Geophysical Research Abstracts
Vol. 15, EGU2013-14035, 2013
EGU General Assembly 2013

Groundwater Evapotranspiration in Arid Riparian Zone along the Downstream of the Yerqiang River

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The Yerqiang river is a headstream of the Tarim river located in Northeast China. In some years, this river flows into the Tarim river in summer; and in other years, it can not reach to the mainstream. Therefore, the downstream of the Yerqiang river, where the precipitation is lower than 50mm, is hyper arid and the ecosystem is very fragile and depends on the groundwater. Groundwater evapotranspiration constitutes a major component of the water balance in arid riparian zone. Most of groundwater evapotranspiration studies depend on numerical models but it is not easy to discuss the controling factors of groundwater evapotranspiration in riparian zone. A site has been set up to observe weather, groundwater table and vegetation in this downstream. Then a two-dimension conceptal framework was applied to understand the groundwater evapotranspiration in this area.