

Introduction

Based on the existing data on forest fires in Portugal, the project goal is identifying possible solutions to decrease the fire occurrences and therefore contributing to minimize its impact on people and properties.

Problem

Forest fires are one of the most serious natural disasters that occur worldwide and very particularly in Portugal.

The high number of fires as well as the enormous extension of affected land mean together a strong impact not only on the country economy but also on its environment, people and properties. In consequence, the knowledge on its causes and propagation are relevant ways to fight and avoid them.

The project will try to find out some relationships and dependencies between the forest fires and several kind of factors as follows:

- air temperature and climate conditions;
- year season;
- geographical area;
- vegetation;
- main cause;
- response time;
- people density;
- surveillance.

Benefits

Due to the relevant consequences caused by the forest fires, all population, mainly the one usually living in more affected locations, and the country economy in general could benefit from the project conclusions.

Data and Sources

The data for the project comes mainly from ICNF (Instituto da Conservação da Natureza e das Florestas - Institute for the Nature and Forest Conservation) web site. There is available data since 1980.

The data includes figures, by time and location, on the type of fire, burnt area, its possible cause, and type of vegetation, among other kind of data:

<http://www.icnf.pt/portal/florestas/dfci/inc/estat-sgif>

Additional data, from Pordata web site, related to climate and people density data, is also going to be used:

<http://www.pordata.pt/en/Subtheme/Portugal/Environmental+Pollution+and+Climate+-86>

<http://www.pordata.pt/en/Municipalities/Population+density++according+to+the+Census-591>

In order to cross the stated data with other more detailed data concerning the kind of trees and vegetation per geographical region, some data from ICNF is also available and it could be collected:

<http://www.icnf.pt/portal/florestas/dfci/inc/estat-sgif>

Analysis and Approach

The data coming from the data sets above mentioned is going to be treated in order to reach the relationships described in the **Problem** section.

Deliverables

The outcomes are describing on a report paper detailing the steps done for this purpose as well as the analysis on the data, its methodology and approach.

A slide presentation is also going to be produced.

Every piece of code developed for this project is going to be included.