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Modelling water needs; from past to present. Case study: The Municipality of Western Mani

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In traditional and isolated societies human needs were limited and the resources were sufficient. For example, 70 years ago, water needs per capita in Greece were about 7,2 m^3/year. But the basic perception of development is the abundance of water resources. For example, tourist development changes the culture of water consumption as modern way of living needs 150 m^3/year per capita. In the same time one visitor would prefer accommodation with pools demanding even more fresh water.

Fortunately, there are many technological solutions to cover this gap of consumption. Unfortunately, some of them are not efficient or sustainable and other have big cost of energy.

This research examines the case study of the Municipality of Western Mani in South Greece, an area with high touristic development, detects the transformation of needs and potential technical solutions which are evaluated with criteria: needs coverage; sustainability; preservation of the landscape.

Stochastic models for the simulation of the function of water infrastructures in different scales (from traditional to modern) are applied.