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From communication to public perceptions: diversity of roles and values in a planted forest. The case of the Landes of Gascony (France)

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Abstract

The Landes of Gascony forest, in the South West of France, is the most important cultivated forest in Europe, mainly planted of maritime pines for industrial purpose in the second part of the 19th century on a sparsely inhabited and swampy area (in French, 'landes' means 'moors'). This area is now an attractive place with seaside tourism on the Atlantic Coast and spectacular urbanization process whose consequence is development of forest recreational frequentation and the multiplication of wildland urban interfaces (WUI) increasing potential land-use conflicts and forest fire risks.

In this context, the aim of this paper is to analyze communication policies on Landes forest and evolution of forest perceptions by population and non-forest stakeholders (tourism sector, public authorities, etc.). As Internet is now an essential means of communication, we decided to analyze the communication on the Web: who talks about the Landes forest? On which forest role does one insist? We made a content analysis of 50 websites indexed by Google after a keyword research (in French). We compared the communication on Internet with a survey based on semi-structured interviews of 60 inhabitants living in WUI and 60 tourists walking or riding in forest areas. The aim of the survey was to evaluate public knowledge and perception of the Landes forest: what do they like / dislike? What roles do they assign to this forest and particularly, what do they know on forestry?

We show that the communication on the forest, even if it's a planted one, is not dominated by the forestry sector. While forestry institutions insist on forest economical and ecological roles (water resource regulation, carbon sequestration, etc.) tourism sector and, partly, public authorities communicate on the Landes forest amenities, selling to visitors a personal experience of "wilderness" insisting on aesthetics and cultural values. The comparison with people answers shows that population perceptions reflect more touristic messages than forester's communication.

Keywords: Planted forest, perceptions, values, communication, website, Landes of Gascony

Introduction

Perceptions of forests and recreational forest uses have been studied in Europe for a few decades chiefly in urban forests or protected areas but rarely in monospecific and intensively exploited planted forest. Yet, the total area of plantation forest currently represents 5% of the global forest cover and their importance is increasing rapidly to meet the demand for wood pulp and energy growth (Carnus et al. 2006). Some of these plantation forests, which are at first often seen as monofunctional, are located near urban or touristic areas. It is acknowledged that the relationship between people and forest is being affected by urbanization processes and changes in social values (Konijnendijk 2000). Plantation forest may also be affected by this phenomenon leading to potential conflicts on land use and contradictory forest uses and perceptions.

In this context, the aim of this study is to analyze forestry sector communication policies and evolution of forest perceptions by population and non-forest stakeholders (tourism sector, public

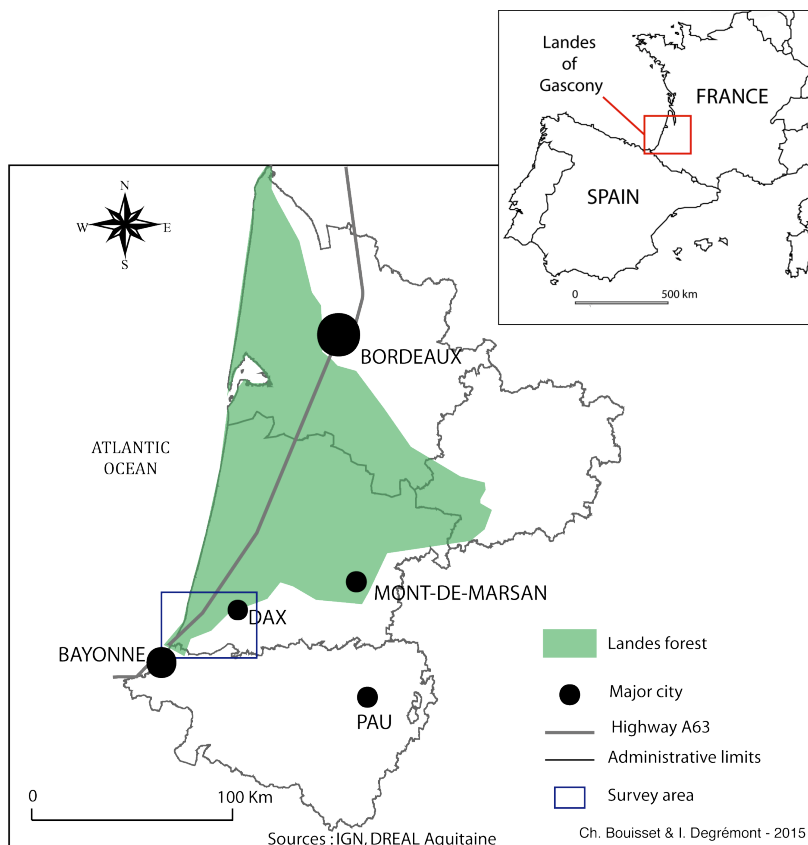
authorities, etc.) in the Landes of Gascony, a French planted forest. Communication is defined as a social interaction, "a transmission of information from one individual or group to another whether in speech or through the mass media" (Giddens 2006: 585). As Internet is now an essential means of communication, our research has focused on foresters Internet tools use to communicate on the Landes forest. Do they take into account its increasing environmental and recreational role or do they only communicate on production role and forestry practices? For what purposes?

We also wanted to know if other stakeholders have the same vision of this planted forest. We have first compared forestry sector communication with other institutions and economic sector's one. Then, we have analyzed the public —wildland-urban interfaces (WIU) dwellers but also tourists— forest perception and sensitivity to those communication messages. What roles and values do they assign to this forest? Do they relay communication messages or not?

Methodology

Case-study area

Figure 1: Landes of Gascony map



Located in Southwestern France, the Landes of Gascony region was mainly planted of maritime pines on sparsely inhabited swampy lands¹ in the 18th century, to fix dunes and fight coastal erosion, and mostly in the second part of the 19th century to provide regional economic development based on wood and pine resin harvesting. Nowadays the Landes forest covers 1.2 million hectares. 90% are planted with maritime pines and 92 % belong to private owners. As resin harvesting ceased in the 1970's, the forest is currently devoted to wood production for lumber and industrial purposes (paper and wood products) with an increasing demand for energy generation. Because of its apparent

uniformity Landes forest is often considered as a whole, even if coastal forests devoted to a protection role are less intensively cultivated and if species diversity (oaks, riparian vegetation etc.) exists on a small scale (Bouisset & Pottier 2014).

Situated near the Atlantic Ocean, the Landes of Gascony region also includes several summer holiday destinations. Consequently, this area is now very attractive with seaside tourism and spectacular

¹ In French "landes" means "moors".

urbanization process near the coastline and around the urban areas of Bordeaux (population of 1.1 million) in the North and Bayonne (population of 233,000) in the South (fig. 1). The consequence of this attractiveness is the development of forest recreational use (Dehez 2010) permitted by traditional open access and the multiplication of wildland urban interfaces with particular landscapes of houses built under trees cover (fig. 2), especially in wealthy seaside resorts. Elsewhere housing estates planning often leads to destruction of forests. In this case people don't live "in" the forest but they still live near the forest (the average rate of forest cover exceeds 65% in the Landes Department).

Figure 2: Wildland – urban interface in Soorts-Hossegor seaside resort. In the foreground: future housing estate. In the background: houses under pine trees cover. (Photo: C. Bouisset).



Websites analysis

Since the 1990s' texts and images describing places have been spreading at an unprecedented rate in Internet (Gervereau 1994; Barats 2013). It is now an important tool in institutional and individual communication. As anybody (governments, companies, non-governmental organizations, individuals...) has the power to produce contents, distribute them and read them, the web creates complex interactions between different stakeholders (Benkler 2006; Jenkins & Deuze 2008). Its contents contribute to reflect, spread and build representations and values assigned to places (Tuan 1977 & 1991; Debarbieux 1995; Bouisset et al. 2010).

We wanted to know in what terms websites talk about the Landes forest. We searched the key words "Landes of Gascony" and "Landes forest" on Google search engine in August 2013 (the research was in French language). We selected the first fifty results (further links often refer to the same websites or to pages whose real topic isn't forest) and made a content analysis of websites' texts and images. The goal of this qualitative analysis was to identify stakeholders using a website to communicate on the Landes forest and to highlight roles and values attributed to it.

Interviews

Secondly, we have compared websites communication with public perceptions. A survey, based on 120 semi-structured interviews of WUI inhabitants (60) and people walking or riding in forest areas (60), has been carried out in the southern part of the Landes forest. People have been encountered in urban areas near Bayonne between 2011 and 2013. Those places are recording important population growth and the forestry sector is nowadays less essential in local economy even though forest still dominates land use. Dwellers have also been interviewed in 2014 further inland in Dax (the capital of

the "Landes" Department) suburbs where urban growth is less important and forestry remains an essential economic sector.

The interview guide was structured in four themes (table 1) to evaluate public practices, knowledge and representations of the Landes forest. The same general themes were covered in all the interviews with recurrent questions such as: "If you had to describe this place to someone who doesn't know it, what would you say?" ...

Table 1: Dwellers and forest users interviews structure

Themes	Sub-theme
Personal informations	Identification data : place of birth, sex, age, job Address / place of stay Importance of forest proximity in residential choice / touristic destination
Forest practices	Activities (type, frequency) Visited places
Forest perception & representations	Forest description Personal values (related to Landes forest / general forest) Forest role
Forest knowledge	Tree species and natural processes Afforestation history Property Forest management & policy

The interviews have been coded through a thematic analysis procedure. The goal of this qualitative approach wasn't to obtain representative quantitative information but to gain deeper understanding of experiences and values, defined as judgments and qualities attributed by someone to something (Reser & Bentrupperbäumer 2005), that defy easy quantification (Dwyer et al. 1991).

Results

Foresters' communication overwhelmed by non-professional websites

Table 2 shows the diversity of web pages related to the Landes forest. Their owners are non-governmental organizations, public authorities at different levels, press or tourism companies... and are located both inside and outside the Landes region. Websites main goals are various too: general information, technical information, advertisement, environmental education... for general public or more specialized audiences.

Table 2: First fifty websites goals

Type	Number
Press information	13
Tourist information	11
General information & leisure	7
Forestry	7
Governmental information	5
NGO for environmental education	4
Individual (blogger)	3

The most numerous pages belong to local or national press (newspaper articles or TV news broadcast), just before tourist information pages from online travel guides or from local tourist information centers. The key word "Landes forest" also leads to forestry services and local authorities' web pages. But in fact, professional foresters represent only seven pages out of fifty and someone looking for information on the Landes forest is more likely to find general and touristic information than professional or scientific one.

Internet communication on forest: a few common and systematic topics

All websites broadcast similar information. They all mention the 'exceptional' size of the Landes forest with a lot of superlatives: "It's the greatest cultivated forest of Western Europe"; "It's the biggest artificial forest in Europe"... This size leads to consider the Landes as a singular and

exceptional place that deserves public interest: "*it is a man-made heritage*" (crpfaquitaine.fr). Indeed, another common topic is the history of afforestation and traditional forest know-how. All analyzed websites talk about men's great achievements since the 19th century to explain how the technological progress has transformed a country known as unhealthy, desert and under developed: "*In the 19th century, famous, forgotten or anonymous men conquered this 'French Sahara'*" (Graine-de-forêt.fr). They demonstrate that this forest is part of an epic tale. Moreover, they describe the local traditional knowledge and forestry techniques: old practices of pine resin harvesting, that ceased years ago to be an important part of Landes economy, are always highlighted and illustrated by photographs and old prints (fig. 3).

Figure 3: Old photograph of pine resin harvesting illustrating Wikipedia's "Landes de Gascogne" page. https://fr.wikipedia.org/wiki/Landes_de_Gascogne



Different focus

But forest descriptions are not entirely similar. Foresters, local authorities and secondarily, non governmental organization focused on environmental education, are the only stakeholders dealing with contemporaneous technical information on forest and forestry techniques and talking about forest multifunctionality. Foresters' communication particularly emphasizes forest production and economic role. Information is concrete, factual with statistics and technical vocabulary to explain forest management and wood transformation: "*More than 9000 Landes forest owners work in accordance with PEFC certified standards. They represent 786,000 hectares sustainably managed.*"(crpfaquitaine.fr). Foresters insist on the importance of sustainable management to promote ecological values and also forest ecosystemic services: "*a forest ecosystem particularly interesting in terms of biodiversity and durability of water resource. By its high productivity and the large areas which are concerned, the Landes forest widely contributes to atmospheric*

carbon storage." (crpfaquitaine.fr). Forest recreational role and importance in regional attractiveness is mentioned as well. But in foresters' communication, public forest frequentation is often linked to risk increase: they rarely insist positively on forest amenities and communicate mostly on fire danger and potential damages caused by the public.

On the contrary, online travel guides and general information and leisure pages that emphasize forest amenities, mention forest economy very briefly except the old resin exploitation. Resin harvesting occupies a more important place than actual forest management and industrial production in non-professional websites. This is particularly true in tourist information websites, even those produced by local stakeholders. Rather, they communicate on the Landes forest natural amenities. They focus more on the sensory and emotional aspects offered by nature. They strongly highlight the experience of "wilderness": "*Carefully tended but also wild, the forest is jealously protected by men*" (JeDécouvreLaFrance.com). They emphasize the peaceful atmosphere and the sensitive experience offered by this forest: "*It's the maritime pine tree forest, the "pignada", which spreads its incomparable resin scent. The peaceful atmosphere of its undergrowth provides a wealth of rare feelings.*" (Tendance33.com).

Public perception closer from touristic advertisement than foresters' communication

The survey shows that users and residents have generally the same perception and appreciate the Landes forest. They all have a recreational use of the forest. The reasons are health, aesthetics and the emotional or spiritual feeling of being in relationship with nature: *"I think it is simple and beautiful [...] there are only pines, it isn't very varied. I think the forest is wild. I feel it's breathable. With the pines under... it's wide open... it's shady but welcoming."* (Capbreton city, resident). Nature is seen in an ordinary way. Thus, if they attach great value to forest, it is not for its exceptionality but for ordinary things: common animals and vegetation such as squirrels and pine trees: *"These big trees. A tree is beautiful. Even if it's just a pine. A pine, it's ordinary, but it's still beautiful. [...] It is like being protected by something. And it's green. This forest is always green."* (Labenne city, resident).

These emotions are the result of individual perceptions and reflect perfectly the tourism sector's websites. The pine has become the symbol of the whole Landes forest. In websites, illustrations often invoke the pine silhouette, its straight trunk, pinecones, needles and its evergreen color. Finally, individual emotions and representations built an aesthetic view on the Landes forest. None of the interviewees mentions spontaneously in his description the productive function of the forest. Their experience of the forest is only to be in a welcoming nature. The Landes forest allows great free walks. This open access leads residents and users to the idea that the forest is a common property. When we asked questions about the forest origin, it appeared that they all know that the forest is artificial but they don't have a clear idea of today land ownership and forestry exploitation features and goals.

Discussion

The goal of this study was to gain deeper understanding of the significance of a planted forest for stakeholders who communicate on Internet and for public who visit it or live next to it. The emotional and symbolic aspects mentioned by the interviewees are broadly similar to those highlighted by anterior qualitative studies on nearby residents and recreational users of urban forest (e.g. Schmithüsen et al. 1992; Kalaora 1993; Schmithüsen & Wild-Eck 2000; Hansen-Møller & Oustrup 2004).

Websites and interviews focus attention on values given to the forest. They emphasize its singularity and describe it as a common natural and cultural heritage. One of the most important points is the aesthetical and ecological value attributed to the Landes both by the public and non-foresters stakeholders' web pages. Due to unrelieved landscapes, monospecific pine trees planted in straight lines and intensive silviculture, the Landes forest has often a negative image and is frequently seen as monotonous and ugly with low biodiversity among non local foresters and researchers (Arnould et al. 2002; Boutefeu 2007). Of course, interviewed people live near the forest or have been encountered in the forest: they are probably more inclined to appreciate it than the general public. Nevertheless, this case confirms that woodlands don't necessarily require being truly natural to represent nature in our societies (Harrison 1992; Coles & Bussey 2000). Being a planted forest isn't contradictory with conveying natural values. People are conscious that this forest doesn't offer grandiose landscapes or remarkable biodiversity, only ordinary beauty and naturalness.

In the case of the Landes, local people's attachment definitively increased after the storm that hit the region in 2009, devastating thousands of hectares. This event contributed to reveal the forest importance in local landscapes and society: the fear of the loss leads to awareness of the threatened thing's values (Gruson 1986; Lefeuvre 1989). This case study confirms that making natural objects part of the heritage not only depends on scenic beauty or scientific criteria such as biodiversity but also on public taste (Riegl 1984 [1903]) and cultural values recognition.

Foresters and other stakeholders both praise the forest natural values but they don't mean exactly the same thing. Foresters insist on ecological values related to global environmental challenges such as carbon sequestration, mainly to claim ecosystem services payment, while the others are more interested in valuing feelings related to forest experience at individual scale. In this context, the touristic websites'

emphasis on past forest exploitation expresses the will to show it as a part of local memory and historical heritage. To the public, it is much more "romantic" than contemporaneous paper industry or bioenergy production.

Conclusions

The study highlights the increasing multifunctionality of the Landes forest and the difficulty, for foresters, to communicate efficiently on forestry and forest economic role. Landes' naturalness and history emphasis contributes to build an idealized representation very distant from forestry reality, leading to the lack of contemporaneous forest economy awareness in the public and showing, in fact, the lack of communication between local foresters and the public at large. Foresters' Internet communication is probably too technical and should evoke (and indeed consider) forest recreational role in a more positive manner. Foresters should especially target tourism and recreational sector stakeholders who spread the mainstream discourse and have a maximum visibility on the web, to improve forest knowledge and forestry acceptance. If they don't, conflict situations will probably increase with population and recreational use growth in the next decades. This is all the more important given that the increasing demand for renewable and wood fuel resources may lead to more intensive forestry and significantly alter the Landes forest landscape.

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