

Review of “On The Drought In The Balearic Islands During The Hydrological Year 2015-2016” by Ramis et al.

This paper studies the extreme droughts of 2015-16, or more generally on the water resources, of the Balearic islands covers a rather important topic and after revision offers a solid analysis. Compared to the first version, the study now includes a strong argumentation to demonstrate that their simple methods they use hold their rank and are suitable for the proposed interpretation.

I appreciated that the comparison with state of the art land surface models was performed. It is quite sobering to see that they still cannot reach the resolutions needed to address the water cycle of small islands. I also liked that now the authors verify that changing their methodology for estimating potential evaporation has no consequence on the interpretation. The representativeness of the rainfall measurements used is now also discussed. Thus, I would like to recommend to accept this paper perhaps a few minor changes.

As usual, there are some minor things which can be improved. I would like to propose those which I noted while reading and for the benefit of the authors.

- “according to media” could be replaced by a proper reference ! El Pais or Die Inselzeitung (:-)) should be acceptable references for NHSS, or ?
- Lines 141-143 : There are a number of studies on the spatio/temporal variability of rainfall and some proposed metrics. It would be nice to have a reference here so that interested readers can go further.
- Lines 200-217 : The authors might consider to present their water balance model with a simple equation. For some readers it will be simpler to understand than a verbose paragraph.
- Line 250 : The 3 hourly rainfall which has driven the land surface models in the Earth2Observe simulations is not coming from the ECMWF re-analysis but rather independent satellite estimates : Beck et al. MSWEP: 3-hourly 0.25° global gridded precipitation (1979–2015) by merging gauge, satellite, and reanalysis data, Hydrol. Earth Syst. Sci., 21, 589–615, 2017. It would be good to add this reference so that we know the origin of the error you identify.
- The high precipitation values used in the Earth2Observe simulations certainly comes from spatial issues in MSWEP. It cannot properly make the difference between the valley in Mallorca and the mountains to the West.
- Line 346 : “really dry” not the right wording in a scientific paper, or ? “extremely dry” is perhaps more suitable.
- Line 373 : “continuous deficit” does not sound right to me but I see what you mean.
- Line 412 : “essentially unfavorable” is the word essentially needed ?
- Line 464 : “... was also unappreciable over all three islands.” sounds better to me.