

## An Information System Platform for Water Resources Operation in Shiyanghe River Basin, China

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Currently, more and more arid and semi-arid areas in Northwestern China are facing with severe water problems. The Shiyanghe River basin is in the east of Hexi Corridor in Gansu Province with little rainfall and fragile ecological environment. As water pollution and water waste exist with water shortage, a serious conflict of water supply and demand is arising, accompanied with a series of water ecological problem. Thus, we must take measures to ensure the water resources to be used properly for long-term sustainable development. Water resources operation is taken reasonably which can achieve the overall regulation of basin water resources and which is an important method to achieve sustainable development. Taking the Shiyanghe River Basin as the research object, based on the basin data, this paper built the runoff forecasting model, water demand prediction model, water resources operation model and groundwater simulation model. Therefore, an information system platform for water resources operation in Shiyanghe River Basin is built based on GIS with an integrated data and computational models.