

## ***Interactive comment on “Changes in glacial lakes in the Poiqu River Basin in the central Himalayas” by Pengcheng Su et al.***

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Reply to the comments. We appreciate Dr. Shang guan for his instructive comments of our manuscript. At present we'd like provide a general reply to his questions. About comment 1, We consider as follows: 1). For the identification of glaciers and glacial lakes we have employed multi-source data and RS images , combining with UAV and field surveys ; and we can give more detailed descriptions of how the data are obtained in the revised version . 2). As it is well known, weather and climate data in Himalayas at watershed scale is rare and only records in near counties are sometimes available; but these data is insufficient to reflect the local changes. On the other hand, local fluctuation of temperature and rainfall (snowfall) do not necessarily coincide with the global changes. The suggestion of local variation rather than consequence of global warming

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is interesting and worth further consideration. 3). GB reconstruction is crucial to water balance calculation; we'll give pay more attention to the technique and validity of the process. But this requires high resolution images of many years, which is always available in practice. For the reliability of the method we can make further clarification. 4). Actually, there are so many methods estimating to melt water and involving glacier dynamics. Detailed discussions about the related parameters are promised to be added in the revision. 5). We have plotted the curves for comparison between calculation and observation for water balance of the lakes; they are omitted in the text only for page save. The coincidence is very good in general, and should be added in the revised text.

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