



Article Review

Assessment of Recreational Potential of National Land in the Central Part of Dorud-Borujerd Basin, Lorestan Province

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ARTICLE INFO

ABSTRACT

Keywords:

Recreation Potential,
National Land,
Tourism,
Dorud-Borujerd Basin.



Received:

29 August 2022

Received in revised form:

30 November 2022

Accepted:

26 January 2023

pp. 97-114

Investigation and analysis of environmental potential prevent obstacles and problems in tourism development and the destruction of the environment. Today, industrialization, urban development, and increased preoccupation with life have led to significant demand for natural environments and, of course, the need for recreation. In this study, to evaluate recreational potential, the central part of Dorud-Borujerd basin with various potentials and environmental resources such as sufficient water, favorable climatic conditions, vegetation, communication infrastructure, and natural and human phenomena beings attracted to tourism have been studied. The descriptive-analytical research method has been used in various sections of field studies. Tools such as topographic maps 1: 25000, geology 1: 100000, climatic data and water resources, vegetation, maps and soil samples for laboratory studies, satellite images, Google Earth images, and Arc GIS software for Spatial analysis have been exerted. Using the guidelines and standards of the Organization of Forests and Rangelands of the country, the ecological model as a basic model, and experts' opinions to change the threshold of variables taking into account local conditions, areas with extensive recreational potential concentrated in national lands Determined. The results showed that the study area has more potential for extensive recreation than concentrated recreation, so 7581 hectares have the first competence of extensive recreation, and 666 hectares have the first competence of concentrated recreation. Also, lands prone to extensive recreation correspond to hilly units with outcrops and without rock outcrops in the eastern and northern parts. Plain land units are the most suitable area for developing concentrated recreation south of the study area.

Citation: Siyamack, Sh. (2022). Assessment of Recreational Potential of National Land in the Central Part of Dorud-Borujerd Basin, Lorestan Province. *Geographical planning of space quarterly journal*, 12 (4), 75-95.

<http://doi.org/10.30488/GPS.2022.246046.3297>

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Extended Abstract

Introduction

Nowadays, industrialization, the development of cities, and the increase in the busyness of life have caused a significant demand for natural environments and, by nature, the need for recreation. Recreation is one of the spiritual and psychological needs of every human being, which relieves fatigue, calms the nerves and soul, and flourishes talents. Considering the ever-increasing population growth and the human need for recreational areas, it seems necessary to analyze the land's capability to develop and promote nature-related recreation. In the studied area, the potential for recreation is high due to the diversity of topography and geology and, consequently, the formation of different landforms, diverse vegetation, forests, water sources, etc. However, the location of most areas prone to recreation within the boundaries of national lands, whose use or change of use is possible based on specific rules and regulations, has caused these areas to be used for other uses, such as pasture and agriculture, considering that before any use of a resource, it is necessary to know its capability and capacity so that policy making and planning can be done based on the capacity of the resource and in a sustainable manner. Therefore, it is necessary to identify and examine the recreational potentials of the studied area based on the available variables and guidelines so that they can be optimally exploited based on land development approaches. Therefore, this article aims to identify areas prone to recreation in the national lands of a part of the Dorud-Broujerd basin based on environmental capabilities using variables affecting this type of land use.

Methodology

First, the data needed for the research, such as national land area, water, and soil resources characteristics, geological data, etc., were collected by library and field methods from related organizations. Further, based on the research purpose, extensive and concentrated recreation uses were determined in each homogeneous

environmental unit. At this stage, based on the standards specified by the talent search and productivity department of the country's forests and pastures organization in 2014, the ecological model as the basic model, the opinions of experts and specialists to change the threshold of variables, taking into account local conditions, areas with extensive recreation potential and concentrated in national lands. Various variables such as temperature, slope, species and forest type, soil characteristics, geomorphic units, lithology characteristics, and quantitative and qualitative characteristics of water have been used to evaluate recreational potential and identify susceptible areas. The maps, weighting, and overlapping variables were prepared using fuzzy logic and analytical hierarchy (AHP) in Arc GIS software. Then, based on the minimum necessary ecological variables, each of them was classified into three levels of competence S1 (first level of competence), S2 (second level of competence), S3 (third level of competence), and land capability. In the following, by evaluating the degree of competence of each factor in the area of the target land, it was decided to determine its final degree of competence for recreational use.

Results and discussion

In the next step, the areas prone to recreational use were determined based on the homogeneous units' environmental characteristics. Based on this, out of the 60 different zones that were separated based on land units, 17 ecologically homogeneous units within the limits of the national land plates in the separation area and 17 studied units were found to be susceptible to recreational use. In the following, the areas prone to widespread recreational use in the study area were determined by removing the land area with garden, residential, and exceptions (personal land) in three levels S1, S2, and S3. Based on the obtained results, the most significant area is related to the S1 level (the first level of competence). These areas are in the northern and eastern parts and correspond to hilly land units with and without

outcrops and slope lands. Also, the examination and evaluation of areas prone to concentrated recreation show that 666 hectares of the studied area (one area) in the southern part and corresponding to plain lands have the first degree of merit (S1). These areas have been identified mainly around rivers. The reason for the absence of many zones with the first degree of merit in other sectors is that this type of recreation requires infrastructure and facilities if these infrastructures have yet to be created despite the environmental capabilities of the studied area.

Conclusion

The results showed that 17 identified homogeneous environmental units are suitable for extensive or concentrated recreation. However, the distribution of recreation in national lands differs according to topography and geology. So that due to the high slope, uneven topography, and rocky outcrops, a large part of the studied area is suitable for extensive recreation. These ranges are located in large areas, mainly in the east and north of the range, which can be attributed to the lack of facilities and infrastructure for extensive recreation. Also, the assessment of the ability of concentrated recreation in the national lands

indicates that 666 hectares in the south of the studied area are suitable for concentrated recreation with the first degree of competence. These lands are located according to the unit of plain lands, plains, and river beds, which have a slope between 5-8% and suitable soil. The comparison of areas prone to extensive and concentrated recreation shows that the largest area of the national land range for extensive recreation with the first degree of merit and the least with the first degree of merit for concentrated recreation have been identified.

Funding

There is no funding support.

Authors' Contribution

Authors contributed equally to the conceptualization and writing of the article. All of the authors approved the content of the manuscript and agreed on all aspects of the work declaration of competing interest none.

Conflict of Interest

Authors declared no conflict of interest.

Acknowledgments

We are grateful to all the scientific consultants of this paper.