

Hydrol. Earth Syst. Sci. Discuss., referee comment RC1  
<https://doi.org/10.5194/hess-2021-81-RC1>, 2021  
© Author(s) 2021. This work is distributed under  
the Creative Commons Attribution 4.0 License.

## **Comment on hess-2021-81**

Anonymous Referee #1

---

Referee comment on "Spatiotemporal and cross-scale interactions in hydroclimate variability: a case-study in France" by Manuel Fossa et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2021-81-RC1>, 2021

---

The authors present a wavelet-based framework for understanding the variability in precipitation, temperature and streamflow in France. Especially interesting is the cross-scale analysis. However, the discussion of these results were not well done. The authors have only reported the results. More discussion on these throwing light on the physical intuition and learning derived is needed. It was also not clear if the cross scale implied across spatial scales ... in which case, one driving others is confusing as the manifestation of a variable, while having spatial variability, need not necessarily always have a causal connection. In the case of streamflow, this is clear due to the network nature of the flow. If the cross-scale is across wavelet scales, in that, for each time series, the dependence is between low-frequency vs. high frequency, then how does this dependence manifest in space needs to be discussed.