ID496

PO100 - ENHANCE THE KNOWLEDGE OF WILDFIRE IGNITION CAUSES AND MOTIVATIONS IN PORTUGAL AND SPAIN: PATH DEVELOPMENT, TRENDS AND NEEDS

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Understanding the reasons why wildfires start is fundamental to reducing the number of occurrences since this knowledge allows for the creation of prevention measures suited to the needs of each territory.

Overly simplistic explanations of wildfires encourage decision-makers to consider firefighting the main solution to harmful wildfires. Most of the research has been focused on the statistical exploitation of the wildfire causes data from the official wildfire databases without questioning the validity of the causes and motivations there identified that are supposed and not real.

This study aims to understand the recent trends and characteristics of the causes and the main problems in the investigation of the causes in both Portugal and Spain and the recent progress. Firstly, the national wildfire databases are analyzed using several statistical methods. Secondly, interviews with ten experts from both countries with activity in the investigation of the causes for several years.

Both countries adopt different classifications of ignition causes. The impact of these different options is evaluated in the sense to help each other country to improve their policies. Apparently different information (data described properly in a certain frame of reference) support different forms of knowledge (driven by experience, values, contextual understanding of the specific situations, application, intuition, and beliefs). The aim is to find the best-shared knowledge to make good decisions.

The acceptance of fire as a fundamental part of the environment in both countries and the traditional ecological knowledge must be accommodated in the investigation of the causes framework this research presents.

ID513

PO91 - FUEL MANAGEMENT OF FIRE-ADAPTED INVASIVE SPECIES – ONE SIZE DOES NOT FIT ALL

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Areas invaded by fire-adapted species are usually associated with increased fire hazard. Fuel management in these areas may be challenging given the feedback loop that develops between disturbances and invasions. We studied the two-way relationships between fire and two ecologically distinct, invasive woody species of Australian origin (Hakea sericea and Acacia dealbata) occurring in Portugal, aiming at: a) assessing the changes in fire hazard in invaded areas and b) testing the use of prescribed fire treatments for their control. Hakea sericea strongly increases fire hazard when compared to the most hazardous native vegetation, as shown by fire behaviour simulations. In A. dealbata there is a considerable difference between young and adult stands, with the latter showing lower fire hazard compared to most native vegetation, due to the compacted litter and the suppression of understorey. Fuel management techniques were tested through eight experimental blocks of treatments for each of the two species. Each block featured slash, burn and slash-and-burn treatment plots, together with a control plot. Plots were monitored over three years to record survival, resprouting, seed dispersal and germination. All treatments applied to A. dealbata revealed to be ineffective due to strong germination and resprouting, but H. sericea stands were successfully eradicated by applying slash-and-burn treatments associated with a high residence time. Therefore, the two invasive species revealed very distinct fire-related characteristics, and our results show that a one-size-fits-all approach is far from being appropriate in the fire management of invaded areas.