



## **Influence of the Alqueva water input in the Guadiana basin territory – Indicators system**

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Water is the base for many human activities and an essential issue in social, territorial and environmental development. It is fundamental to consider the water-soil systems and their influences in the planning and management of the concerned areas.

The water-soil system under study is the Guadiana river basin territory. This is an international basin, shared by Portugal and Spain, Spain being the upstream country. In 2002, this basin experienced a dramatic change, as a result of the conclusion of the Alqueva dam. Currently, the total water storage in the Portuguese Guadiana basin is 5130 hm<sup>3</sup>, being the Alqueva reservoir responsible for 4150 hm<sup>3</sup>.

The new lake resulting from the damming of the river, is affecting the existing water-soil system, that since then, has been evolving to achieve a new balance.

The increased water availability induces relevant changes on both environmental and urbanistic features, such as land use changes and impacts on soil as a resource. Therefore, the main concern is to evaluate the adaptive capacity of these resources.

With the purpose to understand the evolution of the water-soil system resulting from the closing of the Alqueva dam, an indicators system is built, so as to measure and evaluate the ensuing transformations.