

BOOK OF ABSTRACTS



*XIV International Scientific Agriculture Symposium
"Agrosym 2023"
Jahorina, October 05-08, 2023*



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DRIVING FORCES OF HISTORICAL LANDSCAPE CHANGE IN SELECTED REGION OF GREECE IN THE PERIOD 1961-1991

Asimina SKOUTERI^{1*}, Vassilios PAPANASTASIS², Nikolaos STAMOU²

¹Institute of Mediterranean Forest Ecosystems, Hellenic Agricultural Organization – Dimitra, GR-11528, Athens, Greece

²Department of Forestry and Natural Environment, Aristotle University of Thessaloniki, Thessaloniki, Greece

*Corresponding author: askouteri@elgo.gr

Abstract

The aim of this study is to show the connection between socioeconomic structure and landscape change. The classification of drivers that are responsible for the change of a) socioeconomic factors and b) geophysical factors was made. Data was retrieved from statistical census at two time periods, year 1961 and year 1991 covering 38 registered municipal units in western Crete, Greece (49,860 ha). In regard to 1961 and 1991, the first three components of the Principal Component Analysis explained about 64% and 59% of the variation in the landscape indices. The components above were the dependent variables in stepwise regression models whereas the independent variables were derived from the socioeconomic (16 indices) and geophysical structure (two indices). This procedure contributed to the creation of dependent models with a limited number of socioeconomic and geophysical indices that explained that change. During the 30-year study period, the landscape shifted in most municipal units from a more diverse and traditional to a more homogenous landscape with an increasing trend of monocultures. This procedure showed some high and significant dependence between variation trend of landscape and its socioeconomic and geophysical structure. By understanding how past landscape structure has been shaped due to a number of different drivers, we improve the way we will deal in the future with current drivers of change. One way to consolidate the driving forces of temporal changes, to identify key socioecological and economic features that help deal with alteration and to maintain socioecological memory is the historical analysis.

Keywords: *landscape change, drivers, Crete, socioeconomic indices.*