

## **Identifying Environmental Potential and Natural Attraction for Ecotourism Development from User Viewpoint (Case Study: Shahrood Nature Park, Shahrood – Iran)**

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### **ABSTRACT**

*The study aimed at identifying and determining the importance of Shahrood Nature Park potential and environmental attractions effective in ecotourism development from the users's viewpoint. This study is descriptive and analytical type carried out in several parts. In the first part, the list of environmental attractions and natural potential was drawn. In the next step, land use map and its natural attractions distribution map was prepared through GIS and Index Overlaying. The information layers have been prepared by means of ArcGIS software version 9.2. In the second part, a self administered questionnaire involving 20 questions was designed based on Likert questionnaire. The questionnaire reliability was examined by a pilot study through which 30 questionnaires were administered on a sample resembling original population. The reliability was measured by Cronbach alpha – 97%. The statistical population involved tourism activity users either local or non-local in Shahrood County. The sample, making 393, was determined by Conchran Formula. The sampling was done randomly. Survey results indicate that from users' point of view natural factors are the most important in tourism development in Shahrood Nature Park respectively involving the mountains, mountain forest, forest, and the wildlife. Natural attractions involving more excitement, physical motion, and adventure were given more score by the users.*

**Key Words:** Shahrood Nature Park, Natural attraction, Environmental potential, Ecotourism.

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### **INTRODUCTION**

Tourism remains the world's largest industry and one of the fastest growing sectors, accounting for over one-third of the value of total worldwide services trade [1]. Worldwide tourism grew phenomenally from 25 million arrivals in 1950 to more than 825 million in 2007, with an average annual growth rate of 6.5 percent [2]. International statistics and tourism experts' viewpoints show that this industry will turn to the biggest one by 2020, providing high income and numerous job opportunities for different countries, and play a key role in combating poverty in underprivileged or underdeveloped countries [3]. Nature-based tourism is 'domestic or foreign travel activities that are associated with viewing or enjoying natural ecosystems and wildlife, for educational or recreational purposes' [4]. Despite the fact that nature-based tourism can only survive when the resources on which it depends are protected, resource conservation is not a core element in its conduct. The impacts of tourism in natural areas have been well documented [5, 6]. For example, nature-based tourism can be blatantly invasive towards wildlife when hundreds of observers congregate to view one rare animal or group of animals, when artificial feeding is used to draw animals for tourist viewing and entertainment, and when relationships between species are disturbed [4, 7]. It is in this context that ecotourism is often presented as an alternative form of nature-based tourism with explicit conceptual and applied emphases on conservation of the resource base [8]. Ecotourism was first described by Hector Ceballos-

Lascrain [9]. as 'Traveling to relatively undisturbed or uncontaminated natural areas with the specific objectives of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any manifestations (both past and present) found in these areas'.

In brief, three basic principles underpin most definitions of ecotourism: (1) ecotourism is nature-based; (2) ecotourism is associated with sustainability and seeks to minimize tourism's negative impacts; and (3) ecotourism has an educational component designed to motivate positive changes in people's attitudes and behaviors regarding environmental conservation [10]. Sustainable tourism is defined by the World Tourism Organization (WTO) as tourism that satisfies the needs of present tourists and host regions, meanwhile protecting and enhancing the chances and opportunities for the future. It is envisaged as a management approach that pursues the total satisfaction of economic, social, esthetical needs, while cultural integrity, essential ecological dimensions, biological diversity, and life support systems are maintained. Sustainable tourism will focus on three areas:

- Quality – valuable experience for visitors and increased life quality for host communities through cultural identity, poverty reduction and environmental quality;
- Continuity – exploitation is made at the optimum level that allows the preservation and regeneration of the natural resources;
- Balance between the needs of tourism industry, environmental protection, and local communities by an equitable distribution of benefits among stakeholders [11].

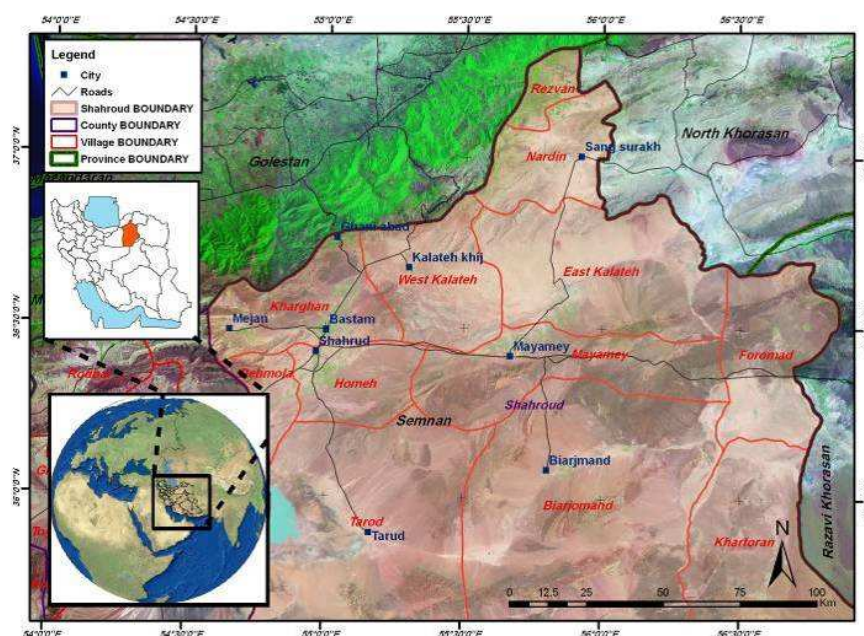


Figure 1: Location of the study area

Also, it is a kind of tourism which requires the implementation of environmentally responsible recreational activities within the designated natural areas, and is a concept that makes contributions to the protection of natural landscape [9, 12]. Seasonality is one of the most prominent features of tourism, yet, paradoxically, it is also one of the least understood. In particular, seasonality generally exhibits a dramatic tourism peak during the summer months. Most of the literature describes seasonal variations in visitation that result in a number of negative effects on the destination and the people living within that destination [13, 14, 15, 16, 17, 18, 19]. It is generally accepted that tourism seasonality can be attributed to two basic groups of factors, natural and institutional [20, 21]. Natural seasonality refers to regular temporal variations in natural phenomena, particularly those associated with cyclical climatic changes throughout the year, such as temperature, precipitation, wind, and daylight [13, 22, 23]. In recent years, a great deal of research has been conducted on tourism and the role of different factors in tourism development. Adabi (2006) concludes in his study that those attractions less affected by seasonal phenomena and associated with more diverse activities have a longer tourism season and hold more significance pertaining to tourism development in Iranian [24]. Honarvar (2007) counts fondness for culture, art, and architecture as well as night life as sport tourism development key factors [25]. The study aimed at identifying and determining the importance of Shahrood Nature Park in potential and environmental attractions effective in Nature tourism development from the users's viewpoint. Indeed, altering the attitudes toward being solely sportive was among the study aims as there are a lot of tourism opportunities hidden in all domestic and oversea events. Since after conducting this study the user interest level in

any of the environmental attractions was to be determined, sport tourism development could be executed more confidently in the area. This can have a role in tourism development in the area and prevent time and capital loss. The study was carried out in the Shahrood, in the East of Iran. Shahrood lies between longitude 37°19' and 35°30' north of the equator and between 54°32' and 57°2' east of the equator (Fig. 1). The mean annual rainfall is 157 mm and the average minimum temperature is about -14°C while the average maximum temperature is about 42°C [26]. The total population of the Shahrood region was around 225000 in the year 2006 [27].

Shahrood lies on the southern side of the Alborz terrain. Shahrood has beautiful nature and a four-season climate, is of the remainder of ancient civilization of Iran and has many historical sights and hills. Because this area lies on the Silk Road becomes very important [28].

## MATERIALS AND METHODS

This study is descriptive and analytical type carried out in two parts. In the first part, basic information on Nature tourism status quo as well as environmental status of Shahrood Nature Park in Shahrood County was collected. Then the list of environmental attractions and natural potential of the study area was drawn (Table 1). In the next step, study area land use map and its natural attractions distribution map was prepared through GIS and Index Overlaying. The information layers have been prepared by means of ArcGIS software version 9.2. In the second part, a self administered questionnaire involving 28 questions was designed based on Likert questionnaire. To verify its validity university professors and experts were consulted and after gathering their views, questions reduced to 20. The questionnaire reliability was examined by a pilot study through which 30 questionnaires were administered on a sample resembling original population. The reliability was measured by Cronbach alpha – 97%. The statistical population involved environment and tourism activity users either local or non-local in Abr mountain forest. The sample, making 393, was determined by Conchran Formula. The sampling was done randomly. The users' fondness for any of the environmental attractions and natural potential was measured by this questionnaire. Factor analysis was utilized to determine factor significance. That is to say different factors were analyzed with regard to a topic and the best ones were selected for future planning. In this part, KMO Test was used to find out whether the data pertaining to Sustainable tourism development factors are appropriate for factor analysis. The test result always ranges between 0 and 1. If it is less than 0.5, data is not suitable for factor analysis; if it is between 0.5 and 0.7 factor analysis can be performed with extra care; and if it is greater than 0.7, correlation among data is appropriate for factor analysis. KMO result of this study amounted to 8.1 showing factor acceptability.

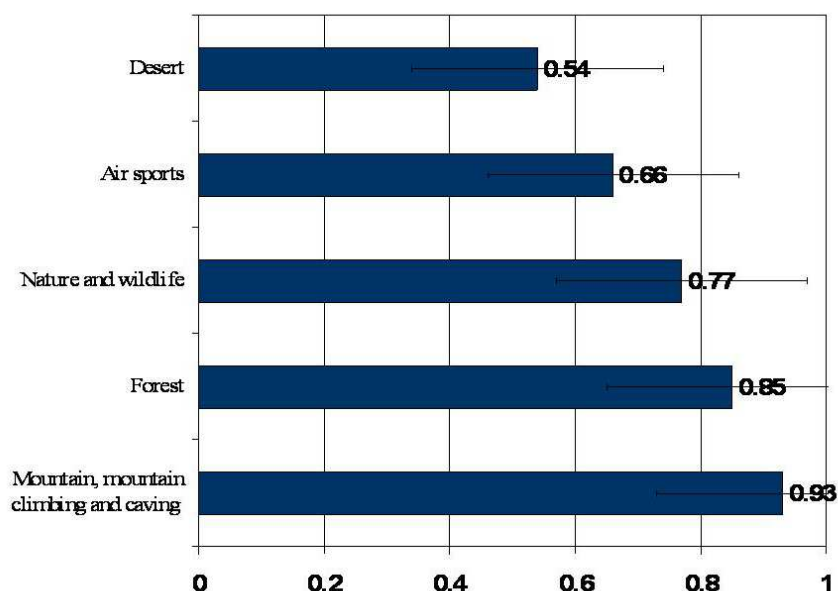
**Table 1: List of natural attractions tourism potential existing in the study area**

Natural attractions and tourism potential	
<b>1. Attractions associated with mountain, mountain climbing, and caving</b>	
a.	attractions associated with mountaineering, mountain climbing, and conquering peaks
b.	attractions associated with jogging, strolling, hiking, and mountain biking on mountain foots
c.	attractions associated with biking and mountain biking on mountain foots and resorts
d.	attractions associated with horse riding on mountain foots
e.	attractions associated with health tourism on mountain
f.	attractions associated with rock climbing
g.	attractions associated with caving
<b>2. Attractions associated with forest</b>	
a.	attractions associated with forest trekking
b.	attractions associated with biking on forest
c.	attractions associated with horse riding on forest
d.	attractions associated with picnic on forest
e.	attractions associated with health tourism on forest
<b>3. Attractions associated with air sports</b>	
a.	attractions associated with Kiting
b.	attractions associated with Paragliding
<b>4. Attractions associated with Desert</b>	
a.	attractions associated with desert biking
b.	attractions associated with desert rallying
<b>5. Attractions associated with the nature and wildlife</b>	
a.	attractions associated with wildlife watching in the forest
b.	attractions associated with wildlife watching in the mountain
c.	attractions associated with the nature and photography
d.	attractions associated with education and research in the nature



## RESULTS AND DISCUSSION

Based on documented data sources and field study, a list of environmental and natural attractions of Shahrood Nature Park was prepared (Figure 2). In addition, the area land use map was produced by overlaying information layers (Figure 3). According to the above map (Fig. 3), a vast stretch of the area, about 60%, is covered with ranges and plains largely forming the southern and middle part of the study area. Moreover, Mountains (about 20%) and forest lands (10%) are situated on northern side. Additionally, survey results indicate that from users' point of view natural factors are the most important in tourism development in Shahrood Nature Park respectively involving the mountain, mountain forest, forest, wildlife, protected area, cave, rivers and waterfalls, snow area and range land (Table 2). Natural attractions effective in tourism development in Shahrood Nature Park based on their importance



are ranked in Table 3 and Figure .

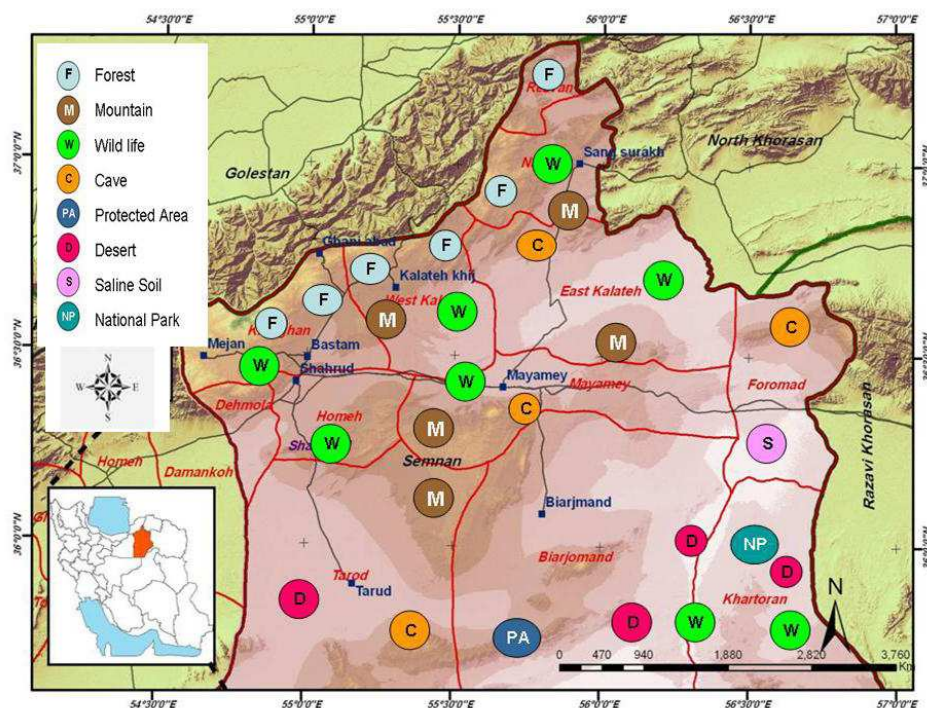


Figure 2: location of significant natural attractions in Shahrood Nature Park

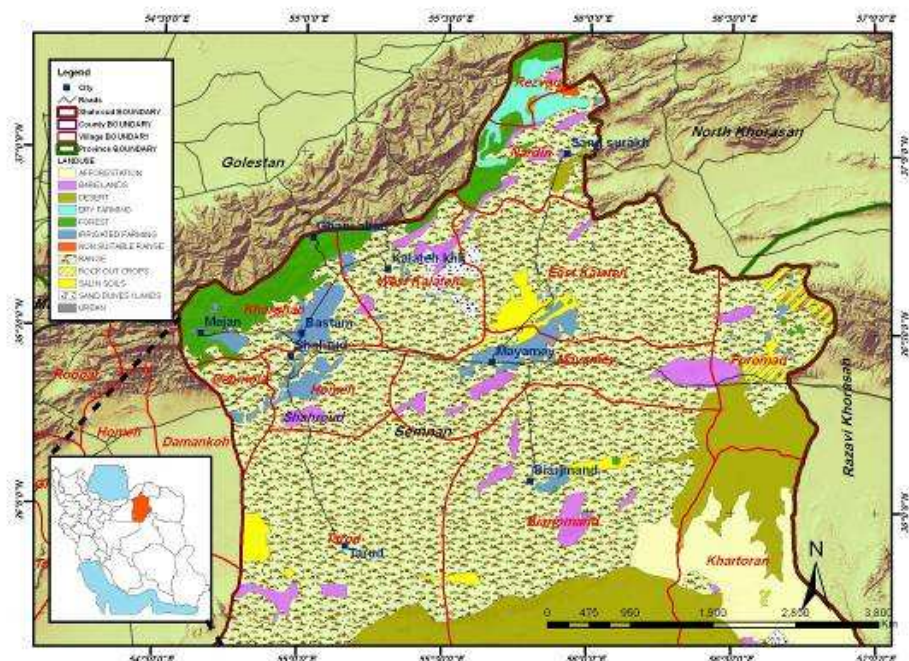


Figure 3: Land use map of the study region

Table 2: Ranking factors associated with natural resources and their role in tourism development in Shahrood Nature Park

Factor	Factor loading
Mountain	0.86
Mountain forest	0.82
Forest	0.78
Wildlife	0.71
Protected area	0.65
Cave	0.55
Range and desert	0.53
Snow	0.44
Rivers and waterfalls	0.36

Table 3: Natural attractions effective in tourism development in Shahrood Nature Park from user viewpoint

Factor	Factor loading
Attractions associated with mountain, mountain climbing, and caving	0.93
Attractions associated with forest	0.85
Attractions associated with the nature and wildlife	0.77
Attractions associated with air sports	0.66
Attractions associated with desert	0.54

Table 4: Micro-scale ranking of natural attractions effective in tourism development in Shahrood Nature Park from user viewpoint

Natural attractions and tourism potential		Factor loading
2.	Attractions associated with mountain, mountain climbing, and caving	0.93
a.	attractions associated with mountaineering, mountain climbing, and conquering peaks	0.88
b.	attractions associated with jogging, strolling, hiking, and mountain biking on mountain foots	0.84
c.	attractions associated with biking and mountain biking on mountain foots and resorts	0.86
d.	attractions associated with horse riding on mountain foots	0.77
e.	attractions associated with health tourism on mountain	0.67
f.	attractions associated with rock climbing	0.8
g.	attractions associated with caving	0.83
3.	Attractions associated with forest	0.85
a.	attractions associated with forest trekking	0.83
b.	attractions associated with biking on forest	0.65
c.	attractions associated with horse riding on forest	0.80
d.	attractions associated with picnic on forest	0.81
e.	attractions associated with health tourism on forest	0.39

<b>4.</b>	<b>Attractions associated with air sports</b>	<b>0.77</b>
a.	attractions associated with Kiting	0.56
b.	attractions associated with Paragliding	0.56
<b>5.</b>	<b>Attractions associated with Desert</b>	<b>0.66</b>
a.	attractions associated with desert biking	0.45
b.	attractions associated with desert rallying	0.39
<b>6.</b>	<b>Attractions associated with the nature and wildlife</b>	<b>0.54</b>
a.	attractions associated with wildlife watching in the forest	0.74
b.	attractions associated with wildlife watching in the mountain	0.72
c.	attractions associated with the nature and photography	0.69
d.	attractions associated with education and research in the nature	0.38

Table 4 demonstrates micro-scale ranking of natural attractions effective in tourism development in Abr mountain forest from user viewpoint.

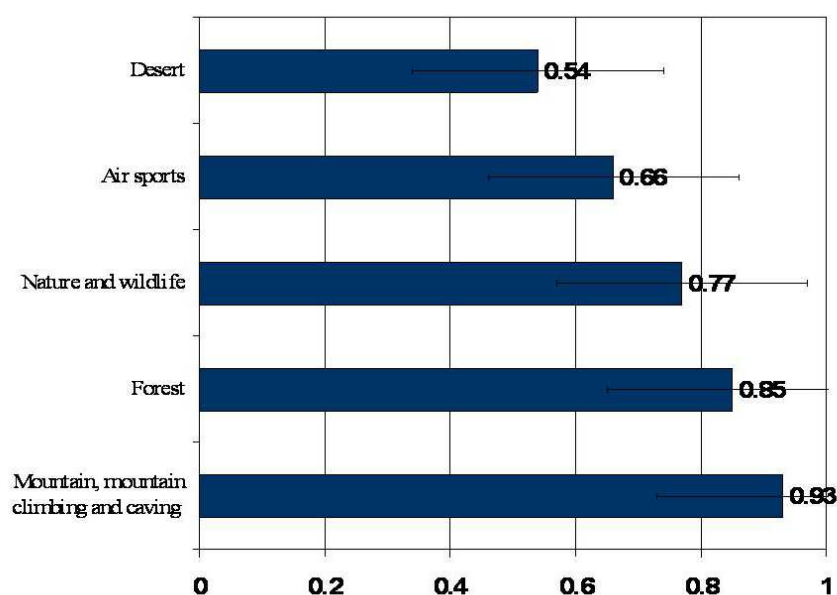


Figure 4: Natural attractions effective in tourism development in Shahrood Nature Park from user viewpoint

## CONCLUSION

The results indicate that the users are interested in mountain climbing the most and like activities taking place in such natural environments. In addition, attraction underlying mountain climbing, caving, strolling, jogging, hiking, and mountain biking are important. In contrast, attractions pertaining to fire arms, health tourism in forest and education and research attract little interest of the users. An important point is eagerness for educational and research aspects with regard to tourism activities in the nature, which is worrying and lack consideration to it will lead to more natural resources and environmental destruction. As tables 3 and 4 show, natural attractions involving more excitement, physical motion, and adventure were given more score by the users. The results of the study comply with those of Adabi [24] on natural attractions in that those attractions less affected by seasonality and involving more various activities has a longer tourism period, hence are more significant in tourism and sport tourism development in Iran. Although Iran enjoys high potential for tourism, there is a big gap between its tourism revenue and that of other countries. Despite the fact that the Shahrood nature park's environmental factors and natural resources can play a key role in tourism, they are not fully taken advantage of. Finally, it is proposed that a pilot study at a small scale be carried out based on the priorities presented in this study.

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