

## **ON THE WATER RESOURCE APPLICATION AND HYDROLOGY ENVIRONMENT CHARGES IN THE TAKLIMAKAN DESERT**

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The Taklimakan Desert is located in the central part of Tarim Basin of China. Basin is a typical arid area of inland with less annual precipitation and more evaporation capacity. Tarim river is main river system in this region. Because precipitation, river water and ground water were not equivalent to evaporation loss, the hydrological environment is changing continuously. Author had made an investigation about water quality and application state of groundwater resource in this region. In this paper, the problems of water resource application and hydrology environment charges in the region would be introduced and some suggestions is also presented for improving those problems. It can be concluded as following: 1) Land degradation in the lower reaches of river is caused by the misuse of inland river water in the upper and middle reaches in the Tarim river. It is very clear that, especially in an arid area, land salinization is a result of the large amount of water infiltration from the rivers and irrigation canals to the surrounding areas. 2) The test results of water quality showed the river water and groundwater of shallow aquifer has obviously changes. The mineral concentration of the river water and TDS(Total Dissolved Solids) of salt in groundwater increased continuously. 3) It is suggested that to increase groundwater as irrigation water for agriculture in the upper and middle reaches of the Tarim River, to decrease farmland and increase plant, as like Pyreatophytes, in lower reaches of the Tarim River.