Strategic Management for Sustainable Ecotourism in Darabad Region in Tehran, Iran

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The purpose of this study was to formulate a proper strategy for ecotourism creation in Darabad region, located in the northeast of Tehran, Iran adjacent to Alborz Mountains. This region is one of the tourism and recreational regions, where is considerably potential to attract many visitors and tourists. To achieve this purpose, firstly the status of ecotourism management was evaluated using strengths, weaknesses, opportunities and threats (SWOT) method. In this regards, external and internal factors were measured and gained 2.42 and 2.88 scores, respectively. This indicated the amount of threats exceeding the opportunities and strengths are more than the weaknesses. Secondly, 21 strategies were formulated. For scoring the strategies, quantitative strategic planning matrix was applied and the obtained results were reasonably used for strategic position and action evaluation matrix. The study showed that the present situation of destination, in terms of ecotourism management, is in "competitive" classification. The findings of this study present the need for developing proper promotional plans, in order to introduce regional attractions; developing welfare and safe recreational facilities such as accommodations for enhancing the eco-tourist attractions; identifying and introducing the carrying capacities of tourists and visitors in the region and establishing subtle monitoring plans in order to identify the environmental destructions due to visitors' presence and tourists through the region.

Key Words: Sustainable tourism, Quantitative strategic planning matrix, Strategic position and action evaluation, Urban ecotourism management.

INTRODUCTION

Globalization of capitalism, growth and movement of populations as well as advances in transportation and communication technology have helped tourism to develop into one of the world's largest industries in the 20th century[1]. Many studies have highlighted sustainable tourism development in parallel to the concept of sustainable development[2]. Developing tourism sites of all kinds for economic and commercial use has been increased over the last four decades[3]. Being one of the most important industries in the world which bears many social and economical benefits, the tourism has the ability to empower the local communities and conserve the nature. Tourism as a beneficial economic activity, directly affects the overall environment of the destination. The environment is often considered to be the major pull factor of tourist movements, contributing to the desirability of a tourist destination[4]. However, the natural and socio-cultural environments of many tourism destinations have been damaged by tourism's unplanned growth[1,5-7]. Generally, the ecotourism has become a significant alternative source of tourists and is often regarded as a form of nature-based tourism[4]. Ecotourism is defined by Ayala[8] as "tourism that allows for the enjoyment and understanding of the nature and culture of a destination, while producing economic benefits and actively promoting environmental conservation", is frequently cited as the fastest growing sector within tourism industry[9]. In contrast to conventional tourism, ecotourism subscribes to the principles of environmental protection and social responsibility[10]. Since the nature-base tourist destination faces with many damages due to the presence of tourists and visitors and also other man-made activities, especially in the capital cities, it has received more attentions. Development of the tourism industry can provide countries, cities and regions with the opportunity of economic growth. However, this cannot be achieved in a sustainable manner, unless there is a sound balance in the planning of cultural tourism and ecotourism for all social classes. This industry, if its requirements conceived and met appropriately, bears the potential to provide new and exciting tourism experiences, to protect and enhance natural areas and historical sites, to raise benefits from local communities and to encourage commercially successful and environmentally friendly tourism operations[3]. Comprehensive planning is regarded as an essential tool for management of cultural tourism and ecotourism destination in coordination with private and public sector interests related to tourist experience[3]. Tourism planners have to take the

environmental issues into consideration. Notably, urbanization generates numerous opportunities and challenges at the same time[11]. A large proportion of typical vacation activities are directly dependent on the natural resources of destination[12].

Strategic planning is currently an extended tool for regional development and territorial structuring[13]. The present study investigates the development of proper strategies in ecotourism of Darabad, which is located in Shemiran, northeast of Tehran, having the potential to become a prosperous urban ecotourism in the region. It falls within latitude 35º49' to 35º54' and the longitude 51º28' to 51º29'. Apparently, less attention has been paid to Darabad, compared with other ecotourism's and recreational destinations located in the northern part of Shemiran, Therefore a holistic planning is required in order to achieve a sustainable ecotourism in the mentioned region. The present study was conducted in 2010-2011 in the north of Tehran, Iran (Fig. 1).
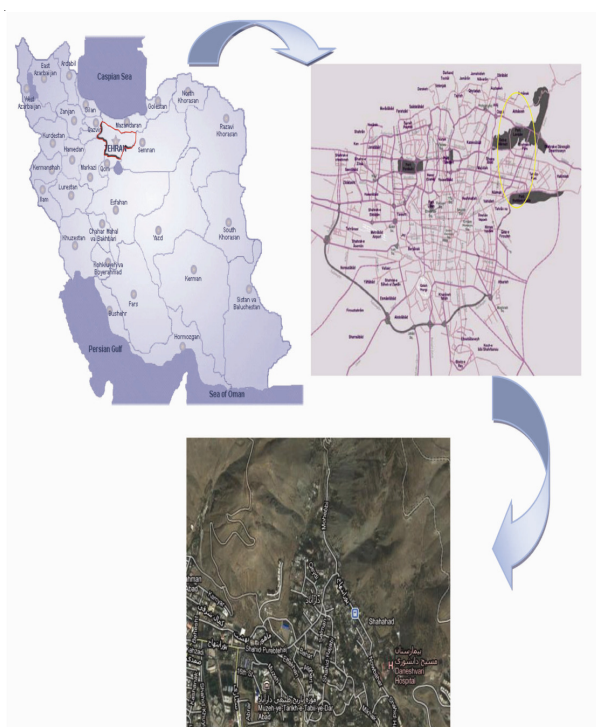

Fig. 1. Location of the case study

EXPERIMENTAL

Formulating strategies is conceptually the same for large, small, profit and nonprofit organizations although there is a debate amongst practitioners of strategic management as to the extent that the process should be more objective/quantitative as opposed to more subjective/qualitative[14]. Strengths, weakness, opportunities and threats (SWOT) is so expanded and is considered as a conceptual framework for systemic analysis that leads to the inspection of factors and understanding of constraints, threats, vulnerable aspects, opportunities, demands, external environmental situations as well as strategic strengths and weaknesses[15]. Basically, in SWOT the strategies are generated by asking and answering the following questions[16]: How the strengths can be utilized? How the weaknesses can be stopped? How the opportunities can exploited? How the threats can be defended against?

In order to manage and implement executive plans, initially available resources should be identified. Recognizing the sources is the first step in land assessing[17] Normally, Internal Factor Evaluation (IFE) and external factor evaluation (EFE) are applied for identifying the internal and external factors.

Internal factor evaluation (IFE) matrix: In the first step, all the factors related to the strengths and weaknesses were gathered and tabulated. These factors were weighted so that the total weights for IFE matrix equaled 1. Then a score ranging from 1 to 4 was assigned to each factor. In contrast to weights, the ratings reveal how well the performance of each factor is (Table-1). Where the score 4 = the response is superior; 3 = the response is above the average; 2 = the response is average; and 1 = the response is below the average[14]. Total score of factors > 2.5 meant strengths are over than weaknesses, while the total score of < 2.5 indicated the weaknesses are over than strengths[18].

External factor evaluation (EFE) matrix: This matrix is similar to the IFE matrix and donates to the opportunities and threats accordingly (Table-2).

Strategic position and action evaluation (SPACE) matrix: Internal and external factors obtained from EFE and IFE matrixes applied to introduce Financial strengths (FS), competitive advantage (CA), environmental stability (ES) and industry strength (IS) can be seen in Fig. 3. Subsequently, IS and FS were scored between +1 (the worst) to +6 (the best). Then, the mean IS and FS factors were specified on IS and FS axes. Likewise, ES and CA were scored from -6 (the worst) to -1 (the best) and the mean ES and CA factors were averaged on ES and CA axes. In addition, the algebraic sum of values on the X axes and also the algebraic sum of values on the Y axes were averaged accordingly. These two points determined the Cartesian coordinate of position point. Finally, the position evaluation diagram was drawn by means of zero point and position point[2].

Quantitative strategic planning matrix (QSPM): The Quantitative strategic planning matrix (QSPM) was used to formulate the strategies based on underlying external and internal evaluation matrixes as well as strengths, weaknesses, opportunities, threats (SWOT) analysis. The QSPM is an excellent tool for deciding among feasible alternative strategies, fits into the strategy formulation. In order to determinate the score of each strategy gained from SWOT matrix, first of all the internal and external factors with their allocated weights gained from IFE and EFE matrixes, were extracted. Then for each strategy, the score determination was accomplished and also the internal and external factors were evaluated. Furthermore, for each factor a score between 1 and 4 was assigned, where 4 meant the most attractive and 1 meant the least attractive. After computing sum of attractiveness for each of them, the strategies were thoroughly compared in terms of their attractiveness score (AS)[14].

RESULTS AND DISCUSSION

The results gained from IFE matrix indicated that amount of strengths were over weaknesses, since the total score of all internal factors was 2.88, which considered as above the average (2.5). On the other hand, the results from EFE matrix

TABLE-1
EVALUATION OF INTERNAL FACTORS

No.	Internal factors	Weight	Score	Attractiveness
	Strengths (S)			
1	*S_1: Existence of the potential for create new welfare facilities for tourists and visitors	0.09	3	0.27
2	S_2: Relatively high diversity of wildlife, especially reptiles and birds	0.09	4	0.36
3	S_3: Possibility of job creation, investment and empowerment of local community in the region, according to the increasing number of tourists	0.08	3	0.24
4	S_4: Existence of informative signs at the beginning and along the way	0.03	2	0.06
5	S_5: Existence of fresh water and semi depth soil in region for Developing green area	0.06	2	0.12
6	S_6: Existence of recreation facilities specially in primary part of the region	0.06	2	0.16
7	S_7: Existence of rather cold wind flow through the mountain to valley in warm days	0.01	2	0.02
8	S_8: Rather High education level of local residents	0.04	3	0.12
9	S_9: Accomplishing Increasing studies and researches in recent years in order to	0.08	3	0.24
	Weaknesses (W)			
10	W_1: Lack of sufficient guard and rescue team in region	0.04	3	0.12
11	W_2: Lack of proper waste disposal in some parts of the region	0.06	1	0.06
12	W_3: Existence of high slope in some parts of the region with potential of land sliding	0.07	3	0.21
13	W_4: Lack of appropriate promotional programs to attract tourists in the area	0.08	3	0.24
14	W_5: Existence of hard bearing condition in terms of climate in some winter days for example, Hail, avalanch.	0.01	3	0.03
15	W_6: There is no sufficient regal receiving the environmental tourists and visitors penalties	0.06	2	0.12
16	W_7: Low density of green area in most parts with potential of implanting in the region	0.05	3	0.15
17	W_8: Lack of facilities such as sufficient parking lots ,and also accommodations for tourists and inaccessibility to required budget	0.09	4	0.36
Total		1		2.88

TABLE-2
EVALUATION OF EXTERNAL FACTORS

No.	Internal factors	Weight	Score	Attractiveness
	Opportunities (O)			
1	*O_1: Presence of other northern eco-tourist mountains areas of Tehran at the neighborhood	0.11	3	0.33
2	O_2: Relatively easy local access of residents to the area	0.11	2	0.22
3	O_3: Older suburb of Darabad being closed to the mountains has added more touristic attraction	0.07	2	0.14
4	O_4: nearness of Natural Monuments and Wildlife Museum (Darabad) and municipality of the region to the area for attracting tourists	0.12	2	0.24
5	O_5: Considering issues regarding tourism in 2025 vision	0.06	2	0.12
6	Considering recreation role for the region No.1 in holistic plan of Tehran	0.08	2	0.16
	Threats (T)			
7	T_1: Discharge of sewage from building to the river and environment specially in duration of construction	0.08	2	0.16
8	T_2: Disturbing traffic of the vehicles nearby the region	0.03	3	0.09
9	T_3: Poor responsibility of the visitors and tourists about caring reservation of the natural resources			
10	T_4: Non systematic constructions nearby the eco-tourist region	0.09	2	0.18
11	T_5: Relatively transferring air pollution due to outcomes of the urban living	0.02	3	0.06
12	T_6: Destruction of the habitat and wildlife behaviour pattern due to presence of human	0.13	4	0.52
	Total:	1		2.42

showed that the total score of all external factors were 2.42, standing below the average (2.5). This evidently implies that the threats are over the opportunities co-existing in the case study (Table 1 and 2) the richest natural history museums of Iran, which was inaugurated in 1993 (http://www.itto.org).

As Tosun and Jenkins[19] illustrate, "Regional tourism development planning should encompass government, non-profit organizations and the commercial enterprise sector". Needless to say, this should be in line with overall goals of the national plan and in force regional and sectoral plans. In this regards, Tables 1 and 2 illustrate that Darabad region is in line with being a sustainable tourist destination, though suffering from some weaknesses such as lack of facilities for visitors and tourists, specially for beyond merely recreational purposes and harsh climatic conditions in cold seasons, shortly in Winter,

as it is snowy and prone to hail and receive avalanche, which is the main weakness against attracting tourists to this destination. Nevertheless, the natural monuments and wildlife museums earn a prominent opportunity for this region. As a result, Darabad has an indisputable potential for integrating cultural tourism and natural tourism, which can be useful for ecotourism development. Tables 1 and 2 show important internal and external factors in the region.

In SWOT matrix (Table-3), 21 strategies formulated from IFE and EFE matrixes. The level of importance of strategies was identified by QSPM matrix (Table-4). QSPM can specify the quality of the strategies that can successfully employ the internal and external effective factors. The associative effects of each of such internal and external effective factors can determine the relative interaction of each strategy within the

TABLE-3
DERIVATION OF THE KEY STRATEGIES FROM THE SWOT MATRIX IN ECOTOURISM AREAS OF THE IN THE REGION

External factors	SWOT matrix	
	(3) Strengths (S)	(4) Weaknesses (W)
	Internal factors	
	S_1: Existence of the potential for create new welfare facilities for tourists and visitors S_2: Relatively high diversity of wildlife, especially reptiles and birds S_3: Possibility of job creation, investment and empowerment of local community in the region, according to the increasing number of tourists S_4: Existence of informative signs at the beginning and along the way S_5: Existence of fresh water and semi depth soil in region for developing green area S_6: Existence of recreation facilities specially in primary part of region S_7: Existence of rather cold wind flow through the mountain to valley in warm days S_8: Education level of local residents S_9: Accomplishing increasing studies and researches in recent years	W_1: Lack of sufficient guard and rescue team in region W_2: Lack of proper waste disposal in some parts of the region W_3: Existence of high slope in some parts of the region with potential of land sliding W_4: Lack of appropriate promotional programs to attract tourists in the area W_5: Existence of rather hard bearing condition in terms of climate in some winter days for example Hail, avalanche. W_6: There is no regal receiving the environmental tourists and visitors penalties W_7: Low density of green area in most parts with potential of implanting in the region W_8: Lack of facilities such as sufficient parking lots and also accommodations for tourists and inaccessibility to required budget
(1) Opportunities	Strategies on the basis of strength points and opportunities (SO)	Strategies on the basis of the strength points and opportunities (WO)
O_1: Presence of other northern eco-tourist mountains areas of Tehran at the neighborhood O_2: Relatively easy local access of residents to the area O_3: Older suburb of Darabad being closed to the mountains has added more touristic attraction O_4: Nearness of natural monuments and wildlife museum (Darabad) and municipality of the region to the area for attracting tourists O_5: Considering issues regarding tourism in 2025 vision O_6 Considering recreation role for the region No.1 in holistic plan of Tehran	SO_1: Utilizing potentials of wildlife for the improvement of ecotourism management in the region SO_2: Establishing opportunities for social communication and cultural development in area SO_3: Implanting native flora in places with low density SO_4: Localization the international successful experiences for the similar ecosystem cases SO_5: Integrating cultural tourism with natural tourism in order to enhancing tourism attractions in area	WO_1: Determining points with high level risks in terms of land sliding and developing disaster risk management plan WO_2: Developing welfare and safety facilities for instance accommodations for enhancing eco-tourist attractions WO_3: Identifying and introducing carrying capacity of tourists and visitors in region WO_4: Improvements of promotion plans in order to introducing regional attractions to residents and visitors WO_5: Implanting proper flora in order to mitigating approximately hard climate condition
(2) Threats (T)	Strategies on the basis of the strength points and threats (ST)	Strategies on the basis of the strength points and threats (WT)
T_1: Discharge of sewage from building to the river and environment specially in duration of construction T_2: Disturbing traffic of the vehicles nearby the region T_3: Poor responsibility of the visitors and tourists about caring reservation of the natural resources T_4: Non systematic constructions nearby the eco-tourist region T_5: Relatively transferring air pollution due to outcomes of the urban living T_6: Destruction of the habitat and wildlife behaviour pattern due to presence of human	ST_1: Using educative and informative signs in order to improving environmental culture of tourists and visitors in addition conserving the nature values of region ST_2: Using facilities and possibilities to develop investing in region ST_3: Using of economical incentives in order to conserve the natural and biological attractions apposite the destruction and contaminations ST_4: Revising the eco-tourism regulations for reduction of negative impacts of visitors and tourist on region ST_5: Stablishing proper monitoring plans in order to identify the environmental destructions due to presence of visitors in region ST_6: Increasing budget for more effective ecotourism management	WT_1: Providing proper waste management for improving environmental index in the destination WT_2: Increasing supervision on implementation of EIA reports WT_3: Effective laws and regulations enforcement against environmental penalties WT_4: Coordinating between developmental plans in order to reduce the destructions WT_5: Recruiting expert nature guards for conservation of natural and biological capitals

application strategy aggregate[17]. According to Table-4, strategies were set in accordance to their attractiveness by applying proper scores. Stepwise, 21 strategies were categorized in 3 levels: the least important, the so-so important and the most important, as presented in Fig. 2.

Fig. 2 reveals that approximately 18 % of strategies are in least important, 38 % are just important and 44 % are in most important level.

The strategic position of the region, which is in competitive position, is described in Table-5 and Fig. 3. The data

TABLE-4
QSPM MATRIX: STRATEGIES CATEGORIZED BASED ON THEIR ATTRACTIVENESS SCORE

| No.	Strategy	Rate	(%)
1	ST15: Improvements of promotion plans in order to introducing regional attractions to residents and visitors	6.09	5.86
2	ST13: Developing welfare and safety facilities for instance accommodations for enhancing eco-tourist attractions	5.89	5.66
3	ST14: Identifying and introducing carrying capacity of tourists and visitors in region	5.82	5.60
4	ST10: Establishing proper environmental monitoring plans in order to identify the environmental destructions due to presence of visitors in region	5.78	5.56
5	ST9: Revising the eco-tourism regulations for reduction of negative impacts of visitors and tourist on region	5.77	5.55
6	ST6: Using educative and informative signs in order to improving environmental culture of tourists and visitors in addition conserving the nature values of region	5.74	5.52
7	ST12: Determining points with high level risks in terms of land sliding and implementing proper mitigating methods	5.45	5.25
8	ST1: Utilizing potentials of wildlife for the improvement of ecotourism management in the region	5.25	5.05
9	ST20: Coordinating between developmental plans in order to reduce the destructions	5.15	4.96
10	ST18: Increasing supervision on implementation of EIA reports	5.07	4.88
11	ST19: laws and regulations enforcement against environmental penalties	5.03	4.85
12	ST8: Using of economical incentives in order to conserve the natural and biological attractions apposite the destruction and contaminations	4.94	4.76
13	ST21: recruiting expert nature guards for conservation of natural and biological capitals	4.89	4.71
14	ST5: Integrating cultural tourism with natural tourism in order to enhancing tourism attractions in area	4.84	4.66
15	ST2: establishing opportunities for social communication and cultural development in area	4.70	4.52
16	ST17: providing proper waste management for improving environmental index in the destination	4.59	4.42
17	ST11: Increasing budget for more effective ecotourism management in region	4.54	4.37
18	ST7: Using facilities and possibilities to develop investing in region	4.53	4.36
19	ST16: Implanting proper flora in order to mitigating approximately hard climate condition	3.63	3.50
20	ST3: Implanting native flora in places with low density	3.54	3.41
21	ST4: Localization the international successful experiences for the similar ecosystem cases	2.65	2.55
		103.89	100
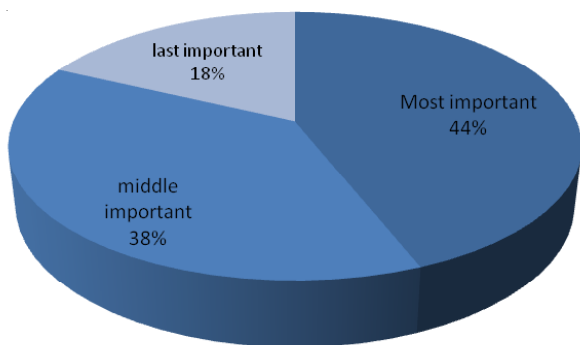
Fig. 2. Importance of strategies obtained from QSPM

suggest that the region under the study, should utilize the competitive strategies. Hence, strategies such as improving promotional plans for introducing social, natural and biophysical capitals and making basic facilities for increasing welfare of tourists in the region and encouraging investing economical friendly incentives are proper for these areas.

Conclusion

There is a growing awareness of the need to obtain a deeper and broader understanding of local environment in connection with tourism industry. Although no written summary alone can do justice to the magnificent setting of Darabad

TABLE-5
SPACE MATRIX, MATRIX FOR STRATEGIC POSITION AND ACTION EVALUATION

Items	Score
Financial strength (FS)	
1. There is no effective legal receiving the environmental tourists and visitors penalties	5
2. Lack of facilities such as sufficient parking lots ,and also accommodations for tourists and inaccessibility to required budget	3
	8:2 = 4
Industrial strength (IS)	
1. Existence of the potential for create new welfare facilities for tourists and visitors	4
2. Relatively high diversity of wildlife, especially reptiles and birds	5
3. presence of other northern eco-tourist mountains areas of Tehran at the neighborhood	5
4. Recreation and ecotourism attraction	6
	20:4 = 5
Environmental stability (ES)	
1. Existence of high slope in some parts of the region with potential of land sliding	5
2. Existence of rather hard bearing condition in terms of climate in some winter days for example, Hail, avalanche.	5
3. non systematic constructions nearby the eco-tourist region	5
	15:3 = 5
Competitive advantage (CA)	
1. Lack of appropriate promotional programs to attract tourists in the area	5
2. Accomplishing Increasing studies and researches in recent years	4
	9:2 = 4.5

nature. However, it is necessary to set short term and long term goals by forehand planning. Currently, it is widely accepted that tourism industry has evident impacts on local environment; however the impact of tourism industry on specific destinations is not always positive, thus local planners have to consider some steps to achieve a sustainable vision. This research, found that Darabad region has an appropriate potential for attracting tourists and visitors. Moreover, competitive strategy is useful for current condition of the region. In this regards, as the paper illustrates, improvement of promotional plans, developing welfare and safe facilities identifying carrying capacity, establishing proper environmental monitoring plans, revising the ecotourism regulations, using educative and informative signs, management of natural critical disasters and utilizing potentials of wildlife are the main strategies for sustainable ecotourism management of this destination. It is clear crystal that the facilities and incentives recommended in this paper, have to be entirely consistent to the environment.

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