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 Prof. Rasoul Mirabbasi for the constructive comments to our manuscript. We identified 4 major comments that we will address in this reply.

1 - Extent of the methodology section

We agree that the methodology section is too short and should be extended. In the revised manuscript we will extend the description of the model ensemble, as well as the formulation of the different indexes employed in the paper.

2 - The uncertainty of the regression of HDI based on MDI

This remark is in part related to the previous one. The presentation of the MDI/HDI regression is extremely short in the submitted manuscript. The same comment applies to the discussion of the results of the regression. We shall extend this subsection, in particular discussing the explained variance in the regression of each index and region.

3 - Influence of strong seasonality in the MDI and using the joint deficit index

Although in principle we agree that drought is a multiscale phenomenon – and that Kao and Govindaraju (2010) and Mirabbasi et al. (2013) provide an interesting solution for quantifying multiscale drought severity – we don't see their method appropriate in the context of this paper. The aim of this manuscript was to provide a clear and standard verification of the forecast models that can be recognized as such by the community. By introducing relatively new and specific concepts in the manuscript we would be re-centering the whole scope of our work. As mentioned in the reply to the anonymous referee #1, we will use shorter time scales for the verification in the revised manuscript.

4 - Usefulness of long time scales of MDI

We agree with your comment: concerning the verification, it is more useful to consider shorter time scales of the MDIs, eg for small hold farmers. However, the scale of droughts in northeast Brazil 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. Furthermore, longer time scales proved to be better predictors of reservoir volume.

In the revised manuscript, we will use shorter time scale of the MDIs in the verification of the forecast models, but keep longer time scales in our manuscript, since they provide better predictors for reservoir volume and useful information for managers and decision makers.