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Tourists' perspective about recreation at Daman-e-Koh and linked Hiking Trails in Margalla Hills National Park, Islamabad

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ABSTRACT

Tourism is a widespread non-consumptive use of protected areas which provides recreational opportunities to the visitors. The present study was designed to assess tourists' perception about recreation at Daman-e-Koh and Linked Hiking Trails located in Margalla Hills National Park (MHNP), Islamabad. A well-designed questionnaire was used for the data collection. An on-site survey was conducted by requesting visitors at Daman-e-Koh and the Linked Hiking Trails to fill out the questionnaire. Basic research output is that greater number of the respondents considered the area had high recreational value. While many problems were indicated by the visitors e.g. transport, security risk, high prices, solid wastes, air pollution, damages to habitat, fire hazards and disturbance to wildlife. It is concluded that, it is needed to improve tourism in the area, the existing facilities are insufficient and there is a need to raise awareness of visitors about ethics of visiting a national park.

Keywords: Hill, Park, Wildlife, Impact, Transport

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INTRODUCTION

The concept of national park was first developed in United States of America in 1872, when Yellowstone was designated as world's first national park. Later on, the idea of national park spread worldwide (Boyer, 2004; McFarland, 2018). Primary objectives of national parks are to protect, conserve and manage natural diversity; as well as tourism is an important component. Tourism in protected areas provides a wide range of opportunities out of which recreational experience of wilderness is recognized as the highest valued service (Eagles *et al.*, 2002; Suh and Harrison, 2005; Gössling, 2018).

At the start of 19th century the concept for parks began to change. The Progressive Movement of the period included an order for change in parks that offered recreation values and opportunities for children and adult in neighborhood parks (Cranz, 1978; Godbey *et al.*, 2005). Thus was born the notion of the playground. The recreation idea expanded to include; swimming pools, grounds, ball fields, as well as indoor facilities in middle part of the 20th century. But after middle part of the 20th century, interest in city parks declined. The interest of the people changed into their own gardens, grounds and swimming pools at home (Harnik, 2006). Different aspects were studied till now related to parks and recreations i.e. pleasurable time (Edginton *et al.*, 2001; Shultis, 2001; McLean and Hurd, 2011; Dattilo, 2015), advancement in transportation (Shultis, 2001), enhance education (Leivo, 2002), important for society and ecosystem (Manning and More, 2002), refreshing to human body and mind (Harmon, 2004), tourist demands, (Cochrane, 2006), tourism benefits and drawbacks (McCool, 2006), tourism as significant source of benefits (Khan, 2006), efficiency for ecotourism (Sayma *et al.*, 2009), relationship between tourism and biodiversity (Salizzoni, 2012) and tourists' attitudes towards national parks (Salizzoni, 2012; Kolahi *et al.*, 2014a; Kolahi *et al.*, 2014b); these aspects are important to enhance the value of parks and recreational activities.

As a capital city, Islamabad has a diverse resident population from all over Pakistan and other countries. Daman-e-Koh in Margalla Hills National Park is a popular tourist attraction in Islamabad. A great influx of visitors from Islamabad and outside may be seen here. Tourism in protected area has potential negative impacts; so there is a need to study different aspects of tourism, especially visitors' experience and expectation about recreation in a national park.

MATERIALS AND METHODS

STUDY AREA

The study was conducted at Daman-e-Koh and Linked Hiking Trails located in Margalla Hills National Park, Islamabad. Margalla Hills National Park (MHNP) was notified in 1980 by the Federal Government under Section 21 of the Islamabad Wildlife (Protection, Preservation, Conservation and Management) Ordinance, 1979 (Figure 1). MHNP was established with an objective to protect and preserve natural scenery with its flora and fauna. It is being managed by Environment Directorate of Capital Development Authority (CDA), Islamabad. Under the law it is open for recreation, education and research purposes (Bukhari and Shafiq, 2013).

It is located in the north-west of Islamabad city with an area of 15,882 hectares including; Margalla Hills Range (12,605 ha), Rawal Lake (1,901 ha) and Shakar Parian (1,376 ha) (Figure 1). Elevation ranges from 600 to 1600 meters above sea level (Ali *et al.*, 2012). Margalla Hills have diverse vegetation ranging from subtropical, dry semi-evergreen forests to subtropical pine forest. Important wildlife species include; Barking deer (*Muntiacus muntjak*), Grey goral (*Naemorhedus goral*), Common leopard (*Panthera pardus*), Rhesus monkey

(*Macaca mulatta*), and great diversity of birds and reptiles (Anwar, 2006). Daman-e-Koh is located in Margalla Hills National Park (MNHP), Islamabad. It is a popular tourist spot in Islamabad. It is a blend of natural beauty and man-made structures which makes it a popular tourist destination. It includes a Hill Park and viewing point that provides a panoramic view of Islamabad (Alter, 2001).

The Capital Development Authority (CDA) has carried out various extension activities to facilitate visitors including; plantation of trees, establishment of Hill Park and development of easily accessible Hiking Trails. Other interventions are; development of car parking facility, establishment of cafe and tuck shops, up-gradation of restaurant and installation of telescopes at viewing point etc.

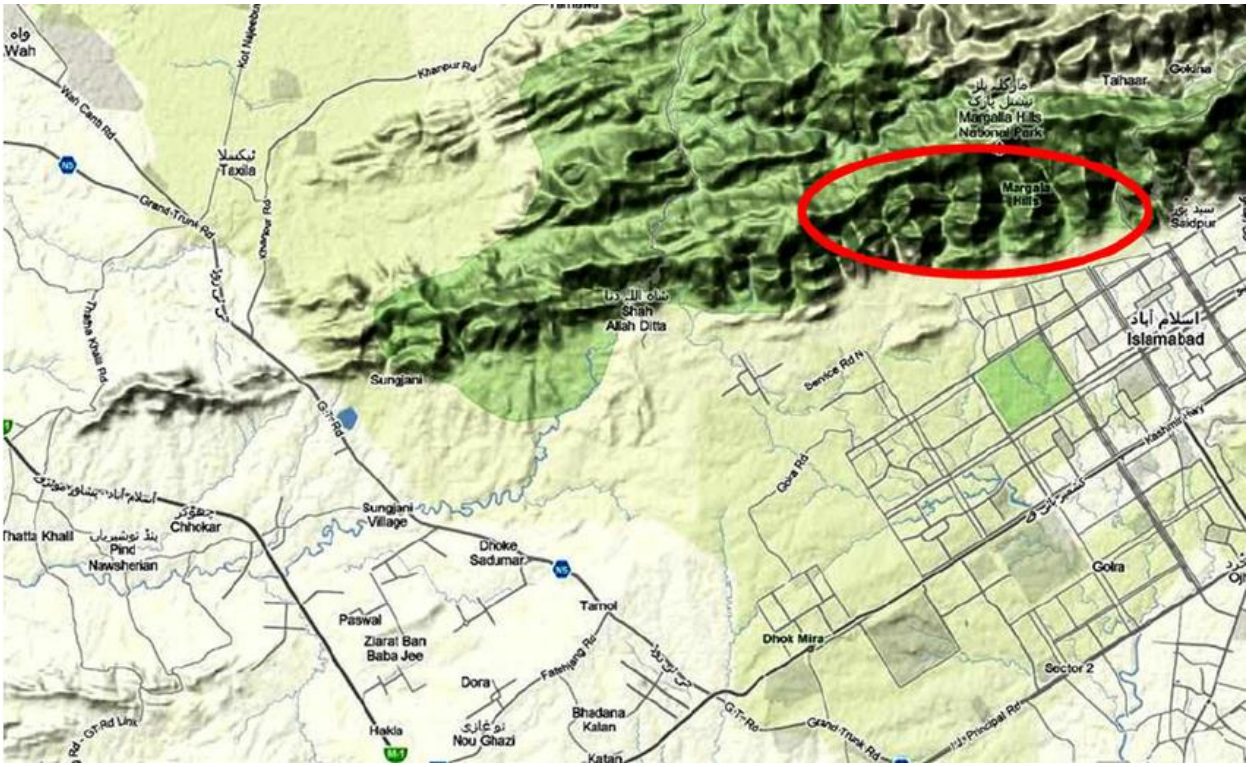

Figure 1: Map of Margalla Hills National Park

METHODOLOGY

A well-designed questionnaire was used for the data collection. According to the objectives of the study, the questionnaire consisted of open-ended and closed-ended questions in addition to background information of the respondent in the beginning. The questionnaire was pre-tested on 10 respondents and slight modification was made to have accurate information.

An on-site survey was conducted by requesting visitors at Daman-e-Koh and the Linked Hiking Trails to fill out the questionnaire. A random sampling technique was used for selection of the respondents. A sample of one hundred (100) respondents was selected randomly. As there is no mechanism to record

actual number of visitors in the area, therefore actual size of population is unknown. The estimated population size is converted into sample size by using this formula (Sudman, 1976).

$$\mathbf{n} = \left(\frac{\mathbf{Z\alpha/2 \,.\, \sigma}}{\mathbf{e}} \right)^2$$

Where, n = Sample Size; $Z\alpha/2$= Confidence Level; σ = Standard Deviation
e = Error of estimator; n = 101.

DATA COLLECTION

The data collection was carried out at different timings from December 2016 to March 2017. The respondents were from different backgrounds including; students, employees in government and private sector, housewives, farmers and persons having their own business. To get reliable data, the respondents were briefed about the objectives of the study. The questionnaire was in English but when required for convenience of the respondents, questions were asked in Urdu (Table 1).

Table 1 Profile of respondents of study area.

Respondents	**Status**	**Frequency**
Gender	Male	60
	Female	40
Marital status	Married	52
	Unmarried	48
Occupation	Employees	35
	Students	45
	Others	20
Education	Matriculation or Below	10
	Inter or Equivalent	30
	Bachelors	25
	Masters or Above	35

ANALYSIS OF DATA

After collecting data, it was transferred to tally sheets for compilation. The data was compiled in tabulated form for comparison and analysis. The data was analyzed manually by using statistical techniques of average and percentage for interpretation and discussion.

Percentages were obtained by using the following formula:

P = F/N x 100

Where

P = Percentage

F = Frequency

N = Total number of respondents.

For Average or Arithmetic Mean following formula was used:

$$\bar{x} = \frac{\sum x_i}{n}$$

Where
$\bar{x}$ = Arithmetic Mean
$\sum x_i$ = Sum of all observations
n = Total number of respondents.

RESULTS AND DISCUSSION

The respondents were asked to indicate their visit type in term of visiting group/company. The responses are summarized in Table-2.

Compiled data showed that most of the people come with families (46%), friends (42%), and others for study tour (10%) and alone (2%). The data shows large portion of respondents was visiting Daman-e-Koh with their families, which indicates family-oriented recreational value of the area. People were there in groups of all sizes enjoying scenic beauty and various facilities available there.

During the study it was noted that most of the respondents visit area to explore nature (47%), for fitness and health (43%) and only few for research and education (10%) (Table 2). Due to scenic beauty of the area, the respondents were visiting to explore natural beauty. Health and fitness were other motives behind visiting the area. With its rich fauna and flora, the area also serves as a place of research and education for students and researchers.

Calculated results showed that 40 percent of the respondents visit the area once a year, 15 percent twice a year, 13 percent three times, 11 percent four times and 21 percent of the respondents visit the area five times or more than that. Majority of the respondents were one time visitors in the area, followed by those who were frequent visitors to the area (Table 2). In a study conducted at Satchari National Park, Bangladesh, three types of visitors were identified; one time visitors were the largest group comprising 72 percent, two times visitors were 18 percent and the visitors who visit more than two times were 10 percent (Sayma *et al.*, 2009).

During the research it was noted that large numbers of respondents like to visit in spring (45%) and summer seasons (35%); while only few prefer to visit in winter season (17%) and seasons does not affect on very few (3%) persons (Table 2). Respondents' compiled data showed that most of the visitors preferred to visit in afternoon (42%), morning (27%), evening (25%) and only few have no specific time (6%) to visit the study area (Table 2). Visitors noted that they preferred holidays, usually weekends to visit the area. As given above, preferred season of more respondents for visiting the area was spring and preferred timing was

afternoon. Therefore maximum visitors may be expected in this season and timing.

It is noted that 32 percent of the respondents preferred photography, 40 percent hiking and 28 percent of the respondents were there for wildlife watching. A large portion of the respondents preferred hiking but during hiking they have other activities like photography and wildlife watching. The area has rich biodiversity which offers visitors to enjoy watching greenery and a variety of wildlife species.

Compiled data showed that 50 percent of the respondents were satisfied with the available facilities in the area, 19 percent were not satisfied and 13 percent of the respondents were satisfied to some extent. The overall satisfaction level was high as greater portion of the visitors was satisfied with the available facilities.

One of the objectives of the study was to identify the problems that are faced by the visitors at Daman-e-Koh. Respondents were asked to indicate main problems they had faced during their visit to the area; the respondents indicated the following problems they faced during their visit at Daman-e-Koh: A) Majority of the respondents complained about high prices of edibles available at different eateries and shops at Daman-e-Koh. 40 respondents (40 percent) indicated this problem. B) 20 respondents (20 percent) indicated lack of sufficient number of dustbins at appropriate places to dispose litter. C) 12 respondents (12 percent) complained about lack of parking space in rush hours. D) 10 respondents (10 percent) noted that, lack of public transport was a problem to reach the area. The respondents complained about unavailability of cabs or other transport. The taxi fares were very high due to no check and balance by the relevant authority. To facilitate visitors, affordable and environment friendly transport may be arranged by CDA preferably from Marghazar Zoo to Daman-e-Koh. E) 6 respondents (6 percent) indicated toilet problem. The available facility was not sufficient for the high number of visitors. There were complains about unhygienic condition of the toilets. F) 5 respondents (5 percent) complained about taunting behaviour of male visitors to females. G) 5 respondents (5 percent) indicated lack of security arrangement for the safety of visitors. The indicated problems are mainly related to the available facilities, which need to be improved. Sayma *et al.* (2009) in their study at Satchari National Park, Bangladesh revealed similar problems faced by the visitors including; food, drinking water, sanitation and security.

Hiking is preferred by health and fitness conscious visitors. Establishment of easy accessible hiking trails in Margalla Hills National Park was a major intervention to promote tourism in the area. Linked Hiking Trails to Daman-e-Koh are popular in the adventurous visitors who like hiking. The Hiking Trails passing through natural habitat provide opportunity to enjoy scenic beauty and rich biodiversity from close proximity. Most of the respondents (62%) used the Linked Hiking Trails. The data indicates that Linked Hiking Trails are important component of recreation at Daman-e-Koh and visitors prefer hiking besides other recreational activities. Most of the hikers were frequent visitors to the area, who

exclusively come for hiking on regular basis. Some of the first time visitors noted that, it was their life time experience to go for hiking in the area.

The respondents who had used Linked Hiking Trails (62 respondents) were requested to indicate whether they were satisfied or otherwise about condition of the Trails. Results indicated that, 48 percent of the respondents were satisfied with the condition of the Hiking Trails, 23 percent were not satisfied and 29 percent of the respondents were satisfied to some extent. The data showed larger portion of visitors was satisfied with the condition of Linked Hiking Trails.

The respondents were requested to indicate problems they have faced during hiking at the Linked Hiking Trails. Compiled results showed that A) 16 respondents (26 percent) complained about lack of proper sitting places at the Liked Hiking Trails for rest. B) 14 respondents (23 percent) indicated lack of dustbins along the trails has resulted improper disposal of garbage in the area. Moreover the trails were not cleaned regularly resulting in heaps of litter along the trails. C) 10 respondents (16 percent) indicated non-availability of first aid facility is case of any health issue or emergency. D) 8 respondents (13 percent) complained about lack of trail maps. E) 8 respondents (13 percent) noted that there was no security arrangement along the trails. F) 4 respondents (6 percent) complained about toilet problem. G) 2 respondents (3 percent) complained about lack of proper maintenance of the trails where they were damaged due to erosion by rain water. There were complains about steepness of the trails at some places which made hiking a cumbersome activity. The indicated problems may be addressed not only to facilitate the visitors but to minimize negative impacts of tourism on the area. As revealed by Sayma *et al.* (2009) in a study at Satchari National Park, Bangladesh, visitors faced similar problems in protected areas especially in national parks. It is because of intensive man-made infrastructures for tourists may affect the sanctity of the protected areas.

It is noted that 33 percent of the respondents were aware of the rules and regulations of visiting a national park, 22 percent were not aware, and 45 percent of the respondents were aware to some extent. The overall awareness level of the respondents in the present study was inadequate. For sustainable tourism in a national park, the visitors should have adequate awareness about the rules and regulations. Effective enforcement of relevant legislation will not be possible unless visitors are aware of which activities are allowed and which are prohibited in a national park. There is need to raise visitors' awareness about importance of national park and ethics of visiting it. Signboards with information about rules and regulations of visiting a national park should be widely installed.

It is found that 38 percent of the respondents observed negative impacts of tourism in the area, 50 percent replied no negative impact and 12 percent of the respondents had no idea about negative impacts of tourism on the area. Due to low awareness level, a greater number of the respondents were not aware of the negative impacts of tourism on protected area. However respondents with understanding of effects of anthropogenic activities on natural environment indicated the different negative impacts of tourism which are summarized in Table 2. A) 23 respondents (46 percent) indicated the problem of accumulation of

solid wastes in the area. B) 13 respondents (26 percent) indicated the problem of air pollution caused by smoky vehicles. C) 9 respondents (18 percent) indicated damage to vegetation by visitor activities. At times careless behavior of visitor caused fire hazards in the area. D) 5 respondents (10 percent) described disturbance to wildlife by visitors' activities. It included; movement in habitat area, noise and lights in nights. The disturbance prevents wildlife species to perform their activities like feeding, resting and breeding etc. There is a trend that visitors feed monkeys by hands in the area. This practice has not only changed natural feeding behaviour of the species but incidents of monkey bites and road kills of animals have been reported. To reduce disturbance to wildlife, activities of the visitors should be strictly monitored by the CDA staff. The trend of visitors to feed monkeys by hands should also be discouraged. According to Eagles *et al.* (2002) even a small recreational use of protected areas can results in negative impacts. Environmental risks from tourism in protected areas include; pollution, accumulation of solid waste, damage to vegetation, disturbance to wildlife and fire hazards etc. To minimize negative impacts, careful monitoring of tourism in protected areas may be ensured.

The respondents were asked to comment on recreational value of Daman-e-Koh and Linked Hiking Trails in Margalla Hills National Park (Table 2). The data showed that 15 percent of the respondents ranked the area with low recreational value, 30 percent indicated medium value, 48 percent of the respondents ranked the area with high recreational value, while 7 percent of the respondents had no idea about it. A greater number of the respondents perceived Daman-e-Koh and Linked Hiking Trails had high recreational value in Margalla Hills National Park.

MAJOR FACILITIES AT DAMAN-E-KOH

The visitors were asked to indicate major facilities they have enjoyed at Daman-e-Koh. Respondents indicated the following facilities:

a. Hill Park with lot of trees, flowers and well arranged sitting places there.
b. Viewing point which gives beautiful view of Islamabad and telescopes installed there give detailed view of the capital.
c. Hiking Trails.
d. Different eateries; restaurant, cafe and tuck shops.
e. Other shops.
f. Traditional music; a person playing *Rabbab* in traditional costume.
g. Parking facility.

As listed above many facilities are available in the area for the visitors, which make their visit enjoyable.

RECOMMENDATIONS

Based on the findings of the present study, following recommendations are made for improvement of tourism at Daman-e-Koh and Linked Hiking Trails in Margalla Hills National Park, Islamabad:

i. A monitoring system should be in place to check number of visitors and their activities in the area.

ii. There is a need to raise awareness of visitors about ethics of visiting a national park. Ecotourism may be promoted which is a responsible way of visiting a natural place with minimum negative impacts.

iii. There should be check and balance on the prices of edibles available in the area.

iv. Parking facility should be properly managed to accommodate visitors in rush hours.

v. In view of the prevailing law and order situation, proper security arrangement should be made for safety of visitors.

vi. First aid facility should be made available at hiking trails in this connection, first aid points or mobile first aid facility may be established to handle any health issue or accident during hiking.

vii. For clean environment, sufficient number of dustbins should be installed on Daman-e-Koh and Linked Hiking Trails. Regular cleaning of the area by sanitation staff should be ensured.

viii. Hiking Trails should be maintained properly and stopover points should be established at proper distances with necessary facilities.

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The all authors are thankful for help of MHNP community.

Table 2: Tourists' Perspective about Recreation at Daman-e-Koh and Linked Hiking Trails in Margalla Hills National.

Contents	**Category**	**Frequency**
Tourist status	With family	46
	With friends/colleagues	42
	Study tour	10
	Alone	2
Purpose of the visit	For health and fitness	43
	To explore nature	47
	Research and education	10
Frequency of visit/year	One time	40

	Two times	15
	Three times	13
	Four times	11
	Five times/or more	21
Preferred Season	Spring	45
	Summer	35
	Winter	17
	No preferred season	3
Preferred Timing	Morning	27
	Afternoon	42
	Evening	25
	No preferred timing	6
Activities at Daman-e-Koh	Photography	32
	Hiking	40
	Wildlife watching	28
Facilities	Satisfied	50
	Not satisfied	19
	Satisfied to some extent	31
Problems faced	High prices of edibles	42
	Lack of sufficient dustbins	20
	Parking problem	12
	Lack of public transport	10
	Toilet problem	6
	Taunting behavior of males	5
	Lack of security arrangement	5
Use of linked Hiking Trails	Yes	62
	No	38
Satisfaction of the visitors using Linked Hiking Trails	Satisfied	30
	Not satisfied	14
	Satisfied to some extent	18
Awareness Level	Yes	33
	No	22
	To some extent	45
Negative Impacts of Tourism	Yes	38
	No	50
	No idea	12
Negative Impacts of	Accumulation of solid wastes	23

wastes	Air pollution	13
	Damage to vegetation and fire hazards	9
	Disturbance to wildlife	5
Recreational Value	Low	15
	Medium	30
	High	48
	No idea	7
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	No	38
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	Not satisfied	14
	Satisfied to some extent	18
Awareness Level	Yes	33
	No	22
	To some extent	45
View point about Negative Impacts of Tourism	Yes	38
	No	50
	No idea	12
Negative Impacts	Accumulation of solid wastes	23
	Air pollution	13
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REFERENCES

Ali, M., A.A. Qureshi, A. Waheed, M.A. Baloch, H. Qayyum, M. Tufail, H.A. Khan. 2012. Assessment of radiological hazard of NORM in Margalla Hills limestone, Pakistan. Environmental monitoring and assessment. 184: 4623-4634.

Alter, S. 2001. Amritsar to Lahore: a journey across the India-Pakistan border. University of Pennsylvania Press.

Anwar, M. 2006. Review of protected areas management and performance effectiveness in Pakistan. Ministry of Environment, Government of Pakistan and IUCN.

Boyer, P.S. 2004. The Oxford Companion to United States History. Oxford University Press.

Bukhari, S.S.B., M.M. Shafiq. 2013. Wildlife Acts & Rules of Pakistan. Forest Institute,. Peshawar, Pakistan.

Cochrane, J. 2006. A typology of tourists to protected areas. Protected Areas Programme. 10.

Cranz, G. 1978. Changing roles of urban parks: From pleasure garden to open space. Institute of Urban & Regional Development, University of California, Berkeley.

Dattilo, J. 2015. Positive psychology and leisure education. Therapeutic Recreation Journal. 49: 148.

Eagles, P.F., S.F. McCool, C.D. Haynes, A. Phillips. 2002. Sustainable tourism in protected areas: Guidelines for planning and management. IUCN Gland.

Edginton, C.R., S.D. Hudson, S.V. Lankford, D. Larsen. 2001. Managing recreation, parks, and leisure services. Champaign, IL: Sagamore Publishing.

Godbey, G.C., L.L. Caldwell, M. Floyd, L.L. Payne. 2005. Contributions of leisure studies and recreation and park management research to the active living agenda. American journal of preventive medicine. 28: 150-158.

Gössling, S. 2018. Tourism, tourist learning and sustainability: an exploratory discussion of complexities, problems and opportunities. Journal of Sustainable Tourism. 26: 292-306.

Harmon, D. 2004. Intangible values of protected areas: what are they? Why do they matter? In: The George Wright Forum. p 9-22.

Harnik, P. 2006. The excellent city park system: What makes it great and how to get there. The Human Metropolis: People and Nature in the 21st-Century City [full book]. 47.

Khan, H. 2006. Willingness to pay for Margalla Hills National Park: Evidence from the travel cost method. The Lahore Journal of Economics. 11: 43-70.

Kolahi, M., K. Moriya, T. Sakai, E. Khosrojerdi, V. Etemad. 2014a. Introduction of participatory conservation in Iran: case study of the rural communities' perspectives in Khojir National Park. International Journal of Environmental Research. 8: 913-930.

Kolahi, M., T. Sakai, K. Moriya, M. Yoshikawa, S. Trifkovic. 2014b. Visitors' Characteristics And Attitudes Towards Iran's National Parks And Participatory Conservation. Parks. 20: 53-66.

Leivo, A. 2002. Customer management in Finland's protected areas. Parks. 12: 37-41.

Manning, R., T. More. 2002. Recreational values of public parks. In: The George Wright Forum. p 21-30.

McCool, S.F. 2006. Managing for visitor experiences in protected areas: promising opportunities and fundamental challenges. Parks. 16: 3-9.

McFarland, B.J. 2018. The Origins and History of Conservation Finance Conservation of Tropical Rainforests. p 121-131. Springer.

McLean, D., A. Hurd. 2011. Kraus' recreation and leisure in modern society. Jones & Bartlett Publishers.

Salizzoni, E. 2012. Tourism and biodiversity along the Euro-Mediterranean coast: prospects for overcoming a deeply rooted conflict. Parks. 18: 44.

Sayma, A., M. Rana, M. Sohel. 2009. Protected area an efficacy for ecotourism development: a visitors' valuation from Satchari National Park, Bangladesh. Tigerpaper. 36: 1-7.

Shultis, J. 2001. Consuming nature: The uneasy relationship between technology, outdoor recreation and protected areas. In: The George Wright Forum. p 56-66.

Sudman, S. 1976. Applied sampling. Academic Press New York.

Suh, J., S.R. Harrison. 2005. Preservation, conservation and development Management objectives and economic value of national parks. School of Economics, university of Queensland, Brisbane.

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