



## Water for People and for the Environment: Linking Modelling and Participatory Approaches to Define Adaptation in the Tagus Basin, Iberian Peninsula

Ana Iglesias, Aline Chiabai, Pedro Iglesias, Marc Newman & Luis Garrote, CEIGRAM, Universidad Politécnica de Madrid, Spain.

### ABSTRACT

In the beginning of the 21st century water to support ecosystems, cities and culture seems to stand at a crucial juncture. Projections of water availability remain complex and uncertain, not least due to changes in population, consumption patterns and environmental policy. Research and technology have been unusually vigorous and have shed light on many possible innovations. In southern Europe of this transformation is due to the pressure of agricultural practices and policies to face climate change, especially in relation to water for agricultural production.

The climate change challenge has forced research and policy to look at the interactions of urban and rural areas and environment with a longer term perspective. Exploring policy choices for future water management in the Tagus basin – a transboundary basin in the Iberian Peninsula – need to consider climate change projections and need to be successfully balanced to achieve sustainability. In this case study we explore some aspects of water management through a combined participatory and modelling approach designed to stimulate discussion and debate. In our work, models assist in providing evidence of changes in patterns of water supply and demand under a range of scenarios. The participatory approach aims to understand resilience and adaptive capacity. We then design the adaptation strategies organized around the idea that understanding (1) resilience, (2) policy trade-offs, and (3) flexible mechanisms. We recognise major limitations in our assessment of adaptation policy due to the difficulties in forecasting water needs and supply. The strength in our approach is the science-policy interface.