

# **PRINCIPLES of SECTORAL WATER ALLOCATION**

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## **EXPERTISE THESIS ABSTRACT**

This study considers practices on the principles of sectoral water allocation from the world and Turkey. As known, as a result of growing demand for water resources access to appropriate quality and quantity of water and efficient use of resources are current issue. Since river basins provide major goods and services such as drinking water, irrigation, electrical power, recreation, transportation as well as ecosystem services. However, river systems are vulnerable to water shortages and ecological disturbances during extreme precipitation, climate and water demand events and discharges. Therefore, it is very important to understand the interconnected effects of characteristics climate, quality and demands on water resources. That's why planning of water-supply systems have become significant in all over the world due to increasing pressure on water resources. On the other hand, planning of water demands needs complex analysis. The main objective of water management is to protect and enhance the water resources for the benefit of society and also ecosystem.

Another goal in water allocation is to recognize consumption demands including cultural requirements, social and environmental needs. At all levels in the water management and water allocation requires decision-making process in which all stakeholders are considered. In this study the principles, planning stages and application tools of water allocation were examined. Moreover, in terms of stages of basin planning, compliance with other planning activities in the basin, decision support systems and monitoring of plan revision experiences of developed countries were evaluated. Tools for water allocation such as water recording and license system were investigated. Practices on legislation, administrative and technical framework from Australia, Spain and France was considered in terms of the sectoral allocation of water.

Consequently depending on the sectoral structure at river basin the annual available water potential exceeds or the sustainable limits in water use are forced. Today in Turkey improving of policies, institutional and technical capacity is essential. Current efforts to develop legislation that will contribute to integrated management of water resources at the basin level and corporate restructuring steps are promising. At this point, studies on sectoral allocation of water are among the main topics to be discussed.