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BOOK OF ABSTRACTS

XVI International Scientific Agriculture Symposium

"Agrosym 2025"

Jahorina, October 2-5, 2025

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SPATIAL AND TEMPORAL HISTORICAL LANDSCAPE CHANGE IN A MICRO BIODIVERSITY HOTSPOT OF GREECE

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Abstract

The study of the historical landscape structure is significant because past land use changes in relation to the natural environment have been reflected in the future interpretation of the landscape. Measuring progress or change of any kind requires the use of metrics, indicators, or indices. The delimitation of biodiversity hotspots into smaller hotspots and the analytical study of them regarding landscape indices can provide information and directions for future land use planning and management. The objective of this research was to investigate how physical factors and location have influenced the historical spatiotemporal change of a landscape in the Mediterranean Basin micro hotspot. The progressive landscape change was studied in 38 municipal units in Western Crete, Greece. The research design, applied in the study, helped to address the research questions set at the beginning. Among the main findings it was found that the diversity and evenness of the landscape were temporally decreased, while dominance was increased; the plain and south landscapes were more diverse and even and the intensification of agricultural land was increased as it was expressed by intensification index. The dynamic structure of this approach permits the applicability, with future inclusion of additional indices in other areas, scales, time lags, and dimensions-and in combination with socioeconomic structure to explore the drivers of change. As a more general conclusion it could be said that more case studies and research are required to explore the influence of heterogeneity or homogeneity of landscape – as connected with land abandonment or not – on biodiversity and economic, social and ecological stability.

Key words: *landscape change, environmental indices, biodiversity, land use planning, Crete.*