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MAPPING THE ECOLOGICAL STRUCTURE IN OCEANIC ISLANDS - THE CASE-STUDY OF S. MIGUEL ISLAND (PORTUGAL)

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Abstract

Oceanic islands face very serious environmental issues such as climate change, environmental degradation, loss of biodiversity and proliferation of invasive alien species. The Island Ecological Structure (IES) includes the key natural resources, biophysical functions and ecological processes within this territorial unit, in order to ensure the existence of a continuum naturale across the island. The delimitation of the IES shall consider the many inter-relationships between all biophysical and cultural variables, contributing therefore to a better understanding of the socio-ecological system. This paper presents a methodological proposal for mapping IES. A case-study based on consistent biophysical and land policy criteria was conducted for S. Miguel Island (Archipelago of the Azores, Portugal). The results have showed that the Island Ecological Structure covers about 75% of its total area. The land use conflictive areas within the Island Ecological Structure (21%) have also been identified and should be addressed by Land Management Plans in order to minimize the conflict effects.

Key words: Azores, ecological structure, environmental planning, island, land management

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