Throughout this response, the reviewer's text is presented in black, our response in blue

This paper addresses comprehensively a topic that increasingly requires investigations: the value of seasonal forecasts for real-life applications. Until recently, many studies have worked on assessing or improving forecast skill, but still few manage to link this skill to value. In addition to being innovative, this study investigates the issue through different uncertainty lenses which makes it a very strong contribution to the field and results in valuable findings both for the scientific community but also for water management stakeholders. Overall, the paper, its ideas, structure and methodology are of high quality. However, additional information, for example about the data used and the forecast skill evaluation, would be necessary to support the analysis. In addition, I have some concerns about the validity of the results on linking skill and value due to the chosen methodology. These are detailed hereafter.

We thank the reviewer for their kind words.

The paper would benefit from a Data section, presenting for instance the data used as reference in the bias correction, the inflows used as reference in the forecast evaluation, or the demand model/observations.

We will add a Data section following both reviewers, 2 and 3, suggestion

Some additional information would be needed in Section 2.2 on the forecast skill evaluation. More specifically, (1) In Figure 2, two inflows feed the two reservoirs (Is1, Is2), which inflow is being considered when evaluating forecasts? (2) Which time period is used to evaluate the forecasts? In Figure 8, November to April is shown, but in the forecast methodology (Sections 2.2 and 2.3.2) or in Figure 3, no specific time period is mentioned. I would recommend mentioning these two points in 2.1/2a.

The inflow to S1 is used to evaluate the forecast skills from Nov to Apr. We will clarify and mention these two points but we would rather mention them in the case study section (2.3) and in particular in 2.3.5. We would rather keep sections 2.1 and 2.2 as general as possible because this methodology is meant to be generalizable and applied by others.

Since the goal of the paper is to assess the added value of dynamical seasonal forecasts for water management, and since authors evaluate the skill and performance of these forecasts against observations, it would be important: (1) to add information about how HBV was calibrated and setup for the area, or at least, to mention its performance (mean error) in simulating past inflows to the reservoirs (giving the possibility to make a parallel with the results in Figure 3); (2) to mention even briefly the hydrological regime upstream the reservoir system, as well as the interannual variability, which will define the added value of a method like DSP over ESP.

We will add this information in the Data section suggested above.

I have concerns about the methodology chosen to link value and skill, and therefore about some of the subsequent results (first two paragraphs of Section 3.2.3). The authors are trying to link a skill obtained from comparing dynamic forecasts with forecasts based on past climatology (1981-20XX), with a value obtained from comparing dynamic forecasts with a worst-case scenario (1975/1976). On the one hand, the skill is based on the comparison of DSP-corr with ESP, meaning that its value solely indicates the gain in performance from using ECMWF SEAS5 instead of historical precipitation and temperature. On the other hand, the value is obtained by comparing DSP-corr with a benchmark based on a worst case scenario (1975-1976). These choices result in skills and values that cannot be compared. Instead, the skill computed in the

paper could be related to the gains/losses in value between DSP-corr and ESP (difference between the blue and green bars of Figure 7). Reversely, the value computed in the paper could be compared to a skill whose benchmark would be the performance obtained by using the worst case scenario (1975-76) as forecast in all years. This is a major point that should be addressed prior to publication to ensure the validity of the conclusions.

We understand the reviewer concerns and we agree that there is somehow an inconsistency in the definition of the skill and the value, given their different benchmarks. However, we think it is not easy to resolve such inconsistency. In fact, we use ESP as a benchmark for the forecast skill because this is the standard practice in the literature (Pappenberger et al., 2015, Harrigan et al., 2018) as it is more likely to demonstrate the "real skill" of the hydrological forecasting system (lines 242-244), whereas the worst case scenario is never applied as a forecast skill benchmark and it is not likely to demonstrate the "real skill". As for the forecast value, we use the worst-case-scenario as benchmark because it is the scenario applied in the current operation approach and hence it is a benchmark that can demonstrate the "real value" of moving away from that approach towards using seasonal forecasts (lines 107-108). We would thus be reluctant to change any of these benchmarks, as they are appropriate for their different purposes.
However, we agree with the Reviewer that this inconsistency should prevent one from directly comparing the numerical values of the forecast skill and value. So, in the revised manuscript we intend to remove Figure 6, which incorrectly suggests that such value-by-value comparison can be drawn. On the other hand, we think one can still compare the ranking of forecast products induced by the forecast skill with the ranking based on the value, which is the main point of our work. This is what we refer to when discussing the "forecast skill-value relationship" (line 98). With this clarification, we think the year-by-year analysis of the different optimisation results (as in Figure 7) still provides interesting insights, and supports the main conclusion that "the relationship between the forecast skill and its value for decision-making is strongly affected by the decision maker priorities and the hydrological conditions in each specific year" (lines 476-477).