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# Designing Varzaneh Desert Tourism Resorts with Eco-tourism Development Approach

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## Abstract

This article aims to create a Residential and Recreational Complex and to investigate its impact on improving the living standards of the local Varzaneh desert community. Iran is highly ranked in terms of its diversity of natural and climatic phenomena, especially desert climate in the world, in this paper Varzaneh desert was selected as the target and statistical community and practical and developmental purposes have been analyzed and implemented as descriptive and developmental. Using causal analysis, strategies and tactics for ecotourism development in this area have been proposed, so that the research of this paper reflects the fact that the Varzaneh Desert has an aggressive strategy based on supporting its strengths and usability of existing opportunities to overcome the weaknesses and threats facing ecotourism development.

**Keywords:** resort, tourism, varzaneh desert, eco-tourism development

## Introduction

The large part of Iran is made up of deserts and wildlands such as the Central Desert of Iran, the Lut Desert, and other small and large deserts with different names. Although the deserts of Iran, like the rest of the world, compared to humid regions have restrictions on vegetation, animals, and other environmental factors, but the presence of historical and cultural artifacts, specific climatic conditions, and specific plant and animal species have made these areas remarkable in many ways. (Takano & Wickramasinghe, 2009) The desert ecotourism industry is now increasingly developing on a global scale, because on the one hand, it has adapted to the growing needs of tourists for its symbolic values such as novelty, risk-taking, comfort, relaxation, and stillness, on the other hand, it is the most appropriate sustainable development mechanism for desert and wildland areas (Ahmadi et al., 2013). Undoubtedly knowing and paying attention to the growth and development of such lands has not only contributed to their growth, but also it provides the basis for the development of the infrastructure for the increasing the tourism industry, followed by the growth of its related industries, and ultimately the growth and

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development at the national level (Fennell, [2000](#)). It can be said boldly that of all the natural resources available in Iran, deserts and wildlands are the only examples that can compete globally with reputable markets due to their pristine and scarcity (Ceballos, [1993](#)). On the other hand, since these areas can never be destroyed or fully fertilized for agricultural purposes, the development of ecotourism can be a good way to prevent the destruction of these lands (Moor & Drum, [2009](#)). Varzaneh city has the potential of attracting eco-tourists with historical texture and proximity to Varzaneh desert (Ardalan & Bakhtiyar, [2013](#)). Conscious design in this space and creating a residential-recreational environment for ecotourism activities can play a good role for both villagers and visitors (Malayeri, [2001](#)) and it will attract tourists from many parts of Iran and the world to the region and relax in the heart of the desert and to work in its mystical silence and calm to develop ecotourism (Armaghan, [2007](#)).

- Concepts
- Resorts

Units that provide accommodation for tourists or their dependents are called accommodation units and refer to the set of tourist equipment used by domestic and foreign tourists, including a set of accommodation facilities, catering and amusement such as hotels, guesthouses, inns, tourist complexes, restaurants and all kinds of summer, winter, beach, mountain resorts and the like (Mohammadi et al., [2009](#)).

- Percentage of occupancy of a bed or a room

The number of beds occupied relative to the total number of beds and living rooms in the complex. This indicator is measured in percentages and indicates the ratio of occupancy of a bed or room to the total beds or rooms of a guesthouse or their complex in a city or country.

- Hotel Score

Hotels based on the specific construction status, equipment, and quality of service they provide are rated by one to five stars.

- Night Stay Collection

The term Night Stay Collection refers to the number of beds occupied by travelers within a certain length of time and is usually calculated in terms of night-time (Latifi, [2006](#)).

## Statement of the Problem

Today, tourism is one of the most important economic pillars of the world, with its ever-expanding development becoming one of the main economic and investment sectors in the world. Tourism takes place in a variety of areas that encompass a wide range of types of tourism with regard to resources, facilities, natural, historical, cultural, sports, health, and more. The growing tourism industry will play an important role in the national development of countries in the future.

One of the patterns of tourism spaces in the modern era is eco-tourism or ecotourism. This spatial pattern encompasses tourists' approach to the natural environment with different motivations that tourists are considering traveling to the natural environment. The spatial pattern of this pattern is the natural environment such as the beach, the war, the mountains, the desert, the cave, and the like. Although the desert has few vegetable crops, it has other potentials that, if properly recognized and exploited, would be helpful in preventing desertification. Since much of Iran is made up of deserts, the country's outstanding tourism capability is desert ecotourism. Increasing foreign exchange earnings and domestic and foreign investment and increasing attention to desert ecotourism can provide full employment, increase foreign exchange earnings, and introduce Iranian civilization and culture to the world, introducing the attractions of ecotourism to people and the breaking of ethnic boundaries.

Sustainable planning and development of tourism and ecotourism should be in a way that maximizes the benefits and minimizes the negative impacts on the environment. Varzaneh Desert near Varzaneh city in Isfahan has the potential to develop desert ecotourism. The establishment of a desert settlement to attract Ecotourists from all over Iran and around the world will contribute to rural employment and familiarity with the culture of this region that can be done to develop ecotourism. The purpose of this study is to investigate the position of ecotourism in the development of ecotourism attraction in the Varzaneh desert and also the effects of this habitat on the process of achieving the desired goal.

## Research Background

Ecotourism in the desert began relatively late compared to ecotourism in other destinations, including mountains, cities, or monuments. One reason was the lack of the necessary infrastructure as well as the perceptions and dangers associated with the desert. From the end of the 20th century onwards, ecotourism in the desert was considered a special type of tourism in the world and was gradually attracted (Anderson, [1993](#)). Conducting large-scale desert tourism tours, organizing desert

areas, providing tourism facilities in these areas, and exploiting these natural attractions for desert ecotourism annually generates a great deal of revenue for countries that have benefited and invested in this natural attraction. Scientifically, desert tourism is a sub-category of ecotourism that is expanding dramatically in the world today; however, perhaps because of this young branch of ecotourism, scientific research and research in this field has not been as popular as other forms of tourism (Asmari & Yazdanpanah, 2012). Scientific research in this field has not been as popular as other types of tourism. Since the late twentieth century, desert research has become increasingly popular for those interested in geology, biology, culture, and religion in the desert (Hong & Chan, 2010). Some of this research has been done individually and others are the result of efforts by organizations and institutions working in the desert and tourism areas.

### **Research Objectives**

1. Finding the importance of desert climate to select tourists for travel
2. Familiarize tourists with the unknown world of the desert and its potential
3. Protecting the desert environment and building architecture with it (not on it)
4. Creating employment directly and indirectly
5. Increase tourist attraction to boost tourism industry revenue and revenue in the region
6. Relieve mental illness and relax in an environment full of silence

### **Research Methodology**

The research method and collecting information for each project is mainly based on the nature of the subject and the purpose of the research. Usually, each research begins with a question about the topic, followed by other questions, and the researcher searches for answers to the questions posed. Due to the fact that in this project we have small but new specimens in Iran, it was possible to examine the specimens made and the inns and hotels and desert ecotourism areas in Iran could be identified and investigated. There were also various ecotourism projects around the world, both in the desert and in mountainous, coastal, and forest areas, and we examined examples in this category.

The purpose of this study is applied-developmental and its method is descriptive-analytical.

### **Design Platform Analysis**

Choosing the right place to build and start the design process is of particular importance, and many things to consider, including:

1. Climate issues (light, wind, thermal comfort)
2. Access
3. Perspective
4. Noise
5. Facilities (water, domestic building material, vegetation, and animals)

### Site Selection

Choosing the exact location of the site was considered between the river and the city and facing the sand dunes which preserved river perspective and can provide water by water wells located here, and enjoy sand riding near the hills and see the road coming from the city to the hills. In fact, there is a good view of the Black Mountain as well.

**Figure 1**

*Set Location Select Map (Google Earth, 2019)*



**Figure 2**

*Site Selection (Google earth, 2019)*



### Summary of Theoretical Studies

Based on the studies done previously, we came up with key design results that we will briefly mention below:

- Considering sustainable design principles, including consideration of site-specific features such as terrain topography and micro-climate specification of the site designed and maximum use of these features;
- Use of available energy resources on-site including groundwater, wind effect, and solar radiation;
- Maximum use of passive cooling and heating solutions;
- The use of sustainable materials, including materials available on the design site, or the use of recyclable materials, considering the specific properties of materials such as thermal mass, thermal and acoustic resistance;

- Proper zoning for ecotourism development and no damage to the area;
- Creating employment by creating different uses for achieving ecotourism development goals.

### Project Perspective

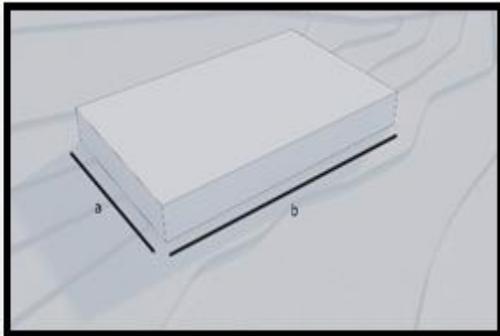
The project has the potential to attract eco-tourists from all over the world, and people come into the collection for a smooth and easy ecotourism experience. This place is not very suitable for those who are keen on austerity, risk, and adventure and this complex covers all the possibilities for a soft and easy eco-tourist and has created a comfortable environment in the heart of the desert.

### Epistemology

#### *Concept and Design Process*

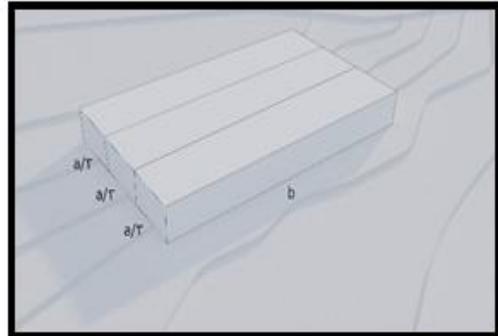
**Figure 3**

*Start of the Design Process (First Step)*



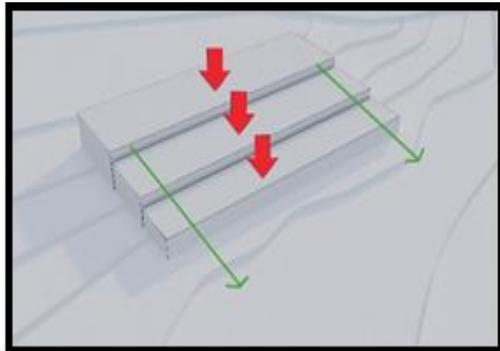
**Figure 4**

*Second Step*



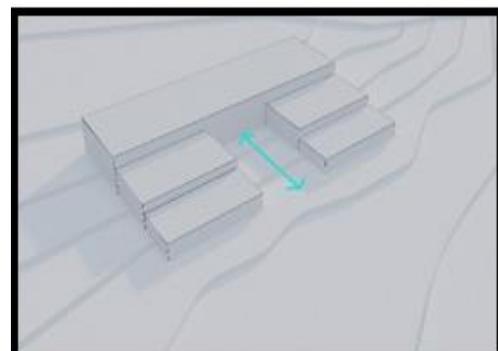
**Figure 5**

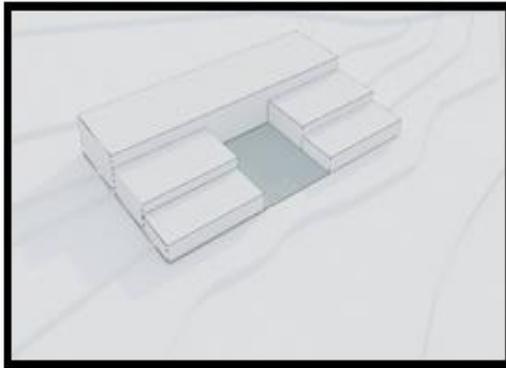
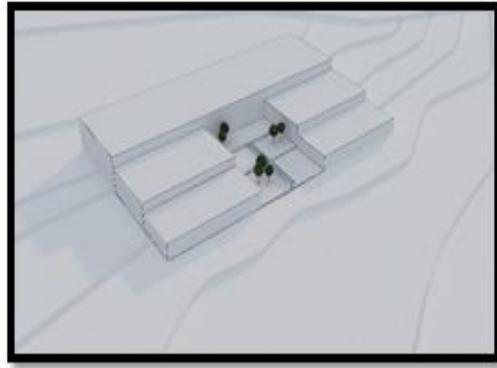
*Third Step*



**Figure 6**

*Four Step*



**Figure 7***Five Step***Figure 8***The Final Step of the Design*

(Modeling and Rendering: author)

The rectangular cube design process was transverse longitudinally at the site in the northwest to southeast direction and the idea of a central courtyard and a good view of the sand dunes, and the Zayandehrood River. Black Mountain started and in the central direction, the volume of the river rises from the bottom of the earth like a Zayandehrood.

### Spatial Planning Basics

**Table 1**

*Physical Program of the Varzaneh Desert Tourism Residence Complex*

Space	Space capacity	Per capita infrastructure	Infrastructure (m <sup>2</sup> )	Number	Total infrastructure
1. Conference hall	200	4.6	-	-	866.11
*audience place	200	1.7	341.51	-	-
* Scene	30	2.17	65.28	-	-
* Backstage	35	2.14	74.92	-	-
* Projector room	20	2.6	53.34	-	-
*reparation room	20	2.6	53.50	-	-
*Waiting room	200	1.24	248.14	-	-
2. Educational	120	3.92	-	-	470.40
* Research Institute	30	2	60	-	-
	30	1.7	53	2	106

Space	Space capacity	Per capita infrastructure	Infrastructure (m <sup>2</sup> )	Number	Total infrastructure
* Workshop	45	3.1	156.12	-	-
* Star and Desert Museum	7	3.3	23.42	-	-
	6	3.7	22.71	-	-
* Reception					
*Cultural department					
3. Welfare	300	4.4	-	-	1320.41
* Restaurant	200	1.7	350.41	-	-
* Cafeteria	30	3.3	100.23	-	-
* Chapel	25	1.2	30.26	2	60.52
* W.C	1	1.8	1.8	-	128.37
*Game Collection	30	2.4	72.10	-	-
	100	3.8	385.46	-	-
*Shopping center	100	2.3	223.29	-	-
*Handicrafts gallery					
4. Sports Complex	150	3.9	-	-	589.23
	3	10.27	30.83	-	-
* Management	35	1.5	53.27	-	-
* Cloakroom	15	2.1	32.76	-	-
*Massage and desert therapy salon	15	1.9	29.78	-	-
	50	2.3	115.69	-	-
* Yoga salon	50	3.5	177.54	-	-
*Bodybuilding club	10	2	20.43	-	-
*Sauna and Jacuzzi in the water					
* Cafeteria					
5. Residential	120	48.43	-	50	42/5218
*Double-bedroom	2	15	33	28	924
	3	33.12	37	14	518

Space	Space capacity	Per capita infrastructure	Infrastructure (m <sup>2</sup> )	Number	Total infrastructure
*Three-bedroom	1	27	27	4	108
*single bedroom	4	11	44	4	176
*Suite	50	1.8	-	2	180
*Cafeteria					
6. Office	50	7/4	-	-	60/262
*the reception	6	5/5	44/33	-	-
*the Secretary	4	5/6	31/20	-	-
* Accounting	12	5/2	62/30	-	-
*Archive	-	-	32/12	-	-
*Management	1	22/16	22/16	-	-
*Meetings	15	3/1	42/20	-	-
*Staff	30	6/1	10/49	-	-
7. Overall					61/1015

**Figure 9**

*Metal brise-soleil at the Entrance*  
(Wikipedia)

**Figure 10**

*Brise-Soleil on the Roof (Arch Daily)*



## Shelters Brise-soleil

Brise-soleil is a type of exterior solar canopy that prevents overheating and direct sunlight into the building. Without obstructing the view from the outside or vice versa like a curtain. The sun's rays can pass through or can be absorbed and reflected by the brise-soleil cell. These profiles can move depending on the weather and the sun's position and can be positioned at an appropriate angle to control light and shadow (Mahmoudi & Mousavi, [2010](#)).

**Figure 11**

*A View of the Entrance Covered by the Cladding Structure to the Courtyard*



**Figure 12**

*View from the Top to Look at the Whole Project*



**Figure 13**

*Parking lot Covered with Photovoltaic Cells*



**Figure 14**

*Collection Yard*



**Figure 15**

*Double-Bed Rooms with Balcony Facing the Desert*

**Figure 16**

*Balcony Facing the Desert*



## Conclusion

The purpose of this paper is to investigate the impact of ecotourism development on Varzaneh desert as one of the pristine places in Iran. Iran is a vast land most of which is desert and dry land. In this paper, the Varzaneh Desert was selected as the target and the impact of improving the ecotourism industry on the local communities, and improving and recognizing this point in order to increase tourist attraction was investigated. It is understandable that when the ecotourism industry is improved and expanded in an area with great potential, the stakeholders including locals, government officials, visitors, and so on. To put this into practice, an aggressive strategy based on strengthening one's strengths and opportunities on the one hand and overcoming weaknesses and threats to develop ecotourism were used.

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