

## ***Interactive comment on “A first wildfire risk assessment for Belgium” by Arthur Depicker et al.***

**Anonymous Referee #2**

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The manuscript “A first wildfire risk assessment for Belgium” presents a wildfire ignition probability map for Belgium using GIS techniques and probability rules. The database and applied methodology attempt to indicate the spatio-temporal manner of wildfire ignition in Belgium. The topic is within the scope of the Journal; wildfire is an environmental problem, which can cause a host of natural hazard and human health impacts. The manuscript focuses on an interesting topic, however I think there are some critical issues which should be considered before publishing the paper. The manuscript can be accepted after paying close attention to the following points and making the necessary revisions.

1. The authors are recommended to revise the structure of the paper and use of numbered outlines.
2. Anthropogenic factors and natural factors are known as the reasons behind the wild-

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fire ignition in Belgium. It could be useful to provide the spatio-temporal map of these factors to characterize the superiority of human factors.

3. Page 6, lines 12-13 “The Flemish soil and land use layer date from 2016 and 2014, respectively, while those from Wallonia date from 2007 and 2016, respectively”. The expressions “from 2016 and 2014” and “from 2007 and 2016” are not true. Please revise these expressions.

4. Page 2, line 18, Page 6, line 19, line 27, Page 7, line 10, line 16. What do you mean by “Section”? Please mention the name of the desired section.

5. Please use a flowchart in the methodology part of your manuscript to describe your methodology step by step.

6. Page 13, lines 4-6, “All together, it seems that the best way of preventing wildfires is perhaps to exclude human activities in the most fire prone areas and increase the awareness among the general public, so that people become more aware of the danger they pose to their natural environment”. The proposed solution “to exclude human activities in the most fire prone areas” does not seem to be scientific and logical to prevent wildfire. Please search about other solutions and methods to prevent wildfire and control it.

7. According to the Figure 4, Although the summer is warmer than spring but most wildfires have occurred in the spring. Is there any scientific and specific reason behind the wildfire in spring?

8. As can be seen from Figure 5, the number of ignitions has increased between 2009 and 2015. Is there any relation between climate change and the number of ignitions in this period? I mean what is the reason behind the increasing the number of ignitions in this period?

9. The conclusion part is explained superficially. Please explain this part more precisely.

10. The authors are recommended to analyze climatic data (temperature and precipi-

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tation) in meteorological stations close to the wildfire places to understand the relation between climate condition and wildfire ignition. The authors can use the data of some sample places in the Belgium to clarify this topic.

I hope that these comments will help improve the manuscript.

Good luck.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2018-252>, 2018.

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