

## ***Interactive comment on “Modelling post-fire vegetation recovery in Portugal” by A. Bastos et al.***

**Anonymous Referee #1**

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The paper does not represent any substantial contribution to the scientific progress in forest fires, mainly because this manuscript does not introduce anything new really robust to that published by Gouveia et al. 2010. I think that the longer length of the time series or the application of the method to three new fires is not enough to accept this manuscript as a innovative or original paper. Moreover, the relationships between recovery rates and fire damage or previous land cover types are not scientifically robust. Their conclusions are based only on a qualitative assessment and on erroneous assumptions resulting in confounding results. In the case of recovery vs fire damage, as the authors indicated in the introduction, and later, they contradicted, pre-post NDVI difference introduce error in fire severity/damage estimation. Using an absolute measure as this could lead to incorrectly characterizing burn severity in pixels which contain less pre-disturbance chlorophyll on average than the surrounding landscape due not

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only to differences in the amount of cover but differences in the type of vegetation present (Miller and Thode 2007). Hence, the relationship between severity/damage (NDVI diff) and recovery (derived from NDVI) are mainly based on NDVI by itself and then, it is a circular relationship without any physical basis. In relation to recovery vs land covers authors said that recovery was faster in regions with higher cover of transitional woodlands-shrublands than in conifer woodlands; but results indicated (table 4) that clusters 1 and 3 in RIII showed similar % of coniferous forests but different recovery times; rejecting such hypothesis, and giving place to incongruencies between data tables and results.

The results are plenty of paragraphs that later, they are repeated in discussion. The paper is full of assumptions without significant evidences. There are a lot of errors in figures and captions. Hence, I think this paper would be a oral presentation in a congress or gray paper, and I reject it to be published as a top scientific paper.

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