

ANTHROPOGENIC IMPACTS STUDIES BASED ON SPATIAL TOOLS ON THE COAST OF SMALL ISLANDS

Lorenzo Carlos Quesada-Ruiz*¹, Carolina Peña-Alonso² and Luis Francisco Hernández-Calvento²

¹ Department of Physical Geography and Regional Geographic Analysis, University of Seville, Sevilla, Spain.

² Department of Physical Geography, University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain.

³ Grupo de Geografía Física y Medio Ambiente, Instituto de Oceanografía y Cambio Global, Universidad de Las Palmas de Gran Canaria, ULPGC-CSIC.

¹ *lquesada@us.es*, ² *carolina.pena@ulpgc.es*, ³ *luis.hernandez.calvento@ulpgc.es*

Abstract: Over the last 50 years, global environmental issues have been getting more attention from governments and the public in general. Human activities have altered the coastal ecosystems services, such as carbon capture and storage, water and energy exchange or biodiversity, leading the modification of environmental balance of the planet and damaging the livelihoods and economic activity of local communities. Those problems have been exacerbated in territories with fragile ecosystems or closed systems, such as small islands marine-terrestrial ecosystems, where the intrusion of entropies generates serious damage to the ecosystemic stability, affecting directly to the maritime and terrestrial coastal environments and their inhabitants. This systematic review analyses studies focused on anthropogenic impacts on small island coastal environments at a global level. Based on keywords, 507 peer reviewed articles related to anthropogenic impacts on small islands for the period between 1985 and 2021 were found and classified. This review have paid special attention to the use of geographic information systems and remote sensing for obtaining and processing coastal management tools. Exclusively, the 32 % of the studies have used spatial tools, showing a generalised deficit at a regional level. Furthermore, the use of stochastic, predictive or simulation models associated with studies focused on the characterization of impacts was analysed. The use of spatial tools helps to evaluate the socioeconomics and environmental impacts of different environmental problems, being an accurate and low-cost tool. Nevertheless, the study of coastal environmental problems on small islands may need to deep the use of those tools for improving their diagnosis and remediation actions.

Key words: Small Island, Coastal environment, geographical information system, remote sensing.

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