Manuscript: Number: HESS-2019-496

Title: Risk assessment in water resources planning under climate change at the Júcar River
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Contents overview:
The paper aims to integrate climate change projections into water system management models in order to guide the decision-making taking into account drought risk assessments.
Main results should be in estimating drought risk indicators and management rules in the future for the water resources system (WRS).
A general remark regards the methodological approach of this complex study regarding climate-changes, hydrology, and water system management: paper needs to improve the clarity of exposition in terms of sections arrangement and description of methods. Considering the complexity and the amount of the reported material, I suggest giving at the end of the Introduction an outlook of the following paper content.

Specific Remarks:

1) The Introduction focus on the need of methodologies to integrate climate projections in the decision process for water management and drought risk assessments in order to evaluate the future impacts on inflows reduction on stored water availability. This aim is stated in (lines 49-51): "That is exactly what we aim to do in this study: proposing a general methodology inspired on the work of Suárez-Almiñana et al. (2017) to integrate climate projections in the decision process throughout a model chain for water management and drought risk assessments, where the future impacts on inflows and water resources are evaluated." Consequently, the paper deals with different modelling approaches (climate projection, storages inflow evaluation, WRS simulation) with a lot of evaluated material, since many years this work group has implemented modules of the Aquatool DSS. As previously stated, a general outlook of paper structure should be given at the end of the introduction. Nevertheless, Introduction is very extended and could be reduced of some information irrelevant (or no strictly requested) for the rest of the manuscript.

2) Even if the Jucar River Basin is an extensively studied catchment in literature, especially from this research group, I suggest giving some more information regarding the criticality in water system management. At the moment in the paragraph 2 only some data on water stress in the WRS are given. Moreover, as in the Management Plan and in the Drought Management Plan for this basin, the climate projections were not incorporated explicitly (lines 132-135) and in previous studies climate change effects were only assessed by reducing the natural inflows in a certain percentage, it should be interesting to compare previous management rules given in these Plans with the ones obtained using the hereafter proposed procedures

3) Differences between the two alternatives for characterisation of hydrological models, called option A and option B, are not clearly recognized. The main difference between these alternatives seems to be the application of the bias correction before (option A) or after (option B), nevertheless, future inflows from A and B options are both introduced in the management model to simulate the future water availability (lines 174-75). Consequently, the two series can be considered as different possible runoff scenarios equally probable ? In

any case main statistics of historical and adopted runoff series should be documented in the paper not only graphically and compared with previous values used in Plans.

4) Paragraph 4.3, showing future water storage ensemble results (shaded area) occupies practically the whole field of stored volume in the basin. These results, indicating for authors a huge uncertainty for the future, highlight the opportunity of filtering obtained data in order to provide performances information managing the system. Graduating colours by frequencies could be useful.

5) In 4.4, giving drought risk indicators, the frequency evolution of reservoirs storage in the system can be seen in Fig. 8 for both options A and B and the exceedance probabilities in storage volumes of March and September (Fig. 9). In addition, values of mean allocated resources for demands and consequent deficit values, as well the well known indices of reliability, vulnerability, resiliency derived from the adoption of the Aquatool DSS could be documented.

6) The final phrase in Discussion, pointing out that all the simulations were made taking into account the current conditions of the system should be anticipated in the modelling description paragraph.