and orientation of slope is based on temperature, solar energy, ice movement as well as predominant wind and precipitations (most
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precipitation coming from Atlantic direction). Except in one case (low altitude) the orientation did not play a significant role as shown on the table. So only slopes and altitude are relevant for most cases.

Regarding the exclusion of SRTM, there were two reasons: firstly SRTM cannot be repeated through time, so we needed to see what radar images and ASTER DEM could do in order to ensure a follow up. Secondly, we were advised not to used February data as snow precipitation can be extremely high (up to 15m we were told), the seasonal aspect would have made some unrealiable change detection.

Remarks about the figures: we will redo them, especially all when units were missing.

This is a quick answer to main question. All the remarks on re-structuration of the text and clarification are under process.

Best regards, Pascal Peduzzi

Please also note the Supplement to this comment.

Interactive comment on The Cryosphere Discuss., 3, 831, 2009.