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Suitability of discrete choice experiments for landscape management under the European Landscape Convention



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ABSTRACT

Landscapes throughout the world are increasingly being altered as a result of human actions and natural processes, therefore necessitating urgent management. Acknowledging this situation, the European Landscape Convention (ELC) was approved in 2000 with the explicit objective of protecting, managing and planning European landscapes. In this paper, we provide empirical evidence on the suitability of the Discrete Choice Experiment (DCE) methodology for valuing multidimensional landscapes under the ELC. An application in the Basque Country, Spain, serves as an example to illustrate that the DCE methodology may be suitable for supporting the aims of the ELC because: (i) it is a tool for public consultation; (ii) it offers an insight into the relative attractiveness of key landscape attributes, such as native forests and farming activities; and (iii) it provides policy-makers with quantitative information on the public preferences for potential future landscape protection, management and planning programmes. The results highlight the important role that the conservation of native forests and the

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promotion of organic farming may play in the management of European landscapes, which in turn is found to be strongly culturally dependent.

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Introduction

Landscapes, designated as collections of forests, fields, wetlands, urban areas and more, and the areas where they intersect, are an integral part of individual and communal well-being. These areas are continuously changing because they are the expression of the dynamic interaction between environmental and cultural forces. More specifically, the transformations of landscapes can be attributed to factors such as population growth, changes in lifestyle preferences, competing demands for agricultural land, fuel security and natural disasters (van der Heide and Heijman, 2013). Moreover, the current changes are increasingly regarded as a threat because they are often characterised by the loss of diversity, coherence and identity of the existing landscapes (Balej et al., 2010). These rapid and sometimes chaotic landscape changes can result in the need to manage landscapes based on a balanced relationship between social needs, economic activity and the environment.

This is the case for European landscapes, which are complex assemblages of forests, fields, wetlands and human settlements that have been subjected to a high level of transformation throughout history. Forest areas in particular render a number of extremely important economic, ecological and social services, along with being part of Europe's identity and cultural heritage (Edwards, 2006). In fact, forest landscape restoration should be carried out under the assumption that improving the flow of forest goods and services requires a balance between livelihoods and environmental protection, and that this is best achieved within dynamic, multifunctional landscapes (Déjeant-Pons, 2006a).

The approval of the European Landscape Convention (ELC) (Council of Europe, 2000) initiated more research and action programmes relating to landscapes in most European countries than ever before. A significant difference from older regulations regarding landscape protection is that all kinds of landscapes are involved, not only especially valuable locations, such as natural protected sites. Natural, rural, urban and peri-urban areas are considered, which encompass land, inland water and marine areas. European landscapes are recognised as a basic component of the European natural and cultural heritage that can be a favourable resource for economic activity.

The ELC introduces a series of formal landscape definitions as well as a series of recommendations. Landscape is defined as "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*". The aim of the ELC is to promote landscape protection, management and planning, and to organise European co-operation on landscape issues. The general public, as opposed to solely academic experts or political officials, is set as the main information source to guide the ELC process (see Jones, 2007). Although general and specific measures are proposed, the ELC is not explicit regarding how to proceed, and gives flexibility for determining how the agreement is implemented (Déjeant-Pons, 2006b). It is clear that the competent public authorities are responsible for organising the public's participation, by collecting their aspirations and translating them into policy actions.

Opened for signature on 20 October 2000, the Convention entered into force on 1 March 2004, after 10 member states had ratified it. Spain ratified the Convention in 2008, and the Basque Country in 2009. Therefore, with the adherence of the Basque Country, the Basque authorities made a commitment to promote the ELC principles and a landscape law so that the quality of different landscapes, including native forests, is preserved and improved. However, due to the nature of landscapes as public goods (i.e. the landscape itself is non-excludable and non-rival in nature) and the complex definition and holistic nature of landscapes, effective governance is often complex and challenging (for different interpretations and connotations of the term "landscape" see van der Heide and Heijman, 2013). The challenge for policy-makers is to find a way to quantify the value of landscapes to the local residents

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