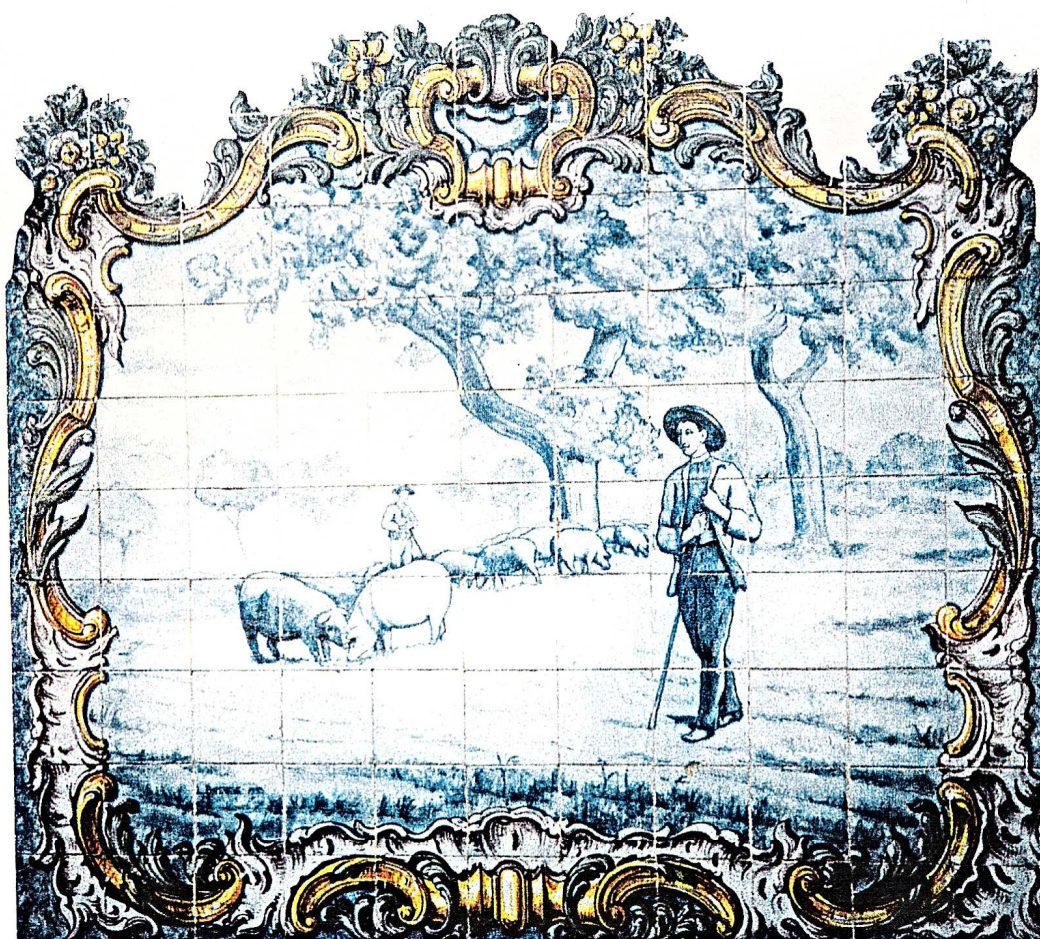




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Analysis of the Ecological Evolution of an area in the Setubal Peninsula (Apostiça) Caused by changes in land use patterns

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The aim of the present study was to analyse the evolution of land use patterns and environmental functions in Apostiça, an sub-regional area in the Setubal Peninsula. This area was chosen for study because it serves as a dynamic model of land use modification, while simultaneously playing an important role in connecting habitats of great ecological value.

After conducting an inventory and characterisation of the existing elements belonging to the ecological structure at a regional level, located in a particular area at three defined moments in time, a subsequent analysis of the modification of biological structures of the area was undertaken. This analysis involved the application of different diagnostic indices in order to evaluate the causal relationships between modifications in land use and the environmental modifications observed. Also to be assessed is the applicability of such indices to Impact Assessment Studies.

A diachronic analysis of the index values obtained provided the data necessary to characterise the environmental impacts caused by the modifications in land use patterns. This analysis will make possible the determination of the most accurate methods of evaluating environmental impacts for the study area and facilitate the analysis of the causal relationships existing between modifications in land use and the environmental changes observed.

The results that were obtained point that the parameters usually measured by the methodologies available only represent a small number of the studied system. This approach is more accessible and convenient, however the ecological systems are simplified in such a way that the most important proprieties became unclear.

Therefore is necessary to develop more accurate models for the ecological characterisation of land use structure with application in regional planning process, namely a methodology to analyse effects originated by losses in ecological structures, in way to identify indices of ecological evaluation.

Keywords: Landscape Ecology and Planning, Land Use Change, Ecological Evaluation