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Research Article

ASSESSMENT OF ECOLOGICAL POWER FOR LOCATING TOURIST VILLAGES

Behnam SALAHI[*] (orcid.org/0000-0003-4242-1084)
Robab NAGHIZADEH[1**] (orcid.org/0000-0002-2425-4879)

[*]MSc, Student in Geography and Tourism Planning, University of Tabriz, Iran
[**]PhD, Student in Geography and Rural Planning, University of Tabriz, Iran

TCARTSBA

Eco-tourism is a purpose-oriented nature trip to understand the natural and cultural history of the environment by avoiding the change any ecosystems. Degradation of the environment and the creation of economic activities that lead to the proper exploitation of environmental resources and employment for indigenous people. Assessing the power of Lighvan-e Chai and Saeid Abadi watersheds for eco-tourism development is a major step taken in the sustainable development in the region. The present paper aims to assess the eco-tourism potential of the area using the ANP process and Geographic studies system (GIS). Based on the results of the eco-tourism capability map, %1.42 of the high level in the study area is 7.11% of the good level. Also, the results of this study showed that the most unsuitable areas for the construction of high-rise tourist villages were identified. More than 55% of the total range is included.

Keywords: Eco-Tourism Potential, Network Analysis (Anp), Gis Geographic Information System, Saeedabad Basin and Lighvanchai

Introduction

Iran has unique natural attractions, however, the natural tourism resources of Iran are a large collection of scattered, unsolved and in many cases destroyed resources. Studies show that natural tourism is an unusual, special, and, of course, abandoned economic resource (Rezvani et al., 28: 2013). Therefore, the province of East Azarbaijan is still unknown to tourists, despite its many tourist attractions and attraction. Even domestic tourists are alien to that. This province has many natural attractions such as mountains, beautiful Urumieh lake, Arasbaran forests, valleys and lush plains, water springs, caves, waterfalls, beautiful rivers, as well as diverse cultural attractions such as historic villages, beautiful cities and numerous historic buildings. And cultural remains of the various benefits of the tourism industry (Sadr Mousavi and Ghaleili Muayi, .129 : 2007), including the tourism resources of the province, Lighvan Chai basins and Sa'id Abad Chai, which is located on the northern slopes of Mount Sahand. These basins are considered one of the most beautiful areas of the province, which despite the fact that there are potential for growth and development of tourism, so far, few studies have been carried out on them. Functions that can lead to tourism attraction include birding, biking,

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Corresponding author: r.nagizadeh71@gmail.com

fishing, liveliness and the presence of fruit gardens, crops, dairy products of high quality and hot springs, as well as the existence of historical works such as the Sheikh bridge in Saeed Abad and Caravanserai Hajibbah and Ghadamgah, the ancient cemetery of Lighvan and ..., which despite these capabilities, these areas lack the facilities necessary for attracting tourists. Regarding this, in this study, by identifying the ecological abilities of Lighvan Chay and Saeed Abad Chay basins, it is desirable to identify suitable places for the construction of tourist villages in order to provide the necessary grounds for planning the development of tourism in these areas.

From the socio-cultural point of view, this industry can, by identifying and promoting specific cultures, increase the awareness of people about indigenous traditions and livelihoods and biomedical practices in the host society, the regeneration of arts and crafts, and, ultimately, the creation of associations. The organization maintains an effective way of damaging or destroying local community cultures. Hence, tourism plays a role in social justice and social distribution of income and geographic justice globally.

Tourism activity utilizes resources that are generally unusable and are considered to be sustainable through the development of economic tourism (Badri and Ayari Hesar, 57: 2009). The tourism industry is dynamic with a clear future. This industry is not only contributing to the national economy and foreign exchange earnings, but also a high-performing, highly-productive industry. In our country, tourism for the provinces like East Azerbaijan, which has many historical, tourism and tourist destinations, can become the most important source of income and economic growth in the province.

In recent years, the ANP method has been considered as an elaborate method for discussing multi-purpose decisions and solving complex decision-making problems. Parolo (2009) in a research entitled Optimization of Tourism Impacts in Protected Area, by Genetic Algorithm for Growth and Development of the Tourism Industry in Alpine Mountains, investigated its criteria for development, and, using the Geographic and Genetic Algorithm System, Infrastructure is based on logical criteria. Finally, the proposed model is a flexible and effective model that can easily be used in all protected areas. Silberman and Rees (2010) In a study entitled "Mountain Resettlement: Using the GIS Tool to Identify Ski City in Rocky Mountains in the United States", came to the conclusion that the only way to develop mountain villages is to pay attention to the ski industry, with a number of potential locations Extensions of winter sports and recreation can be systematically evaluated. In addition, the method used can also be used in other parts of the world that are capable of growing winter sports. In a study entitled "Assessing the Environmental Impact of Land Use Planning in the City of Wohn, based on the ecological proportionality analysis, the direct impact of regional land use patterns on the basis of overlap analysis in the environment, and considering three relatively reasonable classes, Proper and inappropriate ecological development of the city center . Murayama and Bunruamkaew (2011) in a study entitled Eco-tourism using sustainable development factors using GIS and AHP, the Suratani case study of Thailand identified sustainable development factors, landscape, wildlife, topography and access. It has been estimated for eco-tourism that vegetation cover, conservation, variety of species, elevation, slope, proximity to cultural places and distance from the road are among the most important parameters. These factors are also based on the idea of professional experts. In this study, AHP has been chosen as a tool for the weight of each class, and GIS has played a very important role in ecosystem maps. This method is used to identify ecotourist locations in relation to selective criteria. Bunruamkaew and Murayama (2012): Land Use and Natural Resources Planning for Sustainable Ecotourism Using GIS in Surat Thani, Thailand. Among the internal sources that can be mentioned are: Rezvani et al. (2013) in an article entitled "Locating the construction of ski slopes from a tourist perspective" (case study: Northern areas of Tehran province) "Using ANP network analysis and ARC GIS software Found that parts of the village of Roodbar Ghasran in the city of Shemiranat, the central part of the village of Abali in Damavand city and central and western part of Firouzkooh city are the most desirable areas for skiing. The findings also show that all three ski slopes in the area, especially Pishta Abali, are almost consistent with the findings of the research. Firoozi et al. (2013), in a study entitled "Assessing the ecological potential of Shahid Abbaspour Dam Tourism Project with emphasis on sustainable

tourism development", using the geographic studies system and the proposed models, found that the Abbaspur Dam Tourism Area has two concentrated and extensive tourism areas Is. Also, the results of the research show that economic investment in centralized tourism is not attractive due to the high slope of the region. Also, due to the high slopes and unsuitable rock and soil in the region, the result is that the large outdoor tourism is the best tourist destination in the region. Rahmani et al. (2014) in an article entitled "Optimal location of eco-tourism and areas susceptible to tourism development using GIS" (case study of Kalayl city) "concluded that the best tourism planning model in this city is natural tourism.

Area of study

The famous catchment area of Lighvan is from the main Ajichai basins with an area of 76km and 42.13 km in the East Azarbaijan province on the northern slope of Sahand Mountains (Fig 1)

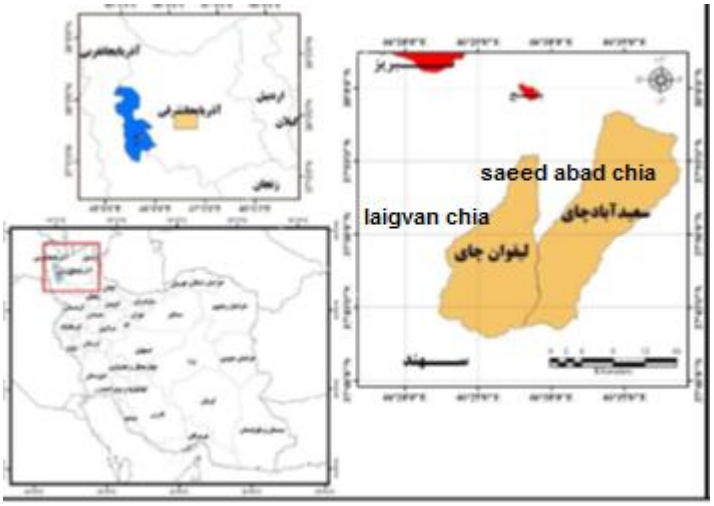


Figure1: Geographical location of Lake Lighvan Basin and Saeedabad Basin

The Sa'id Abad Chay basin is limited to the west of the Mosharrood basin (Lighvan valley and Basmenjian), to the east of the Ojan Tea, and to the north to the Aji Chay. The area of the basin is 215 km and its widest point is 12 km and narrowest points is 4 km . The maximum height of the basin Atthe southern end is 3695 m it is related to the hot-water ram. The minimum height of the basin is about 1700 meters at the entrance of the Alexander Strait. The difference between the minimum and maximum height is 1935 meters. Also, the highest point of the basin is 3620 meters above sea level in the southeast of Sahand Highlands and its lowest point with a height of 2140 meters at Lighvan hydrometric station.

Valley of Lighan (Lovian Daresi) is one of the attractions of Lighavan village, due to its river, springs and forests, trees and nature, is one of the most famous promenades around Tabriz and one of the most important tourist attractions of the province. This valley is located in the east of the village of Sefid Jiang located in the Lighuan Chai River, passing through this valley, has created a beautiful resort and the best-quality Middle East cheese. The Lighvan Tea, originating from the northern slopes of the Sahand Mountain Range has many springs from the eastern and western valleys of Lighvan joining it and make the river a watery river. Figure 2 shows the exponential lush valley of Lighvan

Shape2: lush views of Lighvan valley

The hot water of Lighvan is caused by underground changes and the remains of the volcano of the Sahand Mountains. In total, it consists of several rivers, and along the same river, the waters of the garbage dump from the earth, which, due to climatic conditions, is one of the best and richest mineral waters of this land. At the foot of the same river, there are several steep and steep mountains, which is the same Sahand mountain range which is named after the mountains of Iran. The unique vegetation of this region and the presence of medicinal plants have high properties, including Puneh, Chamomile, Mushroom, etc. In addition to using local people from these herbs, the sheep's milk of this region is distinguished by the use of the same vegetation of white cheese. It is a great pleasure to come. Valley of Lighuan is among all the valleys of the East Azarbaijan Province, which is the only place that can provide service and enjoyment of passengers. Lush plants and fruit gardens every year, especially in the summer, attract thousands of lovers of nature to this valley. The old cemetery of Lighvan and the master's house (Haj Ehtesham al-Dawlah) are one of the most important historical attractions of the village, which dates back to the seventh century AH. Ancient stones are abundant on graves and numerous sentences have been deliberately crafted over rocks. Saeedabad is one of the villages in the East Azarbaijan Province, which is located in the village of Saeedabad, central part of Bostanabad city. Saeedabad Valley is one of the bay areas of the East Azarbaijan Province, located 1 km from Tabriz Transit Road. The SeyyedAva Chai River passes through the valley, the vegetation of which is the crops and fruit gardens. Sayed Ave River (Seyyed Ava Chay) is a river of high water, the source of this river that originates from the mountain of Pyramid and from the northern side of Sahand Mountain is heavy snow in Sahand mountains .

Figure 3: The lush view of the Saeedabad valley

The flow of this southern river is located at the source of the village of Samar Khazan. The flow of water from Seyyed Ava Chai in the Mannek valley has led to an agricultural boom, and there are several fields, farms and gardens on its sides. The Valley of Sa'idabad (Figure 3) has natural landscapes and historical monuments that have added to the attractiveness of this region, which is a typical example of the ancient valley of Said Abad Bridge, known as the Sheikh Bridge, which dates back to the Safavid era. The bridge of Saeed Abad Valley is located in Shably Valley and is one of the major bridges of the main route of Tabriz to Tehran .

Materials and methods

In short, this study was conducted in three main steps. In the first step, using the network analysis process, the surveyed network was formed and the weight of the clusters was determined by factors influencing the eco-tourism potential of the study area. In the second step, using the GIS capabilities, maps of factors affecting the eco-tourism potential of the area were studied. In the last step, the weights and maps of the previous stages were combined and the final map of the eco-tourism potential of the study area was obtained.

What ANP and AHP?

The method of the Analytical Network Process (ANP), first proposed by Thomas L. Sahaati, includes multi-criteria decision-making methods (MCDM), which improves the process of hierarchical analysis (AHP) by replacing the "network" rather than "hierarchy". The method of the network analysis process identifies each issue and problem as a "network" of criteria, sub-criteria and options (all of these elements are called elements) that are clustered together. All elements in a network can have any form of communication (Zerabadi and Abdullah, 2013 : 42) The main stages of the ANP analysis process are discussed below :

1- Making model and converting a problem / subject to a network structure

The subject or issue should be clearly and unambiguously converted into a logical system, such as a network. This network structure can be achieved through the brain storms or any other suitable method, such as the Delphi method, or the nominal group method. At this point, the subject or problem is converted into a network structure in which nodes are presented as clusters. Elements within a cluster may be influenced or influenced by one or all of the other cluster elements. These connections (external dependence) are indicated by arrows (arrows). Also, elements within a cluster may be interconnected (internal affiliation), where such connections are represented by an arc attached to that cluster .

2- Formation of binary comparison matrix and determination of priority vectors

Similar to the binary comparisons performed in AHP, the decision elements in each cluster are compared based on their importance in relation to the two-way control criteria. The clusters themselves are also compared on the basis of their role and their effect on achieving the goal. Decision makers should make two decisions about binary comparison of elements or clusters themselves. In addition, interdependencies between elements of a cluster should be compared in two ways. The effect of each element on another element is possible through a special vector.

Definition of importance

1 2 3 4 5 6 7 8 9 Importance

Table 1 : 9 Hours quantitative scale to compare binary options

Definittion	Equilibrium	Equilibrium-Moderate	Moderate	Moderate-Strong	Strong	Strong-very strong	Very strong	Very strong-Extra strong	Extra strong
Important	1	2	3	4	5	6	7	8	9

In this section, the vector of internal importance is calculated which indicates the relative importance (coefficient of significance) of the elements or clusters, which is obtained through the following equation :

$$Aw=\lambda_{max}w$$

:where in

:A is Binary Comparison Matrix of the Criteria: W is the special vector (Importance coefficient), and: max is the largest specific numerical value To calculate the special W wavelength, the clock represents several methods. If the calculations are set. If the calculations are to be done without the use of certain software, the geometric mean approximation method should be used. Therefore, at this stage, internal priority vectors are counted.

3- Create Super Matrix and convert it to Super Matrix Limit

To achieve general priorities in a system with interactions, the internal priority vectors (ie, W calculated) are inserted into the appropriate columns of a matrix. As a result, a super matrix (in fact, a partitioned matrix), each section of which represents the relationship between two clusters in a system. As an example, a three-level structure of the goal, criteria and options are presented in two hierarchical (a) and network (b)formats in the following graph (Fig. 4) (Zebardast, 2010 : 81).

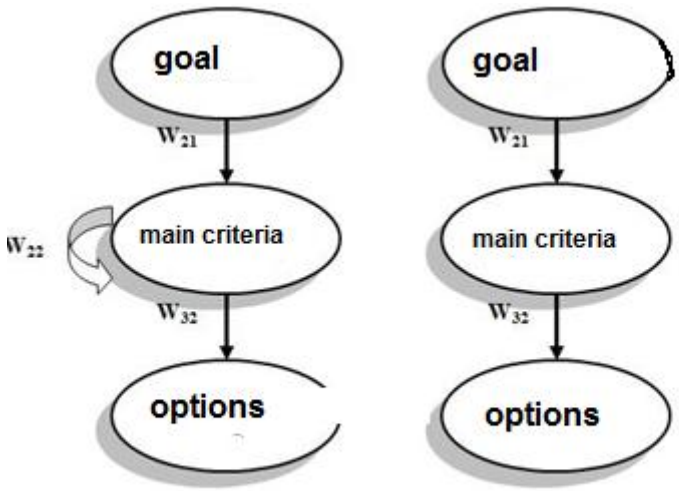


Figure 4: Hierarchical structure (a) and network (b) Source) (Zebardast, 2010 : 81).

In this model, the W 21 vector indicates the effect of the research goal on the main criteria. Similarly, the W 32 vector indicates the effect of the main criteria on sub-criteria. Therefore, the research model has a hierarchical relationship. If the internal relations of the criteria are not considered, then the AHP model is used. But if there is an interaction between the criteria, the model will be network-driven. In this case, the ANP fan will be used. Primary Super Matrix Structure (Unbalanced) The ANP model will be as follows:

Primary Super Matrix Structure (Inverted)

$$W = \begin{array}{c} \\ \text{goal} \\ \text{main criteria} \\ \text{options} \end{array} \begin{pmatrix} 0 & 0 & 0 \\ W_{21} & W_{22} & 0 \\ 0 & W_{32} & I \end{pmatrix}$$

In order to determine the general priorities and to explain the relations between them, the structure of the supermatrix is first (inharmonious). Based on the theory of time, after the formation of the primary super matrix, the next step is to determine the priority. To determine the priority, the concept of normalization and a balanced medium are used. After normalizing, the values of each row will be scored averaged. The following

formula is used to normalize values without using the software :

$$r_{ij} = \frac{\bar{a}_{ij}}{\sum_{i=1}^{m} aij}$$

In this formula, rij is the normalized volume corresponding to the aij in the primary super matrix. Of course, the requirement to explain is the view of the extent of the present study to normalize the relevant statistical software. Finally, with the formation of a supermatrix, if the super matrix is composed of the entire network, that is, all of the options are included in the super matrix, the priority of the sub criteria is obtained from the column of options in the normalized super matrix:

$$\lim_{k\to\infty} W^k$$

Demettel Technique

Fan Demettel was presented by Fontal and Gubs in 1962 . This technique is one of a variety of decision-making methods based on paired comparisons, in such a way as to determine the effect of these relationships as numerical scores. Demettel's method is used to identify and investigate the interrelationship between the criteria and the mapping of network relationships (Lee and Wo 91, 2004)

Step 1: Establishing a Direct Contact Matrix: To form a direct relationship matrix, experts' opinions are used, and then, for the purpose of forming the final matrix, the average score of all experts is taken. Therefore, to form a direct relationship matrix, the language variables defined in Table 1 are used .

Step 2: Normalizing the Direct Contact Matrix: For normalization, the matrix derived from Sections 5 and 6 is used

.

Relation (5) $H_{ij} = z_{ijr}$

Where r is obtained from relation (1):

$r=max_{1\le i\le}(\Sigma_{nj=1} z_{ij}$

Step 3: Calculate the Complete Contact Matrix: After calculating the above matrices, the fuzzy relation matrix is obtained with respect to relation 1.

$T= \lim_{k\to\infty}(H_1 +H_2+\cdots+H_K)=H\times(I-H)^{-1}$

In this formula I, the matrix is one

Step 4: Calculating the Total Rows and Columns of the Full Matrix Matrix: The next step is to obtain the sum of the rows and columns of the matrix T. The sum of the rows and columns of the matrix is calculated according to the relations (8,9)

$(D)_{n\times1}=[\Sigma T_{ijnj=1}]_{n\times1}$

$(D)_{1\times n}=[\Sigma T_{ijnj=1}]_{1\times n}$

Step 5 : Calculation of the threshold of relationships : the next stage , the importance of the indicators (+) and the relationship between the criteria - (specified) . If -> 0 the relevant criterion is effective and if - <0 , then the relevant criterion is influential .

Data and studies

In this research, depending on the nature of the nature, a set of data and studies is used which is as follows :

1-DTM data

2- GPS observations

3-Hydrological data (position and route of the secondary and main waterways)

4-Satellite imagery of the area. Preparation of land use and vegetation map using Landsat images (2)

5-geological maps (1: 100000) Geological Survey

And in this research, a series of specialized GIS software applications, in particular GIS 10.4.1, have been used .In order to accurately show the amount of rainfall and average temperature in the studied watersheds in relation to elevation, the following steps are taken: For the preparation of a digital model of precipitation and temperature, a regular network of points was prepared in the basin and surrounding area. The more compact the network is, the better the accuracy of the calculated rainfall and temperature is increased. In this research, the meteorological studies of synoptic stations of the cities around the Lighvan Chay and Saeed Abadchay basins have been used. Using the dotted network and digital elevation model in the GIS software, it is possible to allocate the elevation to each of the points of the network, then the Y and X coordinates, and Z elevation Z points, are extracted using the gradient of precipitation and temperature of the area The amount of precipitation and temperature of each point of the network with known Y and X coordinates are determined by the amount of precipitation and temperature, and finally by using them in the GIS software, coherent and coherent zones are plotted.

Discussion and results

91 indicators were determined by experts in order to assess the ecological abilities of Lighvan Chai and Sa'id Abacha watersheds for locating tourist villages. These 17 indicators have been analyzed in the form of 3 morphological indicators , 2 environmental indicators , 4 climatic indexes , 4 physical spatial parameters and 4 geopedometric indices . Niknejad et al . (1394) defined the choice of five main clusters as standard. Further details are given in Table (1) with the final weight.

Table2 : Clusters, options and final weight of options

Final weight	options	clusters	row
0/931	slope		
0/011	Slope direction	Morphology	9
0/012	height		
0/931	Vegetation cover		
0/991	wild life	environmental	1

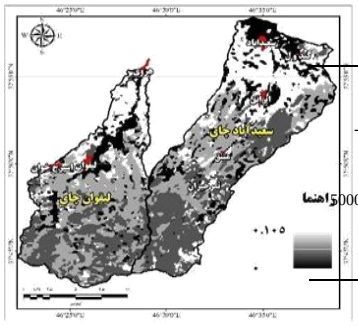
0/019	temperature		
0/011	rainfall		
		province	3
0/001	humidity		
0/019	Sunny hours		
0/091	Distance from the village		
0/091	Distance from the city		
		Spatial	1
0/991	Distance from the road		
0/011	Land use		
0/019	soil		
0/090	Geology		
		Geopedometry	1
0/091	Fault		
0/019	Hydrology		

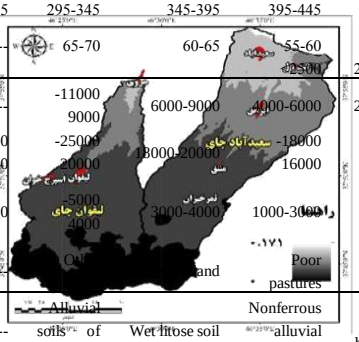
The results of different maps are indicative of the diversity of various morphological , environmental , climatic , spatial and geopodometric factors . For example, in the studied area, the annual precipitation varies from 295 mm to 545 mm , the slope is more than 15% , and the altitude is from 1800 to more than 3600 m . Table (3) illustrates how the classification is used in this study.

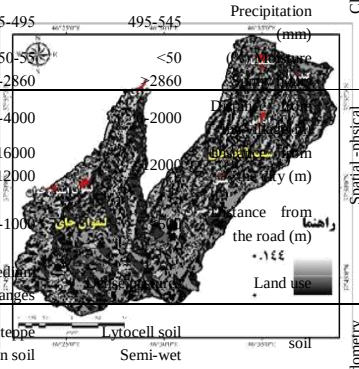
Table 3: How to classify the layers used in this study

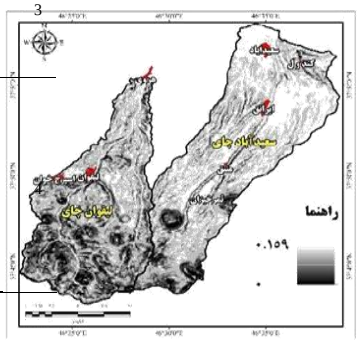
(4)Class6	(5)Class5	(6)Class4	(7)Class3	(8)Class2	(9)Class1	Different classes relate to the map of the city of Qadir dedicated to each class(Parentheses)	Options	Clusters	row
>15	10-15	7-10	5-7	2-5	0-2		Slope(percent) steep direction Topography(m)	Morpho	1

	Other directions	western	southern	northern	eastern	Smooth		
	---	>2800	-2800 2200	-2200 2000	18000-2000	<1800		
---	---	Without vegetation	Thin vegetation	Semi-condensing vegetation	Dense vegetation	Vegetation cover	environmental	2
-23000 17000	-17000 15000	9000-15000	6000-9000	3000-6000	<3000	wild life		
	<4	-6	6-8	8-10	10-12	Temperature (celsius	Climate	
<295	295-345	345-395	395-445	445-495	495-545	Precipitation (mm)		3
---	65-70	60-65	55-60	50-55	<50	(%) Moisture		
---	-11000 9000	6000-9000	4000-6000	2650-2860 2000-4000	>2860 -2000	Distance from	Spatial -phisical	
-30000 25000	-25000 20000	18000-20000	-18000 16000	-16000 12000	-12000	Density (m)		
5000-6620	-5000 4000	3000-4000	1000-3000	500-1000		Distance from the road (m)		
---	Other	and	Poor pastures	Medium ranges		Land use		
---	Alluvial soils of the river	Wet litose soil	Nonferrous alluvial soils	Steppe brown soil	Lytocell soil Semi-wet	soil	Geopedometry	
Trashaijuan	Toff	Conglomerate	Alluvial deposits	Andesite - Duct	Peroclastic	geology		5
---	0-2500	2500-5000	5000-8000	-12000 8000	12000-14500	Distance from the fault (m)		
>730	500-730	300-500	200-300	100-200	0-100	Hydrology		

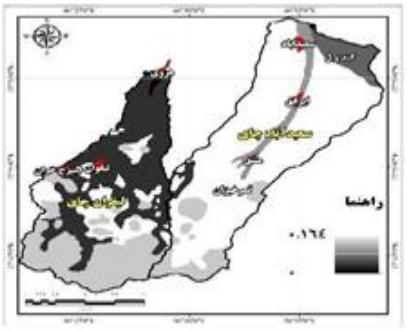




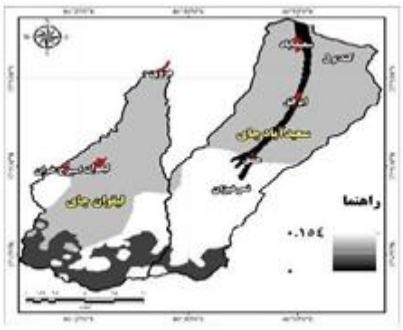




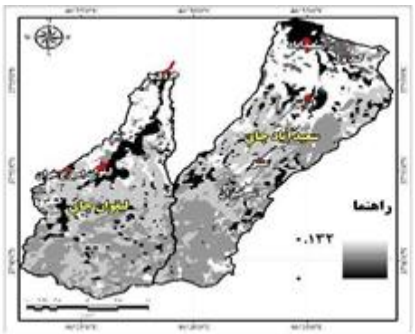
Drawings obtained from the natural, physical and geometric resources of the studied basins were obtained according to the selected options for the assessment of ecological potential as shown in Fig 5 . After calculating the factors affecting the ecological capability of the area studied and preparing maps of these factors, using the FUZZY overlapping method, the maps were combined with their respective weights and the final ecological capacity map of the area was classified according to the standard deviation to five classes (Fig 5)



Geospatial Fuzzy Geological Map of the Case Zone Study

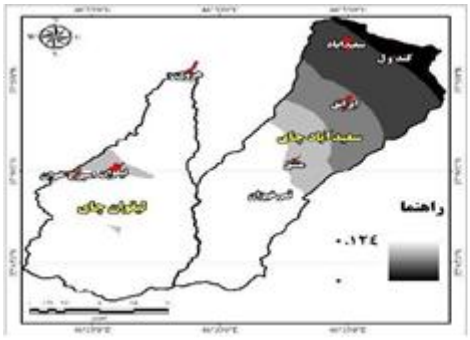


Weighted Fuzzy Map of the Type of Soil in the Case Zone studv

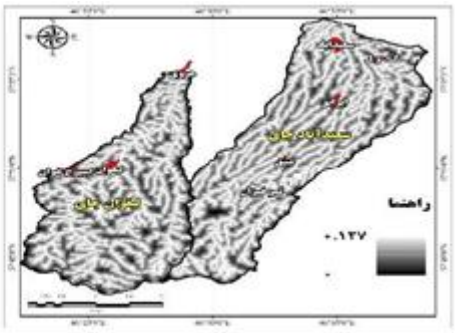


Fuzzy Weighted Land Use Scheme

In the studied area



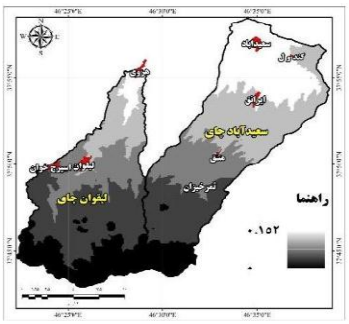
Weighted Fuzzy Map Distance from Fault in the study area



Hydrological Network Weighting Fuzzy Map (Distance from River) The study area

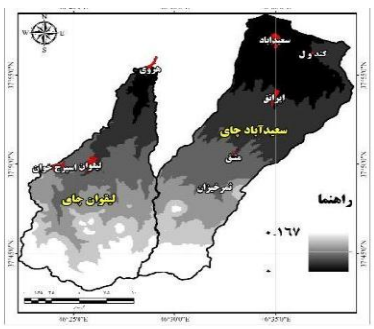
Figure 5: Weighted fuzzy maps of the study area

Weighted vegetation map of the studied area



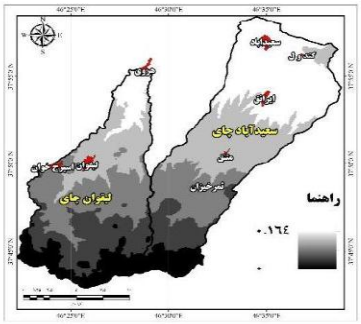
Fuzzy map of The weighted average of the relative humidity of the studied area

Fuzzy map of weighted altitude from the sea level of the studied area



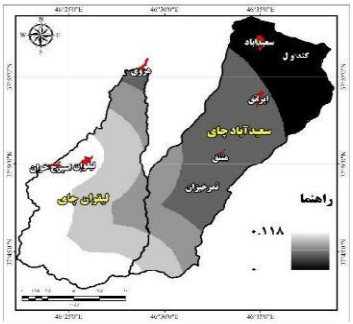
The fuzzy map weighs the annual rainfall of the study area

Weighted fuzzy map of the slope directions of



Weighted fuzzy map of the average annual temperature of the study area

Weighted slope map of the case area



Weighted Fuzzy Map of Wildlife Attractions (Protected Areas)

Based on the results (Table 3) obtained from the ecological index (Fig. 6), the study area is 42.1% of the high level, 11.7% of the good level, 35.25% of the average. Also, the weak range has the highest percentage of area in the area. This figure is about half the size of the two catchment areas of Lighvan Tea and Saeed Abad Chai.

Based on the results obtained in the final map (Figure 6), the excellent levels achieved in the Lighvan tea basin are more consistent with the northern half of the basin and are relatively flat, around the villages of Saeedabad, Persia and Persia. The situation is also true in the Lighvan tea basin. In other words, the Lighvan Valley tea, which includes the villages of Heravi, Lighvan and Sprach Juan, is among the high levels of classification of suitable places for establishing tourist villages.

Fuzzy map of weighted distance from the roads of the study area

Fuzzy Weight Landing Map of the Residential District of Tabriz, Basmenj

Weighted Fuzzy Map of Rural Residential Districts in the Region

The fuzzy map of the weight is the total annual sunny hours of the area under study

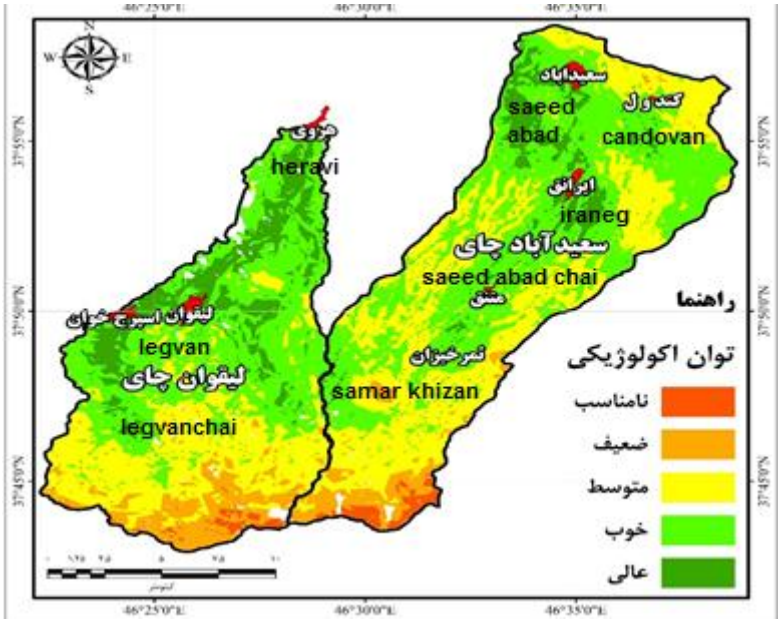


Figure 6: Final map of the ecological potential of the study area

The most inappropriate areas for the construction of the Turkish countryside were identified in the highlands. These areas, which are classified as weak and inappropriate classes in Figure 6, cover more than 55% of the total range. The rough mountain face in this area is one of the most important reasons for the high share of ecotourism. However, this variable itself is one of the most important factors in creating the current favorable condition of the study area.
The results showed that areas with inadequate power also account for about 11.41%. It should be noted that, according to the criteria used, there should be no establishment or tourism purposes in the mentioned areas. Table 3 shows the area of different classes in the map of the ecological potential of the study area for locating tourist villages.

Table 3: The area of different classes on the ecological potential of the studied area for locating tourist villages.

Area (%)	Area (ha)	Level	row
1/42	439/82	level 1(excellent)	1
7/11	2203/78	Level 2 (Good)	2
35/25	10923/70	Level 3(average)	3
45/08	13969/30	Level 4 (weak)	4
11/14	3451/02	Level5(Inappropriate)	5

It is worth noting to check the accuracy of the final map through frequent visits and observing the status quo. The obtained results are able to meet the needs of optimal location of tourist villages in Lighvan Chay and Saeed Abadchay watersheds. Accordingly, it is possible to plan and develop sustainable tourism taking into account the ecological capability in the Maidu area.

Conclusion

In this paper, an analysis of the network (ANP) was used to evaluate the potential of the investigated area for ecotourism.

The mountainous regions of the north-west of the country also attract many tourists, especially in the warm season, due to the diversity of weather and pristine nature, among which the Lighvan basins of tea and Saeedabad tea on the northern slope The mountainous masses of Sahand and the southeastern city of Tabriz are considered to be one of the most famous bay areas in Azerbaijan in the shade of high-water rivers and cold climates and thanks to the beautiful nature. The results of this study showed that the most inappropriate areas were identified for the construction of high-rise tourist villages. More than 55% of the total range. The rough mountain face in this area is one of the most important reasons for the high share of ecotourism. However, this variable itself is one of the most important factors in creating the current favorable condition of the study area. Also, the excellent levels achieved in the Lighvan basin of tea are more in line with the northern half of the basin and are related to fairly flat lands, around the villages of Saeedabad, Persia and Persia. The situation is also true in the Lighvan tea basin. In other words, the Lighvan Valley tea, which includes the villages of Heravi, Lighvan and Sprach Juan, is among the high levels of classification of suitable places for establishing tourist villages. . Investigating the ecotourism power map of its area, more than 90% of the area has a high potential for the development of ecotourism activities in the northwest and west of Saeed Abadchay and Lighvan-e-Chai basins. This is due to the close proximity to recreational attractions, the avoidance of negative factors (distance from the fault), more suitable vegetation coverage, lower altitudes, less slopes, and more favorable climates.

Also, 7.11% of the total area of the two basins is classified at a good level of ecological capability. This range is located on the level of two basins with a degree lower than the high level. It includes a wider spatial distribution. This range is largely located in altitudes below 2200. In this study, based on the results of analyzing the questionnaires of vegetation, slope, wildlife and topography experts, were most important. Vegetation with vegetative forms, variety of shape and color of leaves, variety of carnivorous and winter is always one of the types of natural promenades. Vegetation is one of the important elements in the attractiveness of a region. Having a rich vegetation in one region gives a beautiful landscape to the region and is an important factor in attracting people to the region.

The time and type of natural tourism activity depends on the type of climate and the prevailing condition; therefore, identifying the climatic factors of the area is very necessary and can provide an important quality factor for the presence of tourists.

The best time of the outing in terms of climatic conditions is that climatic indices such as temperature, rainfall, humidity and radiation correspond to the human comfort level, which is called comfort climate. Rainfall as one of the climatic structures plays an important role in climate creation and control.

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