



How much management is enough? Stakeholder views on forest management in fire-prone areas in central Portugal



Sandra Valente^{a,*}, Celeste Coelho^a, Cristina Ribeiro^a, Hanspeter Liniger^b, Gudrun Schwilch^b, Elisabete Figueiredo^c, Felicitas Bachmann^b

^a Centre of Environmental and Marine Studies (CESAM), Department of Environment and Planning, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal

^b Centre for Development and Environment (CDE), University of Bern, Hallerstrasse 10, 3012 Bern, Switzerland

^c Department of Social, Legal and Political Sciences. GOVCOPP – Research Unit on Governance, Competitiveness and Public Policies. University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal

ARTICLE INFO

Article history:

Received 13 November 2013

Received in revised form 18 December 2014

Accepted 16 January 2015

Available online 9 February 2015

Keywords:

Forest management

Forest fires

Perceptions

Forest owners

Forest stakeholders

ABSTRACT

With the increasing pressure to improve the contribution of forests to help dealing with global changes, it is critical to understand the different perceptions of those involved in the forest. How do forest owners, managers and members of local communities who often depend on the forest, value it and what are the problems affecting the forests in terms of being able to meet these new challenges?

In Portugal, this task has taken on an even greater priority as more than 90% of the forest is private and forest management relies on the individual decisions of thousands of forest owners. To understand stakeholder views on forest and forest management, a transversal social perception survey was implemented in the form of a case study of central Portugal which included decision-makers, local technicians, forest owners and the general public.

The results show that there is a consensus on the main issues affecting forests and forest management. A shift from *classic forest owners* to the emergence of *indifferent forest owners* was observed, although this shift has not been recognized by the forest owners in the survey, who maintain the individual management of their properties.

© 2015 Elsevier B.V. All rights reserved.

1. Introduction

The international and national political agendas regarding forests are changing so that they include a greater integration of global challenges, local needs and interests. These new agendas have brought new stakeholders onto the scene as well as a whole set of multiple perceptions, values, attitudes and interests regarding forests and the forest sector came alongside (Fabra-Crespo et al., 2012). The progress towards Sustainable Forest Management (SFM) is now anchored within the recognition of the need to work together with forest stakeholders and to take their perceptions, preferences and behaviours into consideration.

Rametsteiner and Kraxner (2003: 43) argue that “Whatever the actual state of Europe’s forests, it is the public’s view on issues that counts possibly as much in forest policy and business”. This statement underlines the importance of assessing social perceptions when it comes to understanding forest management views and practices as well as the importance of increasing public awareness about the

socio-economic, environmental and cultural relevance of forests (Dolisca et al., 2007). It also identifies areas of agreement and conflict among the various forest stakeholders (Elands and Wiersum, 2001; Ní Dhubháin et al., 2008). Fabra-Crespo et al. (2012) argue that talking to the people involved in the forest sector at various levels is essentially the key to effective management of natural resources. In fact, it is essential when it comes to foster mutual understanding, decision making and overall management of forests. This may also have an important impact in increasing societal acceptance and implementation of decisions (Valkepää and Karpinnen, 2013).

The aim of this paper is to discuss the results of a survey on people involved in the forest sector. It is based on qualitative variables about forest values and forest management practices in areas of high fire risk. The main criterion in selecting the case study is to focus upon small-scale private holdings of maritime pine and eucalyptus. For this reason it was chosen the municipality of Mação located in the central region of Portugal.

Following a theoretical debate outlining the various types of forest owners, the values of the forest and the issues affecting forest management (Section 2), the methodology is presented (Section 3). Section 4 discusses the results of the survey, which are discussed in the light of the theoretical assumptions (Section 5).

* Corresponding author at: CESAM/University of Aveiro, Portugal.

2. Theoretical assumptions

Based on public opinion surveys carried out in various EU countries in the last 20 years (e.g. O'Leary and Elands, 2002; Wiersum and Elands, 2002; EC, 2002; Rametsteiner and Kraxner, 2003; Elands et al., 2004; Wiersum et al., 2005; Rametsteiner et al., 2007; EC, 2009; Elands and Praestholm, 2008), and aiming to understand the values underlying forest management practices, this research was guided by three main hypotheses: 1) a shift from *classic owners* to *hobby owners* or *indifferent owners* is occurring in private small-scale forest holdings; 2) forests and forestry are increasingly valued for their environmental amenities; 3) the absence of forest management is a major driving force for wildfires.

As far as the first hypothesis is concerned, it can be stated that in the past, both in Europe as in Portugal, small-scale forest owners have been economically dependent on their forests, as a complementary activity to farming and for the provision of forest products such as forage and fuel wood. Nowadays, these owners (due to their age) or their heirs are demonstrating a relatively low interest when it comes to the economic role of their forests. O'Leary and Elands (2002) argue that the majority are becoming either disinterested or environmentalist in their objectives. The economic dependence upon forest resources decreased drastically due to rural out-migration and a decline in primary activity. This decline is in line with changes within broader rural development strategies, where a transition is taking place from a rural modernization perspective to a rural restructuring one (Wiersum et al., 2005).

In general terms, there are a number of factors responsible for the logistics of forest ownership which range from more tangible aspects, such as the conditions and the characteristics of forests, to intangible criteria, such as the societal value given to the forest, or the importance of the forest as a legacy or the future perspectives of the forest (Kline et al., 2000; Bieling, 2004; Boon et al., 2004; Wiersum et al., 2005; Elands and Praestholm, 2008). While the former factors can be analysed through quantitative data, the latter are better understood through the use of a more qualitative approach, namely through the assessment of the forest owners' perceptions.

Academic literature shows that the global current profile of small-scale forest owners may be summarized in four main types. The first type – the *classic forest owner* – represents the owners that are mostly concerned with the financial return from their forests; however legacy also plays an important role (Boon et al., 2004; Elands and Praestholm, 2008). The forest owners may also value the environmental and recreational aspects of forests, evolving to type 2 – *multi-objective owner*. The third type is the *hobby* or *environmentalist owner*, mostly valuing the environmental and the aesthetic role of forests. Finally, the fourth type is the *indifferent* or *passive owner*, who has no further objectives besides keeping the forest property within the family. Wiersum et al. (2005) state that *hobby owners* and *indifferent owners* are becoming more and more important across Europe. In fact, the social changes related to rural-urban migration, and the intergenerational transfer of the land, suggest a potential increase of the *indifferent forest owners* in the future and they will replace the more traditional type of *classic forest owners* (Heino and Harvonen, 2003; Wiersum et al., 2005). This may have important effects on forestry purposes and management practices (Heino and Harvonen, 2003).

Portugal follows in line partly these aforementioned trends in which the presence of *indifferent owners* is increasing, but the environmental and recreational functions are still undervalued by forest owners (Baptista and Santos, 2005; Radich and Baptista, 2005). This is especially true in the central and northern regions of Portugal, where small-scale forest holdings prevail and where forest owners are considering zero intervention as the only economically viable option for their land.

As far as the increasing social value attributed to the environmental functions of the forest is concerned, important changes have taken place in Europe over the past decades. The productive function of the forest, related to the production of timber and other tangible goods, is a

major role of forests in fulfilling the increasing social needs for raw materials and also in sustaining the rural economy. But forests are increasingly perceived as green and natural environments and less as an economic activity or a service provider (O'Leary and Elands, 2002; Heino and Harvonen, 2003; Rametsteiner and Kraxner, 2003; Boon et al., 2004; Elands et al., 2004; Ní Dhubbáin et al., 2008). This has been confirmed in several surveys, that have been carried out in Europe (Elands and Wiersum, 2001; Elands et al., 2004; Wiersum et al., 2005; Ní Dhubbáin et al., 2008). The European cross-study: 'Shaping forest communication in the European Union: public perceptions of forests and forestry' concluded that European public opinion on forestry had "shifted viewpoint from a traditional commodity-based and recreational management demand to a demand for greater protection and management for ecosystem services" (EC, 2009: xix).

The preservation of biodiversity represents indeed a key concern of the EU public opinion about forests (Rametsteiner and Kraxner, 2003; EC, 2009; Forestry Commission, 2011), and this has also generated a more critical eye towards the use of resources (EC, 2009). In this sense, people are demanding more close-to-nature forest management practices (Rametsteiner and Kraxner, 2003; Bieling, 2004; Flécharde et al., 2006; EC, 2009). The valuation of the environmental role of forests is also visible in the increasing importance attributed to the SFM, to the role of forests in mitigating climate change and in protecting from natural disasters (EC, 2009). The survey from the EC (2009) also demonstrated showed that people in Southern Europe are more concerned with deforestation and climate change than with the economic use and the actual value of forests.

Despite the centrality of the environmental functions of forests within EU public opinion, the significance that people attribute to those functions may vary greatly. For example, Ní Dhubbáin et al. (2008) argue that social perceptions can be related to the history of the place, the history of forest itself and the geographical and socio-economic characteristics of the area. In Rametsteiner and Kraxner (2003) public opinion cross-study, it has been concluded that the productive function of forests is more valued in typical forest countries, such as Norway, Sweden and Austria. Moreover, another study in Ireland revealed that more positive perceptions about forestry were found in traditional forest areas when compared to planted areas (Ní Dhubbáin et al., 2008). Some studies also identified major public opposition to forestry in afforestation areas, claiming that some afforestation practices do not respect local identity and landscape aesthetics (e.g. O'Leary et al., 2000; Flécharde et al., 2006).

The third hypothesis links the lack of forest management to the severity of forest fires. Wildfires are one of the largest threats affecting the Mediterranean region, and Portugal is at the top of the list of the most affected EU countries (JRC/EU, 2010). In terms of public opinion in Europe, forest fires are also perceived as a major hazard, especially in southern countries (EC, 2009). Public opinion in Portugal is unanimous in naming forest fires as the central threat. This was observed in European surveys (EC, 2009), in nationwide surveys (Colaço, 2006; Galante et al., 2009; Ribeiro et al., 2012; Coelho et al., 2012) and in small case-study surveys (Deus, 2010; Ribeiro et al., 2010).

In the Mediterranean region, wildfires are usually caused by anthropogenic factors (FAO, 2007). The official causes in Portugal are the negligent use of fire, especially in relation to farming and grazing practices, and arson (Damasceno and Silva, 2007; Colaço, 2006). When we take national public opinion surveys into consideration, the same causes are highlighted, but arson is the cause mentioned most, followed by vandalism (Colaço, 2006; Galante et al., 2009).

But how the fires are ignited is only part of the problem. Wildfires tend to be intense in Mediterranean areas and the catastrophic fires that Portugal experienced in 2003 and in 2005 were also linked to the extreme meteorological situation and excessive near-ground fuel loads associated with the neglect of rural land (CNR, 2005; Pinho et al., 2005). Fires have been especially frequent in the maritime pine

Download English Version:

<https://daneshyari.com/en/article/91426>

Download Persian Version:

<https://daneshyari.com/article/91426>

[Daneshyari.com](https://daneshyari.com)