

URBAN-TOURISTIC IMPACTS ON THE NATURAL GEOHERITAGE OF THE AEOLIAN SEDIMENTARY SYSTEMS FROM CANARY ISLANDS (SPAIN)

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ABSTRACT:

Coastal aeolian sedimentary systems have been anthropogenically altered in recent decades due to the littoralization process, causing the loss of their natural and cultural geoheritage. In this sense, in Canary Islands (Spain), aeolian sedimentary systems are developed under arid climate conditions, differing from the rest of European counterpart systems located in more wet regions, and are exposed to high human pressure due to tourism development since 1960, especially due to the good weather all year round, that attracts mass sun and beach tourism. The associated urbanization has used these systems as a tourist resource, building resorts around them and producing block and isolation of the main sedimentary inputs areas, which has altered their natural aeolian sedimentary dynamics. This work aims to demonstrate how the urban-tourist impact developed around four aeolian sedimentary systems in the Canary Islands subject to environmental protection (Maspalomas, in Gran Canaria; Corralejo, in Fuerteventura; and Lambra and Jable Sur, in La Graciosa), has produced a reduction in the aeolian landforms with active aeolian sedimentary processes and, therefore, of the natural geoheritage. Changes in the number of aeolian landforms detected in each system are analysed on a temporal and spatial scale through photointerpretation, using historical aerial photographs and current orthophotos. In addition, these landforms are also classified as indicators of anthropization, erosion, stabilization or sedimentary accumulation. The results indicate that the systems affected by urban-

tourist development (Maspalomas, Corralejo and Jable Sur) show significant changes, where in some cases 50% of the active landforms, and therefore of the natural geoheritage as indicator of processes of accumulation, mobility and a natural dynamic of the system, have disappeared, due to these. In other cases, the landforms result of anthropization (up to 400%) and erosion (up to 200%) have increased. However, the number of landforms related to stabilization remains stable, although their increase of the area has been verified. On the other hand, the systems not impacted by buildings nor construction of infrastructures (Lambra), show minor changes, and keep the number of landforms and their natural geoheritage. The reduction of the natural geoheritage related to an increase in urbanization around these aeolian sedimentary systems indicate deficiencies in the management of these protected areas.