

Interactive comment on “Changes in extremely hot days under stabilized 1.5 °C and 2.0 °C global warming scenarios as simulated by the HAPPI multi-model ensemble” by Michael Wehner et al.

Anonymous Referee #2

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Review of “Changes in extremely hot days under stabilized 1.5°C and 2.0°C global warming scenarios as simulated by the HAPPI multi-model ensemble” (by Dr Michael Wehner and co-authors (manuscript number 10.5194-ESD-2017-89))

The paper “Changes in extremely hot days under stabilized 1.5°C and 2.0°C global warming scenarios as simulated by the HAPPI multi-model ensemble” uses the HAPPI

large ensemble simulations to examine changes in temperature extremes. Annual maxima of averaged three consecutive days temperature (TX3x) are modelled with a GEV distribution. TX3x 20-year return levels are compared between different warming targets (1.5°C and 2°C) and present climate. This study is very interesting and merits publication after the minor point below has been addressed.

Specific comment:

- I would suggest to make some hypothesis testing in order to check if TX3x 20-year return values are significantly different between different warming levels and present climate. Please, in case these differences are not significant across some region, I would suggest of highlighting the grid points with no-significant differences in each relative figure.