Response to Anonymous Referee #1

Reviewer comment	Response
In this study, the authors reviewed the several progress in the understanding and modelling of land surface processes on the Tibet Plateau in the last decade and summarized the major advances. This manuscript also provided the land surface modelling community potential directions of the further improvement of land surface modelling on TP. Overall, the paper is well organized and written. I only have some minor comments listed as follows:.	We thank the reviewer's comments and encouragement.
1. The advance in the impact of Sub-grid Terrain Radiative effect over TP is missed. References are listed as follows: Gu Chunlei, Anning Huang*, et al., 2020. Effects of Sub-grid Terrain Radiative Forcing on the Ability of RegCM4.1 in the Simulation of Summer Precipitation over China. Journal of Geophysical Research: Atmospheres, DOI:10.1029/2019JD032215. Lee, W.-L., K. N. Liou, and C.-c. Wang (2013). Impact of 3-D topography on surface radiation budget over the Tibetan Plateau. Theor. Appl. Climatol., 113, 95-103, doi:10.1007/s00704-012-0767-y.	We thank the reviewer's comments. Sub-grid terrain radiative effect is very important in land surface process. We will add this part and relative references in the revised version.
2.Another missed advance is the Sub-grid orographic drag effect. references: Zhou, X., Yang, K. & Wang, Y. Implementation of a turbulent orographic form drag scheme in WRF and its application to the Tibetan Plateau. Clim Dyn 50, 2443–2455 Zhou Xu et al.,2019. Dynamical impact of parameterized turbulent orographic form drag on the simulation of winter precipitation over the western Tibetan Plateau .Climate Dynamics, 53:707–720.	We thank the reviewer's comments. We will include the sub-grid orographic drag effect in the revised version.
3. I think some key lake process parameterizations including the light extinction coefficient, turbulent mixing in deep lakes, lake surface roughness length,	We thank the reviewer's suggestions. We reviewed the parameterization of vertical mixing process of lake models in current version. We will add the perspectives of lake

and lake ice surface albedo need to be improved based on more field observations in the future LSM developments. This issues are necessary mentioned in perspectives on the further improvement of land surface modelling.	model development in the revised version.
4. As the vegetation types are very sensitive to climate change on TP, the parameterization of dynamic vegetation should be improved further LSM development.	We thank the reviewer's suggestions. We will consider the vegetation parameterization in the perspectives part.