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Interactive comment on "SEAS5: The new ECMWF seasonal forecast system" *by* Stephanie J. Johnson et al.

Anonymous Referee #2

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General comments:

The manuscript describing ECMWF's new seasonal forecast system SEAS5 contains a comprehensive selection of evaluation metrics of model skill, biases, variability and teleconnections. It also presents in a fair manner the aspects in which the model performs better and worse than its predecessor SEAS4. This in my opinion is very useful information for the user. I think the paper is well structured, easy to follow and gives an adequate overview of the forecast system which will serve as a guiding document for many users, both scientists and non-scientists.

Specific comments:

Page 2 line 28: Remove one " all"

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Discussion paper

Page 5 line 17: Is there a reason for using CMIP5 and not the most recent CMIP6 forcings? Could this have an impact?

Page 7 line 10: Why is there a change from ERA-Interim to ECMWF operational analysis (is it superior?)

Page 8 lines 14-18: There are a few changes for the ocean/sea ice initialization during the hindcast period. Does this have an impact on skill/bias/variability?

Page 11 line 5: Is there a reason for not applying cross-validation for other indexes?

Page 20 lines 7-9 and figure 19c: There seems to be a bit of degradation in DJF temperature skill over the Iberian peninsula as compared to SEAS4. For particular regions availability of SEAS4 forecast data could be advantageous. Has SEAS4 operational forecast stopped or will it continue in the future?

Page 25 Fig 13. Is there a reason for using normalized precipitation anomaly in the black box instead of the more standard NINO indices?

Page 34 line 9 and Fig 20. Is there a reason for not showing precipitation skill difference between SEAS5 and SEAS4, they are even discussed. I would suggest including it for completeness.

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