



Geotourism and geomorphological potential assessment of protected areas in Meshkinshahr Township using quantitative models¹

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Abstract

Background and Objective: Geotourism is a form of tourism that contributes to the growth and geographical sustainability of the region, its environment, culture, historical and aesthetic heritage, and also improves the lives of its residents. Geotourism is a new movement towards rural development. The aim of this research is to assess the geotourism and geomorphological potential of protected areas in Meshkinshahr Township using quantitative models.

Methodology: The research method in this study is based on the Serrano-Gonzalez-Truba and Kobalícova models. The Serrano-Gonzalez-Truba model is suitable for evaluating geosites located in protected areas. Geosites are evaluated in this method based on three main criteria that help to evaluate scientific and management values and are considered a suitable method for the study area.

Findings and Conclusion: The results of the evaluation of the Serrano-Gonzalez-Truba model showed that the Shirvan Daresi protected area ranked first with the maximum score in terms of diversity of geomorphological and geological forms. Also, with the highest score in terms of accessibility and landscape diversity, it has a high potential for field studies and tourist attraction compared to other study areas. According to the results obtained in the second place, the Gandomin region with a score of 8.5 has suitable protected areas for field research and tourism attraction. Therefore, based on the validation of the model criteria, it can be concluded that the Shirvan Daresi protected area in Meshkinshahr with the highest score has a great potential for development. Finally, it is suggested that future studies should also use human impact sub-criteria to evaluate protected areas.

Keywords: Capability, Capability, Geotourism, Serrano method, Meshkinshahr Township.

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Extended Abstract

Introduction:

Geotourism science increases the attachment of local people to their place of residence, and consequently contributes significantly to the level of awareness and tourist attraction. Among these, rural tourism has high potential from the perspective of geotourism, urban and rural management and design, in terms of the importance of preserving rural culture and preventing rural migration, which will improve the general welfare of villagers. The growth and development of the tourism industry is of considerable importance, especially in developing countries that face numerous problems such as high unemployment rates, lack or limited foreign exchange resources, and a single-product economy. The understanding of societies that the tourism industry is a desirable and sustainable source of foreign exchange income has led to tourism achieving a very broad meaning and concept in various economic and social dimensions and being considered an important industry. In many parts of the world, natural beauties and attractions are the primary and fundamental reason for attracting tourists and developing the tourism industry (Qahramani, 2017: 6). Tourism is in fact a capability that leads to wealth generation over a period of time (Hashemi-Dizaj et al. 1403). Geotourism is considered as one of the branches of responsible tourism (Sabzvari, 2014, quoted by Orji, 2012, 2) in the geographical sense and in the form of examining the place and also recognizing and protecting the heritage of the earth (Sabzvari, 2014, quoted by Reynard, 2008, 226). In the matter of planning with the aim of land development and spatial organization (Sabzvari, 2014, quoted by Samadzadeh, 2010). Geotourism is the best option and solution for preserving nature because it is planned with the aim of protecting the environment and its landscapes, not changing it and refraining from human intervention in disrupting the face of the earth. By observing international rules and standards, on the one hand, it provides a platform for the appropriate exploitation of nature for the current generation, and on the other hand, it increases public awareness, which results in the preservation and maintenance of protected areas for future generations (Kordavani, 2016). Tourism is one of the most dynamic economic activities of the present era, which brings many social, economic, environmental and cultural benefits from the combination and simultaneous use of domestic and foreign resources.

Methodology:

Materials and Methods

The present study is of an applied, descriptive and comparative type. This research was conducted in the fall of 1403. In the first stage, a questionnaire was prepared based on the desired model. The statistical population in this study was environmental experts and natural tourists. In this regard, 25 experts and 36 tourists were selected to answer the questions. In the next stage, the areas under study were evaluated based on the Serrano-Gonzalez-Truba model.

Serrano-Gonzalez-Truba model:

The Serrano and Gonzalez-Truba method is suitable for evaluating geosites located in protected areas. The evaluation of geosites in this method is based on three criteria, which is considered a suitable method for the study area for evaluating scientific and management values. The aim of this type of methodology in the analysis of geosites is nothing more than the correct analysis of geomorphic elements from a scientific point of view, along with acquired values and practical and management aspects.

Geosites are evaluated in terms of intrinsic value, cultural value and practical and management value. The three layers of evaluation mentioned above are:

Scientific or intrinsic value: Scientific or intrinsic value is based on geomorphic issues that allow a more objective and complete knowledge of the site. Landforms and landform systems are analyzed and evaluated using the enumeration of intervening elements in the morphogenetic system. A maximum of ten separate elements are used for each site to obtain a significant parameter between 0

and 10. The total value is 100, but for ease of comparison with the scale used for added values and use, it is expressed between 0 and 10.

Results and Discussion:

Results of the Serrano-Gonzalez-Truba model

Based on the results obtained from the scientific and technical evaluation of protected areas within the Meshkinshahr county (Table 4), the Shirvan Daresi protected area has suitable geomorphological and geological forms in terms of morphological and geological forms, with a score of 10, compared to other protected areas, which can be used as a basis for tourism development in these studied areas. Accordingly, the next protected areas in terms of diversity of geomorphic and geological forms were the Anzan and Gandomin protected areas, respectively. These results showed that all three studied areas have a great diversity of geomorphological and geological forms.

The results of the evaluation of the Serrano-Gonzalez-Truba geotourism model of protected areas indicate different strengths and weaknesses in different fields. The Shirvan Daresi protected area, with a score of 10 in the landscape and aesthetics criteria, has performed best in terms of diversity compared to other protected areas. These results from Shirvan Daresi indicate the visual appeal and high aesthetic value of this region, which can help develop tourism in it. On the other hand, in terms of educational levels, Shirvan Daresi Protected Area has obtained the lowest score, meaning that it cannot currently provide enough information and training for visitors. Therefore, this area needs to improve its educational and information infrastructure. Also, Gandomin region has the highest score in terms of landscape with a score of 8.5 in terms of measurable criteria, which indicates the high potential of this area in terms of diversity of geomorphic forms. These results can be used as a good basis for planning and improving the quality of tourism and geotourism services in these areas. Paying attention to strengthening educational aspects and providing up-to-date information can help increase awareness and improve the experience of tourists. In the last category, Anzan region obtained the lowest score by obtaining the minimum points from the evaluation model in some sub-criteria such as educational resources .

Conclusion:

Social and cultural indicators of liveability are among the key components of urban quality of life, closely linked with place experience, collective identity, and citizen participation. They play a critical role in shaping spatial disparities in liveability. In Bonab city, the uneven distribution of cultural, The present study investigated the geotourism and geomorphological potential of protected areas in Meshkinshahr using quantitative models. The results obtained from the evaluation of Serrano-Gonzalez-Truba models show that the Shirvan Darreh Si protected area received the highest score (10) and the Anzan region received the lowest score. Also, in the cultural evaluation, Shirvan Darreh Si received the highest score and the Anzan tourism region received the lowest score. Therefore, based on the validation of the model, it is concluded that the Shirvan Darreh Si protected area in Meshkinshahr, with the highest score, has great potential for development. Similar studies such as Hejazi et al. (1402) conducted a geotourism evaluation of protected areas using quantitative methods, studying the geosites of the Mirabad protected area (southwest of West Azerbaijan). They concluded that Pardanan Recreation Area was ranked first with a score of 13.6 (out of a total of 30 points) and the triangular surfaces of Biloke were ranked 5th with the lowest score of (10 points). Finally, it is suggested that in future studies, modern artificial intelligence technologies be used to more accurately evaluate the studied geotourism areas.

Declarations

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Authors' Contribution

The article is a single-authored article.

Conflict of Interest

The author declares no conflict of interest.

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