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APPLYING IO AND AHP TO LOCATE COASTAL TOURISM SITES USING GIS: A CASE STUDY OF MAZANDARAN PROVINCE, IRAN

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Abstract

Increase in tourism demand in the coastal areas of Mazandaran Province, Iran, as one of the major tourist attractions near Tehran, has led to tourism development and consequently adverse environmental impacts. However, given the tourism potential within the region, tourism managers and planners seek to follow sustainable development principles. In this regard, determining sites capable of tourism development and finding an optimal site among the alternatives are two main challenges that they are facing. Therefore, this study aims to both identify and prioritize the suitable sites for coastal tourism. For this purpose, the methodology was employed in two stages. In the first stage, by integrating Index Overlay (IO) model and analytic hierarchy process (AHP), suitable sites for coastal tourism development were determined using geographical information system (GIS). In this regard, the ecological and socio-economic criteria, with 10 sub-criteria, were considered as the main criteria to identify the intended sites. The factor maps were integrated according to IO model in GIS. Meanwhile, based on the relative importance, the criteria, sub-criteria and classes were weighted using AHP. In the second stage, the selected sites were prioritized based on AHP and the most suitable alternative was identified accordingly. The results of this study indicate that combining IO with AHP in GIS can be employed as a suitable tool by decision-makers to determine appropriate sites for coastal tourism development. This study also demonstrates that a well-structured spatial decision support system (SDSS) can provide a comprehensive framework to assist decision-makers in sustainable tourism development.

Key words: Analytic hierarchy process, Coastal tourism, Index overlay model, Site selection

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