

UNIVERSITY OF FLORENCE – FACULTY OF AGRICOLTURE
FIRST LEVEL UNIVERSITY DEGREE IN: Scienze Forestali e Ambientali

LAUREA THESIS IN: Internship

TITLE OF THESIS: Analysis of forest fires that occurred in the years 2011-2012 in
the territory of the “Unione dei Comuni del Pratomagno”
(Tuscany)

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ABSTRACT

Italy has an estimated forest area of about 10.5 million Ha, approximately 35% of the national area, and it's steadily increasing. Always, unfortunately, together with the enormous natural heritage, also fires are part of our territoriality. However, until the 60s (the period to which date back the first statistics) the phenomenon has remained quite low. It's from the 70s, and for the next 30 years that the phenomenon has taken on the characteristics of high gravity, taking on extremely significant sizes.

The causes of this increase must be sought partly in the changing climatic and environmental conditions and partly in the social-economic changes, especially with regard to the exploitation of burned areas for the benefit of building, agriculture and sheep farming.

From the late 90s until today it has detected a significant decrease in the number of events, mainly due to the establishment of more stringent laws and regulations against the arsonists, but mainly thanks to the introduction of rules that prevent the exploitation of the areas covered from the fire and minimize any possibility of gain from the destructive events (such as the "Land Register of forest fires", Law No. 353/2000).

The present thesis examines the fires in Tuscany in 2011-2012, especially the events that took place in the territory of the “Unione dei Comuni del Pratomagno”, of which I have dealt with during the internship experience.

Initially, the text provide an overview of forest fire on the organization of the Tuscany region, its expertise and its structures, the territory in question, the various charities in the area and their particular importance.

Then we will deal with regional statistical data related to the fires that occurred in 2012 on the whole territory of Tuscany, in particular on the temporal and spatial subdivision of individual events and with any crossed surface. These data are then compared with those statistics of the previous five years 2007-2011, in order to examine the annual trend of the various events.

With the data provided by the “Corpo Forestale dello Stato” of Loro Ciuffenna and by “UC Pratomagno”, it was possible to develop a series of graphs that allow you to evaluate the different characters (environmental, temporal and operational), relating to the territory in question, of every single event.

Because of the asymmetrical distribution of data related to fire, the average of the values doesn't provide a correct information of the phenomenon, for this reason in the treaty it is preferred to use, for the main representative values of the phenomenon, the median.

The values obtained by processing the described above data are then compared, where possible, with those relating to the fires occurred on a regional scale. Will be subsequently assessed the different results obtained at the local level by the management of forest fires by UC Pratomagno.

It's important to note that this organization has reached a good level of organizational management "AIB" (Anti Incendi Boschivi, transl. Anti-forest fires). Both at the level of prevention (with the implementation and maintenance of fireguard roads, forest roads and other works and structures useful in the activity AIB, training and information of people and the compilation of the "Land Register of forest fires"), both also at the operational level. The response times are quite low, they have a good presence on the territory and a good cooperation with voluntary associations.

Finally, though, we had to see how the resources and funding grossly limited and limiting the different activities AIB, especially in the years when the fires start in periods outside of those at "high riskiness".