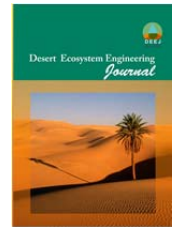




University of Kashan

## Desert Ecosystem Engineering Journal

Journal homepage: <http://deej.kashanu.ac.ir>**Assessing the Capabilities of Ecotourism Based on Desert Ecosystem:  
A Case Study of Sefidshahr Region in Aran and Bidgol County**Hosein Gholami Nasrabadi,<sup>1</sup> Sayyed Hojjat Mousavi,<sup>2\*</sup> Sedighe Kiani Salmi<sup>3</sup>

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**Extended Abstract**

**Introduction:** desert tourism emerged in the late 20<sup>th</sup> century as a special type of ecotourism worldwide. However, compared to other tourist destinations, including mountains and historical sites, desert tourism started relatively late due to the lack of required infrastructure, the existence of threats, and misconceptions concerning the desert.

Some scholars argue that offering desert tourism tours, organizing desert areas, and providing tourism facilities can generate substantial revenues for countries enjoying such natural attractions, that have invested in such kind of ecotourism. Thus, as a relatively new type of ecotourism, desert tourism can be defined as visiting desert attractions such as geomorphological forms of sand and those derived from salt crystallization, organizing sports events, enjoying brilliant sunshine during the cold season of the year, vegetation, clear and starry sky, animal life, and other attractions.

Equipped with environmental capabilities, nature provides humans with facilities for sustainable economic activities, including tourism, whose operationalization requires accurate scientific knowledge and the kind of treatment that is oriented towards economic stability and the survival of the natural environment. However, despite all such capacities and potential, no study has so far been conducted on desert tourism and its role in the development of sustainable ecotourism, especially in terms of sand, salt, and sun. Therefore, it can be argued that desert areas may considerably contribute to the sustainable development of tourism, making it necessary to pay high attention to them. In this regard, Sefidshahr enjoys great potential in terms of ecotourism in Playa ecosystems due to its geomorphological and climatic situation. Therefore, this study sought to investigate the tourism capacities of Playa areas in Sefidshahr with an emphasis on sand, salt, and sun.

**Materials and Methods:** The current study is a descriptive, analytical, survey research using comparative studies, field visits, and experts' opinions to collect the required data. To this end, the theoretical framework of the study was determined by reviewing the related literature and conducting library studies. Then, the environmental capabilities of the Sefidshahr region were identified in terms of tourism in desert ecosystems that are based on sand, salt, and sun using field visits and interviews with relevant experts. In this regard, the required data were collected by identifying the available information concerning natural attractions, geomorphology, existing land capabilities, tourism infrastructures, and facilities, including the capabilities of the desert geosystem in terms of sand, sun, and salt. Then, the strengths, weaknesses, threats, and opportunities of developing desert tourism in the study area were examined. Finally, the most effective factors involved in the development of desert tourism were identified using factor analysis and structural equation modeling.

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In this regard, first, the natural and human capabilities in the region were identified, based on which a researcher-developed questionnaire was prepared to assess the current situation of the region. The questionnaire was administered to 38 specialists and professionals in the field of ecotourism once the content validity and reliability of the questionnaire were confirmed, with its Cronbach's alpha being 0.903. Finally, the collected data were analyzed using descriptive statistics, T-tests, and structural modeling.

The current study was conducted over a period of 15 months, which started from the beginning of the fall of 2022 and lasted until the end of the fall of 2023. The study area includes Sefidshahr, which is located in the cultural region of Kashan and Aran and Bidgol cities, belonging to Aran and Bidgol county in terms of Iran's political division.

**Results:** According to the study's results, the main strengths of Sefidshahr as a desert tourism destination at 99% confidence level were found to be salt geomorphological forms and sand dunes (with the average rate of 4.0789 and statistic rate of 32.057), ecotourism development potential, Biotourism and Agritourism (with the average rate of 4.2632 and statistic rate of 31.738), over 300 sunny days annually (with the average rate of 4.1053 and statistic rate of 24.468), Dastkand underground complex (an underground carved out city) and the Mehrkadeh Narseh (a historical site) (with the average rate of 4.2105 and statistic rate of 33.421), the existence of a world-famous disabled painter (with the average rate of 4.2368 and statistic rate of 24.264), the organization of various attractive rituals and religious ceremonies (with the average rate of 4.0526 and statistic rate of 21.094), historical and traditional context of the city (with the average rate of 4.0541 and statistic rate of 24.695) and religious attractions (with the average rate of 4.0263 and statistic rate of 25.529), respectively. Moreover, easy accessibility to the tourist attractions of the surrounding areas such as Fin Garden, Sialk Hills, Vigol ancient site, the historical houses of Kashan and Aran and Bidgol, and the underground city of Noushabad (4.1316 and 27.241) was found as the most important opportunity in Sefidshahr.

As for the structural models, the main influential factors were reported to be the traditional view of the Indigenous community (0.99), conducting of scientific and applied research (0.95), allocation of governmentally decided budget to the entities responsible for ecotourism development (0.94), access to the North-South railway (0.93), the presence of natural attractions (0.90), proximity to the pleasant weather areas of the Karkas Mountain (0.90), the presence of large government organizations and decision-making NGOs (0.88), general national policies set for attracting international ecotourists (0.88), the diversity of tourism services centers (0.84), marketing of ecotourism products and its branding (0.84), Dastkand underground complex and the Mehrkadeh Narseh (0.82), lack of governmental ecotourism associations (0.82), the historical and traditional context of the city (0.80), and the presence of local private ecotourism houses (0.72), respectively.

**Discussion and Discussion:** The proper management of the aforementioned capabilities can help develop desert ecotourism and overcome the obstacles in the path of sustainable tourism development in Shafidshahr. Therefore, desert tourism planners for Sefidshahr need to focus on removing obstacles to the development of ecotourism and desert geosystem, training skilled and specialized personnel, reinforcing the infrastructure, advertising, and branding, seeking to achieve relative stability in the development of desert ecotourism in the region.

**Keywords:** Environmental Potential, Ecotourism, Desert Tourism, Capability Assessment, Sefidshahr.