

Interactive comment on “Rankings of extreme and widespread dry and wet events in the Iberian Peninsula between 1901–2016” by Margarida L. R. Liberato et al.

Margarida L. R. Liberato et al.

mlr@utad.pt

Received and published: 2 November 2020

Reply: We acknowledge the reviewer for the support and constructive comments, which will definitely contribute to improving the revised manuscript. We agree with the reviewer that a more in depth discussion may be provided, including the topics mentioned by the reviewer below. We also agree that we must emphasize why developing such a ranking is fundamental for future research on (dry and wet) extremes – either from the impact perspective, for understanding the physical mechanisms behind each of these events, for the attribution to climate (natural or forced) variability or to climate change, for the development of future risk assessments... In this regard

C1

the authors would like to stress that a lot of publications have been published in the last two decades covering these topics, including many co-authored by some of us in terms of physical mechanism (e.g. Garcia-Herrera et al. 2007, Trigo et al. 2013, Vicente-Serrano et al. 2011) or in terms of impacts (e.g. Gouveia et al., 2009, 2012 Páscoa et al., 2017, Andreia et al., 2018). In any case, after this ranking is established, additional investigation on these research topics may be performed. However, we would like to stress that the scope of this paper is, as stated in the introduction (lines 100-105): “In summary the main goals of this paper are to: (i) present a tool which allows identifying regional extremes of persistent, widespread dry and wet periods, at different time scales; (ii) build a comprehensive dataset of rankings of the most extreme, prolonged, widespread drought and wet periods on Iberia (...).” Our detailed responses can be found in the attached file.

Please also note the supplement to this comment:

<https://esd.copernicus.org/preprints/esd-2020-46/esd-2020-46-AC4-supplement.pdf>

Interactive comment on Earth Syst. Dynam. Discuss., <https://doi.org/10.5194/esd-2020-46>, 2020.

C2