

## **The feasibility study of KhodaBandeh development with a special emphasis on the geotourism: The case study of kataleh khour cave**

***Manijeh Ahmadi\****

*Assistant professor of Geography, University of Zanjan, Zanjan, Iran*

---

### ***Abstract***

*Most of the planners and policy makers regard tourism as a basic component leading to a stable development. So, geotourism which is a new topic in terms of tourism industry shall have a considerable effect on the regional development provided that calculated and appropriate planning taken into account in this regard. In spite of having a considerable potential considering tourism and, especially, geotourism, Iran hasn't got its due in international level. Kataleh khour cave is one of the unique geotourism phenomenon, although the authorities haven't taken it seriously. Hence, it couldn't play an influencing role upon the Zanjan and Khoda Bandeh development. So a questions arises as follows: How can the cave play an effective role regarding Zanjan and KhodaBandeh development and prosperity: To this end, the present paper investigates the weak and strong, points in kataleh khour cave regain using field and library studies, the authorities' viewpoints and comments and, finally, the swat technique. The most important strategies which best cause the geotourism development in the kataleh khour cave are investment and planning on the government part and private sector, making use of this excellent geographical situation, enhancement of the communications networks, training and developing the specialized work forces, promoting the tourist's information and knowledge.*

---

***Keywords: Geotourism, Development, Zanjan, katale khour, SWOT.***

*\*Corresponding author: ahmadi.manijeh@znu.ac.ir*

*Received Date: 19 April 2017*

*Accepted Date: 17 July 2017*

***Date of Print: Summer 2017***

## **1. Introduction**

the geologically picturesque phenomena are considered important to the geologists. They reflect the earth evolution over the time (Brand et al., 2004). The relationship between the mankind and the natural resources has a long history. The relationships of course, have taken different shapes in the course of time. People like to visit intact and natural sites. In the 21<sup>st</sup> century, new concepts developed into the increasingly growing tourism industry like geotourism. This new field introduces the geological phenomena while preserving their local identity (Saraii et al., 1999, p.63). Geotourism, which is a growing industry, supported considerably by the individuals who seek to get a further insight into their surroundings (Turner et al., 2006). The geotourism characterized mainly in terms of the relationship with the nature, the educational motives and the stability topic (Blamey, 1997). It is defined as a tourism entailing geomorphological characteristics, environment, culture and aestheticism, the public health and happiness in a given region (Smith, 2003). Based upon the UNESCO ratings, Iran ranks 5<sup>th</sup> and 10<sup>th</sup> in terms of natural attractions and tourism attractions, respectively. Most regrettably, Iran, currently, lacks the global tourism. Based upon the predictions, there shall be 200,000,000 tourists visiting Iran up to 2020 (Sabouri, 2008). Since the geological and geomorphological phenomena expanded throughout Iran, there should be protective and managerial measures through establishing geopark, geosite, etc to preserve them (Darehshouri & Kasraian, 1998) (Ziari and et al., 2008). One can notice different and beautiful geological, geographical as well as geomorphology phenomena in Iran. So they can be introduced at global level, if there are appropriate feasibility studies, well equipped facilities, skilful workforce and tour guides (Ebrahimi, Fini, 2008). It should be noted that if managed and planned properly, these resources will be driving force for social, cultural and economic development. The main question in the paper is: considering its high potentials, how can

kataleh khour cave get engaged in Zanjan and Khoda Bandeh and, consequently, national development?

## **2. Methods and materials**

To carry out the research, we, at first, considered the attractions, tourism services and their effects using descriptive analytical and field methods. Then, SWOT method applied to analyze the obtained data and develop the necessary recommendations (table 1). Having applied this method, we would explore some weak & strong points, opportunities and threats. Then, the questionnaires developed through the respective authorities' comments, weighting and scoring the included in the tables. Ultimately, the data was analyzed.

So, we would try to put forward appropriate strategies so as to minimize the weak & strong points and threats as well as to maximize the strong points regarding the geotourism enhancement in the region.

## **3. Discussion**

Kataleh Khour cave is located on the north west of Iran. It is 48 deg and 50 min (eastern longitude) and 35 deg and 50 min (northern latitude) one the south of Garmab and Khoda Bandeh town located on the south of Zanjan province (140 Km). Currently, it is accessible through Zanjan \_soltanieh\_ Koda Bandeh route. It is, also, accessed Via Zanjan \_ Birjand main road (Jamali, 1387). The cave is the longest cave in Iran (12860 m) and the second tourist cave (1250m open to the public) (Arshadi & Laumanns,2004).

It is situated on the tectonic zone of the central Iran at the top of Zagros Mountains (Raeisi & Laumanns, 2003). Its formation dates back to Eocene Miocene era (Amir Kazemi & Mehrpooya, 2006) in which it is formed through

Lime erosion and tectonic movements. There are different like Estalagmit, Estalagmit, column, crust, screen, aragonite inclination are found in different parts of the cave (Razeei & Nakhae, 1387) Kataleh khour cave is a kind of sinuously connected network.

The passage in the cave is formed in a sinuous fashion upon 3 floors (Sivand, 2000). The cave explored by a mountaineering group in 1331 (Fathi, 2004). Although a great deal of area in the cave explored, it is still completely untapped (Amir Kazemi & Mehrpooya, 2006)

Internal factors in flourishing geotourism of kataleh khour cave; in this stage we would try to investigate the internal environment of the cave

so as to explore its respective weak and strong points. In other words, we would consider the obstacles on the way of the planning towards its development. Hence, the current condition and resources were taken into consideration subsequently. They are divided into 2 categories namely strong and weak points. These strong and weak points were given normal weight and ranking (Table 2-3).

**Table 1: The rank and normal weight regarding the Strong points of kataleh khour**

Normal weight × rank	Normal weight	The current status	Strong points	No
0/186	0/062	3	The most attractive limy (calcareous) cave regarding its various icicles	1
0/207	0/069	3	The second land aquatic cave in the world	2
0/207	0/069	3	The longest cave in Iran and the second cave from tourism perspective	3
0/162	0/054	3	Its considerable and potential status in the cultural, art and historic tourism attractions of Zanjan, Soltanieh, Khoda Bandeh and Garmab	4
0/138	0/046	3	Its proximity to the populated and rural areas like Tehran, Zanjan, Hamedan	5
0/062	0/031	3	Its convenient and comfortable surrounding for the city dwellers to rest and relax	6
0/138	0/046	3	It is open to the visitors all the time except for 2 special occasions namely Tasoua and Ashoura	7
0/072	0/036	2	There is kataleh khour mud dam adjacent to the cave	8
0/082	0/041	2	There is an exemplary comprehensive tourism plan	9
0/082	0/041	2	There are necessary infrastructures required for investment like electricity, telecommunications, radio and television coverage	10
1/336			IFE	

Source: author

**Table 2: The rank and normal weight regarding the weak points of kataleh khour**

Normal weight × rank	Normal weight	The current status	Weak points	No
0/183	0/061	3	Lake of fence to protect the valuable geomorphological phenomena in the cave	1
0/183	0/061	3	Lake of reporting facilities sue has television sets in the cave waiting lobby broadcasting in Turkish, Persian and English languages	2
0/210	0/070	3	Lake of experienced tour guides in the cave (There are currently 5 tour guides)	3
0/07	0/035	2	Slippery cave floor endangers visitor's safety due to stalagmites and Stalactites formation	4
0/07	0/035	2	The nets around the geomorphological phenomena shall be easily damaged by the visitors	5
0/07	0/035	2	The railings are of poor quality, so their safety is in great danger	6
0/082	0/041	2	Lake of guiding signs in the cave,so the visitors shall get lost through the various Corridors	7
0/058	0/029	2	The cave shall probably be subsided and ruined in case of severe rain or moisture	8
0/07	0/035	2	Some incorrect information regarding geological and geomorphological phenomena is conveyed mistakenly to the visitors by the cave guides	9
0/376	0/094	4	Lake of basic facilities such as hotels, W.C, restaurant and parking lots	10
1/302			IFE	

Source: author

**Table 3: The rank and the normal weight of the external factors**

Normal rank	weight ×	Normal weight	The current status	Opportunity	No
0/094		0/047	2	The world wide popularity of the katale khour cave	1
0/094		0/047	2	Its proximity to the capital city (Tehran)	2
0/237		0/079	3	Proximity to the tourism attraction in the neighborhood cities like Alisadr cave (Hamadan) and Zarin Qar (Khoda Bandeh)	3
0/094		0/047	2	The government enthusiasm to invest upon the tourism sector	4
0/094		0/047	2	The public's eagerness to travel and visit tourism areas	5
0/07		0/035	2	The cave play an integral communicative role connecting the center, north the north-west regions. It is, also, in neighborhood of 7 provinces	6
0/082		0/041	2	There are specialized work force in the Zanjan province	7
0/213		0/071	3	Its proximity to some internationally renowned historical monuments like Soltanieh dome. To develop tourism services	8
0/07		0/035	2	There are some roadgurd houses to prevent the cave obstruction due to heavy snow and blizzard	9
0/094		0/047	2	The private sector shall be granted loan to invest upon the cave and its surroundings	10
1/142				EFE	

Source: author

**Table 4: The rank and normal weight of the external factors (Threats)**

Normal × rank	weight	Normal weight	The current status	threats	No
0/09		0/045	2	The communicative networks to the cave on the Soltanieh, Qeibar and Garmab is of poor quality	1
0/078		0/039	2	The poor condition inside the cave especially the broken by the visitors	2
0/056		0/028	2	The traditional and local tradition of the natives in the region is going to fade away	3
0/068		0/034	2	The farmlands and the surrounding field are destroyed	4
0/09		0/045	2	The visitors handle the facilities in appropriately	5
0/068		0/034	2	Cultural and social delinquencies arise due to visitors visit to the regain	6
0/228		0/076	3	The various credits are injected poorly	7
0/204		0/068	3	The private sector reluctance to invest	8
0/177		0/059	3	The authorities inconsideration to the employment and revenue sources in the cave	9
0/204		0/068	3	Lake of international and national-based reporting system upon the cave attractions to attract the tourists	10
1/263				EFE	

Source: author

Having explored the strong and weak points, opportunities and threats and allocated their related rank and weight we would assess the external and internal environment and fix the SWOT matrix (Table 6).

**Table 5: The score of the internal-external factors influencing katale khour cave**

External factors		Internal factors	
Opportunities	Threats	Strong points	Weak points
1/142	1/263	1/336	1/302
Σ O+T = 2/405		Σ S+W = 2/638	

Source: author

Since  $(1)\Sigma S+W > \Sigma O+T$ , the recommended strategies in this stage are developmental (offensive). Next stage shall be determination of the strategies resulting from the analysis of internal and external factors and their respective rank and normal weight in order to offer the appropriate strategies for each WT, so, WO and ST parts. Generally, the strategies reflect the followings:

The first group: So strategies (maxi-max): These strategies designed to maximize the present strong points in order to make best use of the environmental opportunities.

In other words, these strategies are competition

Specific strategies (Table 7).

The second group: ST strategies (Maxi \_ Min): These strategies designed to minimize the internal weak points in order to make best use of the environmental opportunities into account so as to do away with the weak points (Table 7)

The fourth group: WT strategies (Mini \_ Min): These strategies designed to minimize the internal weak points in order to minimize the external threats. In other words, these strategies are stability bound strategies in the environment and applied to minimize the weak points and avoid the threats (Table 7).

**Table6: The four strategies –i-e- SO, ST, WO, WT and their comparisons**

	Strong points	Weak points
WS	1- The second land aquatic cave in the world 2- The longest cave in Iran and the second tourist cave 3- the most attractive limb cave with various icicles 4- Its strategic status in tourist, cultural and historic zones like Zanjan, Soltanieh, Khoda Bandeh and Garmab	1- Lack of services & facilities 2- Lack of guides and specialized individuals to guide visitors through the cave 3- Lack of protective fences to protect the valuable geomorphological in the cave
TO	5- Its proximity to the populated regions like Tehran, Zanjan, Hamadan	4- Lack of informative media and television in the waiting lobby 5- Lack of signs in the cave

<p>Opportunity (O)</p> <p>1- Its proximity to the tourism attractions of the adjacent provinces</p> <p>2- Its proximity to the national and internationally renowned monuments like Soltanieh</p> <p>3- The popularity of the cave at international level</p> <p>4- Its proximity to the capital city (Tehran)</p> <p>5- Government enthusiasm to invest upon the tourism sector</p>	<p>Guidelines (S-O)</p> <p>1- The government planning and investment upon the cave</p> <p>2- Granting credits to the private sector for investment upon the Cave</p> <p>3- Investing upon sufficient reporting so as to attract as many tourists as possible</p> <p>4- Taking advantage of its proximity to the adjacent tourist regions</p> <p>5- Making use of the population in adjacent provinces so as to develop tourism industry</p> <p>6- encouraging private sector to invest upon the cave</p>	<p>Guidelines (S-T)</p> <p>1- Enhancing communicative networks leading to the cave</p> <p>2- Promoting informative media at national &amp; international level</p> <p>3- Promoting the visitors knowledge so as to handle the facilities and services appropriately</p> <p>4- Preserving the traditional and local culture and traditions</p> <p>5- Injecting proper amount of credit upon tourism industry</p> <p>6- Motivating the private sector to invest upon the industry</p>
<p>Guidelines (T-W)</p> <p>1- Preventing the unique phenomena from being destroyed</p> <p>2- Securing the protective fences around the valuable phenomena in the cave</p> <p>3- Injecting effective to secure the visitor's safety</p>	<p>Guidelines (O-W)</p> <p>1- Preserving the valuable geomorphological phenomena in the cave regarding the government investment in the tourism sector</p> <p>2- Training specialized work force to inform the visitors effectively</p> <p>3- Investing on part of the private sector to promote the services</p> <p>4- Government investment in securing the cave and visitor's safety</p>	<p>Threat (T)</p> <p>1- Lack of various credits in the regard</p> <p>2- The private sector reluctance for investment</p> <p>3- Lack of informative media to attract tourists</p> <p>4- Lack of the authorities support from the revenue and employment sources in the cave</p> <p>5- Inappropriate quality of the communicative networks</p> <p>6- Inappropriate handling of the facilities by the visitors</p>

Source: author

**Table 7: The improved matrix SWOT**

<p>The mixed SWOT guidelines</p> <p>1- Government and private sector should invest in the tourism industry in the katale khour cave</p> <p>2- The cave proximity to 7 provinces and highly populated centers should be taken into account</p> <p>3- The communicative networks connecting the cave to the other tourist attractions such as Alisadr cave, Soltanieh dome, etc should be improved</p> <p>4- Highly specialized and skillful work force should be trained to guide the visitors through the cave</p> <p>5- The visitors should be informed to handle the valuable geomorphological phenomena appropriately</p>
--

Source: author

#### 4. Conclusion & Recommendation:

The stable development of geotourism in Khoda Bande depends highly upon the investment on part of the government and private sector, the natives involvement and specialized work force training. The tourism and public involvement can lead to the developed geotourism plans so that the natives can much benefit from it (Qasemi, 1387). In sum, it can be said that the potentials are highly rich to attract domestic and foreign tourists provided that comprehensive planning and policies are developed in this regard so as to enhance the tourism industry (Asadi and etal, 1387). Also, based upon the afro mentioned

resources, we can build a geopark in there.1-Allocating developmental and services budget, executing different projects, providing employment for the natives like handicrafts sales, exhibition of local foods and traditions.

2- Setting plane to build a geopark and managing the cave.

3- Efficiently informing the natives regarding the importance of the geomorp-hological phenomena.

4- Setting a comprehensive plane to nationally and internationally introduce the cave to attract tourists.

5- Improving the infrastructure and services.

6- Planning and taking measures to reserve the cave.

#### **References**

- [1] Amrikazemi A. & Mehrpooya, A, Geotourism resources of Iran, 2006, PP.78-92 in: Geotourism: sustainability, impacts and management, Ed. By R. K. Dowling & D. Newsome, Elsevier, p 260.
- [2] Asadi A. & others, the role of salty domes and caves on development of Gheshm geopark, collative article of Gheshem, 2008, pp25-35.
- [3] Brandat S. & Lagally, U, Eichhorn Roland Bavarian top 100 geosites-an important source for a sustainable eco-tourism in Bavaria. 2004.
- [4] Blamely R., Ecotourism: The Search for an Operational Definition Journal of Sustainable Tourism, Journal of Sustainable Tourism, No 5 1, 1997, pp. 29–45.
- [5] Darehshouri B. & Kasraian.N Nature of Iran, 1998, p10.
- [6] Ebrahimi F., Investigating of suitable regions for ecotourism in Kashan, first Conference in Iran, geological survey of Iran, 2008, pp155-165.
- [7] Fathi asl M., Reconizing of historical& natural attractive of Zanjan, management & planning publisher of zanjan, 2005, p 250.
- [8] Ghasemi A., Geotourism in firuzabad (Fars), first Conference in Iran, geological survey of Iran, geological survey of Iran, 2008, pp53-62.
- [9] Jamali A., Garmab katalekhlor cave, Journal of farhang zanjan,No8,2003,pp230-245.
- [10] Jacob Johannes S., Geotourism in South Africa: Problems and Prospects, RAND AFRIKAANS UNIVERSITY, 2003, p 8.
- [11] Khoshraftar R., Geotourism in zanjan province, Journal of earth science, (In press) geology sourvey of Iran.
- [12] Mahmodiesivand S., Geology &Hydrology of Katalekhlor cave, th center of karsts researchingIran, 2001, pp6-10.
- [13] Nakhai M., Processing of existing of Katalekhlor cave, geological survey of Iran journal, No6, 2008, pp16-19.
- [14] Raeisi E. & Laumanns. M, Cave Directory Iran. Berliner Hohlenkundliche, Berlin2003, p 101.

- [15] Sabori T., Geotourism as new theory of sustainable development and environmental management in Iran, first Conference in Iran, geological survey of Iran, 2008, pp81-94.
- [16] Sari A., investigating on Gheshem geopark (Harra forest & Namakdan cave), first Conference in Iran, geological survey of Iran, 2008, pp 60-65.
- [17] Shrifzade A. & Moradnezzhad.H, sustainable development &rural tourism, Jahad journal of Iran, No251, 2003, pp47-61.
- [18] Turner S., Creaser.P & Mcknight, Celebrating Planet Earth – UNESCO-assisted Geoparks in the Australasian-Pacific region,AESC, Melbourne, Australia, Acedido em 18 Out 2006.
- [19] Ziyari K. & others, situation of Gheshm as geopark and Its effects on economic of Gheshm Island, collective article of Gheshem,2008,pp36-50.