

*We thank the reviewer for his very detailed comments; we have addressed them all in the final revision of our MS. Please find our responses in italic below the referee comments.*

I have appreciated the efforts made by authors to clarify my major comments.

I strongly suggest that a native English speaker revises the writing, the current version of the manuscript has several errors and does not flows well.

*Done*

I have still some minor comments

Page 1

Line 27. Large part of Europe was ...

*We prefer to keep it unchanged*

Line 27. Footprint. Maybe in the abstract would be better to use a more widely used terminology.

*Definition was added*

Line 28. I do not see the reason to mention in brackets “magnitude”, here and in the following lines of abstract. Consider to remove it.

*There are different severity measures of drought events around, hence this specification is useful.*

Line 37. Diverging. I think it is not clear to what it is referring to.

*Done*

Page 2

Line 13. Remove now, not needed

*Done*

Line 30. I think “timely” is more appropriate than “thorough” in this context

*Done*

Page 3

Line 24. “and are therefore spatially variable as well”. Consider to remove it, not needed.

*We prefer to keep it.*

Page 4

Line 28. with respect to their spatial coverage

*Done*

Page 6

Line 2-4. You do not need to introduce the general formulation with n

*Done*

Lines 7-10. Information not relevant, consider to remove it

*There are actually diverging uses of drought definitions, and we need to be crystal-clear about the method we use.*

Page 7

Line 8. Suggested instead of recommended.

*We see it more as a recommendation.*

Line 14. I suppose return period have been calculated by inversion of the fitting function.

Plase clarify.

*Done*

Line 28. Mixed mixture model... are you sure? Strange nomenclature

*Yes, it's the proper name of the method.*

Line 29, Please, clarify for what event has been computed.

*We clarified in line 20 and line 29.*

Page 9

Line 6. Please, introduce in methods how you identify winter low flows.

*We added the definition on page 6, line 28: We further distinguish between summer (May – November) and winter (December – April) low flow season, and classify gauges according to their dominant low flow season into summer and winter regimes.*

Line 17. Avoid the use of slightly, repetition

*Done*

Line 22. Exceptional conditions. Not clear what you mean, please clarify.

*Done*

Line 30 and following. This material should be mentioned in the method section.

*Done, it was moved to Section 3.2*

Page 10

Line 2. Unclear, please clarify.

*The passage has been removed.*

Page 11

Lines 23-26. Material for methods

*The sentence was moved to Section 4.5.*

Page 12

Line 12. While some regional features...

*Done*

Line 20. The maps exhibit ... features. Please, consider to remove, not needed.

*Done*

Line 24-25. Rephrase

*Done*

Page 13

Lines 1-10. Please, clarify why you have performed this analysis and what are the main findings.

Not clear at all. Furthermore, this mostly material for methods.

Line 4. Clarify to what correlations these numbers refer.

Lines 5-6. Counterintuitive result, please clarify.

Line 14. Please, add reference “droughts is one of the most costly hazards”

*Done*

Page 14

Line 18. It is interesting to analyse? Let the reader think if it is interesting or not.

*We modified the sentence.*

Page 16. I still think that the paper would benefit if this part would be removed completely.

This is not related to your findings, It does not add any relevant information.

*We carefully evaluated the paragraph and its relevance for the paper. We believe the provided information is very relevant for drought management and for the discussion whether universal or specific indices are needed. Hence, we prefer to keep it in the paper.* Line 33.

Personal communications by who?? Please, use appropriate references.

Page 23. First two references are reported wrongly.

*Done*

Figure 2. It would be useful to see the number of stations used for the boxplots

Figure 3. Add color palette

*It is indicated in the legend that colour codes are those of Fig. 1. For the sake of a optimal layout we prefer to leave it unchanged.*

Figure 6 and 7. Panel a and b are redundant, please remove them. In panels c-h, use larger dots.

*It is right that the lines and points are also shown in individual panels, but the synoptic view provides additional, complementary information to the individual plots. We therefore prefer to keep panels a and b. In panels c-h and a we increased the symbol size.*

For the reference stations of altschaining use a different type of line, is confounded with the y=0 line. I suppose that each gray line is a station in panels i-n. Please clarify in captions.

*Line signature of Altschlaining was changed and grey lines were explained in the caption.*

Figure 10. Explain the meaning of seasonality in caption. Change colour for potentially ongoing (not extreme) and potentially ongoing (most extreme) to improve visual distinction.

*Done*

Table A1-A3. I suppose that numbers refer to return period. Please clarify in caption. Bars on the right are redundant and do not add relevant information, please consider to remove them.

*We added this information.*