

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

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Referee #2 Many thanks for the positive evaluation of our work. We highly appreciate your comments and suggestions which will clearly help us to improve the submitted manuscript. Please find our response to your questions and suggestions below (we first repeat the referee’s comment in italic and then provide our answer)

1. Indicators vs. index Thanks a lot for highlighting this issue. Indeed, the terminology of indicator, indices and combined indicators in this paper has not been used appropriately, even though it has been defined. The mixture of terminology is, unfortunately, taking place throughout literature. Reconsidering Hayes 2000, Zargar et

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al.2011, Vicente-Serrano 2012 this paper will follow the terminology as following:

Drought indicator: are variables that directly measure climatological parameters, such as precipitation, temperature, etc.

Indices: are quantitative measures that characterise drought levels by assimilating data from one or several drought indicators

Combined drought indices: a combination of several drought indicators and or indices that are categorised to relative drought hazard severity levels

We will change the text according to these definitions in the revision. Still, the 'Combined Drought Indicator' of the EDO is a proper name, and thus we will have to keep this, but will use mainly the acronym after defining it.

2. 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?

We assume the occurrence of reported impacts from 2000 onwards to have several reasons. More than by the information collection bias of the EDII contributors alone due to their professional backgrounds and focus of interest. However, we assume that this 'trend' is mainly caused by an increased reporting behaviour (governmental and news) due to an increased awareness of natural hazard impacts and the possibility of easy and fast communicated information (internet). Nevertheless, we cannot exclude the fact that Europe is warming and that we see an increase in drought area (defined using the SPEI) in the Mediterranean region, notable from 1990 onwards (Stagge et al., 2016). We will add some more details to this fact in the discussion.

3. 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 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

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cases after forest stands are vulnerable to pests and disease, and thus mortality. Thank you.

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

Indeed, larger images are desirable, but the amount of information provided is very high. Since we decided to focus on the differences between e.g. impact categories or hazard severities, it was found to be important to have all information comparable on one site. Thus, we prefer to keep this information level. We will try to work with the graphics directly to improve readability and will maximize the size of the figures in the final HESS layout (which is considerably larger than the Discussion paper format)

5. I do like the format for Figures 4-7.

Thank you.

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

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