



The fire regime in Portugal

M. G. Pereira (1), R. M. Trigo (2), J. M. Pereira (3), B. D. Malamud (4)

(1) Departamento de Física, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal (gpereira@utad.pt), (2) Universidade de Lisboa, CGUL, IDL, Lisboa, Portugal, (3) Departamento de Engenharia Florestal, Instituto Superior de Agronomia, Universidade Técnica de Lisboa, Lisboa, Portugal, (4) Department of Geography, King's College London, UK (bruce.malamud@kcl.ac.uk).

This paper addresses the wildfire regime in Portugal. The wildfire regime is a collection of fire attributes in a given ecosystem or region, such as: spatial and temporal distribution and extent of the fires, duration, seasonality, return intervals, intensity, predictability, date of occurrence, fuels involved, etc. Wildfire regimes of a given biome at regional or at country level can aid in further analyses of that area. Aspects of fire regimes in different ecoregions have been documented for a number of areas, such as Australia, USA, and Canada. The main objective of this work is to provide a comprehensive characterization of the fire regime in Portugal based on a recently updated Portuguese wildfire database for the 26 year period, 1980-2005. This is an extensive dataset of 450,000 fire records, comprising 3.0×10^6 ha burnt, or 35% of Portugal's total area. Over the period, the average was 47 fires and 316 ha burned per day, which increases considerable if only summer months are considered. We combine the wildfire records (wildfire area, location, time, vegetation) with other Portuguese environmental, socio-economic, and meteorological/climatological data, to better understand the 'cause/effect' of different factors on the Portuguese wildfire regime.