

Dear Carlo De Michele,

Please find attached the revised manuscript of the work “Future extreme precipitation events based on a historic event”.

Below you can find the replies to the final reviewer. The comments of the reviewer are provided in *Italic* fonts and are followed by our answers.

I am looking forward to your reply.

Best wishes,
Iris Manola

We would like to thank the reviewer for her/his time and constructive comments. We have revised the document accordingly and addressed each of the comments and suggestions in their response.

REVIEWER #1

I appreciate the authors' effort of revision. The manuscript is almost ready for acceptance. However, some additional explanation will make the article easier to understand (although revision is not mandatory).

(1) The authors have presented following methods in the Introduction as written in their reply to my previous comments:

*@ Method A: the delta change technique,
@ Method B: downscaling techniques,
@ Method C: bias-correction techniques, and
@ Method D: the future weather method.*

On the other hand, the authors' analysis is based on two types of application of "A" and an application of "D". It will be better to write explicitly that B and C are not used in the present study.

Answer:

The text in page 3, lines 14-16 are revised as follows in order to clarify that only the two out of the four methods are utilized in the paper:

“Among the four methods described above (delta change, downscaling techniques, bias correction and future weather), the delta change and the future weather are employed in this paper. The main

aim is to compare a ‘future weather’ simulation with two alternative ‘delta-change’ scaling methods, of which one is developed in this study.”

(2) It appears to me that the "future weather" method is the same as the "pseudo global warming" method that is widely used for climate change studies (e.g., doi:10.1175/JCLI-D-15-0623.1, 10.1175/JCLI-D-16-0697.1). If I understand correctly, it will be better to write so for the convenience of readers.

Thank you for this notification. The following text is added in page 3, line 8:

“A similar method is the ‘pseudo global warming’ method, which involves the simulation of observed events modifying the meteorological forcing by a climate change difference (Schär et al. 1996, Michaelis et al., 2017). For example, Trapp & Hoogewind 2016 applied climate change differences from CMIP5 simulations on the high resolution Weather Research and Forecasting (WRF) Model to reveal how typical extreme observed tornadoes might be realized under conditions of the late twenty-first century.”