

Interactive comment on “Temporal variations and change of forest fire danger in Europe in 1960–2012” by A. Venäläinen et al.

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Authors reply:

We would like to thank the Referee for the comments. We agree that FWI (or any other similar index) cannot predict the burned area or the number of fires as there are many other factors influencing fire ignition and spread (including the impact of human activities). However, the main motivation for this study was to examine the influence of climate change on the fire risk in order to be able to establish the background for the assessment of the impact of other factors (human, socio-economics) on fire occurrence. We found that weather- and climate-induced fire danger has increased during the recent decades in some parts of Europe (while in other parts there is no change).

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This change follows the predicted spatial patterns of climate change; reduction of precipitation and of rise temperature in the region where the fire danger has increased. This and similar studies set benchmarks regarding the relative, and not absolute, contribution of weather in area burnt. In addition we have also compared the relationship between FWI and burned area for three regions and the results indicate that FWI can, to some extent, predict the real burned area. Interesting finding is that same time when FWI indicates increased fire danger for the Mediterranean area the burned area has decreased. This indicates there has been positive development in fire management in the region

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