

Interactive comment on “A large set of potential past, present and future hydro-meteorological time series for the UK” by Benoit P. Guillod et al.

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I think this paper describes a useful product that can be used by the scientific community. However I am a little concerned at the lack of analysis particularly of the bias in the model estimates of potential evaporation (PE). On page 12, lines 9 to 11, you state that there is a 'small overestimation' of the PE and claim this is satisfactory. I think you might be brushing it off too casually. The bias is 20% which is not 'small'. Firstly, I think you should tell us where this bias is coming from. You mention earlier (Page 12, line 1) that there is a warm bias in the south in the summer. Presumably this is driving this 20% overestimate of PE. Secondly, I think you need to quantify what impact this will have on your drought estimates. Drought isn't only about rain - it's about drying as well. With a 20% overestimate of PE in the very dry area of the UK, you

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might be overestimating the drought. Please add a paragraph or so on the drying bias. The many plots of results (figs 7, 8, 10, 12, 14 and 15) are hard to read. Firstly they all look much the same. Secondly, there is no map of where these regions are. You should have a map so that we know where catchments such as 'Dee' and 'Tweed' etc are. Not everyone has a geographical-hydrological map in their heads! In fact what I recommend (although it would take some time) would be to just do the 4 regions that we used in the CHES paper (Robinson et al): Scotland, Wales, England and Lowland England. The advantage is that you have separated the climate zones of the UK and the plots are easier to digest as there are less of them.

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