Groundwater flow system in Kherlen River basin, Mongolia

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Groundwater is one of the main water resources in arid or semi-arid regions of north-eastern Asian countries including Mongolia. However, scientific investigations on groundwater flow system are not enough in these regions. We performed the scientific groundwater investigation in Kherlen River basin, eastern area of Mongolia. The temperature, electrical conductivity, deuterium and oxegen-18 isotopic ratios, and inorganic solute concentrations are determined on the groundwater, river water, lake water and precipitation samples. Also, river discharge and groundwater table depth data were taken from Institute of Meteorology and Hydrology, Mongolia.

The discharge rate at the upper stream was always higher than that at the lower stream in Kherlen River. Thus, the river water mainly would recharge the groundwater. The stable isotope and solute concentration data also suggests that the source of groundwater and river water should be precipitation in this region.