



## How seasonal forecast could help a decision maker : an example of climate service for water resource management.

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The ongoing FP7 project EUPORIAS is a great opportunity for the climate community to co-design with stakeholders some original and innovative climate services at seasonal time scales. In this framework, the prototype proposed by Météo-France aims to provide to water resource managers some tailored information to better anticipate the coming season.

This prototype is based on a forecasting system, built on a refined hydrological suite, forced by seasonal forecasts. It particularly delivers probabilistic river flow prediction on river basins all over the French territory.

We will present the work we have done with "ETPB Seine Grands Lacs", an institutional stakeholder in charge of the management of 4 great reservoirs on the upper Seine Basin. In particular, its role is to guarantee a minimum river flow during the dry season all over the basin. In this presentation, we will focus on 3 important steps:

- translation of classical outputs into several indices, which could influence the stakeholder's decision making process (DMP). This step includes a calibration of the data over a past period;
- objective assessment of the prediction chain, over a past period, by calculating relevant and understandable scores. This is necessary to be sure that the stakeholder use correctly (with the appropriate level of confidence) the forecast;
- evaluation of the impact of the forecast on the decision making process. This crucial phase is possible only with a strong involvement of the stakeholder, which have to replay past situations with and without these forecasts. An original method is tested to complete this work in a blind test. It allows calculating skill scores of the DMP in comparison to a classical approach based on climatology.

Some prospects will be proposed to conclude.