

Interactive comment on “Estimating drought risk across Europe from reported drought impacts, hazard indicators and vulnerability factors” by V. Blauhut et al.

Anonymous Referee #2

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General Comments: The timing and relevance of this team's work aimed at linking and predicting drought indicators with impacts (vulnerability) is very good. The methods and results bring a much needed perspective and valuable contribution to the literature and better understanding in the field in my opinion. The fact that systematic drought impact collection is sorely lacking, or non-existent in many cases, illustrates the need for more resources to be directed at such efforts moving forward as a way of establishing a baseline for how we have been, are and will be affected by future droughts in a changing climate. The lack of a long, comprehensive record of impacts is not the fault of the authors and in fact the development and maintenance of the EDII moving forward is critical for future works like this.

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This study attempts to better quantify the relationship between the drought hazard and our risks/vulnerability to the hazard. The paper is well written and is only in need of minor changes in order to be suitable for publication in HESS. These suggested changes are outlined below.

Specific Comments: In the Abstract, I would avoid acronyms (unless spelled out) as many of the readers may not know what NUTS stands for, whereas with the SPEI you did spell out what that stands for.

Page 9/Lines 10-11: As for describing the two groups of indicators, I would argue, in general, that there are “single” and “combined” indicators. Introducing “indices” just for the combined is confusing and more importantly inaccurate. Combined, or composite, indicators “can” be indices, but often times are not. To be consistent, I would stick with describing both groups as “indicators” and not just categorize combined as indices as single indicators can be indices as well.

The same logic should apply for the occurrence on Page 5/Line 26. ...for the combined, I would list this as indicator or at least point out that it can be an indicator or index. In fact, you then point out the EDO's CDI on the next page, which gives a nice example of a combined “indicator”. Being consistent with the terminology throughout will help avoid confusion and more importantly it will help the reader in the end.

Page 9/Line 13: The USDM is a combined “indicator”, not an index. In truth, it combines both indices and indicators and given the fact that indices are indicators themselves, it is best to describe it as an indicator.

Page 17/Line 13: Any ideas as to “why” all impact categories have reported impacts post-2000? Is this simply due to more contemporary collection methods for incorporation into EDII by the team that built the database?

Page 25/Lines 8-15: Good to see the “fire” issue included as it is very hard to discern regular fire season activity from drought exacerbated fire. Temperatures also play a

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key role, particularly winter temps. Fuel loads and such are often tied to much longer time frames leading up to the fires themselves with droughts providing the trigger in many cases after forest stands are vulnerable to pests and disease, and thus mortality.

I would like to see the Figures, 2-6 in particular, be larger in order to be more readable. I do like the format for Figures 4-7.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 12515, 2015.