

# ***Interactive comment on* “The development and evaluation of a hydrological seasonal forecast system prototype for predicting spring flood volumes in Swedish rivers” *by* Kean Foster et al.**

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**Brief Overview** The paper presents a very interesting study related to the implementation of a prototype for seasonal forecasting in Swedish rivers based on hydrological modelling and seasonal meteorological forecasts. The prototype is compared to a traditional operational EPS approach and to climatology. Results show benefits in the use of the prototype. The paper is well written, methods are adequately described, and assessments seems suitable to the objectives. I have only a few major and minor comments about the manuscript.

**Major Comments** P2, I20-25: Please observe that it historical observations are re-

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ferred two times. And only in the second one it is presented as the ESP approach. The explanation here could be better. Evaluation section: I understand that one of the limitations of the work is that authors were not able to evaluate properly the ensemble, since most of the used metrics are related to transforming the ensemble into the ensemble mean, and then evaluating it as a deterministic forecast. Authors did not even experiment testing some other metrics? P5, I10: It is relevant to better explain what is the data used in the bias correction. Also, I think this procedure has great impact in results, but it is not adequately described. My suggestion is to explore more this point. Conclusions: Authors commented that the prototype was put into operation as a beta product at SMHI in January 2017. This gives openness for another discussion: in an operational perspective, are the benefits verified for the prototype enough to justify the implementation? I understand that yes, but also the prototype is more dependent on data and require more processing power and time to run, right?

Minor Comments P1, I16: “considered” is doubled in the text; P2, I34: Please explain better what is “limited success”. Only one case is cited; P15, I19: The sentence is confusing. Please revise. P6, I10: “subbasins sub-basins”

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