

## **Extending to seasonal scales the current usage of short range weather forecasts and climate projections for water management in Spain**

Ernesto Rodriguez-Camino (1), José Voces (1), Eroteida Sánchez (1), Beatriz Navascués (1), Laurent Pouget (2), Tamara Roldan (2), Manuel Gómez (2), Angels Cabello (2), Pau Comas (3), Fernando Pastor (4), M<sup>a</sup> Concepción García-Gómez (4), Juan José Gil (5), Delfina Gil (6), Rogelio Galván (7), and Abel Solera (8)

(1) AEMET, Madrid, Spain (erodriguezc@aemet.es), (2) CETaqua, Cornellà de Llobregat, Barcelona, Spain, (3) AQUALOGY, Barcelona, Spain, (4) DG Water, Ministry for Agriculture, Food and Environment, Madrid, Spain, (5) Spanish River Basin Agency of Duero, Spain, (6) Spanish River Basin Agency of Tajo, Spain, (7) Spanish River Basin Agency of Ebro, Spain, (8) Universidad Politécnica de Valencia, Spain

This presentation, first, briefly describes the current use of weather forecasts and climate projections delivered by AEMET for water management in Spain. The potential use of seasonal climate predictions for water –in particular dams- management is then discussed more in-depth, using a pilot experience carried out by a multidisciplinary group coordinated by AEMET and DG for Water of Spain. This initiative is being developed in the framework of the national implementation of the GFCS and the European project, EUPORIAS.

Among the main components of this experience there are meteorological and hydrological observations, and an empirical seasonal forecasting technique that provides an ensemble of water reservoir inflows. These forecasted inflows feed a prediction model for the dam state that has been adapted for this purpose. The full system is being tested retrospectively, over several decades, for selected water reservoirs located in different Spanish river basins. The assessment includes an objective verification of the probabilistic seasonal forecasts using standard metrics, and the evaluation of the potential social and economic benefits, with special attention to drought and flooding conditions. The methodology of implementation of these seasonal predictions in the decision making process is being developed in close collaboration with final users participating in this pilot experience.