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Evaluation of the Application of Geology in the Tourism Industry

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Abstract
Geological tourism is a basic supporting element and an essential format in the development of the tourism industry; It is also the development of domestic tourism of the more systematic and mature and has been widely accepted by tourists and a favorite product type; To all kinds of geological parks or geological scenic spots as the representative of the geological tourism has made rapid development, Also face the bottleneck of their development; To explore a variety of Geological tourism innovative development model, for the future of geological tourism has a positive exploration of value and practical significance. Also, if we can understand Geo-tourism as a touristic, not academic, activity and make a real effort to make Geology an attractive issue related to explanation of beauty of the landscape and with disentangling the mysteries of life and earth, far from the complexity of scientific concepts and geological processes, we shall be ready to make Geology an interesting subject for tourists. If we are conscious that, when talking about Geo-tourism and its touristic components, besides Geology, we are speaking about accommodation and eating facilities, the quality of accesses and services, and the excellence and attraction of merchandising products, we shall be able to make Geo-tourism equally attractive as other classical modalities of tourism. On the contrary, if we identify Geo-tourism with the teaching of Geology or with explaining Geology to groups, we will focus on a separate matter that may be interesting for some visitors.

Keywords: Evaluation; Geology; Geoparks; Geo-tourism; Tourism.

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1. Introduction

In recent years, the tourism industry has become one of the main poles of development in various respects, primarily socio-economic. (Bayati Khatibi,et al., 2010). Due to job creation and relatively rapid profiting characteristics, tourism is a proper ground for foreign investment and it can accelerate tourism development, promote its economic criteria and bring out new ideas, technologies, and markets (Papeli Yazdi, 2011). Geo-tourism, as a subcategory of tourism, is considered one of the new methods in providing tourism attraction and has allocated a prominent part of tourism studies to itself. (Servati & Ghasemi, 2008) moreover assigns an essential art of tourism studies.

2. Literature Review

The combination of geological science and tourism has invigorated two kinds of resources. Geological resources with popular science value, aesthetic value, and market development value have been paid more and more attention by the market and the public, which has aroused the public interest in sightseeing and understanding. The rational tourism development based on protection also brings many tourists, which is conducive to the sustainable development of geological tourism resources. Geo-tourism or land tourism is considered a relatively new concept in the tourism industry that has gained considerable growth and attention in the recent decade.

Geo-tourism has defined boundaries that geological tourism is on its spotlight (Newsome & Dowling, 2006) and surveys the problems and complications associated with the land, geomorphologic situation, tectonic phenomena, as well as their tourism capacity. From the viewpoint of Gates (2006), Geo-tourism means “Tourism in geological perspectives. “In Newsome and Dowling’s words, Geo-tourism is a part of land associated with geology, geomorphology, and natural landscape resources as well as available forms on the land surface, fossil-containing layers, rocks, and minerals according to the emphasis on understanding the underlying and shaping processes of these complications (Newsome & Dowling, 2006). Moreover, can say that Geo-tourism is an informed and responsible tourism in nature with the aim of observing and understanding of geology processes and phenomena as well as learning how they shape and progress (Amri Kazemi, 2009).

Some consider the professional branches of Geo-tourism as one of the Eco-tourism sub-branches, but these two kinds of tourism are based on nature and are parallel, not subsets. If we divide nature into two sections, animate and inanimate, Eco-tourism includes the study of animate nature and its attractions, and Geo-tourism studies inanimate nature and its attractions. Therefore, tourism can be divided into two sub-branches of Geo-tourism and Eco-tourism. According to the above matters, it is determined that these two kinds of tourism are a set of tourism that is dependent on nature and is not sub-branch of each other. The main difference between these is that Eco-tourism is focused on the living organisms and plant and animal living environment. However Geo-tourism is mainly involved with geomorphological and geological phenomena and, indeed the inanimate nature and its evolution. Technology progress in recent century causes more free time for human beings and increases wealth as well as spending more time on leisure. Indeed, this century should be called the era of tourism (Papeli et al., 2011).

Iran's unique tectonic and climate situation causes diverse sights of tectonic and geomorphology in different parts of the country, so it seems necessary to investigate these attractions for their better cognition and Geo-tourism development (Yazdi, 2012). We can easily observe that geological tourism plays an essential supporting role in tourism development, and it is no exaggeration to say that geological tourism already holds up more half than tourism in Iran.

3. Research Method

This article is applicable and developing a survey and the research method is descriptive-analytical. Accordingly, various kinds of a library –documentation studies, interpretation and satellite image analysis of some studied areas, field studies, direct observation, and survey of phenomena are used particularly from a Geo-tourism perspective.

4. Result

4.1. Analysis of the development status and choke point of geological tourism

Geological parks are the primary development carrier of geological tourism. Since the first cultural and natural heritage sites were selected in 1972 in the

world, natural heritages account for less than one-fifth of the nearly 1,000 projects selected, and some are dual-heritage sites. Most of these projects, which are listed in the world natural heritage list, are geological relics or unique landscapes, and they are built into the world's geological parks.(Wang,2016).Geo-park means a geographical area with determined borders in concept that has one or more special or unique geology phenomena as well as significant natural and cultural attractions in the available area. This set affects the economic development of the region and has special protective measures and programs as well as complied management plans (Amri Kazemi, 2006).

Also, in the range of Geopark, we can find a group of Geosites. Geoparks are a part of the universal net and can have an essential role in the country's economy and have a vast effect on sustainable development with the tourism boom, especially Geo-tourism. Therefore, each country or area that has ancient history and attractions, as well as geology effects, will have a suitable potential for the development of this industry. Considering Iran's significant geological potential, countless geo-parks can define in every part of Iran not just in Gheshm area (Fig1).Also, in this regard; the scientific planning and sustainable development of geological tourism must be put on the agenda. The development of geological tourism will certainly promote follow-up and the development of planning. The needs of world heritage management and the tourism management department require scientific and reasonable geological tourism development planning, project approval, and argumentation opinions, and the planning of geological tourism scenic spots as the prerequisite for market development. In terms of the development of various geological tourism projects, although the planning level is high or low, it accords with the program requirements, which are demonstration before the project and planning before development.

The situation of developing first and then making up planning still exists in some places, but it has been effectively curbed.in continuation of above mentioned, the theoretical research and discipline construction of geological tourism must be on the agenda. The theoretical study of tourism geography is one of the hot spots in the field of tourism that about this and a lot of research and literature must publish(Peng,et al.,2009).Tourism geological education be on the agenda. Geological tourism discipline and curriculum construction attract attention from relevant universities. The universities

must offer Geo-tourism courses, and recruit tourism geoscience graduate students .The tourist geography education, textbook and training rented gradually, provide support for the development of the industry. (Guo,et al.,2011)

Fig1. Distribution of geomorphological phenomena in Gheshm geopark

4.2. The main bottleneck of the development of geological tourism

The main bottlenecks in the development of geological tourism are as follows (Table 1). Firstly, the positioning of geological tourism in the tourism industry is not precise enough. In modern society, do geoscience resources have the dual nature of geoscience and tourism resources, or can we only use the traditional perspective to look at its geoscience resources? Is it optional, or can it play the leading role? Is it the object of tourism marketing, or can it be a featured product and backbone? Is it a protective development or economic benefit, firstly? Although a certain amount of research has done before, the industry management departments, tourism

circles, and enterprises have not formed an entirely consistent consensus on the above issues, which is impossible for the development of geological tourism without influence and restriction. Most importantly, this ambiguity harms the clarity of industry management policy and industrial development policy. Secondly, the planning standards of geological tourism development have not wholly unified. The guidelines for the general planning of national geo-parks (trial) ,which have been issued since 2000 and have not been revised or improved to the level of legislation, are not adapted to the rapid development of geo-parks. Under the guidance of different development subjects, geological tourism resources are planned and developed as geological parks, wetland parks, nature reserves, tourist resorts, and tourist attractions. As the management subjects of these projects are different, some managed by the urban construction department, some by the forestry department, some by the land department, and some by the tourism department; the result may be similar resources to form very different or even different planning. If measured by the standard of planning identity, this planning chaos will cause many loopholes and hidden dangers in protection, development, and management. This will lead to different policies of environmental protection land, forestry, and finance, and in final, which will lead to waste of resources and increase of management costs. it is not alarmist. Thirdly, the level of development, operation, and management of geological tourism need to improved. Fourthly, the cultivation of talents in geological tourism is out of line with the development of the industry. On the other hand, the closed feature of education is also very prominent. It is separated by a wall or a layer of paper between industry development and enterprise demand. The integration of production and education is not carried out closely. Teaching and learning are difficult to put into practice. The level of scientific research achievements is not high and scientific research and personnel training do not play a leading role in the industry.

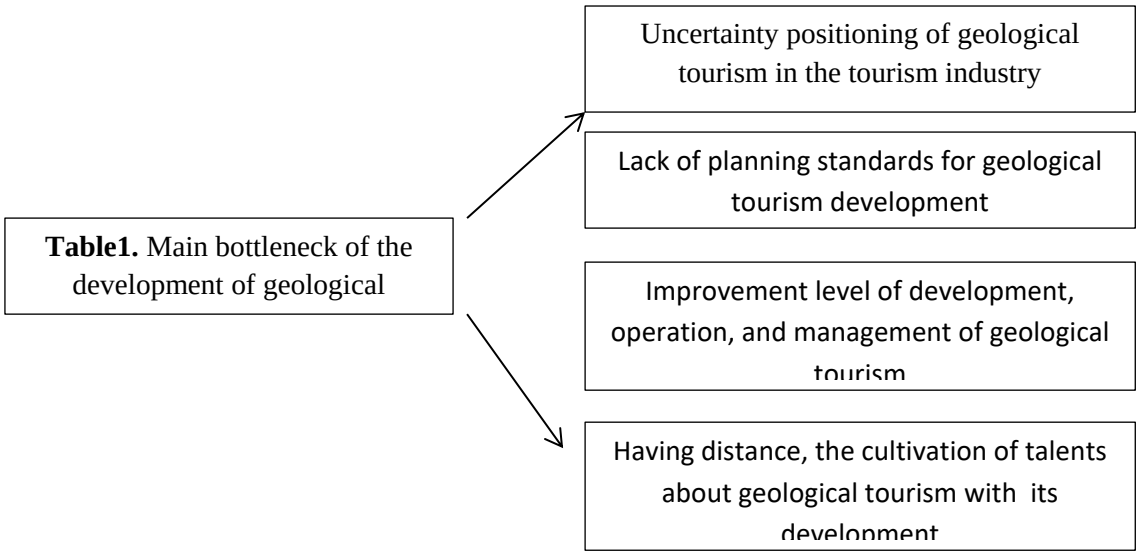

Table1. Main bottleneck of the development of geological

4.3. Opportunities and Challenges of innovative development

Geological tourism should not be conservative and complacent and lack the passion and motivation for innovation. The development of the economy and society and the innovative development of tourism not only bring new opportunities to the development of geoscience tourism but also form challenges. It is necessary to take the initiative to respond, take active actions to seize the commanding heights of innovative development, seize new opportunities, and push the development of geoscience tourism to a new level. Geological tourism development faces new opportunities. First, the pace of China's economic and social development is clearly beyond the expectation and preparation of most people. Second, welfare policies such as wage growth and paid holidays are likely to be implemented in advance, which will release significant tourism momentum and make the whole tourism industry get the efficiency of interconnected development. Third, the development of the tertiary industry and leisure industry attracts more and more attention from the government, society, and the public, which will have a positive effect on the development of tourism. Due to the regional and product characteristics of geological tourism, the service industry is much more dependent than other tourism forms. The whole development of the tertiary industry represented by the service industry will surely bring more evident and robust support to the development of geological tourism. At the same time, the challenges and constraints to the development of geological tourism cannot ignore. First, this kind of influence of a slowdown in economic growth in a whole area, all-direction, including the tourist industry. Second, the challenges and impacts brought by the polarization of consumer groups means that the young population represented by the post-90s and post-00s coexisted with the middle-aged and elderly population represented by the post-50s and post-60s generations. The consumption and tourism demand brought by the polarization are different, which brings apparent challenges to development and marketing. Third, product competition and diversion within tourism. Eco-tourism, cultural tourism, ethnic tourism, combined product tourism, etc., all have a specific impact on traditional geoscience tourism. Without sufficient understanding and practical strategies, it bounds to cause stagnation and passivity.

4.4. Analysis of the innovation mode of geological tourism

The multi-functional in-depth development of geological resources and the integration and linkage development of surrounding resources are the main breakthrough point of Geo-tourism innovative development. The foundation of Geo-tourism innovation comes from two aspects: one is the attention and deep excavation of the function of geoscience resources; the other is the organic integration and reasonable utilization of surrounding resources. Geo-tourism relies on geological bodies or phenomena that form the basis of landscape, such as strata, rocks, structure, morphology, karst cave, ancient relic phenomenon, rivers and lakes, vegetation resources, weather, environment, etc. Due to the complexity and particularity of formation and structure, it often has the characteristics of geology, geomorphology, and geohistory. In the process of geological tourism development, due to many factors such as different levels of knowledge and emphasis, the exploration of many geological features is not enough, and the scientific value and scientific popularization value are outstanding. Geo-tourism should make up this lesson well to achieve meaningful innovation, through an in-depth exploration of the connotation of geoscience, the value of popular science, and cognitive significance. we must know ,tourism products with gradually aging life cycles thus it is necessary to change the geological tourism narcissistic, by practice through scientific planning and coordination, geological tourism and rural tourism, ecological tourism, scientific tourism, and adventure tourism, sports leisure tourism etc. We should be cautious of projects that do not conform to the concept of innovative, coordinated, green, open, and shared development behaviors that have the potential to impact and disrupt resources and options with potential environmental and legal risks. The premise of "do" is scientific, green, ecological, sustainable, upgraded, and level, while the premise of "not do" is not to blindly pursue economic benefits and destroy non-renewable resources of geoscience, destroying the future of future generations.

4.4.1. Analysis of Geo-tourism and popular science innovation path

The deep knowledge of geology, paleontology, and ancient historiography becomes an easy and intuitive way to tourists and attracts tourists' interest.

The tourists enjoy the wide variety of geological phenomena, and the geological popular science knowledge education, to make up for their knowledge of the short board. Tourists can not only enjoy rich and varied geological phenomena, but also receive geological popular science knowledge education, to make up for their knowledge shortcomings and increase their knowledge. In fact, through the emphasis on the value of popularization of science, geoscience resources have become more "people-friendly" and more able to adapt to the needs of tourists of different levels and different cultural levels, which has become the key point of many geoscience tourist attractions.

Unfortunately, the popular science education of many geoscience tourism scenic spots remains at the stage of compulsory indoctrination. The content copied from the geological textbooks cannot meet the needs of tourists, the update is not timely, and the presentation form is monotonous and inflexible. It cannot effectively improve tourists' scientific literacy, but also affects their perception and evaluation of resources. The model of systematic inculcation education is a traditional model widely adopted in most of China's geological parks, which is inaccurate and does not have a high degree of participation in the learning benefit of ordinary visitors to geological parks. As a result, it is no longer suited to the new needs of contemporary visitors. Based on this, the mode of "Geo-tourism and popularization of science" should take measures in such aspects as determination of development concept, selection of geological science popularization knowledge, selection of presentation method, application of scientific and technological means, the conception of interactive method, cultivation of scenic spot characteristics, and efforts in marketing and publicity. Under the advantages and strength of cultural and creative industries, innovative and integrated packaging can bring forth new ideas in the mode of "Geo-tourism and popular science," giving people a fresh feeling.

4.4.2. Geo-tourism and rural tourism mode

Geo-tourism and rural tourism are two different types of tourism products, and their most considerable contact is proximity in geographical space. Following the principle of resource endowment compatibility and tourism benefit maximization principle, it is possible to make a mixture of the products of geological tourism and rural tourism. In the process of

geoscience tourism, tourists can not only enjoy the value of scientific tourism but also get the original ecological experience of rural living in the source area. At the same time, they can solve, to some extent, the problems of catering, accommodation, and parking that emphasize the protection of the geoscience tourism area but cannot give more attention. The key to the mode of "Geo-tourism and rural tourism" is to give full play to the complementary functions of the two products, which can not only distinguish the primary and secondary but also achieve product linkage. Playing the stage is Geo-tourism resources, and rural tourism is more of a stepping stone role. The sound of side drums will attract more attention to developing such primary and secondary matching, which can regard as a beneficial attempt to enrich the product line. The depth of tourism publicity ability in the tourism-marketing field will have a direct impact on the effect of this product linkage.

4.4.3. Geo-tourism and eco-tourism mode

Wetland parks, nature reserves, national forest parks, and some geological parks, in addition to the development based on the resource, make full use of environmental factors such as vegetation meteorology and water body to carry out additional ecological tourism and fully activate the potential value of the resource itself, which can regard as one of the alternative innovation paths. It is human nature to get close to nature, the coldness of Geo-tourism and the vitality of Eco-tourism can form a complementary relationship, so that Geo-tourism can get green nutrition help.

4.4.4. Geo-tourism and adventure tourism mode

There is a natural connection between Geo-tourism and adventure tourism. Geoscience resources such as karst caves, Tiankeng, earth cracks, rifted valleys, deep canyons, etc., will arouse the curiosity of tourists and make them want to explore to satisfy their curiosity. There are many successful examples in Iran.

4.5. Strategies for the Development of Geo-tourism

Some strategies to achieve the development of Geo-tourism , are suggested as follows:

- Identify study and introduce Iran's geology attractions and add them to the country's Geosites list.

- Introduce historical, ancient, cultural, health centers and ,etc. ,as Geosites.

- Surveying the influential factors of a phenomenon to protect them and prevent their damages.

- Do the necessary affairs for a universal record of Iran's potential Geoparks in the UNESCO Geopark list.

- Providing tourism infrastructures such as access roads, accommodation, and welfare, security, signposts, etc.

-Introducing Iran's geology attractions to tourism fans in national and international eras via advertising.(Yazdi et al., 2012)

- Creating and developing tourism land tours in tourism agencies by training the managers and employees of these centers.

- Support surrounding residents of Geoparks and Geosites in the establishment of welfare facilities, shopping centers, entertainment places, etc.

- Promoting the aboriginal culture and education of Geosites in providing guidance and appropriate services to tourists.

- Establishment of a Geo-tourism exhibition and introduction of Iran's capabilities in different places of Iran.

- Providing the necessary infrastructures for producing and providing of the local products surrounding Geosites.

- Attention and promotion the healing properties of some Geosites such as mud volcanoes, salt domes, hot springs ,etc.

- Allocation of budget and support of active researchers in this field.

5. Discussion and Conclusion

Geo-tourism "is an innovative tourism model based on the existing foundation, focusing on improving product connotation, paying attention to in-depth development, and realizing integration, and interconnected development. It is not a thinking revolution, but a practical model transformation and promotion strategy. For many geological-tourism scenic areas that are still within the life cycle but are not tepid due to many problems in planning, development, and management, it can regard as an effective way to bring changes in appearance and performance in a short time, and can be thoroughly tested on the premise of scientific demonstration and investment. Accuracy the economic performance of countries that are successful in the tourism field, we realize that tourism can have a significant impact on income and economic growth of the country, and sometimes it acts more successfully than the essential industries. Therefore, tourism development, as well as Geo-tourism, is one of the effective ways to the country's economic dynamics. Geo-tourism can harmonize most with sustainable development and all economic, cultural, social, and environmental dimensions. Therefore, the necessary infrastructures should be provided for Geo-tourism development and pave to achieve the above goal. Iran's land has the most diverse landforms and new geology phenomena according to climates and geology situation. The availability of these tourism natural areas, besides ancient cultural and monument's facilitates Geo-tourism development. In this regard, the introduction and creation of Geosites and Geoparks can be effective in adding scientific content and making tourism professional as well as the local economy and creating jobs besides preserving geology.

Heritage and prevention of land conservation and environmental elements related to industrial societies. The proximity of a lot of Iran's potential Geoparks to monuments, cultural, and biological phenomena ,as well as coordination of this situation with the UNESCO index ,cause the situation suitable for providing the necessary infrastructures for the record and list of UNESCO universal heritage. According to the increasing development of the world Geoparks and competition in attracting tourists via countries that have Geoparks, responsible persons of the related organizations should try to provide necessary infrastructures for a universal record of Iran Geo-tourism potentials at the list of UNESCO organization's Geoparks with more

programming, management ,and proper acknowledgment and do the necessary affairs for development of Geo-tourism, the attraction of foreign exchange and sustainable development.

To achieve the development of Geo-tourism also, some strategies are suggested ,such Identifying studies and introducing Iran's geology attractions ; introducing historical, ancient, cultural, and health centers; surveying the effective factors phenomenon to protect them and prevent their damage, Doing the necessary affairs for universal record of Iran potential Geoparks in UNESCO Geopark list, Providing tourism infrastructures, Introducing Iran geology attractions to tourism fans, Creating and developing tourism land tours ,Support surrounding residents of Geoparks and Geosites, Promoting the aboriginal culture and education of Geosites, Establishment of Geo-tourism exhibition and introducing Iran capabilities in different places of Iran, Providing the necessary infrastructures for producing and providing of local products surrounding Geosites, Attention and promotion the healing properties of some Geosites , Allocation of budget and support of active researchers in this field.

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