

Interactive comment on “The benefit of using an ensemble of seasonal streamflow forecasts in water allocation decisions” by Alexander Kaune et al.

Anonymous Referee #2

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This manuscript presents the benefit of using an ensemble of seasonal streamflow forecasts in water allocation decisions with an emphasis on those decisions in dry seasons and dry years. This is very important for farmers to choose which crop to plant and to decide on the area to be cropped. And also, the manuscript described the development of new approaches for the reservoir inflow estimates to replace the fixed inflow with the forecasted inflows, decision model to emulate the feedback loop between simulated reservoir storage and water allocation to irrigated crops, inflow forecasts, etc. The authors have briefly evaluated the approaches and identified effectively, and find that there is a quite much higher inconsistency and lower accuracy in estimating water available for allocation during dry seasons and dry years. This is a good and new

C1

insight of present manuscript to enhance our understanding of the water allocation for the farmers. The subject is relevant to the journal, the manuscript is well written and structured. However, at present, the focus of manuscript is not particularly strong and it seems that the authors are not entirely sure about the key message they wish to convey. There are some aspects are suspected as follows: Firstly, the equations (on pages 6-8) to determine the available water for allocation needs more variables related to complicated relationships among the water demands and feedback loop among the reservoirs. Secondly, it is necessary to discuss the nonlinear processes of higher water demands and tradeoffs among the water users and reservoirs behind dams in the study area in dry seasons and dry years. These processes are suggested to presented more in detail in the context “4.2 To what degree does the seasonal forecast help in the decision process?”. Thirdly, the better quality of figures in the text and supplementary materials are suggested to provide.

The manuscript is recommended to be accepted after minor revision.

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C2