



Wildfire regime and territorial features

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Some papers appeared in the last few years showed how a population of data relevant to wildfire can be distributed as a power-law in order to represent its frequency-area relationship. On this basis, one can think to identify a spatial region by its own wildland fire regime, which can be represented by the recurrence intervals for given burnt area, which is fully described by the power-law.

In principle, the greater the considered region, for a given time interval, the more reliable is the estimate of the recurrence interval, because greater is the number of the considered occurred fires. However, the aggregation of the available information over a given region in a unique power-law can be misleading, since the considered region may consist of various sub-regions characterized by significantly different wildfire regimes. Actually, one can consider the problem of finding a partition of a given region where one can suspect that there may be reasons leading to different characterizations for various sub-regions. Such reasons may correspond to differences in the vegetation cover, in topography, in climate, as well as in anthropic-related issues, like land use, and socio-economic characteristics.

In the present work, a methodology for a regional partitioning able to identify, over a wide regional area, a number of zones (regions) characterized by different wildfire regimes is presented and discussed.

A case study relevant to Liguria, a region placed on the north-western coastline of Italy and frequently affected by severe wildland fires occurrences, is analyzed, in order to evaluate the effectiveness of the proposed approach. An analysis of the results will

be carried on aiming at highlighting the relationships existent among some territorial features characterizing the obtained zones and their recurrence intervals.