



## **Spatial and temporal characteristics of wildfire activity over the Iberian Peninsula**

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According to the official reports of the European Commission, during the period 1980-2010 the Iberian Peninsula has contributed to 60% of the total burned area of 14 620 968 ha, which was recorded in the five Southern Member States with higher wildfire activity (Portugal, Spain, France, Italy and Greece).

The aim of the present study is to assess fire activity over the Iberian Peninsula based on time series of hot spots extracted from the MODIS global daily active fire product (MOD14A1 and MYD14A1). This dataset, which contains the coordinates of MODIS pixels where fire events were identified together with the respective date and quality indicators, covers the period from July 2002 to August 2012.

It is first shown that overall hot spot activity exhibits power law behaviour. A spatial analysis is then undertaken based on land cover information as obtained from Globcover - an ESA initiative relying on observations from the 300m MERIS on board the ENVISAT. Temporal analysis of hot spot activity is also performed based on daily information about meteorological conditions provided by the European Centre for Medium-Range Weather Forecasts.

Results obtained allow defining a set of fire regions over the Iberian Peninsula determined essentially by the respective land cover type, which present coherent statistical behaviour in space and time. Finally, models of fire risk are developed for each region and their potential operational use by forest and civil protection services is discussed.