

Historical landscape studies

Estudios históricos del paisaje

Aarón Moisés Santana-Cordero
Universidad de Salamanca (España)
Departamento de Geografía
<https://orcid.org/0000-0003-2210-1980>
aaron.santana@usal.es

Carla García-Lozano
Universitat de Girona (España)
Departament de Geografia
<https://orcid.org/0000-0002-5071-1009>
carla.garcia@udg.edu

1. INTRODUCTION

Landscape is polyhedral - it is a multi-sided system the interrelationships between which are crucial to its dynamics. Of these sides, nature and culture can be considered fundamental. As a consequence of the above, numerous approaches have emerged which, although complementary, have different focal points and objectives (ALBA DORADO, 2023). The coupling of landscape and history can be tackled through studies based on landscape history, historical ecology, landscape ecology, land change/systems science, landscape science, historical geography and environmental history, and combinations thereof. Depending on the approach taken, the emphasis can be put on nature or culture/society.

Methodologically, this kind of research is particularly associated with a mixed-methods approach; the integration of natural sciences, social sciences and the humanities, the use of multiple sources, and qualitative and quantitative methods (BÜRGI and GIMMI, 2007; CRUMLEY, 2017). Such an integrated view enriches the kind of paper this special issue is publishing.

The main contribution this topic provides is the understanding of past and current landscapes. Other important contributions include the retrieval of the natural history of a place and the modes of interactions between environments and the societies that have lived in them.

Accordingly, the aim of this special issue is to publish studies that explore the history of landscapes, the old patterns and processes that allow a better understanding of their state and dynamics both in the past and in the present. The analysis of human-ecological interactions, as well as their underlying natural particularities and cultural traits, is the primary source of interest in these studies.

2. PAPERS IN THIS SPECIAL ISSUE

The papers in this issue are arranged by regions, with the first three studies focusing on Central America, the fourth on central Europe and the last five on Spain.

GARRIDO-PÉREZ *et al.* (2024) focus on vegetal landscape evolution in the last hundred years, analysing CO₂ capture and its link to land use history in the island of Coiba (Panama). To do so, the land use histories are reconstructed after the undertaking of fieldwork. Based on data from nine stands, the authors found nine successional pathways derived from abandoned pasture, a river and a camp, resulting in important modifications to agricultural activities and a > 400 year old forest. In addition to the fieldwork data, which was analysed using quantitative procedures, data was acquired from the direct observations of a witness over the course of 30 years.

BAXIN MARTÍNEZ (2024) study the evolution of land occupation in Ciudad de México based on a reading of the different layers of the landscape, like a palimpsest, resulting in an analysis from current to past times. Hidden information is retrieved with this method using toponymy as the main source. The results are organized in four phases corresponding with the different statuses of the city: México City (present to 2016), Federal district (2016-1824), México - Viceregal city (1824-1521), and Tenochtitlan (1521-1325). Likewise, the article presented by MORENO ARRIBA (2024) also focuses on México (Sierra de Santa Marta, Veracruz). He bases his research on the sustained underdevelopment of the study area and analyses, using a transdisciplinary approach, four non-governmental projects of natural resource management that tackle afforestation and poverty reduction, taking as the spatial unit the watershed. Additionally, the investigation is supported by an exhaustive literature review, with oral sources being the main ones used. Several actors and agents are involved in these management processes. The result of these processes is the development of indigenous peasant communities.

In Central Europe, BÜRGI and LOCK (2024) analyse the history of the Cröterwald forest in the Avers municipality in Central Alps (Switzerland). The period studied is 1900 to current times and the sources used are historical written documents, oral sources and aerial and terrestrial photographs. The results are structured according to the several ecosystem services the Cröterwald forest provides to

the population: wood and timber, forest pasture, other non-timber forest uses, avalanche protection, habitat protection, and cultural heritage.

In Spain, DELGADO ÁLVAREZ and PARDO ABAD (2024) present a study on land cover/use changes in the period 1980-2018 in Arribes del Duero (Salamanca, Spain) through the application of a set of landscape metrics. The method used is based on a cross-tabulation matrix developed by PONTIUS *et al.* (2004). The results show the changes among 24 classes of land cover/use and the resulting trends: activity reduction or abandonment, naturalization, change of activity, and intensification.

Along the coast of Catalonia (Spain), GARCIA-LOZANO *et al.* (2024) compare two coastal dune fixation processes, revealing that one of these processes was undertaken to avoid sand movement and the other to mitigate health problems due to stagnant waters and to obtain economic profit. In the latter case, the disappearance of the largest dunes in the area is related to urban construction. A total of thirty historical documents were consulted to understand the fixation of the dunes. One of the interventions was documented and planned while the other was spontaneous and took place over several centuries. This study highlights the importance of past interventions to understand current landscapes. Additionally, the importance of knowing past practices and their long-term effects to undertake suitable environmental management and regional planning is highlighted. Similarly, ROIG-MUNAR *et al.* (2024) focus on the afforestation of mobile dunes in the Balearic Islands (Spain). This work analyses the anthropic transformation of dune environments. The presence of *Pinus halepensis*, related to human agency, notably affects the structure of the vegetation and biodiversity conservation. The results show that afforestation actions, especially with *Pinus halepensis*, have been an effective measure to prevent the advance of the sand. However, these actions have also had a negative impact on the conservation of these dynamic environments. The dune systems in the Balearic Islands show a homogeneous forest mass in the semi-stabilized and stabilized morphological sectors, although some systems face conservation problems due to fragmentation and erosion.

Finally, MORENO-MEDINA *et al.* (2024) study the impact of transhumance on landscapes of Gran Canaria (Spain). Transhumance is a land management system that has been present in the island for the last 2000 years, thus providing fascinating landscape heritages with a deep history. Only 23 transhumant shepherds continue working on the island, indicating the level of risk that this activity may eventually disappear. The work is partially based on fieldwork, historical written documents and interviews, as well as the use of GIS (geographic information system) to help with data analysis. As an outcome, the authors identified numerous pastoral areas influenced by this activity.

3. REFERENCES

ALBA DORADO, M.I. (2023): «Theoretical conceptions for a holistic, transdisciplinary approach to contemporary landscape», *City, Territory and Architecture*, 10: 32.

- BÜRGI, M.; GIMMI, U. (2007): «Three objectives of historical ecology: the case of litter collecting in Central European forests», *Landscape Ecology*, 22: 77-87.
- CRUMLEY, C.L. (2017): «Historical ecology and the study of landscape», *Landscape Research*, 42 (S1): S65-S73.
- PONTIUS, R. Jr.; SHUSAS, E.; MCEACHERN, M. (2004): «Detecting important categorical land changes while accounting for persistence», *Agriculture, Ecosystems and Environment*, 101: 251-268.