Survey Potential of Optimized Areas for Geomorphotourism Development
(Case Study: The Maranjab in South of Salt Lake)

Maghsoudi M.*
Associate Prof., Dep. of Physical Geography, University of Tehran

Shamsipour A. A.
Assistant Prof., Dep. of Physical Geography, University of Tehran

Noorbakhsh S. F.
Ph.D. Candidate in Geomorphology & Environment Planning, University of Tarbiat Modarres

Received: 08/02/2011    Accepted: 25/09/2011

Extended Abstract

Introduction
Geo-tourism is the best practice tourism that sustains, or even enhances, the geographical character of a place, such as its culture, environment, heritage, and the well-being of its residents. Geo-tourism incorporates sustainability principles, but in addition to the do-no-harm ethic, geo-tourism focuses on the place as a whole. Deserts are now becoming a more and more popular tourist destination. Because of Iran's situation in a high-altitude plateau that surrounded by connected ranges of mountains, desert conditions is dominated in the interior plains. Some of the ecological features of the deserts in Iran are strong sunshine, relatively little humidity, little rainfall and excessive vaporization. This area due to Having special geomorphologic conditions, natural and unique landscapes and that apparent elements and components of desert, are important ecotourism areas in Iran. The goals of this study are identified geomorphologic and Geo-touristic attractions for development and introduction most effective parts of the region for focus tourism facilities.

Methodology
Maranjab is situated in north of Kashan and the Northwest of the Iranian desert known as Dasht-e-kavir. The area spanning latitude 34 to 34°15'N and longitude 51°05' to 51° 35'E. The average topographical height of the area is approximately 1987(mASL). Since the region falls under the

*E-mail: maghsoud@ut.ac.ir
rain shadow of the Zagros Mountain Ranges, average annual precipitation is only 138 mm. From a climatic perspective, the atmosphere is mostly stable and cloud free (especially in spring and summer) due to the influence of the subtropical high pressure belt (sun-shine hours are approximately 2860 per year). The area due to dry weather conditions, have special geomorphologic features such; great sand dunes and fields, polygon shapes, natural and unique landscapes and so on.

In the study, used data are including environmental data layers in format of GIS files. Maps of Topography, Land use, Geomorphology, Soil and erosion, Geology and water sources and manmade elements and also satellite images and meteorology data were used in different stages of study.

Methodology of study is based on combination of systematic review of library resources, field works, and statistical and GIS analytical processes. In field studies, dates collected through direct observation (photographs and film), interviews and questionnaires. In this regard, the number of 10 questionnaires was filled by Delphi method, and obtained weights compiled to GIS layers for determine appropriate locations by AHP model. The Analytic Hierarchy Process (AHP) is a structured technique for dealing with complex decisions. Rather than prescribing a correct decision, the AHP helps decision makers find one that best suits their goal and their understanding of the problem. It is a process of organizing decisions that people are already dealing with, but trying to do in their heads. AHP model including of three steps, once the hierarchy is built, the decision makers systematically evaluate its various elements by comparing them to one another two at a time, with respect to their impact on an element above them in the hierarchy. The AHP converts the evaluations to numerical values that can be processed and compared over the entire range of the problem. In the final step of the process, numerical priorities are calculated for each of the decision alternatives. These numbers represent the alternatives' relative ability to achieve the decision goal.

In order to create a hierarchical structure and for pair comparisons and evaluation matrix was used Expert Choice software. Then coefficients of criteria convert to data base of GIS layers, so for tourism spatial Prioritization all layers computed with together.

Results and Discussion
According to prioritization of environment and manmade criteria, geomorphologic features, available water resources and human constructions are more important elements for ecotourism. Calculated map of overlying the data layers was divided into five classes; from high potential to low potential for geo-tourism. Final map and its results showed that between from total area of 32,000 hectare, about 32.1 hectare have high potential, 8.3 hectares had relatively high potential, 8.5 hectare have moderate potential, 46.1 hectare have relatively low potential and 10.7 hectare have low potential. Therefore can attempting to plan for about 7.3% of the area that has moderate to high potential for ecotourism activity.

According to final result path of Kashan and Aran-Bidgol town to Maranjab Caravansary has the higher capability to develop ecotourism and geo-tourism.

Conclusion
According to final result path of Kashan and Aran-Bidgol town to Maranjab Caravansary has
the higher capability to develop ecotourism and geo-tourism. Therefore Development of tourism in the study area is depending on the level of management and investment. Development of ecotourism activities in the region can be one of the most important factors in preserving the natural environment and sustainability of the tourism resources of the region.

**Keywords:** Ecotourism, Geo-tourism, AHP Model, Maranjab, GIS.