



Regional differences in the spatial distribution of the negligent and intentional wildfires in Portugal

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Portugal is the European country with the highest number of wildfires and the second with more burnt area. Wildfires are mostly caused by human activities, whether by accident, negligence or arson. For this reason, the main objective of this study is to better understand the fire regime of human caused wildfires (negligent and intentional) for the most recent years 2001-2014 in the five Nomenclature of Territorial Units for Statistics II (NUTS) regions of mainland Portugal. The methodology consisted of identifying and characterizing: (i) the wildfire incidence's spatial patterns; and (ii) the main wildfire drivers' patterns. The results are presented in terms of normalized number of wildfires (NNF) and burnt area (NBA), and disclose an uneven south-north spatial gradient distribution of the fire incidence with higher values in Norte region, more evident in intentional wildfires than in negligent wildfires. The main drivers' influence is higher for intentional than for negligent wildfires, for southern than for northern regions, and for NBA than for NNF, and they show a higher influence on NNF of distance to roads (d), population density (pd) and altitude (h), and, on NBA of h, d, s (slope), and pd.

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