

**GENERAL COMMENTS**

The subject of the paper "*From skill to value: isolating the influence of end-user behaviour on seasonal forecast assessment*" is of direct interest to the Journal of Hydrology and Earth System Sciences. Authors introduce and apply a framework in the context of valuing the potential benefit of seasonal forecast in terms of economic end users benefit. Although there are several aspects that need to be further elaborated, this is a step forward in moving from skill to impact (financial) based assessments.

Regarding the different aspects of the HESS journal:

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|----|--|-----|
| 1  | Does the paper address relevant scientific questions within the scope of HESS?   | YES |
| 2  | Does the paper present novel concepts, ideas, tools, or data?  | YES |
| 3  | Are substantial conclusions reached?   | YES |
| 4  | Are the scientific methods and assumptions valid and clearly outlined?   | YES |
| 5  | Are the results sufficient to support the interpretations and conclusions?   | YES |
| 6  | Is the description of experiments and calculations sufficiently complete and precise to allow their reproduction by fellow scientists (traceability of results)? | YES |
| 7  | Do the authors give proper credit to related work and clearly indicate their own new/original contribution?  | YES |
| 8  | Does the title clearly reflect the contents of the paper?  | YES |
| 9  | Does the abstract provide a concise and complete summary?  | YES |
| 10 | Is the overall presentation well structured and clear?   | YES |
| 11 | Is the language fluent and precise?  | YES |
| 12 | Are mathematical formulae, symbols, abbreviations, and units correctly defined and used?   | YES |
| 13 | Should any parts of the paper (text, formulae, figures, tables) be clarified, reduced, combined, or eliminated?  | NO  |
| 14 | Are the number and quality of references appropriate?  | YES |
| 15 | Is the amount and quality of supplementary material appropriate?   | YES |

**SPECIFIC COMMENTS**

1. One of my concerns is that the examination of the value of forecast is limited to a single lead time (51 days ahead) and the potential benefit of other lead times to the current framework are not examined, or at least discussed.
2. Crop yield modeling is an integral part of the valuing framework. The simulation of crop production is based on water availability and growing degree days controlled by temperature. From the information provided in the manuscript it is not clear whether the heat unit module of agricultural model is also informed by seasonal forecasts.
3. I understand that the present study, beside other components, examines the usefulness/applicability of a continental scale hydrological model (E-HYPE) with known issues in simulating streamflow dynamics due to local scale hydrological features (as referred in L120-

125 – constant positive bias of E-HYPE / failure in seasonal dynamics). The question is whether the use of fine-tuned local scale model would increase the performance of the overall system?

4. Finally, the manuscript would benefit from considering a section summarizing the limitations of the study and ways to overcome these limitations. This could be included in the discussion section.

Considering these, and the fact that the scientific significance and quality are excellent, my suggestion to the editors is to accept after minor revision in the context of my specific and technical comments. I am listing a number of suggestions in the form of technical comments that will improve the presentation of the study.

### ***TECHNICAL COMMENTS***

L200: The simulation horizon for the policy optimization is 2007-2015 while results are presented for the 1996-2008 period (thereafter). In case this is correct, is there any effect from potentially different operation policies between these two periods (considering also that the 2005 drought is out of the 2007-2015 bound)?

Figure 4: Please consider adding a straight line in panels (b) and (c) indicating flood level.

L240-241: This is not clear in the figure. Please explain.

L249-250: but also less efficient onwards (from July to mid-August).

Figure 5: could consider adding a second panel on the right illustrating the benefit with respect to the baseline.

Table 2: Based on the values in the table, does the optimum profit comes from informing farmers with the minimum values (SYS4-min)?

L279: Please provide more information on the behavioral factors.