Dear Pr. Manuela Brunner

Thank you very much for your resubmission, which has been reassessed by two of the original reviewers. While they are happy with the revised manuscript, I think that there are still three main deficiencies that have to be properly addressed in another round of revisions.

We have taken your additional requests into consideration, after the first round of review and the recommendations of the two reviewers to accept the article. In agreement with the co-authors, we applied the following modifications to the manuscript:

1. Coming back to the novelty aspect. While I acknowledge the points you make in your response to the editor, I am not convinced by how the novelty is presented in the manuscript. It needs to be more clearly stressed in the introduction, abstract, and conclusions.

Following your request, we modified the abstract, introduction and conclusion to better stress the novelty of the results presented here. We provide in our manuscript a comprehensive analysis of changes in flood properties (event characteristics, event types and seasonality) and there are no equivalent studies for Mediterranean regions with such a high-resolution dataset, allowing to analyze not only annual maxima but the whole flood events characteristics. There are notably two aspects to highlight:

1-We added some elements about the 'popular' belief (notably often seen in the medias) that drier soils could produce more runoff. By providing an analysis of the correlation in time between runoff coefficients and antecedent soil moisture, we show that the correlations are always positive (dry soil = less runoff, wet soils = more runoff) and stable in time. This could explain the absence of trends in flood magnitudes and the change in flood types. Previous studies on changes in event types cannot go to this level of analysis, first because they only consider daily annual maximum floods and not the whole events, and also since it would be quite difficult, if not irrelevant, to compute runoff coefficients with a database of the resolution of E-OBS.

2-In addition, we also better highlighted the results related to changes in seasonality due to changes in weather types frequency, to the best of our knowledge this analysis has never been performed for Mediterranean regions. In a pan-European study, Blöschl et al. 2017 observed different changes in flood seasonality, notably in the Mediterranean, without providing plausible explanations for these changes notably for the French Mediterranean basins. Here we fill this gap by showing a shift for some particular weather types associated with floods and also regional differences in these changes.

2. As your main novelty, you stress the insights into flood processes in the Mediterranean thanks to a new database. I see this new database as an essential part of the publication because the other novelty arguments are not as convincing. Furthermore, HESS requires data sharing upon publication of the manuscript (https://www.hydrology-and-earth-system-sciences.net/policies/data_policy.html). I think that your data availability statement does not do this policy justice and am happy to reconsider

your submission for publication if you are willing to share your database with the hydrologic community.

We agree. We have added in an online repository ans with a DOI the dataset for flood events for all basins, including all the indicators computed in the present study: https://doi.org/10.5281/zenodo.8075639

We modified the data availability section to:

The computed catchment-based indicators for each flood events in all basins are accessible from the online repository: https://doi.org/10.5281/zenodo.8075639

The complete time series of river runoff can be accesses freely here: https://hydro.eaufrance.fr/

The SAFRAN/ISBA outputs can be ordered freely for scientific purpose here: https://donneespubliques.meteofrance.fr

3. I have to reiterate that there are still problems with the figure design. Figure 4 needs a colorblind-friendly color scale and Figures 8 and 10 come with different map projections which makes the entire presentation of the results inhomogenous. Thanks for fixing these graphical issues.

We have now fixed Figure 4 with a colorblind-friendly color scale. We used the Twilight circular color map (https://github.com/bastibe/twilight), available in Matplotlib or Matlab, with a perceptually uniform cyclic colormap.

We have also modified figure 8 and 10 to have the same map projections.