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“Filling gaps and removing traps
for sustainable resource management”

The Relationship between Land Sustainable Management, Stakeholder Pressure and Change in Ecosystem Services – Khorasan Province, Iran

NAGHMEH MOBARGHAE¹, HOUMAN LIAGHATI², FAATEME MOHEBBI²

¹*Shahid Beheshti University, Environmental Planning, Iran*

²*Shahid Beheshti University, Environmental Sciences Research Institute, Iran*

Abstract

Measuring and anticipating the effects and changes of ecosystem services due to human activities, such as tourism, is a complicated issue in environmental assessments that can help to make the management plan suitable for the areas with remarkable natural value. The provision of environmental services map is a useful and common method used to provide information, although this method requires a lot of data. The purpose of this research is to investigate the trend of changes in ecosystem services in the "Darcastt-tourism area in the northern Khorasan province with an emphasis on serving the storage and treatment of carbon and the quality of the habitat over a period of thirty years. In order to extract the changes in ecosystem services, land covers between the 1988 and 2018 was extracted in this area so that classes structure of ecosystem such as forests, rangeland and manmade and the course of its changes was be extracted within three decades. In order to estimate the value of recreation in the region, 384 questionnaires were completed among the local tourists. To do this research, ArcGis10.3 and Terrset's software was used. Finally to extract the changes in the ecosystem services such as carbon sequestrations and the quality of habitat, InVEST3.4.0 software was used. The results of this study indicate that the ecosystem services of carbon sequestration and habitat quality have declined over the past 30 years due to the expansion of human activities in the region. The value of each hectare for the tourism area was estimated. The inclination to pay for this region was estimated to be between 20 and 40 cents per ha. In addition, the results indicate that there are correlations between indigenous and the amount of entry fee, as well as being NGO member.

Keywords: Changes, ecosystem services, tourist, valuations, willingness to pay