Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2020-396-SC3, 2020 © Author(s) 2020. This work is distributed under the Creative Commons Attribution 4.0 License.



## **HESSD**

Interactive comment

## Interactive comment on "Do small and large floods have the same drivers of change? A regional attribution analysis in Europe" by Miriam Bertola et al.

## **Yves Tramblay**

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This is a very interesting study documenting the drivers of floods in Europe.

I have a small comment on line 195, about the use of 30-day antecedent rainfall. How are the results sensitive to the choice of this 30-day average? With basin sizes ranging from 5 to 100 000 km2, it is likely that 30-day antecedent rainfall is a rough approximation of the actual soil moisture conditions for this range of basin sizes. For very small basins, 30-day rainfall could be enough, but maybe larger accumulations periods could be more adapted for larger basins. Why not consider an API, as in Woldemeskel and Sharma (2016)? The question behind my question is: do we under-estimate the

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effects of antecedent soil moisture by using only a 30-day antecedent rainfall?

Woldemeskel, F., and Sharma, A. (2016), Should flood regimes change in a warming climate? The role of antecedent moisture conditions, Geophys. Res. Lett., 43, 7556–7563, doi:10.1002/2016GL069448.

Note: line 65, Tramblay et al. 2013 is wrong, the correct reference is Tramblay et al., 2019 (https://doi.org/10.5194/hess-23-4419-2019).

Yves Tramblay

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