



Reply on CC1

Anonymous Referee #2

Referee comment on "100 years of lake evolution over the Qinghai–Tibet Plateau" by Guoqing Zhang et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-130-RC2>, 2021

The paper by Chang et al. deals with change detection of lake coverage on the Qinghai-Tibetan Plateau during the last hundred years. As one commentator already pointed out in the public discussion, this is an amazing paper. I am not so much familiar with GIS approaches, but my impression is that the authors did a sophisticated job and considered all methodic limitations. The results are very impressive and might also be of high value for palaeoclimatologists dealing with ancient lake dynamics. I agree with the public review. In addition, the following issues should be considered in a revised manuscript:

- Line 41: Degradation of „thawing“ permafrost; snow and ice melts.
- Lines 60-62: „...no studies of lake mapping...“ versus „...have been considered in several studies...“ Sounds like a contradiction, needs rephrasing.
- Lines 82-85: The political assignment of geographic terms by countries and the international community sometimes differ. The region not „sometimes“, but „often“ is referred to as Tibetan Plateau. Just use your terminology and definition of the area. This is fine, but rephrasing is needed to understand what you mean.
- I generally appreciate the high quality and layout of the illustrations. In Fig. 6, the old shore lines in red and yellow are difficult to note and should be mentioned in the caption.
- Causes of lake change are well discussed. Maybe, it is possible to give some values of correlation between climate parameters and average lake parameters (lake numbers, lake area through time). I would also be good to have values for glacial melt-water runoff to substantiate its unimportant role for lake status. Could be added to Figure 10. The latter figure should also include an average curve of lake development.