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Exploring farmer's knowledge as a source of information on past and present cultural landscapes A case study from NW Spain

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Abstract

The primary goal of this research was to explore the potential of farmer's knowledge as a source of information on the past and present cultural landscapes, focusing on the land-use system, the cultural heritage, and the farmer's perception of landscape changes, from the 1950s to the present day. For this purpose, 42 semi-structured interviews were conducted from a random sample of 10% of the villages in an area of the Northern Mountains of Galicia (NW Spain). As shown in farmers' reports, the main crops in the 1950s were wheat or rye, potatoes or maize (only near the coast) and turnips. Scrubland areas were an essential resource for pasture, litter, temporary crops and charcoal, whereas deciduous forest was mainly used as a source of wood for carpentry, firewood and litter. Agriculture was the main economic activity, whereas crafts and other activities in the fisheries or forestry industry were secondary. Granaries, watermills and stone laundry basins were the most frequent elements of built heritage that was mentioned in the interviews. Farmers were also comprehensively aware of the broad changes that occurred in the landscape. The results indicate that farmer's knowledge is a valuable source of information for documenting past and present land-use practices, local cultural heritage and changes in the landscape, all of which are helpful for the design of landscape-orientated policies. Moreover, observed ancestral cultural practices, such as extensive grazing in scrubland areas, may be promoted as strategies for helping the sustainability of cultural landscapes in the study area and in other areas with similar characteristics.

Keywords: Farmer's knowledge; Agricultural landscapes; Land-use system; Cultural heritage; Landscape change; Landscape management

1. Introduction

Cultural landscapes are the result of the interaction between humans and nature (Stanner and Bourdeau, 1995; UNESCO, 1997; Council of Europe, 2000), bearing witness to past and present relationships between human beings and their environment. Landscapes are part of the European cultural heritage and key components of local, regional and national identities, as recognized by the European Landscape Convention (Council of Europe, 2000). The rural landscapes of Europe constitute the immediate daily surroundings of many people and directly or indirectly affect the quality of life of all Europeans. Besides, traditional rural landscapes are vital for the conservation of biodiversity (Fjellstad and Dramstad, 1999; Antrop, 2004), and a source of information concerning the application of sustainable management techniques (Stanner and Bourdeau, 1995; Antrop, 2004).

Increasingly, however, their ecological, aesthetic and cultural values are threatened by processes of a rapid, large-scale nature, such as sweeping changes in agricultural practices, the decline of agricultural activity in some regions, urban sprawl, the development of road and rail networks, as well as the pressure of tourism and leisure activities (Meeus et al., 1990; Meeus, 1995; Stanner and Bourdeau, 1995; Palang et al., 1998; Vos and Meekes, 1999; Jongman, 2002; Van Eetvelde and Antrop, 2004). Given this situation, strategies for conservation and management must be developed in order to ensure that these values are not needlessly lost.

This research was carried out in *bocage* landscape of the Northern Mountains of Galicia (NW Spain). Our primary aim

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was to explore the potential of farmer's knowledge as a source of information on the past and present cultural landscapes focusing on the cultural heritage (crafts, built heritage and field boundaries), the land-use system and cultural practices, and the farmer's perception of landscape change, from the 1950s to the present day.

2. Materials and methods

2.1. The study area

The study area is located in the Northern Mountains of Galicia (NW Spain) that were described by Bouhier (1979) as possessing a characteristic *bocage* landscape. Facing the western Bay of Biscay (Fig. 1), it covers 370.7 km^2 of the ranges *Serra da Faladoira*, *Serra da Coriscada*, *Serra da Carba*, *Serra do Xistral* and *Montes do Buio*, ranging in altitude from sea level at its northern limit (1–12 km from the sea) to 1037 m, with 70% of its area between 300 and 600 m above sea level. About 50% of the area has slopes higher than 25% and 10% slopes higher than 50%. In terms of land cover 50.8% is woodland, 33.5% scrubland and 15.7% holds a mosaic of plots devoted to pasture or crops (SITGA, 2000). It features 431 small villages belonging to 32 parishes in five municipalities (Vicedo, Ourol, Muras, Viveiro and Xove) with a population of 827 inhabitants (INE, 2003).

In the study area, major changes in landscape due to the intensification of agriculture, happened in the 1970s, while in other areas of Galicia the changes mainly occurred in the 1950s. Additionally, one of the most salient changes in the agrarian practices has been the large-scale introduction of *Eucalyptus* sp. plantations, which currently cover about 40% of the study area. More recently, the landscape has also been modified by the installation of wind farms, along the range crests, even in the areas that have been included in the Natura 2000 network proposal. The main priority habitats present in the study area are blanket bogs and raised bogs (with Nature 2000 codes 7130 and 7110, respectively), as well as European dry heaths and temperate Atlantic wet heaths with *E. ciliaris* and *E. tetralix* (Natura 2000 codes 4030 and 4020, respectively). The alterations in the landscape have also been helped by the rapid depopulation of the area – a loss of 73% of the inhabitants since 1960 – caused by out-migration to nearby small towns resulting in an aging population; and by the lack of any landscape planning policy in the Galicia region.

2.2. A review of methods

The use of interviewing methods is a long-standing practice in social science, and is increasingly being used in the field of environmental management to document local knowledge. It has proved especially valuable in regard to local inhabitants' knowledge of local soils, their potential and their management (Di Mauro, 2003; Cools et al., 2003; Grossman, 2003; Desbiez et al., 2004; Alexander and Kidd, 2000; Ali, 2003) and in relation to local vegetation and its use and management (Lykke, 2000; Kappelle et al., 2000; Dhillion and Gustad, 2004; Mc Donnald et al., 2003). Also interviews began to be employed in landscape studies investigating the relationships between the landscape and the people (O'Rourke, 2005; Kruger, 2005), landscape management (Cudlínová et al., 1999; Pavlikakis and Tsihrintzis, 2006) and changes in landscapes (Primdahl, 1999; Ellis et al., 2000; Bender et al., 2004; Iiyama et al., 2005; Nikodemus et al., 2005).

Although local knowledge has gained recognition as a valuable source of information in order to understand changes in the

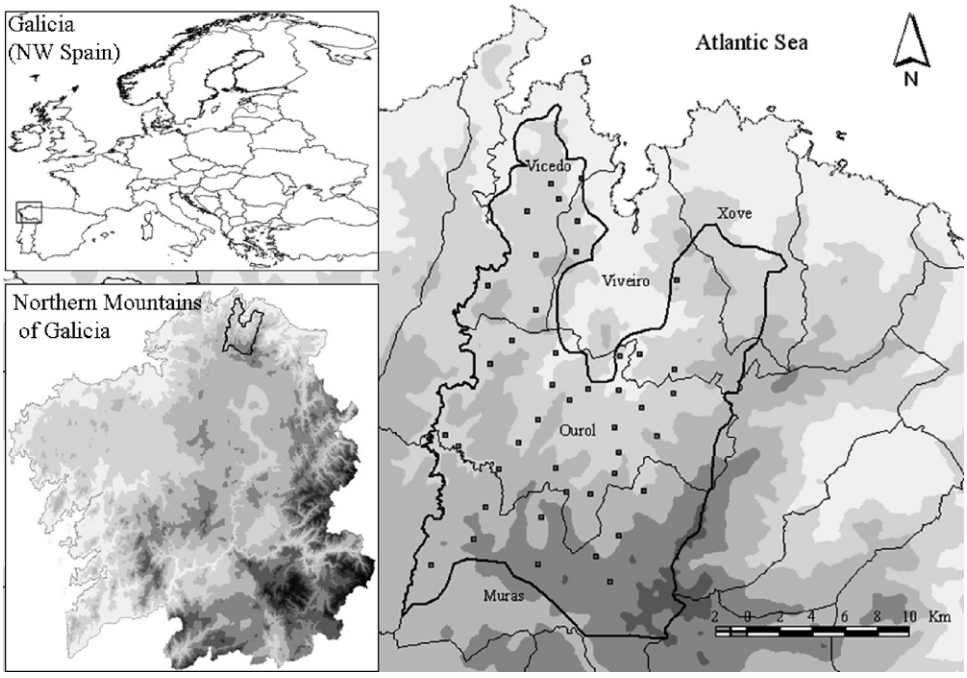

Fig. 1. Study area, showing the location of the villages that were visited.