

Clim. Past Discuss., referee comment RC2
<https://doi.org/10.5194/cp-2021-41-RC2>, 2021
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Comment on cp-2021-41

Anonymous Referee #2

Referee comment on "The 1921 European drought: impacts, reconstruction and drivers"
by Gerard van der Schrier et al., Clim. Past Discuss.,
<https://doi.org/10.5194/cp-2021-41-RC2>, 2021

General evaluation

I will echo referee #1 here – this is a great and timely study that I very much enjoyed reading. van der Schrier et al. presents an in-depth assessments of the 1921 European drought, by closely examining the impact of the drought on various aspects of the society (by a systematic literature review of newspapers from the time of the drought), as well as providing a qualitative evaluation of the characteristics and drivers of the 1921 drought. I find the idea of this work compelling and original, and thus I regard the results being of general and international interest. I therefore recommend the work to published in Climate of the Past after a minor revision.

The manuscript is well-written, the methods that have been used are, as far as I can see, sound and well justified. My only concern is that the paper is at present a bit lengthy. There are currently 13 figures in the manuscript, and most of them consists of several panels. This is a lot of information for a reader to digest, and I fear that the main message and findings of the work may be masked by information of secondary importance. I therefore strongly recommend the authors to check the figures and move those that do not really contribute to the story to the supplement.

I have listed a few other minor comments below, mostly highlighting parts where clarification or paraphrasing is needed. I hope that this feedback will help the authors improve their work, and I look forward to seeing the final product in Climate of the Past.

Specific comments

P1/L4: "(rescued) meteorological measurements" the term "rescued" is unclear here.

Define or remove from the abstract

P1/L16: "The 1921 drought stands-out as the most severe and most wide-spread drought in Europe since the start of the 20th century. While none of the seasons in 1920 and 1921 tops the scale of having the largest precipitation deficit on record, the conservative nature of drought amplifies the lack of precipitation in autumn and winter into the following spring and summer"

the meaning of this paragraph is not fully clear. The 21 drought stands out as the most severe on record, yet there are no deficits in observed precipitation??

P3/L54: "systematic effort to review" provide more details on how this systematic literature search was conducted (e.g., keywords, publication dates, databases used, etc.).

P3/L66 please make sure that the figures in the supplement are placed in the same order as they are referred to in the main text.

P3/L71: "BE and DE report" – define the abbreviations

P7/L164: 0.4 mm – is this a common threshold? If so, provide a reference.

P7/L172: "30°Cin" spacing needed

P8/L198 complement

P8/L204: "... amount of data that is used to construct the data" reword

P8/L216: I assume that the new met data were quality checked and homogenized before the gridding procedure? If so, this should be mentioned in the methods.

P9/L218 "[...] has been provided." provided from where?

P9/L226 "daily temperature data" it should be mentioned here, or earlier in the methods, whether this refers to max, min or average daily temperature

P10/L261 RR1?

P10/L270: change to extraterrestrial or extra-terrestrial

P11/L294: "For comparison, [...]" if a comparison is made with fig 5, then please provided the values for SPI12 and not SPI3.

P11/L297: "[...] and peak values in 1967 are [...]" unclear if these statistics are for SPI3 or SPI6 or SPI12?

P11/L301: "dry to extremely dry conditions" define the SPI threshold for these conditions

P14/L402: "[...] largest precipitation deficit on record [...]" unclear, which record this refers to.

L408: "the drought had its first major impacts in autumn 1920 in north Italy" fig 7 seems to show rather pluvial conditions in northern Italy at that time ...

Fig 4 caption does not make sense. What is the difference between panels a,b,c and d? Which of the panels represent temperature and which represent precipitation? Also, the last digits in the labels on the colorbars seems to be truncated? This figure is in my opinion better suited in the supplement .

Fig 5: Indicate in the caption which country the Uccle series comes from (suggestion). Provide a title for the x-axis.

Fig 6 caption: x-axis – number of consecutive months?

Overall I find the labels for the colorbars in many of the figures too small to be clearly visible. Also, the figures would be easier to understand if a title would be added to the colorbars (e.g., in fig 4, 7, 8, 10, 11, 12)

