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 RC1

The article by deCastro et al. is of great interest but requires revisions. Many key relevant works in climate history, that the authors could cite in the introduction, are missing. Instead they cite outdated popular science book about the Little Ice Age by Fagan (2001). I have at the end of this review listed some additional potential references to cite for the Introduction and Discussion. Also key literature about erosive precipitation in Italy is missing and could be cited. The entire Introduction section could be more concise and better relate to state-of-the-art climate history research for Europe.

The reviewer is right and most of the references proposed by the reviewer were introduced in the revised version of the manuscript.

The English language requires additional polishing. In particular, the title contains a severe error. The Article concerns the 1760s – thus the 18th century – and NOT the 17th century (the 1600s) as stated in the title.

The English language was polished and the title was corrected.

It would be better to have the quotations of sources, in English, in the main text and place the original after within parentheses (and avoid footnotes altogether).

Done

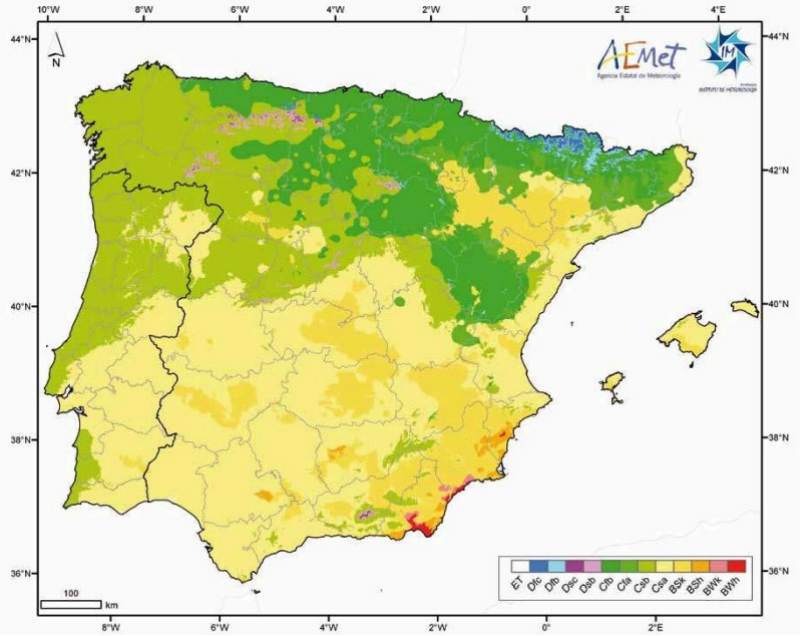
Much of the links to the data sources on pp. 8–9 code instead be include be listed in a Data Availability Statement at the end of the article. It is enough in the actual Method section to describe the data sources but how to find them can instead be placed in a Data Availability Statement.

The authors maintain links to the data sources in the Methods section because, to the best of their knowledge, the journal's Data Availability section is intended for data generated by the authors during the course of the research, rather than for indicating the sources from which the data used in the paper were downloaded.

Minor comments:

Line 80: Formulation "most of the south and Mediterranean" is unclear.

This sentence was rewritten to reflect what can be observed in the Climatic Atlas of the Iberian Peninsula (AEMET-IM Iberian Climate Atlas. Agencia Estatal de Meteorología, Instituto de Meteorologia de Portugal, 2011. https://www.aemet.es/documentos/es/conocermas/recursos_en_linea/publicaciones_y_estudios/publicaciones/Atlas-climatologico/Atlas.pdf).



Line 209: Better to write 18th century and 21st century.
Done
Table 2: Please state period.
Done
Table 3: Please state sources and location.
Done
General: Avoid abbreviations such as "IP" for the Iberian Peninsula. It makes the text harder to read.
Done
Line 559: Avoid words like "unprecedented". The authors themselves mention that 1740 might had worse famine mortality.
Done

Suggestion of additional references to cite:

Collet, D. and Schuh, M., eds.: Famines During the 'Little Ice Age' (1300–1800): Socio-natural Entanglements in Premodern Societies, Springer, Berlin/Heidelberg, https://doi.org/10.1007/978-3-319-54337-6, 2018.

Diodato, N., Ljungqvist, F.C. & Bellocchi, G., A millennium-long reconstruction of damaging hydrological events across Italy. Scientific Reports, 9 (2019): 9963. https://doi.org/10.1038/s41598-019-46207-7 2

Diodato, N., Ljungqvist, F.C. & Bellocchi, G. A millennium-long climate history of erosive storms across the Tiber River Basin, Italy, from 725 to 2019 CE. Scientific Reports, 11 (2021): 20518.

Diodato, N., Ljungqvist, F.C. & Bellocchi, G. Outcome of environmental change from historical sediment discharge in a Mediterranean fluvial basin, 1500–2019 CE. Environmental Research Communications, 3 (2021): 071002.

Diodato, N., Ljungqvist, F.C. & Bellocchi, G. Climate patterns in the world's longest history of diluvial storm-erosivity: the Arno River Basin, Italy, 1000–2019 CE. Frontiers in Earth Science, 9 (2021): 637973.

Diodato, N., Ljungqvist, F.C. & Bellocchi, G. Fingerprint of climate change in precipitation aggressiveness across the central Mediterranean area. Scientific Reports, 10 (2020): 22062.

Galloway, P. R.: Secular changes in the short-term preventive, positive, and temperature checks to population growth in Europe, 1460 to 1909, Clim. Change, 26, 3–63, https://doi.org/10.1007/BF01094008, 1994.

Ljungqvist, F. C., Seim, A., and Huhtamaa, H.: Climate and society in European history, Wiley Interdisciplin. Rev.: Clim. Change, 12, e691, https://doi.org/10.1002/wcc.691, 2020.

Ljungqvist, F. C., Seim, A., and Collet, D.: Famines in medieval and early modern Europe – connecting climate and society, Wiley Interdisciplin. Rev.: Clim. Change, 15, e859, https://doi.org/doi.org/10.1002/wcc.859, 2023.

Ljungqvist, F. C., Christiansen, B., Esper, J., Huhtamaa, H., Leijonhufvud, L., Pfister, C., Seim, A., Skoglund, M. K., and Thejll, P.: Climatic signatures in early modern European grain harvest yields, Clim. Past, 19, 2463–2491, https://doi.org/10.5194/cp-19-2463-2023, 2023b.

Pfister, C. and Wanner, H.: Climate and Society in Europe: The Last Thousand Years, Bern, Switzerland: Haupt Verlag, 2021. ISBN: 978-3-258-08234-9. Ed. A. Matzarakis

Slavin, P.: Climate and famines: A historical reassessment, Wiley Interdisciplin. Rev.: Clim. Change, 7, 433–447, https://doi.org/10.1002/wcc.395, 2016.

Wanner, H., Pfister, C., and Neukom, R.: The variable European Little Ice Age, Quaternary Sci. Rev., 287, 107 531, https://doi.org/10.1016/j.quascirev.2022.107531, 2022.

White, S., Brooke, J., and Pfister, C.: Climate, Weather, agriculture, and food, in: The Palgrave Handbook of Climate History, edited by White, S., Pfister, C., and Mauelshagen, F., pp. 331–353, Springer, Berlin/Heidelberg, 2018.

We look forward to hearing from you soon.

Yours sincerely and on behalf of the co-authors,

Prof. M. deCastro
Centro de Investigaciones Marinas. Environmental physics Laboratory (EphysLab), University of Vigo
Department of Applied Physics
Vigo, Spain