

## ***Interactive comment on “Seasonal Drought Prediction for Semiarid Northeast Brazil: Verification of Six Hydro-Meteorological Forecast Products” by José Miguel Delgado et al.***

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We would like to thank the detailed and constructive comments of referee #1. Generally we agree with the technical corrections and specific comments. In particular the methods section, which was also mentioned as too short by the second referee, will be extended to accommodate all the additional information mentioned in the review process.

1 - Reasons for choosing ECMWF and ECHAM models

The main reasons were the availability of the models both for the hindcast period and

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in operation. We shall further explain the reasons for the choice and processing of their output in the revised manuscript.

2 - We will explicitly show the equation describing SWSI in the revised manuscript.

3 - The reason for using longer time scales is the nature of droughts in northeast Brazil: their scale is often interannual, if not decadal. By using longer time-scales the forecast of the current rainy season is put into the context of an interannual drought. As you correctly state, although useful for forecasting reservoir levels, SPI36 is not very useful for verification. We will therefore focus in the verification of shorter SPIs in the revised manuscript.

4 - We agree that a measure of reliability should be shown. We will try to arrange the manuscript in order to fit reliability plots and Brier score in it without extending it too much,

5 - You are right, RMSE and ROCSS measure different aspects, which happen to be related to deterministic and probabilistic forecasts. Our conclusion is misleading and we will reformulate it.

6 - We will add an explanation for choosing -1 as a threshold for drought.

7 - Although the solution is not very elegant, we had to truncate the indices within  $]-0.1, 0]$  and  $[0, 0.1[$  to  $-0.1$  and  $0.1$  respectively. We will describe the method in the revised manuscript.

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