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The Cryosphere Discussions

Interactive comment on "A glacier inventory for the western Nyainqentanglha Range and Nam Co Basin, Tibet, and glacier changes 1976–2009" *by* T. Bolch et al.

M. Pelto

mauri.pelto@nichols.edu

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Bolch et al. (2010) provide a detailed glacier inventory for the Nyainqentanglha Range in Tibet. The methods utilized in the study are very detailed. The results are significant, and should be expanded upon to better quantify some of the changes observed. This paper will be added to the recent important inventories of the Pamir range and Himalayan Range glacier extent changes of Bolch et al, (2008), Haritashya et al. (2009), Ye et al., (2006) and Zhou et al. (2009). Below are a few relatively minor suggestions for improving this detailed and valuable contribution.

434-13: This mentions polythermal and subpolar glaciers. If this study has developed

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any further information on the distribution of these glaciers it would be useful to include: What percentage of the glaciers in the western Nyainqentanglha Range are polythermal or subpolar? Is there any attempt to distinguish these glaciers in this study? Are their characteristic settings or elevation ranges of these glaciers from previous studies? Is the response of these glaciers any different?

440-7: Debris covered glaciers are noted for their lower termini elevation. Is there a pattern to the maximum elevation, elevation range, or glacier length? The one example given, Xibu Glacier, indicates a much higher maximum elevation and a significantly increased length versus the other glaciers, is this typical?

440-24: A couple of specific examples of glaciers that disappeared or disintegrated would be useful. How many were noted? Elevation range? Initial sizes? Top elevation?

441-8: Additional comments on the likely change in ELA based on the results of Fig. 8 should be made. It appears that the overall areal extent percentage change is considerably reduced between the 5800 m to 5850 m interval, with all all intervals 5800 m and below having considerable change. Is this a useful indicator of the recent ELA or is the change to subtle?

441-20: Separation of Panu Glacier is noted. The Fig. 9 caption should indicate which tributary has separated and the figure itself could be annotated.

445-23: Specify how substantial has the rise in Lake Nam been according to Wu and Zhu (2008).

Table 3: For the five glaciers if their polythermal, temperate or subpolar nature is known note it.

Table 5: This detailed important data should be used to construct a figure, either focusing on the three period changes or the annual quantities from the 5 specific shared years.

A minor issue with the paper is the frequent use of the wrong word, for example.

TCD
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432-27: comprised or consists, not comprehend

432-24: were not where

433-20: little not few

438-9: extent not extend

438-20: remove own

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