

Feasibility Analysis of Sustainable Development Emphasizing Geotourism Attractions Using SWOT Analysis. Case Study: Qeshm Island Geo Park

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Abstract. Geotourism is a branch of nature tourism, which is interested by geologists and ecotourists. Most countries proceed to establish geo parks and introduce the geological potentials of their territories in order to develop geotourism. Qeshm Island, which is located in Persian Gulf, includes some exclusive geological phenomenon. Since 2006, Qeshm Island has been registered as a member of global geo parks network of UNESCO. This geo park involves the world's biggest salt cave and many salt geomorphologic landforms. Possessing eight tourism sites with nice Hara forests would have made this Island a geo park model in the Middle East.

In this paper, sustainable development strategies of Qeshm Island have been identified using SWOT analysis in order to use the ecotourism attractions of Geo Park. The conclusion of this research shows that invasive guidelines, using strengths to utilize the opportunities is the appropriate strategy for sustainable development of Qeshm Island.

According to the strategies of SWOT analysis, providing essential infrastructure, using the recourses of governmental and private sectors, improving physical communications, educating professional geo guides, informing and introducing tourism attractions and taking advantages of existing tax-free zone could provide proper opportunities to achieve sustainable development in Qeshm Island.

Keywords: Geotourism, Geo Park, SWOT, Persian Gulf, Qeshm

1. Introduction

Geotourism is a branch of nature tourism, which relying on the geological phenomenon and geomorphologic land forms invites tourists interested in visiting earth's beautiful attractions to nature. Feasibility analysis treasures of natural resources, traditional and cultural heritage, Iran has always been significant for tourists. This country is a small continent with diverse and various nature and weather. Qeshm international geo park is the first natural part of the country registered in UNESCO. This Geo Park is registered the only Geo park of Middle East as a part having global significance in 2006 and is one of the 57 geo parks of the world.

The term geopark is an interrelated phenomenon of geology, landscape, civilization and society [1]. It is known that from international experience that the creation of geoparks is the best way for geosite protection [2], [3], [4].

The aim of this paper is using Geotourism attractions of Qeshm Geo Park in order to analyze guidelines of sustainable development of Qeshm Island with the SWOT analysis.

2. Problem Formulation

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Tourism industry is one of the tremendous and various industries of the world and is the main source of incomings, employment and infrastructure development for many countries. Countries are seeking to profit more from tourism advantages and opportunities in order to foster the sustainable development of their own region. Possessing various natural, traditional and historical pieces and diverse climatic locations and having high potential for tourism extension, Iran is benefiting a global and exclusive position among other countries of the world. 11 reservoirs of biospheres, one global geo park, and nine registered cultural heritage are among the most noticeable tourism attractions of the country [5].

- Qeshm Island is located in south of Iran in Persian Gulf and is one of the most attractive geographical regions of Iran for tourism extension with natural, climatic, historical, social and cultural features and is capable of serving lots of tourists overall the world. Unfortunately, despite the existing valuable attraction in this region, there are some basal obstacles for tourism extension, as follows:
- Tourism attractions of Qeshm Island are not completely and comprehensively known.
- A proper work is not executed in order to organize tourism attractions and create basal infrastructure.
- Lack of organic relations between tourism attractions, tourism management and beneficiary of this source has banned extension of tourism in this city.

Regarding the above stated cases, in this article, we attempt to study and evaluate the effect of this source on sustainable development of tourism in the region meanwhile assessing potentialities and facilities of tourism development of Qeshm Geo Park. These fundamental questions will be answered in this paper:

- Which conditions and infrastructure are necessary for sustainable development of Qeshm Island regarding the Geo Park situated there?
- What are the main guidelines for sustainable development of Island using potential of geo park tourism?

3. Methods and Materials

This research is based on descriptive and analytic methods. Data collecting is performed some by documentary method, using books, documents, research articles and various journals, newspaper reports, market research agencies and the World Wide Web about Qeshm Geo Park, tourism and development and some by survey method by visiting the site, photographing, filming and interviewing the tourists and people in command. The objective of the survey was to obtain an insight into the tourist perceptions about Qeshm Geo Park tourism. The questions asked pertained to various factors that affect their stay in Qeshm.

In this study in order to assess the amount of effects of geo park attractions on sustainable development of Qeshm Geo Park, SWOT analysis has been performed. SWOT analysis points out a complete picture of the situation in the region regarding tourism strengths and weaknesses as internal to the sector, revealing also the opportunities and threats as external to it that may help or disturb this sector.

SWOT analysis is a basic, straightforward model that provides direction and serves as a basis for the development of marketing plans. The role of SWOT analysis is to take the information from the environmental analysis and separate it into internal issues and external. Once this is completed, SWOT analysis determines if the information indicates something that will assist the firm in accomplishing its objectives, or if it indicates an obstacle that must be overcome or minimized to achieve desired results [6].

- Strengths: characteristics of the business that give it an advantage over others.
- Weaknesses: characteristics that place the firm at a disadvantage relative to others.
- Opportunities: external chances that can be leveraged to the advantage of a business
- Threats: external elements in the environment that threaten a business.

In applying the SWOT analysis it is necessary to minimize or avoid both weaknesses and threats. These strengths should be realistic and not modest [7]. Weaknesses should be looked at in order to convert them into strengths. Likewise, threats should be converted into opportunities. Lastly, strengths and opportunities should be matched to optimize the potential of a firm. Applying SWOT in this fashion can obtain leverage for a company.

4. Geotourism and Sustainable Development (Theoretical Framework)

In 1980, the term sustainable development was used by IUCN (International Union for Conservation of Nature and Natural Resources) for the first time. This organization used this term to describe a situation in which development is not harmful to the nature but conserves and assists environment [8].

According to the international environment commission, sustainable development is a process of using sources, guiding investments and technology development and a substantial change, which is compatible with the present and future necessities. In addition, according to WCED (World Commission on Environment and Development) sustainable development is a development which secures present requirements of the world without threading the ability to provide subsequent generation's requirements and that sustainable development is "correlation of human being and nature overall the universe" [9]. Brownman believes in environmental point of view, development is sustainable only if it is based on ecology [10]. Sustainability has four aspects: natural resources, political, social and economic sustainability. In fact, sustainable development is not only focused on the occasional environmental aspects but also considers social and economic aspects. Sustainable development is the intersection of society, economy and nature. Tourism, a multidisciplinary issue, is supposed as an important solution to achieve sustainable development because it is an unfailing source with minimum natural destructive effect [11].

Geotourism as a branch of nature tourism has a high potential to achieve sustainable development, because in this kind of tourism, responsible treating of the nature and securing natural pieces is a principle. It is attempted to conserve the environment and achieve the sustainable structural, social, economic and cultural development and to make it an employment and income resource, infrastructure development and a good source to spend leisure-time [12]. Regarding the fact that one of the aims of establishing geo parks is economic growth, informing the public on geology, stating the value and originality of the earth and calling for the public contribution in protecting geological heritage [13], geo parks can be an instrument to learn and research on geological foundations and extensive subjects on environment and also an environmental element for sustainable development, so its recognition and protection seem substantial [14].

5. Island Introduction

Qeshm is the biggest Island of Iran in Persian Gulf, which is located in North West of Hormoz's strait. It has 115 kilometers length, and its width varies between 10-35 kilometers. It has 1504 square kilometers space. Qeshm town is the center of Qeshm Island, Located in north east of Qeshm Island with a space of 3 kilometers, 10 meters above the sea level. Qeshm Island has a hot, wet and long season and a temperate and short season. Hara forest is a part of Qeshm's ecosystem, which is lied in a disperse region from Hormoz's strait to east and Indian ocean and Oman's seashore and in the environments of Loft port and from the north of Qeshm Island to Khamir port. It has greened area of 5600 hectares on blue waters of Persian Gulf [15].

6. Global Geo Park of Qeshm Island

Qeshm Geo Park is the first natural piece registered by UNESCO in the country. This park is a member of global geo parks network of the UNESCO. This area is registered as the only geo park of Middle East in 2006 and is one of the 57 global geo parks. This park has the biggest salt cave in the world and there are some salt spring, Salt Mountain, salt diapir and various geomorphological landforms. In this respect, Qeshm Island is the heaven for the geologists. In the wildlife Museum of Qeshm Geo Park, various kinds of aquatic mammals, fishes, birds, crabs, pearls and snakes are kept. Keeping Megaptera Novaeangliae (about 45 tons in weight) as the biggest mammal of the world and Dwarf Sorex (about 1.3 grams in weight) as the smallest mammal of the world is a feature of this museum. Qeshm Geo Park has occupied $\frac{1}{3}$ of the area of Qeshm Island. Having eight tourism sites, including Chah Koh Strait, Setareha Valley, A'lli Strait, Tandisha Valley, Shor valley, Namakdan Caves, Koorkoora Mountains and Doolab close to beautiful Hara forest, Qeshm geopark will be a model for regional geo park in the future [16].

7. Analysis of Data

In order to investigate guidelines to achieve sustainable development in the Qeshm Island, using potentiality of Geo Park, considering effective indexes in tourist attraction and developing facilities and infrastructure of geo park tourism, first this indicator is analyzed in four groups: opportunities, threats,

strengths and weaknesses. So the guideline to sustainable development of the Island regarding Geo Park is achieved. Details in each index, importance coefficient, normal weight, grade and final score is achieved which is shown in table 1 and 2.

Table 1 The matrix of external factors evaluation

Opportunities	importance coefficient	normal weight	grade	score
Inclination of governmental and private sectors to develop tourism in Qeshm Geo park	9	0.0703	2	0.1406
Existence of proper paths and availability of the Island	10	0.0871	3	0.2343
Situating in tourism path of the countries around Persian Gulf	8	0.0625	3	0.1875
Possibility of winter and Noroz travellers attraction	9	0.0703	4	0.2812
Existence of tax free zone	9	0.0703	3	0.2109
Possibility of informing by governmental organizations	9	0.0703	2	0.1406
Existence of proper field for internal and external investments	9	0.0703	2	0.1406
Threats				
Lock of attention to social and economic situation of the region	9	0.0703	4	0.2812
Lack of governmental educating of the natives and their guidance to promote development and extension of tourism	9	0.0703	4	0.2812
Existence of tax free zones in the region and neglecting geo park	8	0.0625	4	0.25
Lack of enough budgeting to organize infrastructure	9	0.0703	4	0.2812
Lack of attention to protection and securing of the natural environment by those in charge	7	0.0546	3	0.1638
Lack of attention to real value of the piece by people and those in charge	8	0.0625	3	0.1875
Environmental pollution and destruction of the piece by tourists	7	0.0546	2	0.1092
Lack of educated professionals to guide (Geo guides)	8	0.0625	3	0.1092
Sum	-	1		0.0773

Table 2 The matrix of internal factors evaluation

Strengths	importance coefficient	normal weight	grade	score
Existence of natural, economical and human sources in the vicinity of the piece	10	0.0684	4	0.2736
Easiness of availability of the central city (Bandar-e-Abbas)	9	0.0616	4	0.2464
Existence of infrastructure in the vicinity	10	0.0684	3	0.2052
High value of geological phenomena of geo parks in the world	9	0.0616	3	0.1848
Existence of proper and wide space in the vicinity in order to create infrastructure such as residency, hosting and transport for tourists	8	0.547	3	0.1641
Variance in fauna and flora of the region	9	0.0616	3	0.1848
Existence of historical and ancient heritage in the region (the Castle of Portuguese)	8	0.0547	2	0.1094
Weakness				
Lack of proper physical, social and cultural relation between Islands	8	0.0547	3	0.1641
Lack or shortage of local contribution in attending geo park situation to promote local tourism	9	0.0616	3	0.1848
Lack of knowledge of natives about the role of geo parks in economic growth and tourist attraction	7	0.0479	3	0.1437
Shortage of facilities and welfare in region	9	0.0616	3	0.1848
Slowness of transport of tourists to Island	9	0.0616	2	0.1232
Anonymosness of the piece in country	9	0.0616	1	0.0616
Lack of guide and educated personnel in site	7	0.0479	1	0.0479
Lack of guiding signs to attract tourism	7	0.0479	1	0.0479
Lack of guard and protector to avoid destruction of the piece	5	0.0479	1	0.0410
Hot and unfavourable climate in half of the year	7	0.0479	1	0.0479
Economical poverty of the natives	5	0.0342	1	0.0342
Sum	-	1	-	2.4494

7.1. Sustainable Development Guidelines

According to data gained from above matrixes, it seems that present guidelines for sustainable development of Qeshm Island are invasive. In another word, sustainable development of Island should be achieved by using internal strengths to utilize external opportunities. So principal and subsidiary guidelines for sustainable development are as follows:

Principal Guidelines of Comparing Strengths and Opportunities of Development (SO)

- Utilizing potential and practical economic, natural and human sources of Island in order to sustainable development of tourism by government and private sector
- Improving physical and structural communications of Island in order to attract more tourists.
- Employing human source of the Island in creation, execution and management of residential places.
- Informing and introducing geo park to those traveling with the aim of purchase and business.
- Proper imaging and appearance around geo park to attract more tourists.

- Investment for introducing and informing about the historical and ancient heritage of Geo Park.

Table 3 comparing the strengths and opportunities of development (SO)

SO	O1	O2	O3	O4	O5	O6	O7
S1	1	1	1	0	1	0	0
S2	1	1	1	1	1	0	1
S3	1	1	0	1	1	0	1
S4	1	0	1	1	0	1	1
S5	1	1	1	0	0	0	1
S6	1	1	0	1	1	1	1
S7	1	0	1	1	0	1	1
Σ	7	5	5	5	4	3	6

Subsidiary Guidelines for Comparing Weaknesses and Opportunities (WO)

- Programming to increase public knowledge in order to employment in the field of developing geo park tourism.
- Creation of facilities and welfare for tourists in geo park region by governmental and private sectors.
- Equipping the region and the vicinity with guiding signs, introducing pieces by scientific and professional methods with investment of governmental and private sector.
- Calling for a contribution of people, NGOs, institution and private firms to work on geo park tourism.

Table 4 Comparing the weaknesses and opportunities of development (WO)

WO	O1	O2	O3	O4	O5	O6	O7
W1	1	1	1	0	0	1	0
W2	1	0	0	1	1	0	0
W3	1	0	0	0	0	0	1
W4	1	1	0	1	0	0	0
W5	1	0	0	1	0	0	0
W6	1	0	0	1	1	1	1
W7	1	1	0	0	1	0	0
W8	1	0	1	1	1	1	0
W9	0	1	0	1	1	1	1
W10	1	0	1	1	1	0	0
W11	1	0	0	0	0	0	0
Σ	10	4	3	7	6	4	3

Subsidiary guidelines using compression of weaknesses and threats (WT)

- Budgeting by the government to improve the economic status of inhabitants.
- Improving public knowledge in the field of effects of geo park tourism attraction on upgrading their economic.
- More attention of governmental managers to internal and environmental parts of Geo Park and establishing residence place in this Island.
- Employing geology professions to proper guide the tourists.
- Continual and effective supervision on protecting sources and values of Geo Park and preventing from their destruction.

Table 5 Compression of weaknesses and threats of development (WT)

WT	T1	T2	T3	T4	T5	T6	T7	T8
W1	1	1	0	1	0	0	0	0
W2	1	1	1	1	1	1	1	1
W3	1	1	1	0	0	1	0	0
W4	1	1	0	1	1	1	1	0
W5	1	0	1	1	1	0	1	0
W6	1	0	1	0	0	0	0	0
W7	0	1	1	0	0	0	0	1
W8	0	1	1	1	0	0	1	1
W9	0	1	0	1	1	1	1	1
W10	0	0	0	1	0	0	1	0
W11	1	1	0	0	0	1	0	0
Σ	7	8	6	7	4	5	6	4

Subsidiary Guidelines for Comparing Strengths and Threats (ST)

- Providing the possibility to execute different and complementary actions.
- Improving the level of infrastructure and communicational facilities.
- Improving public knowledge in the field of real value of the Geo Park and Island and its setting.
- Increasing budget portion given by the government to protect and develop the geo park tourism;
- Attempt to increase the amount of internal and external investments in order to introduce Geo Park to universal societies.

Table 6 Compression of strengths and threats of development (ST)

ST	T1	T2	T3	T4	T5	T6	T7	T8
S1	1	1	1	1	1	0	0	0
S2	1	1	1	1	0	0	0	0
S3	1	1	1	1	0	1	0	0
S4	1	0	1	1	1	1	1	0
S5	1	0	1	1	0	1	0	0
S6	1	1	1	1	1	1	1	1
S7	1	1	1	1	0	1	1	1
Σ	7	5	7	7	3	5	3	2

8. Conclusion

The conclusion of this research to evaluate the feasibility of sustainable development relying on tourism attractions and using SWOT analysis that because of the existence of significant tourist attractions and exclusive scientific, cultural and historical values of Qeshm geo park, this Island is capable of hosting lots of internal and external tourists. In other words, if the infrastructures required for the utilizing of these attractions are provided, there will be the possibility to employment and more income for the natives around the region. On the other hand, according to data studied by SWOT analysis, development of rural settlements in the vicinity is using internal strengths to utilize the external opportunities (invasive guideline.)

Employing economic, natural and human source of this region and improving physical communication between islands in the vicinity and also more informing and introducing universally registered tourism attractions and at last precise and sufficient informing of the environment are the main guidelines of sustainable development. Creation of professional sites, educating professional personnel and employing them in guiding and protecting the pieces are as well useful. Existence of a tax-free zone in this region is a proper opportunity to attract internal and external tourists but because of high attraction of business actions, visiting the Geo Park is neglected, which can be properly utilized by proper guidelines.

9. References

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