Hydrology and Earth System Sciences Discussions

Hydrol. Earth Syst. Sci. Discuss., referee comment RC1
https://doi.org/10.5194/hess-2021-569-RC1, 2021

Comment on hess-2021-569

Anonymous Referee #1

Referee comment on "Long-term trends in agricultural droughts over Netherlands and Germany: how extreme was the year 2018?" by Yafei Huang et al., Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2021-569-RC1, 2021

This study aims to assess how extreme the drought year 2018 was in Germany and the Netherlands, based on standard drought indices (SPI, SSI), also potential precipitation deficit (PPD), and ET deficit. The study used HYDRUS 1D simulations for 31 stations with long-term meto observations, and calculated soil moisture, potential ET, and actual ET for five soil types. Their results show that the increasing droughts over Germany and the Netherlands are mainly driven by increasing potential ET and increasing vegetation water demand. While the topic is relevant and analysis is interesting, this reviewer found the manuscript cannot be accepted with the current form.

Major concern:

This reviewer found that the study/experiment design could be flawed, mainly due to the lack of description on how representative the five soil types used for representing the different domains, and the lack of description on why the pasture is assumed for all these stations. To this reviewer, the current study is merely a synthetic study. Thus, it is far from understanding the drought year 2018 over the Netherlands and Germany.