



Vegetation fire proneness in Europe

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Fire selectivity has been studied for vegetation classes in terms of fire frequency and fire size in a few European regions. This analysis is often performed along with other landscape variables such as topography, distance to roads and towns. These studies aim to assess the landscape sensitivity to forest fires in peri-urban areas and land cover changes, to define landscape management guidelines and policies based on the relationships between landscape and fires in the Mediterranean region. Therefore, the objectives of this study include the: (i) analysis of the spatial and temporal variability statistics within Europe; and, (ii) the identification and characterization of the vegetated land cover classes affected by fires; and, (iii) to propose a fire proneness index.

The datasets used in the present study comprise: Corine Land Cover (CLC) maps for 2000 and 2006 (CLC2000, CLC2006) and burned area (BA) perimeters, from 2000 to 2013 in Europe, provided by the European Forest Fire Information System (EFFIS). The CLC is a part of the European Commission programme to COoRdinate INformation on the Environment (Corine) and it provides consistent, reliable and comparable information on land cover across Europe. Both the CLC and EFFIS datasets were combined using geostatistics and Geographical Information System (GIS) techniques to assess the spatial and temporal evolution of the types of shrubs and forest affected by fires.

Obtained results confirm the usefulness and efficiency of the land cover classification scheme and fire proneness index which allows to quantify and to compare the propensity of vegetation classes and countries to fire. As expected, differences between northern and southern Europe are notorious in what concerns to land cover distribution, fire incidence and fire proneness of vegetation cover classes.

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