

MULTISCALAR ANALYSIS OF THE SEMI-ARID LANDSCAPE IN REGIÓN DE MURCIA (SOUTHEAST SPAIN) AND MANAGEMENT PROPOSAL

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1. INTRODUCTION

1.1. BACKGROUND INFORMATION

Land planning models in southeast Spain, and especially in the littoral of the Autonomous Region of Murcia, characterised by the existence of natural areas of high natural and ecologic quality and vulnerability, have followed criteria opposed to the conservation of these spaces. The processes affecting these littoral areas the most have been mining (from mid XIXth century), residential and urban development in the 1960s (IBARRA MARINAS *et al.*, 2017); and the increase of intensive agriculture and greenhouse crops thanks to the water transfer Tajo-Segura in the 1980s. During the last decades and following this trend, the occupation of the littoral territory has been based on the “resort with golf course” concept, with residential tourism as the basic utilisation (ANDRÉS SARASA, 1995, 2004).

At a later stage (from 2007 on) this model was hampered by the last recession. From that moment, the social and institutional background has evolved to new options, especially regarding rural areas development, sustainable management of natural areas, landscape appreciation and study, and its inclusion in tourism planning (CEBRIÁN ABELLÁN, 2008).

However, the utilisation of landscape as a tool in both land and tourism planning has not been deeply practised in Región de Murcia. This semi-arid landscape is the result of many factors, being the weather conditions-and the consequent water shortage the most influential. This has determined the existence of specific ecosystems forming natural areas of unquestionable ecologic diversity and quality; which have been extensively documented (LÓPEZ BERMÚDEZ *et al.*, 2003, and CONESA GARCÍA, 2006).

1.2. EXPERIMENTAL SUBJECT: CHUECOS VALLEY

Chuecos valley, located in Sierra de la Almenara (Águilas, Murcia) is a rural estate of approximately 480 Ha where organic farming and educational and research projects are being developed. The estate is located within the area of the SPAB ES0000261 Sierras Almenara, Moreras y Cabo Cope, and the CIS ES6200035 Sierra de la Almenara.

The observations set forth above, combined with the existence of this place as an experimental subject for the development of this research, led to the proposal of such topic as Final Degree Project (FDP), named *Welcome to Chuecos: Eco-Theme Park of the semi-arid Southeast*.

1.3. OBJECTIVES

- Presenting the methodology and results of the analysis and research carried out on the semi-arid landscape of Región de Murcia in different scales, highlighting the high values of landscape quality obtained from these analysis.

¹The present work is a summary of the research and experimental proposal carried out in the Final Degree Project in Architecture (Universidad Politécnica de Cartagena). Academic tutors: Marcos Ros Sempere, Fernando Miguel García Martín. E-mail: mariadeganiamedina@gmail.com

- Describing the process and methodology of creating the experimental intervention proposal in the valley of Chuecos. Basic units composing the territory and their relationships are identified, so as to elaborate intervention criteria consistent with the site's intrinsic logic, which could be implemented in areas with similar features, and could be used as a reference for spatial planning.
- Developing the concept of landscape utilisation as a resource for alternative rural development models, illustrating it theoretically and experimentally in the estate through a management proposal based on the union of different activities: organic and respectful farming, research, education and sustainable tourism. The intervention plan (developed deeply in the FDP) is summarised.

1.4. METHODOLOGY AND STRUCTURE

1.4.1. Stage 1: multiscalar analysis

Two parallel working methods are used: field work based on improving the knowledge of the area together with the creation of personal information (pictures, sketches, etc.); and the study of all the information available regarding the territory.

This phase is started by contextualising the littoral of Región de Murcia within the semi-arid area of southeastern Spain, and is concluded in the analysis of the valley of Chuecos. It includes several scales of analysis, studying features as protected sites and related facilities, land classification, land development models, tourism, population dynamics, landscape units. The last scale is focused on Chuecos as the basis for the next stage of work, studying the physical and biological environment; and landscape.

1.4.2. Stage 2: creating the proposal

In this stage the tools to create the intervention project were developed. These are based on disassembling the site's structure in the most basic units. This "minimal units" are situated in different analysis layers to facilitate the understanding of the site, as pieces which are related in a certain way to generate bigger structures, and subsequently forming a global entity. This way, the relationships between every part are classified.

1.4.3. Stage 3: experimental intervention project

The third stage consists of presenting the Action Plan in a summarised way, where the criteria for planning, utilisation and management of the site are set.

2. RESULTS AND DISCUSSION. STAGE 1: MULTISCALAR ANALYSIS

The distribution of natural areas in the semi-arid area of the southeast of Spain and their degree of protection (regarding land planning, big urban developments, communication infrastructure, research/educational/leisure facilities related to them, among other features) is divided geographically in three important poles (Cabo de Gata, Calblanque and El Valle y Carrascoy natural parks). In the middle of these poles, the littoral of Región de Murcia is located, with similar levels of ecologic, landscape and natural importance. However, this littoral area is not as protected as the rest, and this is where the mentioned FDP is developed.

Focusing on this part of the littoral, a very high level of landscape quality is observed in the catalogue developed by the regional administration. However, the existence of research and conservation facilities related to these landscapes is minimal. In contrast, many urban

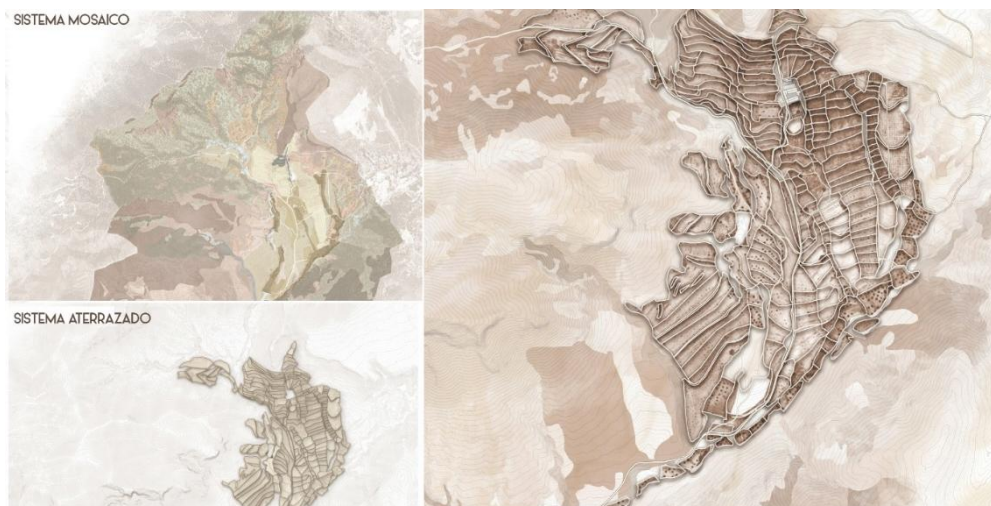
developments have been planned in these areas, including the project for the Marina de Cope² (protected natural area).

Narrowing the focus to Sierra de la Almenara, located in the middle of the mentioned littoral area, the physical features of the valley of Chuecos and its concrete location are expressed, together with its relationship with the rest of the towns, local places of interest and tourism/leisure/educational facilities, among others. Besides, a particular methodology for the study of the landscape of the valley has been developed.

3. RESULTS AND DISCUSSION. STAGE 2: CREATING THE PROPOSAL

The strategies followed to develop the experimental proposal for the valley of Chuecos have been based on dividing the site into its smallest components and identifying the relationships between the parts, and between these parts and the whole site. This process led to the identification of two basic structures, named “ecosystems” and “terraces”, both forming bigger systems named “tiled system” and “terraced system” respectively (Figure 1).

FIGURE 1
Basic structures identification and systems they form



Source: created by the author on the basis of the cartography developed by the National Institute of Geography.

Understanding how these structures are related and shaped is considered basic in order to develop a proposal that is consequent with the internal logic of the site.

Two more aspects of the site are analysed: the activities or uses developed in it, and the “themes” (features defining the “story” of the site). These three aspects or layers are the tools to compose the intervention project.

4. RESULTS AND DISCUSSION. STAGE 3: EXPERIMENTAL INTERVENTION PROJECT

Based on the results drawn from the previous stage, three areas named “hubs” are identified, those where a major concentration of the site’s distinctive features can be observed. These hubs are connected by the main road in the valley, which works as the guiding line for the visit of the park and the development of the Action Plan. This is further explained in the mentioned FDP.

²Regional Interest Action project called Marina de Cope planned a new “city” of 60000 inhabitants in its maximum occupation as expressed by VERA and ESPEJO (2006). Just with this development the population of the municipality of Águilas (littoral of Región de Murcia) would have been doubled. This project was annulled by the High Court of Justice in its judgement 428/2013, dated 31 May 2013.

5. CONCLUSIONS

The most important conclusion drawn from this study is the high landscape quality of the analysed littoral area, and its potential for new land planning criteria, tourism strategies and urban development respecting its features and natural value. This includes actions such as promoting organic farming versus greenhouse crops, developing better communication ways between the academic/professional background and the local administration, implementing new educational strategies focused on improving social perception of the semi-arid landscape, creating new citizen engagement tools, among others.

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