

The role of environmental capabilities in rural tourism in northern Tehran

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Abstract


Nowadays, the residents of urban areas try to spend some time in natural, quiet, original and intact environments to escape from the various types of environmental pollution that threatens them. Therefore, tourism is one of the phenomena that has affected the rural areas and especially the summer villages of Tehran in recent decades. The purpose of this study was to investigate the process of emergence and identification of environmental factors and their relations with development of tourism around metropolis of Tehran. The method of this research was descriptive-analytical. For information gathering, field surveys (questionnaires) were used and 100 households were interviewed. The results showed that the tourism of the studied villages dates back to the decades 1991s and in 2001s, it had a growing trend, and a meaningful relationship between natural and human factors in the formation of this industry has existed. Accordingly, the findings of the research suggested that identifying the effects and environmental factors in the development of tourism structures in rural areas are important.

Keywords: Environmental factors, rural areas, rural tourism

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Introduction

The tourism industry in the world is progressing and developing, so economists call it invisible exports or the white industry. That is, in addition to its high growth and development status, it has generated revenue in developed and developing countries. Developing countries are also trying to improve their economies by using this incomes industry. From developed countries in tourism, economic growth, social welfare, and the rise of living standards and environmental preservation are expected. Achieving these benefits depends on the resources that belong to today's generation and tomorrow's generation. Officials and planners should pay attention to the impact of the arrival of tourists and the development of tourism.

In today's world, national development planning, in general, and rural development planning, in particular, are considered to be the requirements of different territories. In this framework, the formation and ordering of spatial and local spheres has, from the beginning of human life and from the time of exploitation of natural resources, has continuously been raised on a different scale and conception. In this regard, the higher the level of culture has grown, the more the general form of organization and discipline of the environment and tools and knowledge of human groups have advanced. (Saeidi, 2002, p.147).

Growth and development of tourism in today's modern way are among the important phenomena of the late 20th century and rural and mountainous areas are among the most important areas for tourism and related activities (Mahdavi et al., 2008, p. 20).

Today, the world's economic, social and cultural developments, especially in terms of population growth, urbanization, the development of communication routes and transportation vehicles, increased leisure time and improved social welfare have led to the development of tourism in rural areas or rural tourism (Sharpley, 2006, p.5).

Rural tourism is a variety of activities and types of tourism in and around rural environments that have positive or negative effects on the human and natural environment (Papeli Yazdi & Ebrahimi, 2008, p. 85).

Research hypothesis

According to the subject matter of the research and the raised questions, the hypotheses are as follows:

1. Villages in northern Tehran have a good relationship with the city to attract tourists.
2. Access to facilities and lack of facilities is one of the effective factors in the sustainable development of tourism in the region.

Principles of designing recreational areas in mountainous places for tourists

Principle 1: Protection

According to the conducted studies, one of the most important principles in the mountainous areas is the protection principle. Because, as mentioned above, ecological characteristics and external factors in these areas will severely impact on them. In order to integrate development and protection for tourism and sustainability of development and continuous use of such areas, it is necessary to follow a series of strategies that include:

- Preventing contaminated water by creating sewage paths in the valley in order to direct the cafe effluent down the mountain and prevent it from pouring into the river to keep the river water clean and safe.
- Strengthening the green space along the river to increase the production of O₂ and reduce CO₂, in order to help straighten the air of Tehran, by creating a flow corridor and turning it from the city to the mountain in the morning and from the mountain to the city at night.
- The maximum protection of mountainous natural resources and landscapes, which are the first sources to use, as well as the culture of a mountainous environment that can affect design and its impact on the tourist.
- Using water to enhance the environment, developing prospects, preventing waste water and storing water for different uses.

- Strengthening vegetation along the river and waterways, as a green space corridor and a green marginal strip to protect river boundaries and as a conservation plan to prevent soil erosion.
- The use of indigenous plants (trees, shrubs and herbaceous plants) in mountainous areas, which are adapted to environmental and physical conditions. The use of non-native plants, due to non-adaptation to the environment, will damage the natural barrier of the area. And as a result, it damages the attractiveness and value of the natural environment of the mountains.
- Preventing construction and destructive human activities in mountainous paths in high altitudes and lack of accumulation of pollution-producing activities in the upper reaches of mountains, due to contamination of the natural environment of the mountain and its transmission to the downstream and causing destructive and harmful effects to other parts of the area
- Maximum effort to restrict human construction to lower altitudes in mountainous environments. The positive effects of this work include preventing the transmission of pollution caused by construction and subsequent human uses to high mountainous areas and highlands.

Principle 2: Tourism Sustainability

One of the most important issues in maintaining the characteristics of the mountains and its integration with the development is the consideration of plans that make it possible to create tourism spaces in accordance with ecological and conservation principles. So, in the following cases, it can be effective in sustainable mountain tourism:

- Attention to the recognition of ecosystems and ecological balance in planning and designing the environment, as the basis for any design, as a result of the need to recognize the ecological structure of mountainous areas, for use in long-term periods in the framework of methods for studying and evaluating natural environments.
- Designing spaces for environmental activities in order to keep the mountain environment alive and expand its green space and help to survive and maintain the mountains and sustainable tourism.
- Establishing a proper management of resources and sustainable development of the mountains, considering the characteristics of the local environment and the preservation of the interests of mountain

populations. In fact, the need to attract active public participation in the survival and sustainability of mountainous projects.

- Combining developmental and recreational schemes to sustain recreational projects.

- Terracing, in order to preserve the soil and prevent its erosion, planting the plant, creating pathways designed along the way of water movement, collecting large stones in the direction of water movement, and not changing the shape of the valley bed.

Principle 3: The development of mountainous areas for recreation

One of the most important issues in the development of mountainous regions is the consideration of tourism as an important element in the use of mountainous areas for recreation, along with the valuation of ecological principles and the consideration of mountain features in design. Therefore, the following can be considered in the creation of recreational areas in the mountains:

- Creating tourist routes and harbor areas for direct experience of the natural environment in order to watch and understand the natural value of the mountains, and the variety of these routes according to the various needs and motives of the tourists.

- Creating spaces designed and built for an indirect experience of nature. Understanding the natural environment is of secondary importance and is considered as a background for a series of leisure activities appropriate to the environment. Thus, the social dimension of tourism, which is the satisfaction of personal needs and social needs of individuals, is reinforced in these activities and in certain designed places.

- Establishing tourism routes for the elderly on appropriate slopes with regard to environmental assessment, as well as considering the appropriate height for building such a route for this particular group.

- Creating paths along mountainous terrain, for young people on steep slopes: these are more risky routes and can lead to rock climbing areas.

- Using places in mountainous areas to create spaces for stopping and watching for tourist use according to the potential capacity of the environment: these stopping points will have maximum visibility to the area and surrounding landscapes.

- Designing stop and watch spaces, along with observing the use of natural and native materials of the area to create the integrity of the environment and create a coherent whole in relation to the natural environment: these spaces can increase the sense of leadership in relation to the assessment of natural environments. And the tourists themselves, by understanding the value and importance of such natural environments, should try to protect it.

Principle 4: Biodiversity conservation

One of the most important issues that should be considered is to preserve the diversity of plant and animal in the "Darband" area, because the life of the mountainous areas and the area concerned is not possible without interactions between the biological species and the mountainous environment, and these two essential and necessary for each other and with any damage to endemic species and creatures of the region, its ecological balance will be eliminated and its effects will be transmitted to plain and urban areas. Considering the importance of mountains as biodiversity islands (height belts, ecological diversity and Various ecosystems), especially in Iran's dry conditions, where often vegetation biodiversity (habitats) are seen, therefore, animal habitats are also found in mountainous regions which have a more favorable climate. The following are required:

- Observing the ecological principles of designing and keeping open the entire valley path to create a corridor for moving the animals and not disturbing them to move.
- Strengthening vegetation and using adapted species in situ and managing principally to maintain them for vegetation diversity.

Rural tourism:

Tourism has been discussed from the point of view of various sciences and, based on each viewpoint, several definitions have been proposed for it. For example, Author Borman defines tourism as: "Tourism is a series of travels for recreation, recreation, commerce or business activities, and the absence of a permanent tourist during temporary and transit travel" (Rezvani, 2003, p. 28). From the point of view of sociology, tourism is a set of relations that a tourist organizes in his temporary residence with a person residing there. (Shahabian, 2004, p. 13). Among the various definitions of tourism, the International Union of Tourism defines the following definition: "Tourism is the sum of

the spatial changes of human beings and the activities that result from it. These changes are themselves due to the fulfillment of the demands that lead man to move and they exist in each person potentially, with varying intensity and weakness (Armaghan, 2007, p. 219). Lean considers rural tourism as tourism in countryside (Rahimi, 2002, p. 226).

General characteristics of the valleys in northern Tehran

Each of the mountain valleys in northern Tehran has unique charms and attractions that are attractive to a particular group of tourists.

A) Darakeh Valley

It is a green valley and full of water. The path of movement has a low slope and is located in the bottom of the valley, in the mountains and away from the harsh sun. Movement in this valley is accompanied by a change of perspective and a change of nature. Due to the availability of facilities such as water and almost suitable vegetation, there are several stop shops and restaurants in the valley.

B) Darband Valley

This valley is also green and full of water, and from the beginning of the path, the movement is made in height.

C) Velenjac valley

This valley is dry and shallow. Mechanical equipment (telecabin) makes it possible to access to the height of mountains.

D) the path of Golabdareh

This route was damaged a lot after the floods of 1987, and the course of the road, which was already near the water, was transferred to the height, and at present, this way is completely sunshiny. This route has permanent and seasonal springs. Soils on both sides of the path have eroded and therefore, except for the single gardens and terraced sites, which have the ability to be planted by trees due to the type of soil, depth of soil and water streams, there has been no tree planting elsewhere. At the moment, this route is not very attractive for users. The lack and narrowness of the vision at the beginning of the path is one of the reasons for the lack of attractiveness of this path.

E) Narrow Hessarak Valley

This valley is located in the western part of the Jamshidieh Garden, at a height below the path of the Cholak Chal. This valley is used by many people with a lot of attractions such as the river, the running

water and the shadows and half shadow that trees have created in this path.

F) Jamshidieh Valley

The Jamshidieh Valley is completely different from other valleys. This valley is completely dry and does not have a green space. There is no permanent spring in this valley, and except one to two months of the year, its seasonal springs are also dry. The rocky and violent nature of this valley makes it distinct from other valleys.

G) Dar Abad Valley

This valley has two paths, one is at the bottom of the valley and the other is at a higher elevation. This valley lacks the facilities and green space necessary for marching and climbing. At the beginning of this valley, measures (parking) with poor quality and very primitive were carried out.

These heights have semi-arid mountain steppe climates with a mean precipitation of 350 mm per year and the average annual evaporation potential close to the relative equilibrium with annual rainfall (about 2.5 to 3.5 times). The number of wet months at altitudes can exceed 6 months per year. The atmospheric precipitation is mostly snow, which is very durable, and often visible in the chest of high altitudes until June, which, along with the glaciers dispersed at the height of the altitudes, is responsible for continuous feeding of the surface currents of the subterranean plains.

Table 1. The state of visitors according to how to access to the region

Groups	Number	Percent	Cumulative percent
Public	70	23.33	23.33
Private	172	57.33	80.67
Pedestrian	57	19.00	99.67
No answer	1	0.33	100.00
Total	300		

Source: Research findings

Table 2. The state of visitors according to time needed to access to the region

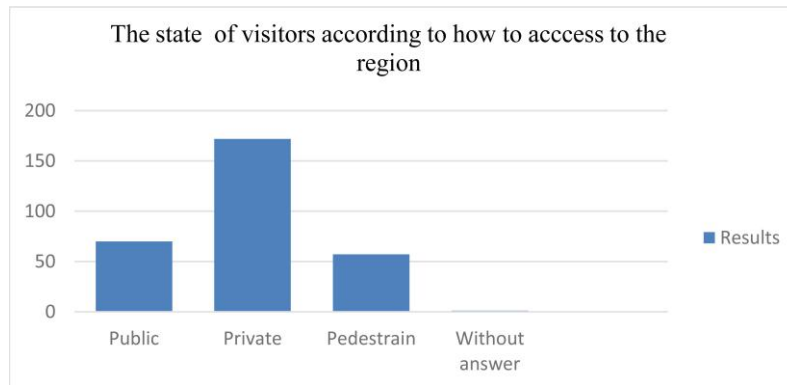
Groups	Number	Percent	Cumulative percent
Less than 1 hour	180	60	60
1 hour	51	17.0	77
More than 1 hour	69	23	100
Total	300		

Source: Research findings

Table 3. Visitor's attitude toward road construction

Groups	Number	Percent	Cumulative percent
Agreed	273	91	91
Disagreed	27	9	100
Total	300	100	-

Source: Research findings



Answering to hypotheses

1. Villages in northern Tehran have good communication links with the city to attract tourists.

According to Table (1), there is a possibility of access to the site in various ways, including public transportation vehicles and personal vehicles, as well as by foot. Table 2 also shows the arrival of people at the lowest hours to the place, and Table (3) indicates that most visitors are in favor of constructing a road to the northern villages of Tehran, because in the shortest possible time access to the beginning Villages is provided.. Of course, one of the ways of accessing the site is to use chairlift, which is only available at noon for using by the rural population during the week.

Table 4. The State of disadvantaged of region for visitors

Groups	Number	Percent	Cumulative percent
Lack of cleanliness	41	13.67	13.67
Noise	21	7	20.67
Green space shortage	171	57	77.67
Overcrowding	20	6.67	84.33
Other cases	42	14	98.33
No answer	5	1.67	100
Total	300		

Source: Research findings

Table 5. Visitor views for area improvement

Groups	Number	Percent	Cumulative percent
Increased controlling human resources and improved management	13	4.33	4.33
Increased health facilities	31	10.33	14.66
Increased recreational facilities	25	8.33	22.99
Places to stay overnight	44	14.47	37.66
Green space development	54	18	55.66
Other cases	2	0.67	55.66
Multiple choice	131	43.67	100
Total	300		

Source: Research findings

Multiple choices	number	Percent
Increased health facilities, developed green space	29	
Increased health facilities, places to stay overnight, green space development	20	
Places to stay overnight, green space development	18	
Increased health facilities, recreational facilities, night shelters, green space development	14	
Increased human resources, health facilities, places to stay overnight, green space development	12	
Increased human resources and improved management, green space development	10	
Increased recreational facilities, green space development	10	
Increased controlling human resources and improved management, places to stay overnight	6	
all items	6	
Increased recreational facilities, places to stay overnight	6	
Total	131	

Source: Research findings

2. Access to facilities and lack of facilities is one of the effective factors in the sustainable development of tourism in the region.

One of the indicators of reaching the village to sustainable development is the time to reach the region, which according to table (2), people can visit the region in the least hours and at least time, and one of the reasons for sustainable development is the availability of facilities and sufficient facilities in the area that most of the citizens referred to the lack of facilities that could be effective in achieving sustainable development in order to solve the problems that, according to table (4), most citizens referred to the lack of cleanness and lack of green space. With studying and solving these problems, we can take steps for sustainable development and, finally, using the views of visitors and visitors to improve the region and to achieve sustainable development will be very effective. According to table (5), the construction of health services, recreational facilities, places to stay overnight and the development of green spaces are among the ways by which we can take a step towards sustainable development.

Landscape analysis and determination of suitable recreational areas using an evaluation checklist

In this method, using landscape elements, the perspective of the north of Tehran is examined and analyzed. In the classification of these elements, the first group is the physical elements, such as water and land, whose subcategories include the diversity of the water pathway, soil texture, and so on.

The second group consists of biological elements of the region that include vegetation and its subcategories, such as plant density, vegetation cover, and so on. The third group includes human variables, such as path, building, type of use, etc. that each of which, in turn, includes subcategories.

After defining three important physical, biological and human variables, subcategories of these variables should be determined. These elements were also selected by considering the characteristics and characteristics of the study area and using elements that Leopold had used in the landscape analysis and assessment of the dam construction on a river.

Items such as water voices, soil texture types, plant species in the area, etc. are elements that according to the accepted characteristics of the studied area, and also taking into account the best characteristics for the elements and characteristics acceptable to the users are determined. The results of the checklist indicate the need for conservation or enhancement and improvement of the landscape.

Table 6. Landscape assessment indicators to determine the appropriate recreational areas

	Water color	Colorless	Green colorless	Light green	Green-brown	Brown	
Physical variables	Water	Floating material in water (water quality)	The lack of solid and liquid floating material	Very small and liquid floating material	The existence of solid and liquid floating material and plant	High Oils and solids and sewage	Different materials, including oils, solids, wash foam, sewage and so on.
		Variability of water flow	Having much diversity, with an alternating low and high speed	Having good variety, with less frequently movement speed	Having medium variety in the movement path and medium speed	Low diversity and without a certain movement and low speed	Very low movement diversity and sometimes still
		Water voice	Gentle and calm voice and sometimes roaring waterfall	-	Very mild voice	-	Voiceless or terrible voice
		The diversity of the water pathway	Having waterfalls and ponds and many maze in the path and good slope	Having a maze in the movement path and somewhat good slope	Medium diversity (very slightly having a maze)	A level and uniform path and sometimes with low slope	Without diversity and having a level path and without slope
		Water visibility	Sometimes explicit and sometimes hidden occasionally, but more explicit	Water visibility and less movement speed	Equally explicit and hidden	Completely hidden and explicit in some point	Hidden
Earth	Soil texture diversity	Extremely high diversity (more than 3 types of texture)	High diversity (between 2 to 3 soil types)	Medium diversity (2 soil types)	Low diversity (between 1 to 2 soil types)	Very low diversity or without diversity (1 soil type)	
	Stone texture diversity	Extremely high diversity (more than 3 types of texture)	High diversity (between 2 to 3 soil types)	Medium diversity	Low diversity (between 1 to 2 soil type)	Very low diversity or without diversity (one type)	
	Soil color diversity	Extremely high diversity	High diversity	Medium diversity	Low diversity		
	Stone color diversity	Extremely high diversity	High diversity	Medium diversity	Low diversity	Very low diversity or without diversity	
	Land erosion	Without erosion	Low erosion	Medium erosion	High erosion	High erosion	

Source: Research findings

Conclusion

Considering the rocky condition of the area, (a high slope), it is clear that the suitable areas for centralized outing are very limited, but extensive outing, especially outing which is suitable for young people, has more range and its development opportunities is seen in the region. Although there are many protective zones due to the high slope, the risk of rock falls and soil erosion and the river boundary, due to the presence of vegetation, and the prevention of its pollution and gardens around the river. On the other hand, according to the results of the landscape assessment, the naturalization of the region to the heights will increase the value of its beauty and the magnitude and extent of the visions of people to the "Darband" valley, until finally, it gets to its end at the peak of the "Tochal". In fact, the nature itself, due to the natural structure that includes the form of the earth, and despite the impact of the natural environment, increases with its natural elevation. Also, with regard to social analysis and evaluation, the river is considered to be the most beautiful and best place to stop for the majority of the people. However, with the increase of heights and as it has been said, due to the widening view, the river becomes more beautiful in the highlands and its value is increased. Also, people who have regular use of the mountain, know the upper parts of the valley and the highlands with visual and environmental value, and those who do not have a regular use of the valley know the low and side elevations of the river desirable.

In addition to the above, a physical analysis of the northern valleys of Tehran indicates that the vegetation in the region is a medium-sized cover and in some places there is a discontinuity in it. This cover is seen as a strip of the riverside along the Darband River. The type of plants is woody (trees and shrubs). The woody species, whose trees and shrubs are small, are not numerous and there are not many variations in them. In terms of the type of shrubs present, more than 8 to 4 species are seen. Although, as far as the heights are concerned, the vegetation is of better quality and density, and its discontinuity becomes less.

Twin waterfall and water pools in the valley have wide open view and create a magnificent view, and others create a narrow view of the waterfall due to the rocky wall of waterfall. Seasonal streams are

flooded in the midst of melting snow and rain and eventually flowing into the river.

There are also high voltage power transmission lines in this area and their route passes from the beginning of the village. Cafes are located along the way along the route, with a density of up to 1900 meters high, and then gradually their density become less.

Changing the height and changing the slope and direction cause changes in open and closed views. In the downstream area, elevation changes lead to the adjacency of the river and pathway, both of which are located deep into the mountains, and in the upstream area of pathway they are placed at a height above the river. As a result, it brings a great deal of vision to the region.

The most important wind direction in the site is the wind that runs through the valley and plain of Tehran, which runs through the night and day. Another regional wind is also from the southeast in the region. From other winds, the wind is a place that flows northwest in all seasons. Also, pollution in the region is more often seen as water-soluble, which is gradually increased due to the increase of cafes at lower altitudes, and the pollution is solid as accumulated from the river's paths.

One of the most important issues in this area is the naturalization of the valley to the heights, which is seen in all its components and elements. The water path is tight and swirling, and its movement is faster and its sound is increased due to the height difference in the valley movement. The rock is more densely populated than the soil, and in terms of elevation and slope variation, the valley moves from mild to severe, and the horizons of vision increase more than the altitudes.

The presence of gardens as green spaces, river boundary vegetation, extensive and continuous observation, regional milestones and diverse views are among the best facilities in the region. Changing the heights, because of the change in the viewing angle and the creation of different spaces, is another possible possibility. The river potential plays an important role as an important factor with its vegetation as a flow corridor and green space. Also, access to the river is due to the leveling of the river and the motorway, the existence of waterways and waterfalls and ponds, as well as other facilities of the region.

Problems and bottlenecks of tourism

Issues and problems of tourism are directly related to the physical problems of the northern valleys of Tehran.

- Lack of public health services along the way
- Lack of telecommunication facilities in case of danger
- Absence of proper drinking water at certain intervals
- Lack of guidance along the path (panels and signs)
- Lack of therapeutic and relief facilities in the area
- Lack of coherent and consistent service network in the area
- Lack of open and open spaces along the path to assign various activities
- Unprotected passage and non-standard bridges
- Excessive number of service locations (cafes) that slow down the movement
- Lack of equipment needed for a cafe, such as electricity, fuel, etc.

Potentials and suggestions

The capabilities of the region are presented quantitatively, and not in terms of social, natural, etc. sectors:

- The existence of calm and quiet spaces in the natural intact environment
- The presence of suitable mountainous weather
- The river, as a positive potential, both visually and in terms of use,
- Closeness to Tehran and ease of access to it
- The implementation of cultural and religious customs in the village and its special value
- Suitable for sports activities such as climbing, climbing, rock climbing for young people
- Suitable for marching and tourism for the elderly
- Having an attractive nature for major social groups (young people) due to slope and elevation changes, and as a result of the formation of various attractive visions
- A suitable place for families for outing, especially on weekends
- There are various other landscapes
- Biodiversity

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