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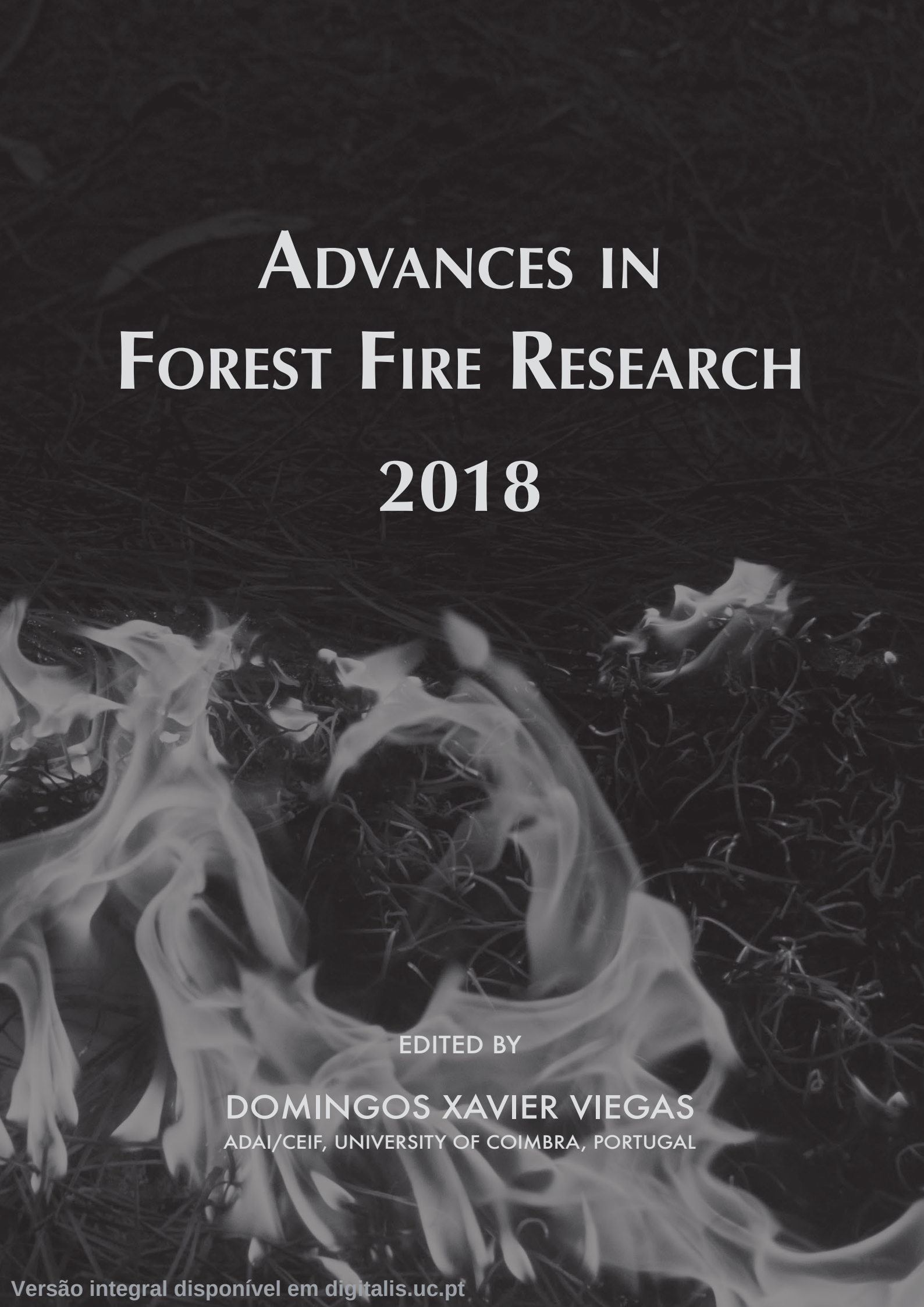

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WUI, Planning and fires in South of France

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Abstract

In France, after a slowdown following the 2008 crisis, there has been an increase in urbanization. Since 2015, in the French Southern region, there has been an increase of urbanization in risk areas. Decision-makers and especially city councilors are greatly involved in the land management because of their capacity in decision-making on diverse topics such as planning and naturals risks. Concerning fire risk, they need to get a correct knowledge of the fire ignitions occurring within their community in order to be able to secure a place, inform the population and ensure fire prevention

Urban sprawl has progressively gained land classified in "NB" (large building plots in natural or agricultural areas) or abandoned by agricultural activities, by creating an interface zone where habitats and natural spaces are intertwined. The coexistence of spaces and continuities often unkempt, with dense vegetation, creates the conditions for the outbreak and the spread of fires in a complex area, difficult to defend. (In France, 25000 ha / year are urbanized mainly at the expense of agricultural, natural and forest areas).

In this context, this study aims at providing decision-makers with all useful information about fire ignitions and their specialization in the community, especially in the wildland-urban interfaces taking into account the planning and the mandatory brush-clearing area and taking the *département de l'Hérault* as the study area.

The studies and results proposed in the paper are a part of a Natural Risk program founded by the French Ministry of Environment. It will give an analysis and information to stakeholders concerning relationships between land planning, WUI and wildfires in their municipality. The aim is to provide knowledge of habitat vulnerability to wildfire and the opportunity of a careful consideration of new urbanization zones. The high demands of land along the Mediterranean coast and hinterland have issued a large extension of urban areas near natural or rural land, creating new WUI at risk.

A spatial analysis of the points of departure of fire was carried out with the taking into account of various aspects: fire ignitions and interfaces types, fire ignitions and land use, fire ignitions zoning in planning documents.

We try to find relationships between fire ignition location and planning document according to the LULC in the study area in the context of WUI.

The results confirm a strong relationship between WUI and fire ignition. In the WUI the fire density is three times higher than outside.

Considering this, a decision support tool was developed to help the stakeholders to simulate the new WUI configuration for new buildings and development zone in connection with the existing WUI.

Keywords: Wildfire, wildland urban interface, planning, fire risk, decision making

1. Introduction

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