

Editor Decision: by Giuliano Di Baldassarre

Comments to the Author:

The manuscript was significantly improved by the authors, but a few comments were not sufficiently addressed. The paper can be published after a minor revision, which should consider the following three points.

In our previous response to the referee comments, we had explained why certain comments/requests made by the referees are out of scope of this study.

The points made by the referees are all important research areas; however, to answer these questions extensive additional research at a European scale is needed to obtain a complete and non-speculative answer. We now discuss these aspects and the areas for future research in detail in the discussion section.

1. Both referees comment about the fact that the paper would benefit from a better link to dominant precipitation patterns and/or weather situations across Europe. I agree with them. More information on the dominating weather processes would contribute even more to the goal of “advancing the understanding of geographical and climate sensitivity of annual maximum floods”.

We agree that such links would be important to obtain, however such links between the obtained spatial and temporal patterns of flood seasonality cannot readily be made.

To elaborate this, we provide a detailed discussion why a link/attribution of the obtained flood seasonality pattern to the climate/weather and precipitation patterns is beyond the scope of this study and why it merits a detailed follow up research. Such research should focus exclusively on the links between climate, flood generation processes, and the spatial and temporal patterns of flood seasonality.

2. The authors should give more credit to other scholars and previous work in the field. This paper would benefit from more references to previous studies, as not many studies are cited here.

All sections that were added to discuss the content of the manuscript, contain additional references to previous studies.

This can be achieved by discussing the role of precipitations patterns (point 1 above),
See answer to point 1 above

discussing potential future possibilities (point 3 below),
See answer to point 3 below

or adding a discussion about the actual implication of flood seasonality (why is it relevant?) by linking this study more with current advances in the study of dynamic flood risk (socio-hydrology, practical applications, etc.).

In the discussion section, we included an elaboration on the importance of this European wide-floods seasonality study, and the practical and scientific importance.

All these additional aspects would enrich this paper, and make it stand out more from previous recent publications.

3. I also agree with another point raised by Rev#1. One single paragraph discussing potential changes in the future would make this paper much more interesting. This does not imply additional work, but a scientific discussion about the potential role of increasing temperature. If the authors think that nothing can be said about future changes, it would be very interesting to read exactly why.

We detail the potential changes of flood seasonality in future, together with a scientific discussion on the current limitations in projecting flood seasonality changes in the discussion section.