

Investigating the Perceptions of Residents in Golestan National Park, Iran

Leylian Mohammad Reza (Corresponding author)

M.Sc., Department of Architecture, Faculty of Art, University of Tarbiat Modares

Jalal Ale Ahmad St, Tehran, Iran

Tel: (98-21)2236-5179 E-mail: Leylian@modares.ac.ir

Amirkhani Aryan

Ph.D. Student, Department of Architecture

Faculty of Art, University of Tarbiat Modares, Jalal Ale Ahmad St, Tehran, Iran

Tel: (98-21)4441-6537 E-mail: Aryan.Amirkhani@modares.ac.ir

Ansari Mojtaba & Bermanian Mohammad Reza

Ph.D. Associate professor

Department of Architecture, Faculty of Art, University of Tarbiat Modares

Jalal Ale Ahmad St, Tehran, Iran

Abstract

The natural characteristics of protected areas have changed for a variety of reasons through time. Changes in protected area landscapes can occur because of natural and/or cultural processes. Natural processes such as geomorphologic disturbance and climatic condition can permanently and/or temporarily change the characteristics of the environment. In addition, changes in human needs, knowledge and activities are the cultural driving forces behind changing characteristics of landscape through time. Herein, the contact between citizens and open spaces continues to block the successful movement of open and especially urban spaces. One of the most important parts of this relationship is local citizens' awareness of open spaces. In this paper key issue in the contacts between citizens and Golestan National Park (GNP) in western part of Iranian capital, Golestan is investigated. In fact, in this paper our objectives are to describe and clarify residents' attitudes regarding the costs and benefits of GNP, explore the effects of people's awareness of park management through non-governmental organization.

Keywords: Awareness, Citizenry, Open spaces, People contacts, National Golestan Park

Introduction

Few discussion remains in the profession about the health, social and recreational benefits of leisure, parks and play. Urban green spaces and recreation services have a unique importance in the overall well-being of communities as their role continues to be vital to citizens receiving the health benefits associated with the green spaces and recreation.

Protected areas are a wide array of land and water designations, of which some of the best known are national park, wildlife management area, nature reserve and landscape protected area but can also include such approaches as community conserved areas. In addition, the term include a wide range of different management strategies, from highly protected areas where few people are allowed to enter the parks where the focus is on conservation but visitors are welcome, to much less restrictive strategies where conservation is involved with the traditional human lifestyles or even takes place alongside limited sustainable resource extraction. However, this contact still remains as an obstacle to outstanding conversation (As an ethic of resource use, allocation, and protection. Its main focus is upon maintaining the health of the natural world: its, fisheries, habitats, and biological diversity. Secondary focus is on energy conservation and materials conservation, which are seen as important to protect the natural world.), in part, because the complex contact between people and open protected

areas are still understood not enough. (Berkes, 2004; Chouni and Russell, 2003; Brown, 2002; Wilshusen et al., 2002). Some findings to understand the Park–people contacts include, describing residents' resource use of open spaces (Brown, 1997; Dearden et al., 1996; De Boer and Baquete, 1998; Maikhuri et al., 2000; Sharma and Shaw, 1993; Straede and Helles, 2000). Thus, a basic way of understanding the contact that people do with open protected sites is the Resource use. Herein, underlying the aspects including wildlife damage, and the effect of conservation are some fundamental solutions to improve the relationship, are occupant's awareness of the protected areas. Occupant's awareness is important in designing correct policies in order to note local occupants' requirements (Mostafaeie et al., 1995; Fiallo, 1995; Infield, 1988; Ite, 1996; Mehta and Mukherjee and Borad, 2004; Sah and Weladji et al., 2003).

However, the main objective of this manuscript is to find out the occupants' behavior concerning the advantages and costs of GNP explore the effects of people's awareness of park management and finally examine peoples' awareness of NGOs. These aims arise from the results of an open-ended survey conducted by Fiallo (1997) to determine residents' perceptions of the benefits and problems of the Golestan National in Iran (Bakhtiyari, 2006). This indeed raised three areas of further study: First, conflicting perceptions of the protected areas were held by respondents in that they reported both liking and disliking that park management did not allow people to extract natural resources, such as fuel wood and fodder, from the park. Although the survey asked people their awareness of the profits and problems that the park caused, people responded by describing their perceptions of for example park management, the military that guards the park, and the government.

Meanwhile, residents did not mention items that they might have been expected to join to the park. Although nongovernmental organizations (NGOs) had been implementing conservation, no one mentioned these NGOs either as profits or problems.

Describing Golestan province

Golestan Province with an area of 20,311.6 km² situated in south east of the Caspian Sea and it contains about 1.3 percent of total area of Iran. The Province is located between 36° 44' and 38° 05' north zatitude and 53° 51' and 56° 14' east longitude of Greenwich Meridian. It has an international border with Turkmenistan Rpublic on the north, and on the south, west and east, it is situated in the vicinity of Semnan, Mazandaran and Khorassan Provinces, respectively. The mountains of Shahkuh, Siah Marz kuh, Chah Bid and the mountain chain of Kurkhud keep its southern and eastern parts with their limits. The most important townships of the province are: Gonad-e-Knaves with an area of 6,856.8 km², Minudasht with an area of 6,485.8 km² and Gorgan with an area of 2,848.04 km². (Fig.1)

Climatic Conditions

Since the area of consideration is besieged between the Caspian Sea and Alborz Mountains, the climate of this area is generally moderate. The sub climatic classification of the region is as follows: Northern part: moderate to dry, central part: moderate and dry, flat and mountainous areas: semi wet and southern mountainous areas: cold semi wet to cold semi dry. For this reason, the area enjoys natural spectacles and extensive woods parks and wildlife .This specification has made the province to have several tourist and camping centers. One of these centers is National Park of Golestan which is one of the 16 protected areas in Iran and it is the most important and internationally reputed park with an area of 919.8 km². This park is located in the east of Alborz Mountain Chains.

Golestan National Park

Golestan National Park is located in the easternmost parts of the Iranian Caspian forests, in which, provide a transition zone between the juniper woodlands, the montane, the Hyrcanian forests, and the Artemisia steppes. It covers an area of 2750 hectares. It is bounded and demarcated by three major highways. Golestan Natural Park is a vast and intact natural reserve situated seventy kilometers away from historic city of Gonbad-Ghabous, in the south-east of the scenic Caspian Sea. It constitutes one of the richest and sanctuary of variant types of vegetation and wildlife. Over 150 species of mountain birds as well as brown bears, wild cats, tigers, mountain goats, coyotes and foxes are among the beautiful and rare inhabitants of this splendid natural park.

Existing conditions

Concerning the measure and intricate situation of the site, this may be a series of base plans or maps that delineated and evaluates the physical attributes and constraints for the parcel of land. It contains some of the following items:

Topography of the site

Slopes that are suitable for certain activities may restrict for others. However, the slope categories are also keyed to the proposal land use or types of facilities. (Table. 1)

Geology and soil

The basis for the visible landform discussed, is the subsurface geology. Other important criteria are the engineering characteristics such as bearing capacity that determine suitable locations for structures and other heavy elements. However, shallow depth to bedrock may restrict certain construction options on the basis of cost and impact of development. A high water table may also limit some sanitary sewage options. Soils are important in terms of suitability for structural foundations, stability, surface drainage, erosion susceptibility, and soil fertility to support plant growth. In addition, the soils' suitability is very much depended on the proposed uses. This site that is suitable for recreational activities.

Microclimate

Golestan Park is located on the sloped area between Alborz Mountains and Central plateau. Regarding these items its weather in summer is desirable but it has a cold winter. Unfortunately there was not a precise microclimatic report of this park available so authors used macroclimatic researches of Golestan to this study. This information is surveyed over a 30year period. Results of these researches are in following tables. Prevailing wind direction of Golestan is from west to east. Its maximum amount occurs at the end of August with western north to eastern south direction. Being close to a refinery in Khurasan province, northern and eastern north winds are unpleasant. (Tables 2 & 3)

Views

The most practical means of determining positive and negative off-site and on-site views is the visual analysis. This survey is indeed useful in terms of determining the visual character of the site as viewed from the outside as well as the visual impact of its surrounding upon potential on-site development. Thus, the main factors examined include mass and space definition from natural and man-made elements, off-site views to be accentuated or screened, and on-site view opportunities or problems.

Existing structures/ infra structure

The availability of essential utilities-water, storm sewer, sanitary sewers, telephone, electric, gas, etc.-is crucial to the potential for site development from both an environmental and economic standpoint.

Authorities

National Park of Golestan authority consists of a chief warden, a senior warden in charge of the eastern park sub-quarters and three assistant wardens. Game scouts, senior game scouts and Rangers, rotate duty at posts located throughout the park. In Iran, the National Forests and Environment Security Organization (NFESO) is responsible for guarding the park and enforcing its rules and regulations, including, checking boundaries, stopping illegal hunting, preventing encroachment into the park, preventing livestock grazing and extraction of resources by area residents, and controlling poachers (Fig.8)

At this time, two army companies (106 individuals) were posted at 8 guard posts and in the park headquarters for assignments of two years. Furthermore, the Organization security battalions and their commanders that rotate through GNP every two years have little incentive to build long-term relationships with local communities. A common perception in the organization is that an assignment at GNP is a lucrative posting because of the possible income from bribes from local people and outsiders who want access to valuable resources and subsistence resources. When the initial survey was conducted in 2002, only one nongovernmental organization (NGO), the Iranian Trust for Nature Conservation (ITNC), was conducting development and conservation projects, including health, community forestry, animal husbandry, and nature guide and lodge management training, with residents living around the park. It maintained its headquarters adjacent to one of the districts where interviews were conducted. One other organization, Women as residents, was implementing education and daycare programs in one of the communities. At the time of follow-up interviews in 2004, so many projects existed in the area that a management structure called the Integrated Conservation Project (ICP) and dispense by the Department of National Parks and Wildlife Conservation had been created to coordinate project activities. Organizations active in the area included ITNC, People Project, and CARE IRAN.

Survey research

For survey research, thirty in-depth interviews were conducted in three communities (10 persons each, equally between men and women) in GNP (Teri D. et al, 2007). These communities were of the main three dynasties

living in the region since years ago. These were all directly in touch with Golestan national park. In this research, residents were not sampled randomly. As the most important aims were to describe perceptions, (Miles, 1994). In Snow ball method (Patton, 1990), the chances of finding interviewees who would yield rich and informative interviews were examined. Interviews were conducted with 15 men and 15 women, ranging in age from 20 to 65 years. In order to understand the range of relationships that residents have with the protected area, the communities were chosen based on their distance from park headquarters. In this regard, peoples' access to natural resources and their relationship with park management was important. The number of NGO projects in the community also correlates with the distance from park headquarters. During the survey, all communities had been visited. The first community is located about five kilometers from park headquarters at the southern edge of the park and another one is located about two kilometers from park headquarters along the northern border of the park, the third community, is on the eastern edge of GNP.

The interviewer's guide covered numerous topics, of which three are discussed in this paper. Topics included the history in the region, if they were a migrant their reasons for moving there, and their feelings about the region as a place for living there; their use and perceptions of GNP and their cognizance of changes over time in their contact with the GNP; their cognizance of park management; their imitations of how others in their community felt about the park; the NGOs working in the area, and tourists and researchers such as ourselves and their understanding of the purpose and goals of the NGO projects in the area. To clarify or gain more understanding general questions were asked about each topic.

Collecting all the useful information about the above topics, text was analyzed afterward using a content analysis strategy (Patton, 1990) and the Non-numerical Unstructured Data Indexing Searching and Theorizing program (QSR NUD*IST). According to the interview topics, interviews were then coded. Finally, additional coding was conducted to identify themes within the research objectives. (Teri D. et al, 2007).

Discussion

Awareness about GNP

Often, citizens are neither solely in favor of nor opposed to the park. On one hand, the area provides resources, environmental services, and aesthetic profits. The inability to extract legally both diminishes and enhances the economic value of GNP for occupants (Teri D. et al, 2007). Citizens recognize that management does conserve the resources that might otherwise be consumed by them or others although they feel angry about aspects of management that limit their opportunity to resources. Citizens dislike not only having free access to resources in the park, but they also know that if it were an open area, citizens would be extracting a greater quantity of resources and people from greater distances away would be extracting. Although people may not like the park cost to themselves, they recognize the park's conservation value at the individual level.

Contacts between the park management and the government's rules

Although people in parks spend most of their time outdoors, they do have office duties, such as answering calls from the general public or from government organizations interested in some aspect of the park's management. Herein, People feel that guards' presence provides some security to communities and they recognize that guards and park staff sometimes provide help to local residents. However, people do not like being punished for entering the park, although they may feel that reasonable punishment is justified. Punishments people described for illegally extracting include fines, imprisonment and beatings. Guards are more lenient with whom they feel an affiliation, such as ethnicity or with people they know. Citizens resent that they are not even allowed to extract dead and fallen wood for household use while officials sell large amounts for personal gain (Ghimire, 1994). According to citizens, the game scouts have been known to cut trees in the park to sell as lumber to wealthy people in other areas of Iran. One resident made the comment that: "They taught us to steal." Despite this, residents support the government and its creation of the park because there is an understanding of the benefits of forest in Iran: "The government has tried a lot for the animals. There is profit for the government because Iran's wealth is green forest. people feel that the government has an obligation to mitigate the negative effects of the park." in the case of GNP. One man said that the government has a responsibility to care for both wildlife and people: "As the Park is the government's resources, people can't kill wildlife. Because animals and people are equal, the government must take care of wildlife, and it must also take care of us people. Anyhow, there has been damage to wildlife. We don't have to disturb the animals, really." The feeling that the government is the supporter of the people arises out of the traditional relationship that people have had with the monarchy, whose role is perceived as taking care of the people. In return, people feel they must patron the government and its decisions (Teri D. et al, 2007). Some people answered that the government decisions must be respected and sincere in a positive, respectful way, when people were asked how they felt about the park. For others, it arises

out a feeling of weakness to help themselves and resentment at a reliance on the government that is viewed as corrupt. In the communities massive foreign aid at the national level contrasted with a lack of facilities, such as roads, and health posts, has created a bad attitude toward the government. Citizens consider the government corrupt and ineffectual. As one man said, "The government doesn't care about the poor, it has bad eyes." People believe that the government only listens to those who are wealthy and have power. An individual's awareness of the government can affect the expression of people's perceptions toward GNP. Some People believe that their land might be taken from them to increase the park size especially in areas where land has not been officially measured and registered by the government. Therefore, a man said: "This happens. We think the government will move us from here if we say animals need a place", when asked if he believed that wildlife needed some place to live. If they observe that those comments could be used to their disadvantage, this establishes that people may be cautious about emphasizing benefits of the park. Because of recognize the value of the park is only fair for the government to take care of all citizens, other people would like to be resettled.

People's Awareness and the NGOs

Different NGOs makes it difficult for people to differentiate between them because the number of different NGOs working in the park. Nongovernmental organizations are the same, a resident indicated. The hotels and NGOs both get preferential treatment from park management. This may be Part of the confusion about them. For instance, both are allowed to cut thatch before local residents, and they are allowed to use wood from the park for their buildings. Hotels with license from the government are allowed to run a camp within the park. Having the feeling of entitlement is an additional problem in a developing country such as Iran, where foreign aid has played such an important role. These residents think they are perceived as poor by other nations who give large amounts of funding, so they feel they deserve development activities. Residents' perception of the role that foreign aid plays in their country's development is showed by one people's response to a question about the role NGOs play in the community. He responded not with a whole answer about the type of projects or the benefits, but with the exact amount of money that a project had given to make a nursery plantation. This sense of entitlement has grown out of Iran's long history of foreign aid. In the forestry sector alone, In 1987, 38 international agencies and organizations, compared to three Iranian groups, were conducting projects and research in Iran (Tinker, 1994). Residents who have contributed in the community groups formed by the NGOs recognize that the groups have benefited the communities in meaningful ways, even though the link between projects and the park is weak. An educated man elaborated that he learned from the NGO that communities need to be self-dependent, not relying on outside government to help them solve problems. People working in committees feel that they are learning to act together and to be more independent through NGO projects. Citizens living adjacent to GNP do not make a connection between the park and the profits that the associated projects have provided, such as a health post and community committees. Disconnection between the NGO activities and the park is due partly to the fact that people do not understand the relationship between the conservation of the park and NGOs, nor can people necessarily distinguish differences among the park authority, the NGOs, and the hotels, much less among the NGOs themselves. Otherwise, the perspectives of one resident reveal a number of ways that residents can view NGO activities negatively. (Teri D. et al, 2007) They resented unevenly distributed profits within the community and the high socio-economic status of project workers. They believed more local people should be hired within the projects and hotels. It was also annoying that some NGOs do not work cooperatively with existing institutions. An NGO's health post, just down the road from a government health institute was mostly referred. While the government health post was not well-stocked, the NGO health post was. The NGO's projects usefulness, which they perceived as short-term solutions, was doubted. First, they also felt that often the NGOs looked out for their own profit.

Examining results and solutions

People's perceptions of the park are linked with their awareness of park handling and the military that guard the park, in GNP. In addition, other studies have also found residents' relationship with park management to be important (Holmes, 2003) and some studies have found that people's attitudes toward management can be even worse than their attitudes toward the protected areas (Infield, 1988; Newmark, 1993). In a summary of factors influencing viewpoint toward protected areas, a poor contact with park staff was the only variable that was always associated with negative awareness of protected areas in all six studies reviewed (Fiallo, 1995). The results demonstrate that the role the guards play in protecting the park is not only a negative one. In fact, citizens have conflicted perceptions of park management and the military that guard it. For example, although they hate it, many accept that punishments for illegal extraction are justified. However, they resent that the park management are allowed to extract resources from the park that they themselves are not. If citizens perceive that other entities are gaining more extractive profits from the park than they are, it weakens people's contacts with management

and makes it difficult for people to understand and support conservation of the park. The important case is that residents perceive park management's primary duty as protecting the park and not legally or illegally gaining benefits themselves. Occupants appreciate that the area provides natural resources, environmental services, and aesthetic benefits. They appreciate these profits both for themselves and their communities. This awareness can seem to be conflicting. Since residents resent not being able to extract the resources they wish, or in the case of that, to the extent that they wish, they do appreciate that extraction is limited. People do understand the reasons that the government has set aside strictly protected areas and they understand the bigger picture that conservation plays in the protecting Iran's national heritage. However, depending on how they perceive the government and whether they respect it or view it as corrupt, it can be good or bad. In the case of GNP, Residents' memories of the leader and his support of protected areas is important to their positive perceptions of GNP, while their awareness of some governments, particularly local officials, as corrupt have a negative effect on their attitude toward GNP. (Mostafaeie, J.S, 1995; Teri D. et al, 2007) The fact that occupants rarely discussed NGOs or their work as a benefit of GNP has disturbing implications for the idea that residents support conservation of protected areas if they gain tangible benefits from it. In the case of GNP, it is obvious that NGOs and park management should be clearer about the purpose and goals of the projects. Anyhow, while it is understood that development projects and conservation have generally done an inadequate job of linking conservation and development, one aspect that has not been discussed much is that often NGOs deliberately do not link them in the initial stages of the project, as was the case with some projects in the area. NGOs are often trying to build support for themselves by supporting development activities that are not directly linked to conservation of the park (Brandon, 1992). They say if they provide programs for occupants that meet residents' needs then residents will be more willing to work with NGOs on projects that meet the park's needs. However this may seem logical to NGOs, if residents are not aware of the NGO's full agenda, then activities of the NGOs are unlikely to motivate residents to support conservation farther down the road. Once the NGO agenda becomes clear, people actually feel manipulated, in a worse case scenario. Anyhow, even if the links between development and conservation are made direct and explicit, their linking ramifications should be carefully considered. If residents considered project development activities to be benefits of the park, the long-term effects of making this link need to be carefully considered. If expectations of the people about development benefits are not fulfilled, their attitude toward the park may be negatively impacted. In Ecuador National Park (Fiallo, 1995) National Park in the Cross River Nigeria (Ite, 1996), and Richtersveld National Park of South Africa (Boonzaier, 1996) residents' awareness of the park have been negatively impacted because they feel betrayed and cheated by promises of community development which have not materialized. Another aspect of the community-NGO contact that is often overlooked is people's relationships with and awareness of the NGO staff. Inherent tensions exist in people's relationships with NGOs, in the case of GNP, because the relationship is shaped by the power structure inherent within it. Personnel of NGO come from outside, descend upon the community, and often take for granted that local people want them to come and want their help. These factors cause tensions between occupants and NGOs, which NGO employees may underestimate because of people's appreciation of the projects and NGO efforts to help the local communities. finally, it is fundamental that NGOs from the outset help build support for the park as an institution and its staff, or they may be undermining their own less explicit long term purpose of making the park a strong conservation institution. The case of GNP highlights the need for good communication between citizens and management. Residents should understand NGOs agendas and be made equal partners in terms of choosing and shaping projects. This manuscript antedate the creation of the Buffer Zone Management Regulations, which among other things, allowed for the spending of 45-60% of the funds deserved by parks and reserves to be used for community development with mechanisms for communities to participate in deciding how the money gets spent. NGO projects should be clearly integrated into park management aims. Management, citizens, and NGOs should clearly understand how NGO projects, fulfill conservation objectives.

Conclusion

Perceptual distortions and inaccuracies may not only affect our perception of the environment but also affect our perception of people. Although the process of perception is equally applicable in the perception of objects or people, there is more scope for subjectivity, bias, errors and distortions when we perceive others. The focus this paper is to examine the perception of people in parks, and to consider the impact this on the management and development of people at open spaces.

The principles and examples of perceptual differences discussed above reflect the way we perceive other people and are the source of any organizational problems. The selection of stimuli and the process of perception can affect a manager's relationship with government in the park. While citizens resent that they cannot freely extract

from the park, they also recognize that protection of the park is perfect not only for conservation in general, but also it serves to conserve the resources upon which they depend. People's perceptions of GNP are strongly connected to their perceptions of other entities that they associate with GNP, particularly park management, but also including the government more broadly. The function of development projects, which are meant to improve the relationship between protected areas and people and ultimately help conserve the area more effectively, is not necessarily one that people easily recognize. These three issues explored in the context of GNP have important implications for park and people relationships more generally. First, Conservation strategies that foster and integrate the diverse values that people hold will more accurately reflect the reality and complexity of resident's lives and, therefore, promise the best hope of sustaining protected areas and communities over the long-term. administration should not only work to meet people's extraction needs if possible, but also take advantage of and strengthen resident's understanding of the need to press out or mitigate extraction from protected areas as well as build on their understanding of the importance of conservation of the area. On the other hand, NGO projects should be clearly integrated into park management objectives. NGOs must be frank with communities about their own goals and objectives from the very beginning of projects. Improving residents' ideas toward management is one of the most critical methods to improve the relationship between the residents and parks. It means that, management must be perceived by local people as trying to protect the park while working to have good relationships with local people.

References

- Bakhtiyari, N.L. (2006). Residents' attitudes toward three protected areas in southwestern Iran. *Biodiversity and Conservation* DOI 10.1007/s10531-006-9092-z. Published online Oct. 27.
- Bauer, H. (2003). Local perceptions of Waza National Park, northern Cameroon. *Environ. Conserve.* 30, 175–181.
- Berkes, F. (2004). Rethinking community-based conservation. *Conserv. Biol.* 18, 621–630.
- Boonzaier, E. (1996). Local responses to conservation in the Richtersveld National Park, South Africa. *Biodivers. Conserv.* 5, 307–314.
- Brandon, K. & Wells, M. (1992). Planning for people and parks: design dilemmas. *World Dev.* 20, 557–570.
- Brown, K. (1997). Plain tales from the grasslands: extraction, value and utilization of biomass in Golestan National Park, Iran. *Biodivers. Conserv.* 6, 59–74.
- Brown, K. (2002). Innovations for conservation and development. *Geogr. J.* 168, 6–17.
- Chouni, E. & Russell, D. (2003). Conservation from above: an anthropological perspective on transboundary protected areas and ecoregional planning. *J. Sustain. Forest.* 17 (1/2), 39–65.
- Daniels, R. & Bassett, T.J. (2002). The spaces of conservation and development around Lake Nakuru National Park Kenya. *Profess. Geogr.* 54, 481–490.
- De Boer, W.F. & Baquete, D.S. (1998). Natural resource use, crop damage and attitudes of rural people in the vicinity of the Maputo Elephant Reserve, Mozambique. *Environ. Conserv.* 25, 208–218.
- Dearden, P., Chettamart, S., Emphandu, D. & Tanakanjana, N. (1996). National parks and hills tribes in Northern Thailand: a case study of Doi Inthanon. *Soc. Nat. Resour.* 9, 125–141.
- Fiallo, E.A. & Jacobson, S.K. (1995). Local communities and protected areas, Attitudes of rural residents towards conservation and Machalilla National Park, Ecuador. *Environ. Conserv.* 22, 241–249.
- Fortin, M., Gagnon, C. (1999). An assessment of social impacts of national parks on communities in Quebec, Canada. *Environ. Conserv.* 26, 200–211.
- Furze, B., de Lacy, T. & Birkhead, J. (1996). *Culture, Conservation, and Biodiversity*. John Wiley and Sons, New York, NY.
- Gadd, M.E. (2005). Conservation outside of parks: attitudes of local people in Laikipia, Kenya. *Environ. Conserv.* 32, 50–63.
- Ghimire, K.B. (1994). Parks and people—livelihood issues in national parks management in Thailand and Madagascar. *Dev. Change.* 25, 195–229.
- Hondegoz, S., Lee, P.C. (1999). The impact of wildlife-related benefits on the conservation attitudes of local people around the Selous Game Reserve, Tanzania. *Environ. Conserv.* 26, 218–228.

Mostafaeie, J.S., Lant, C.L., Burnett, G.W. (1995). Conflicting attitudes toward state wildlife conservation programs. *Soc. Nat. Resour*, 8, 133–144.

Teri D. Allendorf, James L.D. Smith & Dorothy H. Anderson. (2007). Residents' perceptions of Royal Bardia National Park, Nepal. *Journal of Landscape and Urban Planning*, No. 82, 33-40.

Table 1. Slope table

	Direct of slope	Area(hectare)	percentage
1	northern	30	1.1
2	southern	60	2.5
3	eastern	580	23.4
4	western	560	22.9
5	Without direct	1250	50.1
Total	-	2480	100

Table 2.

Year	Daily precipitation max.(mm)	Annual precipitation max.	Relative humidity (percent)		N.O of frozen days
			hour 12:30	hour 6:30	
1969-1983	23.7	241.7	30	50	55
1985-1998	27.5	237.6	33.4	50	33
Final average	25.6	239.6	31.7	50	44

Table 3.

Year	Temperature (c)				
	Average of temperature	Temperature(c)	Absolute max.	Average of min	Average of max
1969-1983	15.9	-8.2	39	11.6	22.6
1985-1998	17.7	-6	40.7	12.8	22.6
Final average	16.8	-7.1	39.8	12.2	22.6



Figure 1. Geographical location of Golestan Province



Figure 2. Golestan Natural Park constitutes one of the richest habitat of variant types of vegetation and wildlife

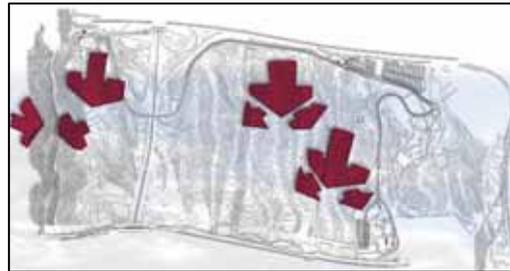
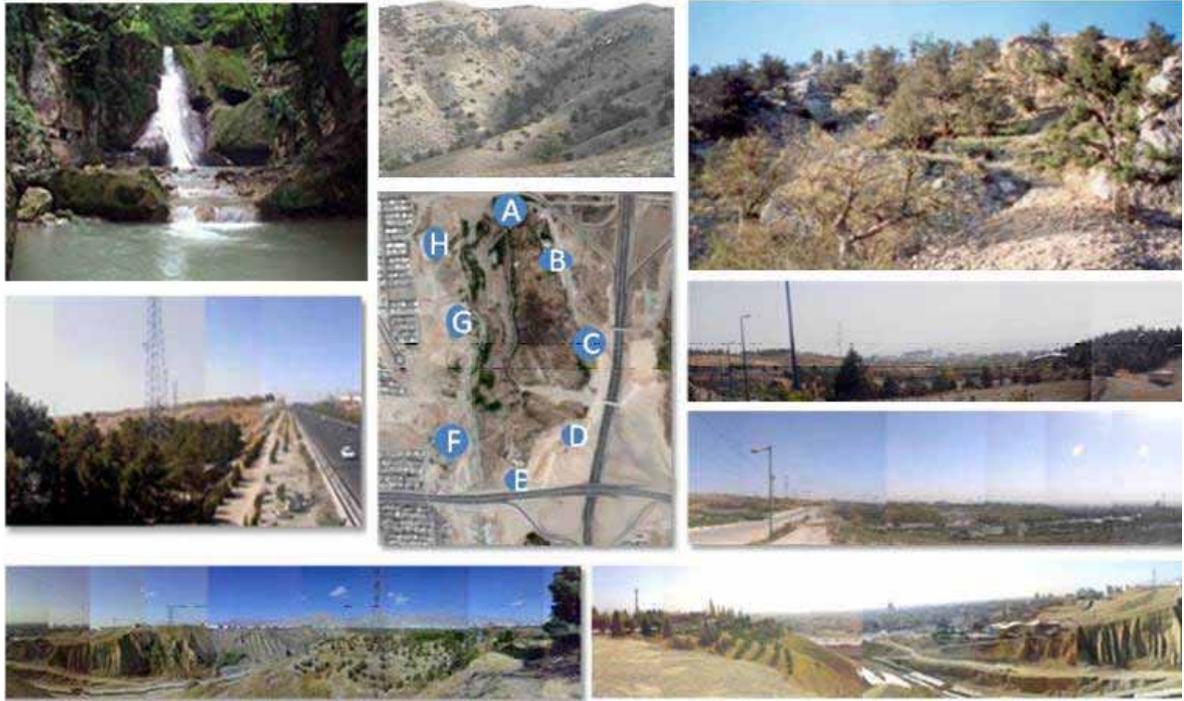


Figure 3. Topography of the site





Figures 4-5. Inside and outside views of the park

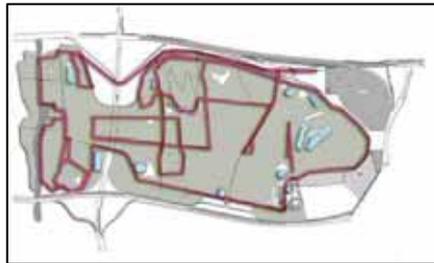


Figure 6. Water net and water storage

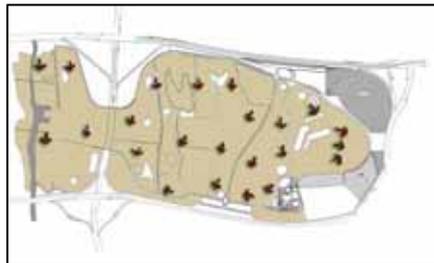


Figure 7. Construction sewage and anticipation sewer



Figure 8. National Forests and Environment Security forces