

Dear Reviewer,

First of all, the authors want to thank the reviewer all the hard work and time he/she have devoted to review the manuscript. We appreciated all the comments, realizing that they serve to improve the quality and understanding of our work, and hoping to have properly answered all their suggestions.

Changes in the manuscript have been highlighted in red.

### **Specific changes RC2**

*This is a very interesting paper on a specific pluvial event and its consequences on society. I appreciate that it is not only climatologically state-of-the-art, but also sketches all the relevant historical developments that are necessary to interpret this event, without going too far into climate determinism, like so many other studies. Nevertheless, I have some comments, which I would ask the authors to consider in their revised manuscript.*

General:

*1770-1772 was a period of crisis in central Europe (see work By Dominik Collet). Although this might be arguably unrelated in a climatological context, and concerned a different region, it might nevertheless be relevant historically to extend the present case.*

The work of Dominik Collet has been considered in the revised version of the manuscript

*Daily scale: The authors speak about "torrential" rain, which cannot be assessed from monthly data.*

The reviewer is correct, and the word 'torrential' (a misuse of language) has been replaced with 'heavy'.

*In general, I am wondering what could be done with daily data. These should be available from London and Paris (see Richard Cornes work), from the English Channel (wind from ships), and other Western European stations. Paris precipitation is another interesting record, but is not included in the study. It is a bit peripheral, but could nevertheless be interesting.*

Richard Cornes's research primarily focuses on sea level pressure data and, to a lesser extent, temperature. Finding no research on daily precipitation, the authors reached out to Richard Cornes to enquire about any sources of daily rainfall data for Paris or London. His response was, "In the sources that I used for the pressure series, daily rainfall values were not recorded but there is "Weather". See the following for Paris (*Journal de Medecine*) and London (*Gentleman's Magazine*)  
<https://archive.org/details/s3id13654820/page/87/mode/1up>,  
<https://archive.org/details/s2492id1330011/page/77/mode/1up>. There may be other sources that do have daily rainfall but it would be quite an effort to find them and then digitize etc.

*At least in three instances in the manuscript, the authors speak about 1678-1679. Perhaps this was a "find-replace" error. Or was it the 17th century and not the 18th century after all? I am confused.*

The reviewer is correct; it was a 'find-and-replace' error. These types of errors have been corrected throughout the revised version of the manuscript.

*The discussion is really nice and interesting, but at the same time the discussion should not present new results, which the authors do.*

The authors have ensured that all new findings from the research are presented in the Discussion section. Data provided by various organizations (Tables 2 and 3) were incorporated to support, clarify, and enhance the interpretation of the results and to strengthen the arguments discussed.

Minor:

*Title: "17th century" -> "18th century"*

Done

*Title: "a meteorological perspective" -> "a climatological perspective"*

Done

*L. 14: "climate behaviour" -> "climate variability"*

Done

*L. 154: Le Roy Ladurie*

Done

*L. 210: Valler et al. 2020 -> 2022*

Done

*L. 224: What did Murphy et al. find?*

This was better explained in the revised version of the manuscript (lines 227- 232).

*L. 342: Why 1944? ERA5 starts in 1940.*

The mean and the 95<sup>th</sup> percentile of the rainiest days, determined from data at the Santiago de Compostela rain gauge station (Table 1), were used to generate the SLP and GPH composites maps from ERA5 data (Fig. 9). Despite ERA5 data are available starting from

1940, the sub-period 1944- 2023 was selected to match the time frame of the Santiago de Compostela rain gauge station.

*L. 423: What is meant with "root crops"? Potatoes? Then write potatoes. Or were other root crops important*

Hoyle (2017) uses the term *root crops* to refer to a variety of crops beyond just potatoes, such as carrots, beets, turnips, radishes... Therefore, we prefer to keep the term *root crops*.

We look forward to hearing from you soon.

Yours sincerely and on behalf of the co-authors,

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