Cover letter to Editor

Dear Editor,

Thanks for your help in the review process. We have finished the revision of our manuscript according to your comments. In this stage, two places were asked to add references and they have been finished as follows.

(Page 3, lines 30-32 and Page 4, lines 1-2) The regional Quaternary aquifers in the basin vary from single unconfined gravel and sand layers with hydraulic conductivity (K) greater than 50 m/d in the alluvial fan to multi-layers of silt and clay with hydraulic conductivity (K) ranging from 0.1 m/d to 0.001 m/d in the low-lying depression (basin center). Three continuous aquitards (clay layers) are found in the basin at depths of 60 m, 290 m and 450 m, respectively (Figure 8), which have significant influences on confining groundwater flow (Shao et al., 2017).

(Page 4, lines 5-12) The potential evaporation is extremely high (＞2600 mm per year). This hyper-arid climate results in aquifers in the basin that do not obtain effective recharge from the local precipitation. Groundwater in the basin is mainly recharged by Golmud River seepage through the riverbed in the alluvial fan and bedrock lateral inflow at the southern mountain front, and flows from the alluvial fan in the south to the basin center in the north (Figure 1c). Much of groundwater overflows as springs at the front of the alluvial fan due to the fining of sediments in the aquifers downdip. The depth to groundwater is less than 3 m in most areas from the front of alluvial fan to the basin center, resulting in significant potentially evaporate loss of groundwater. The regional groundwater finally discharges to the terminal lake, and undergoes large evaporate loss (Shao et al., 2017).

[Reference: Shao, J., Cui, Y., Xiao, Y., Li, Y., and Zhao, D.: Groundwater cycle pattern and groundwater resource evaluation in Golmud watershed of Qaidam Basin, China University of Geosciences (Beijing), 2017.]

If you have any further comments or queries, please contact us.