

Interactive comment on “Hydrological response to different time scales of climatological drought: an evaluation of the standardized precipitation index in amountainous mediterranean basin” by S. M. Vicente-Serrano and J. I. López-Moreno

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The discussion between the authors and the two reviewers has been very constructive, and will improve the quality and clarity of the manuscript. I have a couple of early warnings which can be considered when drafting the new version.

The original paper addressing only a single basin and focusing on drought had a simple and important main topic, namely to warn that the definition of a drought index for management purposes is associated with caution related to the definition of the time scale of such an index. To my opinion, this message should be kept or even strengthened in the revised manuscript. The case study serves as demonstration material for this

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warning message, and to my opinion does not need to be complemented by additional basins, as indicated by the authors. The inclusion of an index only considering drought periods is a bit confusing, since a drought index per definition measures a climatological anomaly in which wet conditions also play a role. The authors state that they have analysed a drought-only index, but I would be careful in explaining what this means.

An interesting remark by reviewer 2 (also for long timescales the two most extreme drought periods emerge from the PSI analysis) could be addressed a bit clearer in the new manuscript.

Please restructure your manuscript in a way that makes the central message even clearer (a little mathematical background of the PSI would be helpful), but avoid making the paper too long by addressing too many issues that deviate from the central message.

I thank both reviewers and authors for a constructive discussion so far.

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