

Project Summary: Determination of Water Quality of Eşen Stream in the Western Mediterranean Basin and its Evaluation in terms of Agricultural Irrigation

Industry, population and agriculture sector are in great competition in terms of water use in the world. Considering that our country is located in a position that suffers water scarcity in the world, water use and proper management of water resources are of great importance. In general, 20% of the available water works in industry, 10% as drinking-utility water and 70% in agricultural irrigation.

Unsustainable water management and practices cause the breaking of natural hydrological cycles. Water is a major strategic resource. Integrated watershed management aims to protect, improve and prevent possible destruction of water ecosystems and other ecosystems by promoting sustainable use of water and soil resources. In this context, watershed scale is the basis of the management of natural resources.

In this project it is aimed to examine the water quality parameters of Eşen Stream, the most important water resource of the basin, due to the surveys of BAKAROL (Determination of Irrigation Water Requirement and the Establishment of Strategic / Political Decision Support Tools) project and on the demand of local farmers. The most important problem of the local farmers is organic and/or inorganic pollution caused by the trout farms, which provides 70% production of Turkey, in the region. Other pollutions are olive oil factories black waters, domestic wastewater, and water returning from industry. In this context, the sites to be sampled were determined by surveys to the site in January 2020. Standard irrigation water, suspended solids, COD, BOD, trace elements, standard irrigation water analysis, fecal coliform, algae-algae and dissolved oxygen analyzes will be carried out by taking water samples from 17 points determined for 12 months. Analysis results will be evaluated according to the Surface Water Quality Management Regulation. As a result, according to the pollution points, the agricultural areas irrigated with these waters will be examined on a field basis, and as a result of the project, special filtration techniques will be developed by the private sector institutions involved to the project.

Keywords: Eşen Stream, West mediterranean basin, water quality, pollution