

## Calculation of Water Economy Balance for Water Management

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**Abstract :** Fresh water deficit is one of the most important global problems today. It must be taken into consideration that in the nearest future fresh water crisis will become even more acute owing to the global climate warming and fast desertification processes in the world. Georgia is rich in water resources, but there are disbalance between the eastern and western parts of the country. The goal of the study is to integrate the recent mechanisms compatible with European standards into Georgian water resources management system on the basis of GIS. Moreover, to draw up water economy balance for the purpose of proper determination of water consumption priorities that will be an exchange ratio of water resources and water consumption of the concrete territory. For study region was choose south-eastern part of country, Kvemo kartli Region. This is typical agrarian region, tends to the desertification. The water supply of the region was assessed on the basis of water economy balance, which was first time calculated for this region.

**Keywords :** desertification, GIS, sustainable management, water management

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