

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC1
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Comment on nhess-2021-46

Anonymous Referee #1

Referee comment on "Changes in drought features at the European level over the last 120 years" by Monica Ionita and Viorica Nagavciuc, Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-46-RC1>, 2021

The manuscript focuses on analyzing drought in Europe in the period 1902-2019 by means of the CRU TS v4.04 dataset. The paper is very interesting and presents a good analysis, however, in my opinion there are a few drawbacks in the paper, which can be eliminated by carrying out some minor revisions following the list of comments below.

My main concern refers to the use of the CRU TS v4.04 dataset for the period 1902-2019. The numbers and locations of stations contributing to any grid cell of the dataset changed over time, especially in the first half of the past century. Can the authors provide a map showing the evolution of the stations' density in the study area? Can the authors provide a comment on how station distribution could influence the analyses shown on the maps?

In the trend analysis the authors identified significant changes but they must specify the significance level considered.

Line 301: Figures 6-8 should be Figure 8

Finally, in the conclusions the authors added a discussion to underline the added value of their work compared to other similar in the same area, but some important comparison with drought analyses performed with gridded databases are missing. For example, in my knowledge, gridded data sets have been used for drought analyses in Europe producing maps of the self-calibrating Palmer Drought Severity Index (van der Schrier et al. 2006 doi: 10.1175/JCLI3734.1) or maps of the SPI trend at different timescale (Caloiero et al. 2018 doi: 10.3390/w10081043).