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Identify and Prioritize Suitable Areas for Ecotourism Development using Multi- Criteria Analysis for the Development of the Tourism Market in Iran (Nathanz City)

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ABSTRACT: Nathanz city having regard to natural attraction, desert, Karkas mountain, geo sites, protected areas have great potential to develop eco-tourism. The development of tourism in the city requires recognition of the potential and actual potential of the region. The aim of this study is to identify attractions of Nathanz city to develop new markets by using geographic information system. In this study studied the use of geographic information system and the parameters of slope, aspect, vegetation, climate and temperature zones suitable ecotourism activities: Desert, trekking, skiing, wildlife, star watching, nature watching, climbing, respectively. TOPSISS model were prioritized according to the marketing indicators: access, employment, security, investment, public feature. The results showed that on the basis of marketing desert, trekking, skiing, wildlife between these activities allocated to the first three places and star watching, nature watching, trekking, climbing to the next priority respectively.

KEYWORDS: ecotourism, zoning, geo-tourism, Marketing

I. INTRODUCTION

The tourism industry is a global phenomenon and showed a good combination of cultural, social and economic affairs (Holjevac, 2003: 132). Often considered as the biggest industry in the world and a tool to achieve the development of the economy, the opportunities of economic, environmental and social - cultural for many local communities that (Aref, 2011: 20). To attract tourists from different countries and regions and with different motivations, resources and attractions the destination is necessary. Tourism industry providing a variety of facilities invested in transport and accommodation and other services, we cannot hope to development of industry without suitable attraction for the development of the industry we can't hope without suitable attraction. For this reason, attractions and tourism resources, consider the main elements of the industry (Kazemi, 1386: 85). Tourism and ecotourism development in recent decades to the extent that many industry experts to introduce dominant the coming years. It would be the existence of such potential be more efforts to identify and introduce this growing industry optimal operation (Amir Ahmadi, 1392). Ecotourism is based on purposefully travel to natural areas to study, pleasure and spiritual use of landscape plants, animals and all kinds of cultural contemporary or past aspects which are in these areas. Paying attention to all the tourist sites (tourist) ranging from natural forests, national parks and wildlife, rivers, mountains, nature around them, especially the mountains and waterfalls, hot springs, natural springs, summer and special areas for hunting and fishing, marine and lakes, beaches and coasts around them, natural habitats and native birds and other reptiles, as well as natural caves and particular inner nature, the scope of

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the department of tourism (tourism) will cover. The first valid definition and short was presented by the International Association of Ecotourism in 1990 (Andy drama, Alan Moore): "responsible travel to natural areas to protect the environment and improve the economic conditions of local communities". Sensitivity to ecological issues in the relationship of man with nature and the environment and attention to the relationship between tourism started in the 1960s. In 1965 Htrz was the first person which is used description of terms tourists in the relationship between, local culture and the environment. Htrz refers to 4 criteria on responsible travel :

1. Lowest impact on environment;
- 2.Lowest impact on indigenous cultures and the greatest respect for them;
- 3.Most economic benefits for the host;
- 4.Most satisfaction for tourists; (Zahedi 1390,91)

II.RESEARCH LITERATURE

Farajzade Asl (1386) by geographical system (GIS) examined in the field of zoning for Ecotourism Development attractions. In this paper, by using of geographic information system have been investigated resources and tourist attractions of the province, the potential of ecotourism zones suitable, climbing, trekking, nature watching.Amir Ahmadi (1391), Range Zanjan were evaluated for natural tourism development and natural tourism areas in the province identified for six activities such as climbing, trekking, skiing, nature therapy, water sports and eco-tourism .For this purpose the required layers in the GIS environment then by using AHP model were determined suitable areas for ecotourism development in the province . Results indicated that 30 percent of the province's capability for development of tourism. Ramezanypour (1390), evaluated suitable sites Deylaman ecotourism area with the technique of geographical information systems. By using spatial data (slope, aspect, soil, sun, vegetation, temperature and precipitation has paid to introduce Regions ecological potential region based on ecological potential on the basis of ecological models. Regarding to the low slope areas located in suitable areas tourism, the margins of rivers and near to villages that can be effective in improving the local economy. Kumari (2010), identified potential ecotourism sites in West Sikkim district by using geographical tools. Byusing five indicators: the indicators of integration, wildlife, environmental, resistance environment, the attractiveness of tourism and the use of remote sensing, AHP and GIS identified the tourism potential in the four levels are very high, high, low, very low. Eftekhary (1392) using continuous spatial modeling and spatial decision TOPSIS-GIS integration to evaluate areas of ecotourism in Tehran province based on 9 criteria and according to the definition in Global Studies, has been introduced 6 villages in protection areas.To identify prone areas tourism in the city of Kazeroon Safari (1391) due to factors such as vegetation, isothermal layer, a communication way, residence and entertainment venues, network Abra, springs and lakes in ARCGIS digitization process were then compared to the pair by software expert choice.Jahanian in an article entitled: evaluation of ecotourism potential areas desert, Yazd Province, by using the SWOT analysis introduced the ecotourism potential of deserts area and plains and of Lut desert. Using SWOT analysis of strengths, weaknesses, opportunities and threats of regional have offered strategies for the sustainable development of tourism in the area.

III.THE STUDY AREA

height	latitude	longtitude	station
1684/9	3332	5154	Natanz

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IV. RESEARCH METHODOLOGY

But as mentioned before, in the process of tourism planning techniques finding calculation, criteria and indicators are valuable tools. Therefore, before any action and decision-making, planning, assessment of capacity and ability measured using models and appropriate techniques is the most important steps. There are several methods and models vary according to study, Specifically for tourism planning and eco-tourism.

To reach this stage have different methods and techniques help according to the component of search and nature of the subject, the dominant approach is "analytical-descriptive" to this study. The purpose of this research is practical and in the literature used library research, for data collection methods. In this study will be examined, by using a geographic information system with regard to the parameters of slope, aspect, vegetation, climate and temperature zones suitable ecotourism activities, desert trekking, skiing, wildlife, star watching, nature watching, trekking and mountain slopes. Finally, with the use of TOPSIS model to analyze environmental data and marketing are discussed

V. RESEARCH FINDINGS

In order to combine and overlay layer used GIS functionality such as logical function (AND), calculations place (MAP CALCULATOR) and the map is marked eco-prone areas. Considering to the relevant environmental indicators for each of the activities in were provided Table 1 :

The objective function	Touristic activities	row
Avoiding light pollution: a minimum distance of 6 km from the town or village, open horizon: lower elevation of 1,200 meters sea level, the percentage of dust below 40%, moisture less than 38%, as so: The brightest object in the sky can be seen from What is distance	Star watching	1
Slope 2 to 50 percent, elevation from 1,200 to 1,800 meters, the every climate, vegetation: all types except rocky land	Star watching	2
Slope 30 to 70 per cent, more than 2,300 elevation	Ski and Winter Sports	3
Slope 20 to 70 percent, elevation from 800 to 2500 meters, vegetation including forest, cliff	trekking	4
higher than 1800 meters elevation, slope higher than 20%	Climbing	5

Source: author

VI. DESERT TOURISM

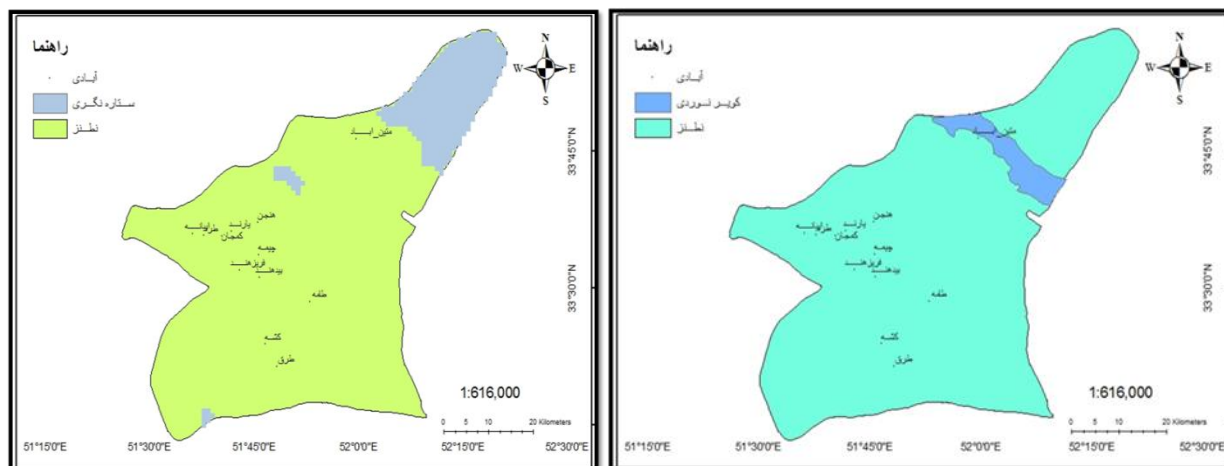
With regard to map drawn 1 areas for desert trekking in the vast majority of the land areas is arid climate and has been sand upon which to operate 88/3 percent of the city area is desert trekking. The geographical areas of 1 degree, between 2-0 ° slope and height of 1000-1200 have been better for desert tourism. The area of this areas is a slight erosion. Rainfall of this range is 100 mm.

According to the map (1) suitable areas for desert tourism in the vast majority the land area is in sandy areas and arid climate that the 88/3 percent of the city area is suitable for Desert tourism activity

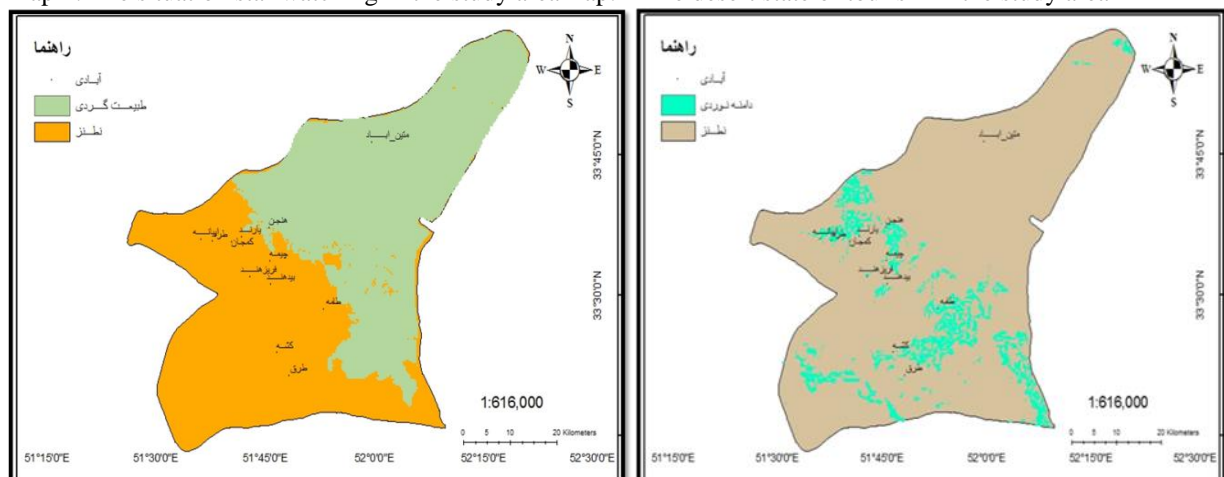
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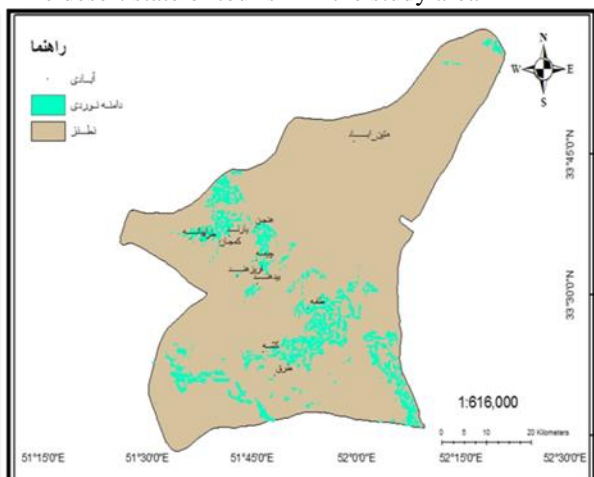
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Map 2: The situation star watching in the study area



Map 3: The situation ecotourism in the region

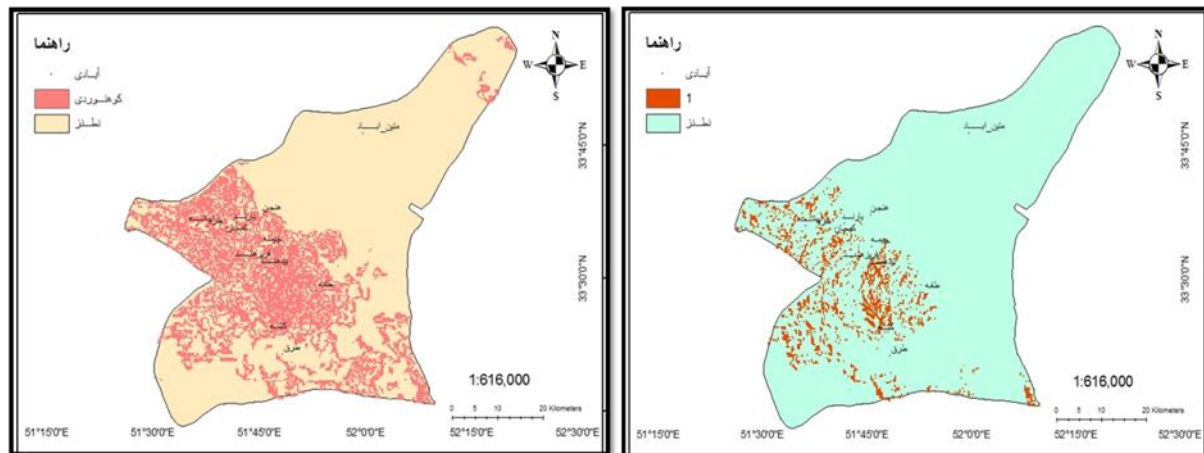


Map 4: The situation Domain Tracking in the region

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Map 5: The situation Climbing in the study areaMap 6: The situation skiing in the region

Star watching

Area suitable for star watching according to the map 2 located in the vast majority poor pasture zones and has arid climate that is based on the 12/49 percent of the city is suitable for Star watching. In the span of 0 to 360 degree aspect have better conditions for star watching. More areas of this zone is Medium and low erosion. Rainfall is between 150 to 200 mm and most of area is about 150 mm of rainfall. And represent a land of star watching is an open horizon. In terms of geology this region frequently plateaus, hills, debris and land mixed.

Nature watching

According to Map 3 all types of lands are suitable for nature watching, and has a dry and arid climate, 51/25 percent of the city is suitable for this activity. The aspect of area 1 ° and slope between 2-50 ° and elevation from 1200 to 1800 is better for nature watching. The area of this zone contains a variety of erosion class. Rainfall in this scope is between 150-100 rainfall.

Trekking

Climbing the height should be such that access for all people who want to see surf in such places. According to Map 4-prone areas is classified, which is 7/98 percent of the total areas in the city. span of climbing includes most of the towns except areas too high altitude and dry air. Ecological indicators considered for trekking in Table 1.

Climbing

Land slope is influential factors in tourism and ecotourism activities. Low slope causes hillsides be washed less and are more resistant to erosion and this will cause deep soil, resulting in a natural landscape with the appropriate cover, on the other hand, low slope ecotourism activities such as climbing and some aspects of winter sports is acted negatively. According to the Map 5 has classified prone areas climbing. Therefore 89/27% of the total area of the city appropriate for this activity and 11/72 percent are inappropriate.

Ski and Winter Sports

Map 6 is zoned areas prone winter sports and ski. Accordingly 50/5 percent of the total area of the city appropriate for this activity and 50/95 percent is inappropriate. Considering to Table 1, These activities are prone areas in the western zone due to the snowy mountains, the ski slope is right for this, ranging from the mountains north and an altitude of 2400 to 3900 has been identified

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Scoring ecotourism activities based on TOPSIS

Considering that one of the objectives of the research, is identification and assessment ecotourism activities city of Natanz

VII.TOPSISS TECHNIQUE

TOPSIS¹ method was proposed by Hwang and Yoon in 1981. This is one of the best models and multi-criteria decision-making, which be used . In this method , evaluate takes place the m option by the n index .

TOPSIS on the notion that the choice should be closest to the positive ideal solution (the best possible), and the maximum distance from the negative ideal solution (worst possible). The assumption is that the the desirability of the index is to uniformly increase or decrease. Topsiss includes six-steps method of solving a problem is as follows:

1-Create an initial matrix

According to tourism experts, based on their responses in the table (4-5) were analyzed.

Table 2: primary Matrix

Index \ Criteria	-1 <i>slope</i>	1 <i>aspect</i>	1 <i>altitude</i>	1 <i>Vegetation</i>	1 <i>Climate</i>	1 <i>Temperature</i>
Climbing	8	4	9	4	7	8
Nature watching	5	4	5	9	9	6
Ski and Winter Sports	9	9	8	7	9	9
Star watching	2	2	2	3	8	5
Visit wildlife	5	2	5	8	7	6
trekking	7	4	7	4	7	8
Desert tourism	2	2	2	6	8	7

Source: author

2-Quantify and Scale of the decision matrix (N)

In this step ,we Be Scale scales in the decision matrix. Thus each value is divided by the size of the vector corresponding to the index.

$$r_{ij} = \frac{X_{ij}}{\sqrt{\sum_{i=1}^m X_{ij}^2}}$$

As a result, every element r_{ij} is obtained from the following equation:
scale making of the decision matrix (N)

Table2: quantify and be

Index \ Criteria	-1 <i>slope</i>	1 <i>aspect</i>	1 <i>altitude</i>	1 <i>Vegetation</i>	1 <i>Climate</i>	1 <i>Temperature</i>
Climbing	0.504	0.337	0.567	0.243	0.335	0.425
Nature watching	0.315	0.337	0.315	0.547	0.431	0.318
Ski and Winter Sports	0.567	0.758	0.504	0.425	0.431	0.478
Star watching	0.126	0.168	0.126	0.182	0.383	0.265
Visit wildlife	0.315	0.168	0.315	0.486	0.335	0.318
trekking	0.441	0.337	0.441	0.243	0.335	0.425

¹ . Technique for Order Preference by Similarity to Ideal Solution

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Desert tourism	0.126	0.168	0.126	0.364	0.383	0.372
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Source: author

3to obtain matrix weighted be Scale (V)

Be Scale the matrix (N) on the diagonal matrix of weights (Wn * n) multiply that:

$$V = N * W_n * n$$

table 3: to obtain be scale weighted matrix (V)

Criteria	-1	1	1	1	1	1
Index	slope	aspect	altitude	Vegetation	Climate	Temperature
Climbing	0.5031	0.0003	0.00041	0.08285	0.02100	0.32271
Nature watching	0.3145	0.0003	0.00023	0.18640	0.02700	0.24203
Ski and Winter Sports	0.5660	0.0007	0.00037	0.14498	0.02700	0.36305
Star watching	0.1258	0.0002	0.00009	0.06213	0.02400	0.20169
Visit wildlife	0.3145	0.0002	0.00023	0.16569	0.02100	0.24203
trekking	0.4402	0.0003	0.00032	0.08285	0.02100	0.32271
Desert tourism	0.1258	0.0002	0.00009	0.12427	0.02400	0.28237

Source: author

4-Determine the ideal solution positive and negative ideal solution

The ideal solution positive and negative are defined as follows:

Two virtual options A-and A * are defined in the following ways:

$$A^* = \left\{ \left(\max_i v_{ij} | j \in J \right) \text{ و } \left(\min_i v_{ij} | j \in J' \right) | i = 1, 2, \dots, m \right\} = \{ v_1^*, v_2^*, \dots, v_j^*, \dots, v_n^* \}$$

$$A^- = \left\{ \left(\min_i v_{ij} | j \in J \right) \text{ و } \left(\max_i v_{ij} | j \in J' \right) | i = 1, 2, \dots, m \right\} = \{ v_1^-, v_2^-, \dots, v_j^-, \dots, v_n^- \}$$

Two virtual options are actually the worst and the best solution.

able 4: Determine the ideal solution for positive and negative ideal solution

max	0.1258	0.0007	0.00041	0.18640	0.02700	0.36305
min	0.5660	0.0002	0.00009	0.06213	0.02100	0.20169

Source: author

5-To obtain the ideal distance of each option has positive and negative

$$d_i^+ = \sqrt{\sum_{j=1}^n (v_{ij} - v_{jmax})^2}$$

Table 5: to obtain the distance up to ideals of positive and negative option

Index	-1	1	1	1	1	1	
	slope	aspect	altitude	Vegetation	Climate	Temperature	sum
Climbing	0.1424	0.0000	0.00000	0.01072	0.00004	0.00163	0.1548
Nature watching	0.0356	0.0000	0.00000	0.00000	0.00000	0.01464	0.0502
Ski and Winter Sports	0.1938	0.0000	0.00000	0.00172	0.00000	0.00000	0.1955
Star watching	0.0000	0.0000	0.00000	0.01544	0.00001	0.02604	0.0415
Visit wildlife	0.0356	0.0000	0.00000	0.00043	0.00004	0.01464	0.0507
trekking	0.0989	0.0000	0.00000	0.01072	0.00004	0.00163	0.1113
Desert tourism	0.0000	0.0000	0.00000	0.00386	0.00001	0.00651	0.0104

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Source: author

6- Determine the relative proximity (CL) an option ideal solution:

$$CL_i = \frac{d_i^-}{d_i^- + d_i^+}$$

Table 6: Determine the relative proximity (CL) an option to ideal solution

Index \ d+	0 <i>slope</i>	0 <i>aspect</i>	0 <i>altitude</i>	0 <i>Vegetation</i>	0 <i>Climate</i>	0 <i>Temperature</i>	sum
Climbing	0.0040	0.0000	0.00000	0.00043	0.00000	0.01464	0.0190
Nature watching	0.0633	0.0000	0.00000	0.01544	0.00004	0.00163	0.0804
Ski and Winter Sports	0.0000	0.0000	0.00000	0.00686	0.00004	0.02604	0.0329
Star watching	0.1938	0.0000	0.00000	0.00000	0.00001	0.00000	0.1938
Visit wildlife	0.0633	0.0000	0.00000	0.01072	0.00000	0.00163	0.0756
trekking	0.0158	0.0000	0.00000	0.00043	0.00000	0.01464	0.0309
Desert tourism	0.1938	0.0000	0.00000	0.00386	0.00001	0.00651	0.2042

Source: author

7- Ranking Options

Table 7: Ranking Options

Index \ d Value	d +	d -
Climbing	0.3934	0.1379
Nature watching	0.2241	0.2835
Ski and Winter Sports	0.4422	0.1815
Star watching	0.2037	0.4402
Visit wildlife	0.2252	0.2750
trekking	0.3336	0.1758
Desert tourism	0.1019	0.4519

Source: author

Rating activity ecotourism based on marketingby using TOPSIS method

As mentioned above, one of the objectives of the study is identify and assess attractions in city of Natanz. Therefore, the matrix is composed of TOPSIS Attractions specified city of Natanz for determining their priority for implementation specified. The criteria used in this matrix to prioritize the attractions collected based on library studies and expert opinions. Evaluation of marketing includes the following steps:

1-Create an initial matrix

According to tourism experts, based on their responses in the table (4-5) were analyzed.

Table 2: primary Matrix

Index \ Criteria	1 <i>Accommodations and facilities</i>	1 <i>Accessibility</i>	1 <i>Ability to raise funds</i>	1 <i>Security</i>	1 <i>Create jobs</i>	1 <i>General appearance</i>
Climbing	5	4	3	5	3	3
Nature watching	4	4	5	6	4	5
Ski and Winter Sports	7	6	7	5	4	3
Star watching	7	6	6	5	3	4

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Visit wildlife	6	4	5	7	5	4
trekking	4	4	3	5	4	3
Desert tourism	7	7	7	6	7	5

Source: author

2-Quantify and Scale of the decision matrix (N)

In this step we Be Scale scales in the decision matrix. Thus each value is divided by the size of the vector corresponding to the index.

$$r_{ij} = \frac{X_{ij}}{\sqrt{\sum_{i=1}^m X_{ij}^2}}$$

As a result, every element r_{ij} is obtained from the following equation:
be scale making of the decision matrix (N)

Table 2: quantify and

Criteria Index	1 <i>Accommodations and facilities</i>	1 <i>Accessibility</i>	1 <i>Ability to raise funds</i>	1 <i>Security</i>	1 <i>Create jobs</i>	1 <i>General appearance</i>
Climbing	0.323	0.294	0.211	0.336	0.254	0.287
Nature watching	0.258	0.294	0.352	0.404	0.338	0.479
Ski and Winter Sports	0.452	0.441	0.493	0.336	0.338	0.287
Star watching	0.452	0.441	0.422	0.336	0.254	0.383
Visit wildlife	0.387	0.294	0.352	0.471	0.423	0.383
trekking	0.258	0.294	0.211	0.336	0.338	0.287
Desert tourism	0.452	0.515	0.493	0.404	0.592	0.479

Source: author

3- to obtain matrix weighted be Scale (V)

Be Scale the matrix (N) on the diagonal matrix of weights ($W_n * n$) multiply that:

$$V = N * W_n * n$$

table 3: to obtain be scale weighted matrix (V)

Criteria Index	1 <i>Accommodations and facilities</i>	1 <i>Accessibility</i>	1 <i>Ability to raise funds</i>	1 <i>Security</i>	1 <i>Create jobs</i>	1 <i>General appearance</i>
Climbing	0.0821	0.0805	0.09961	0.02857	0.14395	0.10322
Nature watching	0.0657	0.0805	0.16602	0.03429	0.19193	0.17204
Ski and Winter Sports	0.1149	0.1207	0.23243	0.02857	0.19193	0.10322
Star watching	0.1149	0.1207	0.19923	0.02857	0.14395	0.13763
Visit wildlife	0.0985	0.0805	0.16602	0.04000	0.23992	0.13763
trekking	0.0657	0.0805	0.09961	0.02857	0.19193	0.10322
Desert tourism	0.1149	0.1409	0.23243	0.03429	0.33588	0.17204

Source: author

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4-Determine the ideal solution positive and negative ideal solution

The ideal solution positive and negative are defined as follows:

Two virtual options A- and A* are defined in the following ways:

$$A^+ = \left\{ \left(\max_i v_{ij} | j \in J \right) \left(\min_i v_{ij} | j \in J' \right) | i = 1, 2, \dots, m \right\} = \{v_1^+, v_2^+, \dots, v_j^+, \dots, v_n^+\}$$

$$A^- = \left\{ \left(\min_i v_{ij} | j \in J \right) \left(\max_i v_{ij} | j \in J' \right) | i = 1, 2, \dots, m \right\} = \{v_1^-, v_2^-, \dots, v_j^-, \dots, v_n^-\}$$

Two virtual options are actually the worst and the best solution.

Table 4: Determine the ideal solution for positive and negative ideal solution

max	0.1258	0.0007	0.00041	0.18640	0.02700	0.36305
min	0.5660	0.0002	0.00009	0.06213	0.02100	0.20169

Source: author

5-To obtain the ideal distance of each option has positive and negative

The distance of option I from ideal options positive and negative calculated on the basis of the following method:

$$d_i^+ = \sqrt{\sum_{j=1}^n (v_{ij} - v_{jmax})^2}$$

$$d_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_{jmin})^2}$$

Table 5: To obtain the distance up to ideals of positive and negative option

Index	1 Accommodations and facilities	1 Accessibility	1 Ability to raise funds	1 Security	1 Create jobs	1 General appearance	sum
Climbing	0.0011	0.0016	0.01764	0.00013	0.00921	0.00474	0.0344
Nature watching	0.0024	0.0016	0.00441	0.00003	0.00230	0.00000	0.0108
Ski and Winter Sports	0.0000	0.0000	0.00000	0.00013	0.00230	0.00474	0.0072
Star watching	0.0000	0.0000	0.00110	0.00013	0.00921	0.00118	0.0116
Visit wildlife	0.0003	0.0016	0.00441	0.00000	0.00000	0.00118	0.0075
trekking	0.0024	0.0016	0.01764	0.00013	0.00230	0.00474	0.0289
Desert tourism	0.0000	0.0004	0.00000	0.00003	0.00921	0.00000	0.0096

Source: author

6- Determine the relative proximity (CL) an option ideal solution:

$$CL_i = \frac{d_i^-}{d_i^- + d_i^+}$$

Table 6: Determine the relative proximity (CL) an option to ideal solution

Index	0 Accommodations and facilities	0 Accessibility	0 Ability to raise funds	0 Security	0 Create jobs	0 General appearance	sum
Climbing	0.0003	0.0000	0.00000	0.00000	0.00000	0.00000	0.0003
Nature watching	0.0003	0.0000	0.00441	0.00003	0.00230	0.00474	0.0115
Ski and Winter	0.0024	0.0016	0.01764	0.00000	0.00230	0.00000	0.0240

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Sports							
Star watching	0.0024	0.0016	0.00992	0.00000	0.00000	0.00118	0.0152
Visit wildlife	0.0011	0.0000	0.00441	0.00013	0.00921	0.00118	0.0160
trekking	0.0000	0.0000	0.00000	0.00000	0.00230	0.00000	0.0023
Desert tourism	0.0024	0.0036	0.01764	0.00003	0.03684	0.00474	0.0653

Source: author

7-- Ranking Options

It is better, any option that CL is larger.

Table 7: Ranking Options

Index	d Value	
	$d +$	$d -$
Climbing	0.1855	0.0164
Nature watching	0.1039	0.1071
Ski and Winter Sports	0.0847	0.1549
Star watching	0.1078	0.1231
Visit wildlife	0.0865	0.1265
trekking	0.1699	0.0480
Desert tourism	0.0982	0.2556

Source: author

VIII.DISCUSSION AND CONCLUSION

This research was conducted in two models and targets. The first objective of the zoning suitable a variety of activities of ecotourism and the second one is priority development of the tourism market based on regional marketing (Table 8).

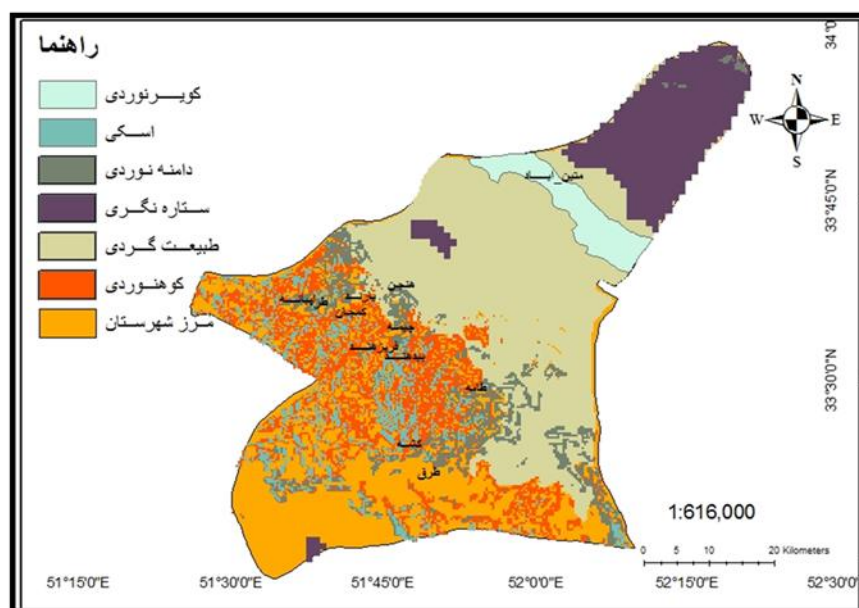
The results show that Considering climate and geography and topography, many of the towns has potential for ecotourism activities so that desert tourism, star watching located in the East zone and climbing, trekking, skiing is in the West of the city. Based on ecological indicators in the model, results show that the city's ability to arrange various activities Nature are: desert tourism, star watching, nature watching, wildlife, skiing, trekking, climbing but based on the marketing Desert (salt) such as sand dunes are considered, While the having beautiful scenery and a variety of major tourist attraction. But based on the marketing Desert (salt) considered sand dunes, While the having beautiful scenery and variety of major tourist attractions are considered and having different types of minerals, the most important economic resources (renewable natural resources) dry areas the country and has a great impact on the economy of the region and the whole country in terms of employment and increases standards of living. Desert tourism, with the score (0/7223) has achieved first rank in tourism marketing which Matin Abad town and tourism area is located in this area. Based on marketing Ski areas with the 6465/0 second rank tourism marketing, Wildlife score gained 0/5939 the third place between these activities and star watching, ecotourism, trekking, climbing, fourth to seventh in order of priority.

map 7: Mapping of ecotourism

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