Natural Hazards and Earth System Sciences
Discussions

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC1
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Comment on nhess-2021-173

Anonymous Referee #1

Referee comment on "Drivers of extreme burnt area in Portugal: fire weather and vegetation" by Tomás Calheiros et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2021-173-RC1, 2021

The paper "Spatial variability in the relation between fire weather and burned area: patterns and drivers in Portugal" aims at analysing large (>100 ha) summer forest fires in mainland Portugal. Although the dataset is sound and of potential interest, I found several flaws in the methods and results interpretations. The use of statistics is not always appropriate, expecially the use of OA, UA and K (they are used for classification accuracy against a reference). Furthermore no analyses on the spatial pattern are provided, simply a description of the maps. The relationships between LULC and weather and fire occurence need to be deepen analysed. The authors need to clarify and explain better the reason why they divided in cluster the dataset, the significant differences between groups,.... Other multivariate analysis methods can be adopted considering more variables (e.g. geographical gradients, inhabitants,...) in order to obtain a strong explanatory analysis and then building relationships or models to be tested.

The discussion section is mainly a list of municipalities in the different groups or sentences related to parameters not considered in the study. The first part is belonging to methods. The conclusion is redundant, repeating results and discussion elements.

In its current version I think the manuscript needs a complete revision and is not eligible for publication.