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#### Research article

## Clusters of landscape characters as a way of communication in characterisation: A study from side, Turkey



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#### ABSTRACT

Landscape is the natural and cultural features of the environment. Characters are distinct recognisable patterns in the landscape that were comprised as a result of human and nature interactions. Landscape characters demonstrate precise features and values that exist in the current environment and provide information for those who use, manage, live in, benefit from and enjoy the landscape.

The aim of this study was to interpret landscape characters with a common set of terminology and to evaluate clusters of characters and so to discuss how they can be used as a communicative tool in characterisation in the case of Side District in Turkish Mediterranean. Number of 35 landscape characters were analysed as variables with aesthetic, cultural, value, perceptual and natural features so to communicate between characters and landscapes.

The study results demonstrated that clusters of landscape characters were divided into 3 character groups; mainly cultural, mainly cultural and a joint cluster of aesthetic, and perceptual and value aspects while spatial composition of landscape character groups was named and mapped as natural, rural, historical, urban and buffer. Aesthetic features were the most prominent elements as they combined in all sub-clusters giving the evidence that landscape is a visual construct. However, landscape characters which can be either outstanding or ordinary and their clusters provide exchange of information about relationship between man and nature, natural and cultural, objective and subjective for planners and managers, for public and professionals. Landscape characters become a body of message which ultimately offers a framework for planners and decision makers for both maintenance and protection of landscapes.

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#### 1. Introduction

Landscape is by definition an area as perceived by people, whose character is the result of the action and interaction of natural and/or human factors (Council of Europe, 2000). Action and interaction between man and nature impart different characters to the landscape such as visual, physical and perceptive. Apparently, landscape is visual construct based on the perception of the biophysical environment. Daniel (2001) defined landscape as a picture/view of natural inland scenery or a portion of a territory that the eye can comprehend in a single view. Form, texture and colour together define the character and composition in the landscape, which

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eventually have become the essence of the environment.

Recently landscape and landscape characters have been a common concern for planners, decision makers and managers. Understanding different characters and communicating about landscape would lead to better environmental management and protection. Here, the landscape character is a combination of qualities or features that distinguishes one landscape from another (Swanwick, 2002; Heritage Council, 2006). According to Jakle (1987) character brings to a scene the distinctiveness of object and spatial order that stamps a particular place as truly unique.

Landscape character is often based on the landscape attributes that give landscape an identity and sense of place (Fry et al., 2009) and displays different uniqueness to that place. Jellema et al. (2009) explained that landscape character can be defined as the presence, variety and arrangement of landscape features, which give landscape a specific identity and make it stand out from surrounding landscapes. Daniel (2001) confirmed that shape, linearity, structure

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and colour in the landscape are subsequently connected with properties such as variety, unity, uniqueness and distinctness. Characters of the landscape evidently demonstrate precise features and elements that exist in the current environment and have become communicative elements for all who use, manage, live in, benefit from and enjoy the landscape.

Literary, the word of communication conveys the meaning of providing information and sharing knowledge (Kirkpatrick, 1980). It is to acknowledge the pervasive, sometimes global, and systemic scope of environmental concerns, as well as the discursive maintenance of the human—nature relationships (Cox, 2015). Landscape is a shared product created throughout man and nature interactions and therefore involves a wide range of fields. For instance, recent developments in communication science highlight the potential of using inclusive methodologies in understanding the landscape, changes and challenges related to landscape and environment. Hansen and Machin (2013) wrote that in recent years that studies focusing on the visual construction of the environment of principal interest to studies of communication, which is the channel for individuals and institutions to distribute, receive, understand, and use messages about the environment (Bakar, 2015).

Willard (2008) notified that environmental communication has much to offer about how we configure the relationship between nature and culture. Brabyn (2005) articulated that central to all landscape research approaches; there is a need to have a classification of landscape characters to maintain a frame of reference for communication.

Brierley (2009) articulated that the use of a common language is critical to effective communication and landscape characters offer a kind of visual vocabulary which eventually became the essence of the environment.

Characterisation is a process of identifying, mapping, classifying and describing landscape characters, and making judgements based on landscape characters to inform a range of different decisions (Swanwick, 2002; Heritage Council, 2006; Tudor, 2014). Brabyn and Mark (2011) emphasised that landscape classification is important to academic knowledge because it provides a frame of reference that enables different researchers to communicate their results effectively.

With regard to characterisation, landscape character assessment (LCA) is a method based on the identification, classification and mapping of different and distinctive characters and areas (Swanwick, 2002; Heritage Council, 2006), which evaluates both spatial and visual characters of the landscape (Atik et al., 2010). LCA provides a clear methodology for identification and manifestation of distinct landscape characters.

Swaffield (2005) confirmed that landscape is a multivalent form of knowledge. This plurality creates tension as the knowledge within landscape and the imperatives for action that it brings can lead to diverse outcomes. In order to communicate what is found about landscape characters and how such discoveries can be implemented into practical solutions to the management and protection of natural and especially cultural landscapes, scholars need to search new ways to comprehend the content and meaning of landscape characters.

Evidently, there has been greater concern to assess landscape characters by different approaches and to set up a communicative tool for a good environmental management. Brabyn (2009) indicated that clustering techniques used to identify the important characteristics where Chuman and Romportl (2010) applied multivariate classification techniques to cluster landscape variables.

The aim of this study is to analyse landscape characters with a common set of terminology, to evaluate clusters of character and to discuss how they can be used as a communicative tool in characterisation in the case of Side district in Turkish Mediterranean. Here, a defined set of variables for landscape characters was used as variables and the cluster analyses was used to see the similarity and dissimilarities between landscape characters based on cultural, aesthetic, natural, perceptual and value aspects. We discussed the role of LCA and landscape characters in communication and how they can act as channel and message and add to the management of landscapes.

#### 2. Materials and methods

#### 2.1. Study area

The study was conducted in Side district situated at south-western Antalya region of Turkey. Located between the longitudes 31°21′ and 31°29′ east and the latitudes 36°48′ and 36°44′ north (Fig. 1), Side was chosen due to the diversity of its landscapes, its location on a historical peninsula, its unique natural, semi-natural and cultural features as well as the multivalent form of changes that the district has faced in recent years.

Side is typically characterised by the Mediterranean climate with very hot and dry summers and rainy, temperate winters. Tourism, agriculture and housing are the main economic activity in the province. The landscape is dominated by tourism sites, urban areas, historic sites and dunes along the coastline and rural and agricultural areas inland. Side ancient town adds to plurality to the local landscapes. Changing characters on a relatively small area from coastline to dunes, from tourism to urban, from historical to everyday, from natural to semi natural has offered an interesting case for the study in Side.

The topography in Side moderately changes between 0 and 50 m on large coastal flat plain enriched by small valleys. The main vegetation types are forest, macchia, dunes and stream bed vegetation. Turkish pine (*Pinus brutia*) and stone pine (*Pinus pinea*) are the dominant tree species that characterise the forests in Side. Evergreen coastal forest and sand dunes have been blocked by the excessive development of tourism and settlement development which led to the isolated mosaics of natural landscapes enclosed by artificial surfaces.

#### 2.2. Method of the study

Method of the study is based on landscape character assessment (LCA); which is modified according to the previous studies by Wascher (2005 & 2009), Swanwick (2002), Turner (2005) and Kim and Pauleit (2007). LCA methodology was applied to the landscapes of Side integrating map-based biophysical data and on-site visual assessment.

Landscape characters which were defined for Side district in a previous work by Atik et al. (2015; in *Land Use Policy* 44, 90–100) were used for this study as variables. A set of 35 variables were classified as cultural, aesthetic, natural, perceptual and value features, respectively (Table 1).

In this study, we followed a different approach in the interpretation of landscape characters and also of the clusters of characters so as to maintain for a communicative ground for landscape management. In order to allow more people to discuss and evaluate what they see in a rational and informed way (Bell, 2004) a common terminology for landscape characters was a greater concern in obtaining comparable results in this study. In order to initiate a conventional set of terms and to standardise a subjective evaluation in a systematic and transparent way; each character term was technically interpreted with reference to Çepel (1990); Thomson (1992); Swanwick (2002); TDK (2005); Yücel et al. (2008); Yavuz et al. (2009); Fry et al. (2009).

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