

Irrigation and Water Supply Recommendations Scheme for Rioni River Basin (case of Kutaisi-Samtredia catchment area)

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Nearly 20 years have passed since the European Community implemented the European Directives on water management. Its main directions are the achievement of good water quality and the implementation of water management principles. In Georgia, this process has been underway already for 3 years. The country's territory is divided into 6 basin areas. One of them is the Rioni River basin, whose area is 13,000 km² with up to 700 rivers. In addition, there are reservoirs and a system of irrigation canals. In the downstream, the Rioni River flows along the wetland territory of the Colchis lowland and merges with the Black Sea near the city of Poti. Rioni is the affluent river of Georgia and taking into account this parameter, is characterized by frequent natural disasters, especially during the spring season. To this are added the tributaries, which originates from high levels and are distinguished by fast flows. Historically fixed floodings are the most ambitious than other river basins and caused the greatest losses at different times. The functioning of the agricultural lands located here and the process of stable development of settlements depends on natural disasters caused by the hydrological regime of the Rioni River, since the riverbed in the downstream and middle flow is in close contact with these objects. Given this factor, in this area there are many vulnerable districts for which prevention and mitigation of natural risks has of great importance. In the Rioni Basin, in the eastern part of the Colchis Lowland, there are two cities of cultural and economic importance - Kutaisi and Samtredia, and rural settlements adjacent to their agglomerations, whose incomes are self-employment in the agricultural sphere. Therefore, reducing the vulnerability of these areas and ensuring a stable economic environment are crucial. Since the main place in the economy of the studied area is agriculture, the major challenge is the efficient use of the water resources of the Rioni River basin and the creation of a modern scheme for this use. It is also important to effectively address the issue of drinking water supply of large urban settlements and rural areas. The increased number of flood disasters in the Rioni River basin, gives us an idea, that the basin has more than enough water resources and their proper distribution would increase the effect of the economic benefits of the region and would receive a scientifically based regulated basin management system.

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