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SWOT analysis of Tandooreh National Park (NE Iran) for sustainable ecotourism

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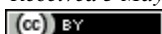
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Abstract

Tandooreh National Park (TNP) is one of the important tourism areas in Iran which is included in the natural heritages of the Northeast of Iran. Present paper explores the possibility of sustainable ecotourism development in Tandooreh National Park with reference to judicious utilization of resource and local resident community. To plan and implement this, different management and decision making tools were used including interviews of local residents, visitors and the staff of the park, with the help of survey questionnaire (primary data) and secondary data acquired from Department of Environment (Iran Government), conference proceedings, books and journals. Based upon these data the strengths, weaknesses, opportunities and threats (SWOT) were analyzed in order to identify the required management strategies to improve the sustainable tourism in the park. SWOT analysis has shown that the well established tourism destination with a variety of natural attractions and unique culture of local people having ancient culture are the strengths of Tandooreh National Park while lack of infrastructures and fundamental facilities are the major weaknesses. Proper ecotourism package development involving local people in decision making are found to be few of the main opportunities whereas tensions, restlessness and insecurity in neighbouring countries are the main threats. In order to maximize the internal strengths and external opportunities and to minimize internal weaknesses and external threats on the TNP several strategies have been suggested for the sustainable ecotourism development and management. However there is a scope for the improvement of the SWOT analysis in identifying more options for strategic management of sustainable ecotourism.

Keywords sustainable ecotourism; SWOT analysis; Tandooreh National Park; Iran.

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1 Introduction

Ecotourism is a travel to delicate, unspoiled and usually protected areas that strives to be low impact and (often) small scale. It helps educate the traveler, provides funds for conservation, benefits directly the economic development and political empowerment of local communities and fosters respect for different cultures and for human rights. Ecotourism is very important so that future generations can experience the wonderful environment we have today (Martha, 2008). In short ecotourism is a small sub-section of the tourism industry catering tourists who wish to visit natural areas to observe wildlife, natural landscapes and traditional cultures. In other words it is a tool having potential for contributing to sustainable livelihoods of local communities and conservation of natural environments which has been recognized internationally when the United Nation declared 2002 as the International Year of Ecotourism. Two most appropriate definitions of ecotourism are given below:

- Ecotourism is "Responsible travel to natural areas that conserves the environment and improves the well-being of the local people" (TIES, 1990).
- As defined by IUCN (The World Conservation Union) Ecotourism is "environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features both past and present) that promotes conservation, has low negative visitor impacts, and provides for beneficially active socio-economic involvement of local people" (Ceballos-Lascurain, 1996).

Sustainable tourism development integrates environment with development based on the ecological, economical, social and institutional pillars of sustainability. Sustainability of the forests has been accepted as the main principle of the forestry profession for a long time and at present (especially after Rio Earth Summit in 1992) sustainable development or sustainable resource management has become an attractive idea for resource managers (Warner, 1997). In the development of the concept of sustainable development it was recognized that there was a need to link conservation of resources with the development needs of rural population who depend on the resources (Gilmour, 1995). To encompass the social dimensions of productive organization and environmental conservation ecotourism projects must go beyond prevailing notions of "the overlap between nature tourism and sustainable tourism". Ecotourism must be beyond creating a series of activities to attract visitors, offering them an opportunity to interact with nature in such a way that it should be possible to preserve or enhance the special qualities of the ecotourism site including and its flora and fauna, while allowing local inhabitants and future visitors to continue to enjoy these qualities. They must also establish a durable productive base to allow the local inhabitants and ecotourism service providers to enjoy a sustainable standard of living while offering these services. Sustainable tourism resources are used in such a way that these resources for future generations do not lose their appeal.

Ecotourism activities are gradually becoming popular in Iran. In March 2006, the Iran Cultural Heritage, Handicraft and Tourism Organization (ICHHTO) created the National Committee of Ecotourism as the first specialist team focusing on ecotourism. This Committee consists of educational, cultural, legal, technical and ecotourism activists. Beside this main center, twenty nine Provincial Ecotourism Committees were established representing each province of Iran. While the development of such groups shows positive signs, the provincial committees are currently not sufficiently staffed with enough fulltime specialists. Iran's sustainable ecotourism, which is dependent on ecology, environment and host communities, is now being widely promoted by communities and the government. The Tandooreh National Park in Iran is appropriate place to investigate the roles that the sustainable ecotourism can perform in visitor's rewarding experiences, environmental conservation and the resident's local culture and way of life

2 Previous Work

Iran has an extraordinary and specific position because of the variety of climate and weather, cultural richness, deserts, forests, geomorphological position, national parks, wildlife refuges and extraordinary seas and beaches, natural landmarks, mountains, pastures, lagoons, lakes and islands (Asadi, 2012) and hence ecotourism can be the most important competitive advantage of Iran ecotourism industry. Due to its territorial diversity, historical and cultural attractions, range of diversified handicrafts and a cache of biological diversity Iran enjoys a relatively advantageous position in the field of eco-tourism as compared to other branches of tourism (Zangiabadi et al., 2006; Tavangar, 2010). Although Iran ranks second in the south region of Asia in attracting the greatest number of tourists and the revenues in this section are only second to attract India (Ebrahimzadeh and Aghasizadeh, 2009) Iran is not yet an ecotourism destination for international visitors as most of the travel is by local people (Tavassoli, 2002) and hence it is essential to identify the important problems and to address them. In this regards few notable studies on the sustainable ecotourism are from Alamut Region (Saeb et al., 2012), from Boujagh National Park (Reihanian et al., 2012), from protected areas (Momeni, 2012), from Northern forests of Iran (Barzekar et al., 2011), from Eslami Island (Mokhtarshahi et al., 2012), from Qeshm Island (Jozi et al., 2010) and from Caspian Sea's South-West Beach (Tabibi et al., 2011).

3 Study Area

Many wonderful contrasts exist in Iran owing to its rich variety of natural environment. Some of them are listed below.

- The temperature in the different parts of Iran varies between 70°C (in Dasht E Lut) and -36°C in mountainous areas of north and west.
- The wide range of rainfall also varies from approximately zero in Dasht E Lut to about 2,000mm in Gilan province.
- There are about 10,000 species of plants, 516 of wild birds and 160 species of mammals which undoubtedly draw the attention of every specialist and animal lover.

Iran is a vast country and has a lot of cultural, natural and historical resources which has resulted in a high potential to attract tourists, since there are 131 protected areas, including 19 national parks, 91 natural reserve, 21 natural parks, 12 world heritage sites and lots of attractions with natural or historical importance (Asadi, 2012).

Tandooreh National Park is situated in the north of Khorasan province in Dargaz division (Fig. 1) and the big cities nearby Tandooreh national park are Mashhad, Ghochan and Dargaz. This Park with 73,435 hectare area was guarded in 1968 as a Tandooreh protected region and in 1969 its names has been changed to Tandooreh Wild Park. The park area in 1975 was 53,780 hectare. In 1978 and later for many reasons, such as no possibility of region protection, increase of cattle number the limits and bounds of Tandooreh park were reconsidered and in 1982 the bounds of this park was authorized with the area of 37,800 hectare by the supreme board of environment protection. This park is also very important as some historical and spiritual places such as Ghale Rajabe, two shrines of Chehelmir and Baba Nastan are situated there.

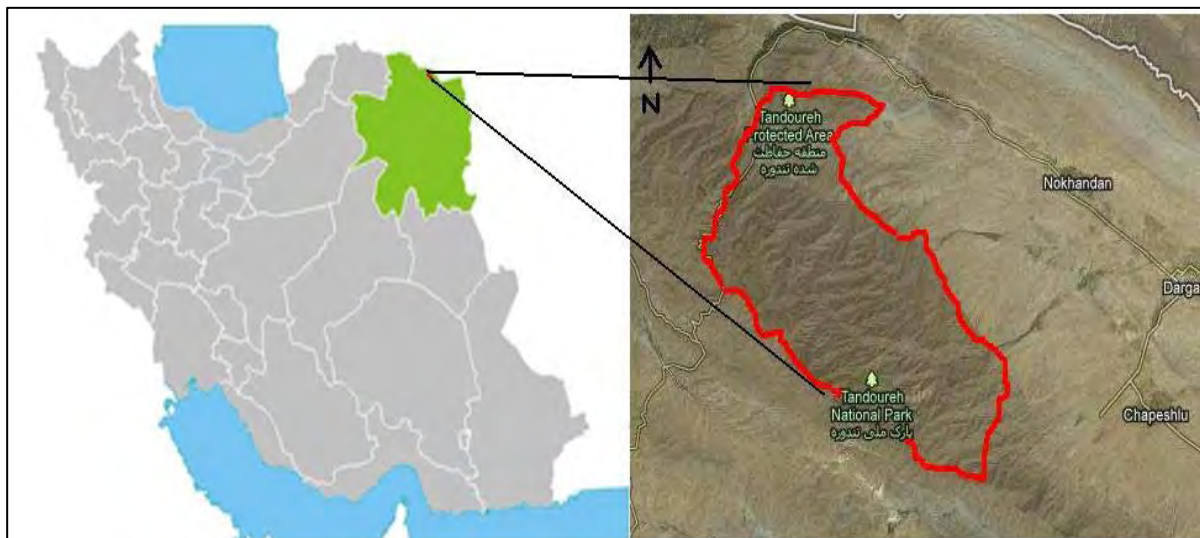


Fig. 1 The geographical location of the study area in the world and Iran.

4 Materials and Methods

To complete the objectives of the study, the primary and secondary data has been collected from different categories of fields, people and institutions involved in promoting ecotourism industries.

The primary data has been collected in the following ways:

- Inspection of the field.
- Formal and semi-formal interviews with tourists and local people.
- Use the statistically designed questionnaire to collect the opinions and information from the local residents, tourists and the staff of the Park.
- SWOT Analysis for defining the strategies.

The secondary data has been collected during different stage of work.

In September 2011 the residents from two villages viz. Doodanlou and Taj Aldin near the city of Dargaz, were selected for interviewing because of their familiarity with the Tandooreh National Park. Interview questionnaires (consisting of 12 questions) were translated in Persian (local language) and after getting the answers from the villagers they were retranslated into English for further processing. The tourists were also given a separate questionnaire (consisting of 23 questions) and they were interviewed for a period of one month (between September and October, 2011) as this period was end of summer and beginning of fall season and this time is the best season to visit the Park. Questionnaires (consisting of 10 questions) were also distributed to the staff of the park from five monitoring stations. After collecting the questionnaire the data obtained were analyzed using the computer softwares like excel to determine the satisfaction index, opinion index etc. and also chi square analysis. The outline of the research methodology adopted in the present work is illustrated in Fig. 2.

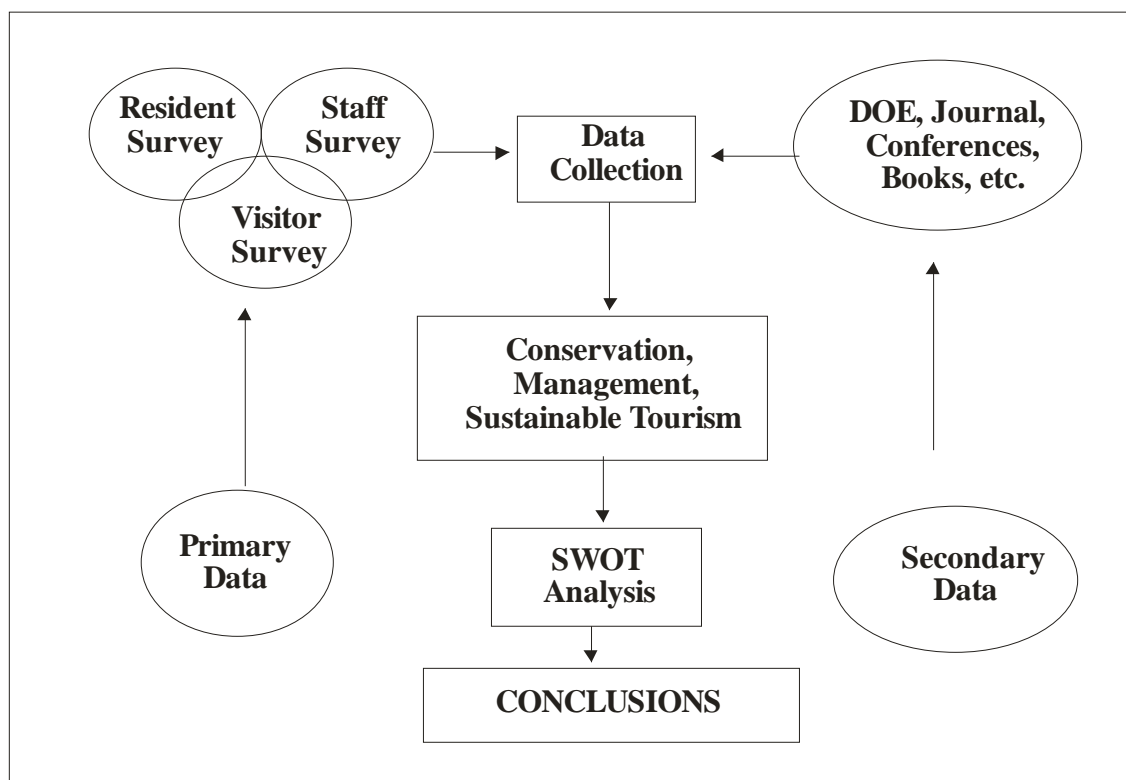


Fig. 2 Outline of the research methodology adopted.

5 SWOT (Strength – Weakness – Opportunity – Threat) Analysis

Surveying internal and external environment is an important part of the strategic planning. Internal factors can be classified as strengths (S) or weaknesses (W) and external factors can be classified as opportunities (O) or threats (T). The SWOT analysis helps in analyzing the advantages and disadvantages of the ecotourism and coming out with strategic suggestions for ecotourism planning. This also helps in sound understanding of elements, process and practice of local institutions in order to determine appropriate interventions. Following that, strategic alternatives are selected in the light of the strengths, weaknesses, threats and opportunities as determined through internal and external environment analysis (Yuksel and Dagdeviren, 2007) SWOT analysis is intended to maximize strengths and opportunities, minimize external threats, transform weaknesses into strengths and to take advantage of opportunities along with minimizing both internal weaknesses and external threats (Saaty, 1987).

6 Results

After primary and secondary data collection SWOT analysis was performed to assess the feasibility of sustainable tourism in Tandooreh National Park through analyzing the results and determining the priorities.

Method of SWOT Analysis: Although SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) research method is often used in business fields it has now been extended to natural resource management to assess the decision and policy directive in a systematic manner (Schmoldt et al., 2001) and also in an assessment of sustainable tourism (NOAA, 2011). The strengths and weaknesses (local analysis) are the internal factors while opportunities and threats (global analysis) are external factors (Harfst et al., 2010). Evaluation of internal and external environmental factors is an important part of strategic planning which is

instrumental in adopting the strategies and becomes a component of sustainable ecotourism management. In this study the SWOT analysis was conducted on the Tandooreh National Park in order to assess the sustainability of ecotourism development. In this process the internal factors (strengths and weaknesses) and external factors (opportunities and threats) were identified and listed. For evaluation of internal and external factors internal factor estimate matrix (IFEM) and external factor estimate matrix (IEEM) were used. IFEM represents internal strengths and weaknesses while EFEM indicate external opportunities and threats. In formulating the matrices each factor was evaluated by giving a weight between zero (non important) to one (most important) such a way that the total point in ach matrix is unity. Further each factor was scored with a number between one and five (1 = poor; 2 = lower than average; 3 = median; 4 = above average and 5 = good). After the weight and score have been determined the weighted score has been given to each factor which is useful in assessing the attractiveness of each factor. In IFEM the total of weighted scores (attractiveness) with a value more than 2.5 indicate strengths are more than weaknesses. Similarly in case of EFEM the total of weighted scores with a value more than 2.5 means opportunities are more than strengths (Monavari et al., 2007).

Weighted score for the strengths and weaknesses (IFEM) and for the opportunities and threats (EFEM) are tabulated in Tables 1 and 2 respectively.

Table 1 Weighted Score for the strengths and weaknesses (Internal factor estimate matrix; IFEM).

Strengths		Weight	Score	Weighted Score
1	Tandooreh National Park is a well established tourism destination with a variety of natural attractions like the Cheetah, Wild goat, Wild ship etc, unique culture of local people having ancient culture; magnificent local language and historical holy Shrine.	0.1190	4	0.4762
2	The local people strongly supporting the need of ecotourism in this region as good number of domestic tourists visit this destination.	0.0779	3	0.2338
3	The region has good weather and climate, unique ecosystem, great biodiversity and valuable wildlife.	0.0606	3	0.1818
4	The existence of a large number of protected areas (national, natural parks and reservations) included in the Fourth National Report to the Convention on Biological Diversity (2010) with reduced pollution in the majority of rural areas;	0.0844	2	0.1688
5	Variety and ethnic richness in indigenous areas with traditional cuisine and regional specialties;	0.0519	4	0.2078
6	Much incentive for the local people from tourism in terms of income generation.	0.0649	3	0.1948
Weaknesses				
1	Lack of coordination among local people and low involvement of local people in tourism.	0.0758	3	0.2273
2	Lack of infrastructures and fundamental facilities like accommodation (hotels and resorts), travel and ecotourism agencies, public transport, recreation.	0.0866	4	0.3463
3	The lack of foreign tourists;	0.0498	2	0.0996
4	The lack of strategies that ensure the promotion and marketing of ecotourism in the protected areas.	0.0628	3	0.1883
5	Seasonality of ecotourism and unequal distribution of tourism	0.0996	3	0.2987
6	High rate of inflation and unsuitable domestic economy which hardens the development of ecotourism and increases the expense of travel;	0.0714	5	0.3571
7	Absence of strict rules for entering the Tandooreh National Park as there is absence of proper zoning and border fencing around the park parameter	0.0563	3	0.1688
8	Lack of adequate funding for conservation and scientific research and education in the region	0.0390	2	0.0779
Total		1.0000	-----	3.2273

Table 2 Weighted Score for the opportunities and threats (External factor estimate matrix; EFEM).

Opportunities		Weight	Score	Weighted Score
1	Proper ecotourism package development involving local people in decision making and planning so that there is a larger involvement of the local people.	0.1027	5	0.5137
2	Diversification of ecotourism products which will help in retaining majority of the income generated with the local people which will help in job creation directly benefiting the local community	0.0514	2	0.1027
3	Conserving natural ecosystems and making effort to decrease negative impacts	0.0428	4	0.1712
4	Feasibility of implementing tourism plans in Tandooreh National Park, considering environmental requirements with emphasis on conserving native culture and prevention of the traditional context alteration.	0.0514	3	0.1541
5	High international interest for ecotourism, agrotourism, rural tourism, adventure tourism;	0.0394	4	0.1575
6	The climate, with soft summers and cold spring, favorable for the tourist activity during the year;	0.0462	2	0.0925
7	Possibility to attract tourists by exploiting historical, cultural, spiritual and traditional inheritance;	0.0616	3	0.1849
8	The existence of the legislative framework which allows the conservation of the protected areas.	0.0497	2	0.0993
9	Existence of a considerable number of potential tourists like Iranian settled in Western countries and neighbor and Islamic countries which have historical, religious and cultural relations with Iran.	0.0308	1	0.0308
10	Geographical position of this country (Closeness to tourist generating countries).	0.0257	2	0.0514
11	Satisfaction of tourists after visiting Tandooreh National Park.	0.0771	5	0.3853
12	The basic infrastructure of utilities are satisfactory	0.0942	3	0.2825
Threats				
1	Potential negative cultural and environmental impacts with lack of favorable circumstances for foreign tourists, intensification of the economical crisis and instability of the national currency;	0.0719	3	0.2158
2	Transport infrastructure not to the community standards and emergency medical services are unsatisfactory.	0.0616	4	0.2466
3	Presentation of an unsuitable image of Iran in International societies to international tourists.	0.0942	2	0.1884
4	Tensions, restlessness and insecurity in Middle East and especially in neighbouring countries like Afghanistan and Iraq, which causes the number of international tourists to decrease.	0.0993	4	0.3973
Total		1.0000	-----	3.2740

Internal factor estimate matrix (IFEM): Regarding strengths six factors were identified (Table I). The weights allocated for these factors were between 0.0519 and 0.1190 and the score ranged between 2 to 4. When considering weaknesses 8 factors were detected with highest weight of 0.0996 and lowest weight of 0.0390 with score ranging between 2 to 4. The final weighted score was 3.227 implying that *strengths were more than weaknesses*.

External factor estimate matrix (EFEM): There were 12 factors pertaining to opportunities (Table II) with weights between 0.0257 and 0.1027 and scores between 1 and 5. There were 4 treats determined with lowest weight of 0.0616 and highest of 0.0993 and sores between 2 to 4. The final weighed score was 3.274 indicating *opportunities were more than threats*.

7 Conclusions

Sustainable tourism is the main pivot for Tandooreh National Park and to achieve this pair wise matching (SO, WO, ST, and WT) has been done. The incidence point of the internal and external factors of Tandooreh

National Park ecotourism (Fig. 3) clearly point towards strong *internal factor estimate* while high potential of ecotourism is suggested from *external factor estimate*

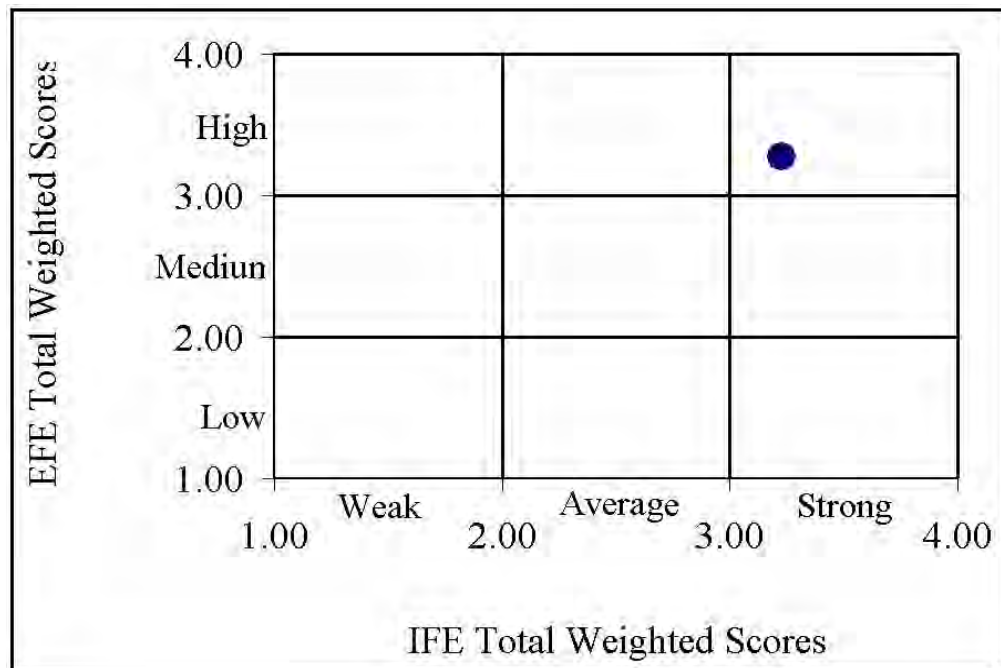


Fig. 3 The incidence point of the internal and external factors.

Thus by comparing internal and external factors in the matrix of strengths, weaknesses, opportunities and threats (SWOT) acceptable strategies were formulated which are as follows.

S-O strategies: Proposed opportunities that fit well with the park's strengths are

1. Establishment of welfare places and hotels for ecotourism in the region which will help in creating jobs to the local people
2. The use of regional potentials for conservation of natural ecosystem.
3. Developing new geographical markets especially attracting ecotourism from tourist generating markets.
4. Develop minimal entrance fee plan to improve the basic facilities.
5. Developing tourism products with emphasis on ecotourism attractions by promoting quality services and products

S-T strategies: Following strategies have been identified by which the strengths can be used to reduce its vulnerability to the external threats.

1. To avoid negative impacts of tourism on sensitive biodiversity a particular plan should be developed to conserve the ecology in accordance with national and international lists such as IUCN (2012) red list and DOE (2011) list of protected species.
2. Establishing facilities and conditions required to attract foreign tourists so that the image of Iran is improved.
3. Increasing environmental guard stations and patrols to improve conservational capacity.
4. Law enforcement for the illegal hunters and impose heavy financial penalties for noncompliance
5. Sustainable development of ecotourism region by renovating and developing ecotourism corridors.

W-O strategies: The strategies which can be used to overcome weaknesses by pursuing opportunities are

1. Increase research funding for scientific studies and research in the area to decrease negative impacts.
2. Facilitating the tours operated by tour operators with collaboration of the authorities and local people.
3. Establishment of well equipped wild life-watching site in different locations in the park.
4. Attracting ecotourism throughout the year by holding ecotourism festivals in the areas which have different weather, climate and culture.
5. Integration of solid waste management plan into environmental education and planning of solid waste rules and regulations for visitors.

W-T strategies: To establish a defensive plan to prevent the park's weaknesses from making it highly susceptible to the external threats following strategies have been suggested.

1. Infrastructure development harmonized with population increase caused by tourist visits
2. Environmental education to the building contractors and tour operators in reducing the environmental impacts.
3. Investing to improve the quality of infrastructures, such as road transport systems, hospitality and accommodation centers, medical and health services, increasing access to new technologies, such as Internet, telephone, post, guiding software and so on in ecotourism regions
4. Developing international collaborative activities to receive support in the field of research and development related to sustainable ecotourism.

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