

Exploitation and Sustainable Development of Tourism Geological Resources in Liaoning Province of China¹

ETUDE DE L'EXPLOITATION ET DU DEVELOPPEMENT DURABLE DES RESSOURCES GEOLOGIQUES TOURISTIQUES DE LA PROVINCE DU LIAONING DE CHINE

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Abstract: As one kind of theory concept, the sustainable development contains the extremely rich thought connotation. Its thought has risen to the present ethics view; therefore it may seep into the human consciousness and the ideas, and can instruct the people to think and the implement motions. The article has mainly discussed the tourism geology resources concept and characteristics. Additionally, the paper considers the existing problems and proposes the countermeasures of the exploitation and sustainable development of the tourism geology resources in Liaoning, China.

Key words: tourism geology resources, sustainable development, countermeasures of exploitation

Résumé: Comme un concept théorique, le développement durable englobe des connotations extrêmement riches. Ce concept a été érigé au niveau éthique de sorte qu'il pénètre la conscience et l'idéal des hommes et peut apprendre les gens à penser et à agir. Cet article examine principalement le concept de ressources géologiques touristiques et ses caractéristiques. D'ailleurs, il étudie les problèmes existants et propose des contre-mesures en ce qui concerne l'exploitation et le développement durable des ressources géologiques touristiques de la province du Liaoning de Chine.

Mots-Clés: ressources géologiques touristiques, développement durable, contre-mesures de l'exploitaton

1. THE CONNOTATION OF THE TOURISM GEOLOGY RESOURCES

Concerning the connotation of tourism geology resources, different scholars have different understandings. For example, one connotation of it is defined by "China tourism geology resources diagram manual" as 'the geology historic relics with tourism values with and mankind's movable historic relics directly related to the geology bodies'. For another instance, Feng Tiansi generalizes the geological tourism resources as 'the natural resources come from the geology function can be called the geology tourism resources' in "The Chinese geology tourism

resources".

Combining the concept of the tourism resources in "China travel the resources census outline" and from the angle of tourism, this paper thinks the tourism geology resources should be those geological things and phenomena that can draw on tourists' motives, be used by tourism industry and produce the economic, social and the environment effects. They include the geology historic relics, geological bodies, historic relic of mankind's movements and geology phenomenon, which have something to do with the geology function.

Chen Anze from China tourism and the ground study committee points out that the geology historic relics are the viewable and readable natural records during the process of earth evolvement and the typical natural databases providing the interaction among the

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lithosphere, biosphere, hydrosphere and ionosphere and the samples of earth crust evolution, the flood and field changes and living creature evolution. They belong to natural inheritance and are a kind of special natural resources. They have the characteristics of research, education, spread of science and technology, living creature environment, history and culture. (Chen Anze & Lu Yunting, "The Tour Ground Studies General Outline", the University of Peking publisher, 1991). The concept of the geology historic relic separates the broad sense and narrow sense. The geology historic relic of the broad sense is to point the geology view and geology phenomenon. The geology view means in the geology history the period, the formation of historic life relic and geological construction relic reserved in rocks under the function of inside and outside geological strengthens. The geology historic relic of the narrow sense means the ammonite thing fossil habitat, ancient glacier historic relic, the geology disaster ruins and historic relic and the geology structure section etc.

2. CHARACTERISTICS OF TOURISM GEOLOGY RESOURCES

Tourism geology resources are the material resources parts in the tourism resources because they are closely related with geology functions and the geology bodies. As a result, they have own special characteristics.

2.1 Property of the fixed position and the lasting of the time space

Property of the fixed position and the lasting of the time space can be pointed that the tour geology resources which have certain time and the fixed regional space.

Seeing from the region, the tour geology resources have certain region space, and can't be moveable. And the tour geology resources not only occupy certain space positions, but also have some certain distribute regulation because they are influenced by many factors such as rock, structure, geography, hydrology, weather, hydrology geology, flood and field and a long-term activity of mankind.

Seeing from time, the tour geology resources compared with the other natural tourism resources, the seasonal change is not very obvious, but almost never seasonal, in addition to the weather geography. The sudden and natural disaster, the long-term outside functions can change the appearance of the geology, but they are hard-anticipation-mutations, especially the speed of the geology function is very slow moving. For the person's life and social history, changes of some geology views and the geology phenomenon can't be judged with human eyes. So they can neglect and don't be accounted in the development of tourism. Therefore tourism geology resources have the property of lasting.

The tourism geology resources are formed in the certain geology history and certain geology environment, and they have the property of the fixed position and the lasting of the time space, so we have to notice the protection issue of them in the development process, otherwise this kind of precious geology inheritance will disappear.

2.2 Irreproducible tourism resources

The tourism geology resources can't be reproducible. That means when mankind's activities or abrupt affairs break the material parts of the tourism geology resources, these materials will be subjected to damage and can't recover their original visages. This remind us of protection in the process of development and usage of tourism resources, and carry on the evaluation and viability assessment of science to make the tourism geology resources get everlasting exploitation.

2.3 Properties of their popularization of science

The tourism geology resources have the properties of science and popularization. Compared with other tourism resources, the tourism geology resources have more outstanding science properties. They are natural formation of the geology bodies or the geology phenomena and have a certain typical model, so they have very important instructive meanings and references values to the geology research, and some tourism geology resources are even indispensable materials of the geology research. In the meantime, in order to strengthen a science and technology content of tourism products, exalt the quality of the tourism products, it needs to develop the tourism geology resources, publicize geology scientific knowledge about earth origins and evolution and the geosciences foundation knowledge and propagandize the protection consciousness of the earth and let visitor can both make sight-seeing trip and get the geology knowledge to spread.

2.4 Ages and variations of geology tourism resources

The characteristic of the ages of tourism geology resources means, along with the development progress of the society, the exaltation level of people's understanding and technological advance, many things and phenomena which originally are not tourism geology resources become tourism geology resources now. For example, taking a look at volcano spray which originally was a how brave affair have already developed to be an important tourism geology resources tour item in Japan now.

2.5 Indetermination of the values of the resources

Values of the general resources mostly can be computed with the numerals, but that of tourism the geology resources cannot. Because tourism geology historic relics in the geology resources form through ten thousand years can be rarely seen, irreproducible, have the sense of vision flimsiness, can't be restored and moved, the market prices of them are hard to be measured. Moreover because of the difference of mankind's' understanding level, taste level and the development level of society, people are easy to use various judgment of standard of the geology resources. In the end, tourism geology resources have the indetermination of the values.

2.6 Cultural characteristics of the tourism geology resources

The tourism geology resources are the tourism resources, so they have the same cultural attributes as tourism resources. For the tourism geology resources, people can enjoy the great universe, broaden minds, get cancellation of agony and carry out the ego values through the sightseeing and tourism activities, which can be said that five layers of demand of Maslow's theories are satisfied. The contents of this kind of cultural attribute contain are abundant.

3. TO ADVANCE THE PROBLEM OF EXPLOITATION AND SUSTAINABLE DEVELOPMENT OF LIAONING'S TOURISM GEOLOGY RESOURCES

The basic form of the tour geology resources development is to build up the geological and historic relic districts named geological park. For long time, the ordinary people didn't give a concern to the geological park from the angle of science, but pay more attention to its tourism values. Accompanying with the increment of the strength of mankind's economic activities, tourism exploitation and development of tourism geological resources is attached more importance than protection of them. As a result, it cause a lot of precious geology resources to be subjected to be damaged in different degrees, and a rigorous realistic problem of the geological park.

3.1 Unclear understanding and scarce research of geological parks

At present, many people recognize geological park as popular scientific tourism and the geological vestige protection in the narrow sense, which is absolutely insufficient. When developing geological park, many local government lack the thorough investigation and

study, the comprehensive scientific proof, appraise and the plan. As a newly emerging thing, its research and investigate are also insufficient in many aspects such as e synthesis appraisal, work depth, the research degree, and the multi-disciplinary comprehensive investigation, which still needs the joint efforts of geological experts and tourism workers, as well as the social propaganda to let more people care about, research and construct geological park.

3.2 Environmental problems of geological parks suddenly reveal

3.2.1 Geological parks ecological environment system is out of balance

Tourism resources are not rationally developed and used, which aggravates the imbalance between supply and demand of the resources. The ecosystem destruction and the environment degeneration by manpower, business and urbanization become the main barrier for geological parks' sustainable development. Besides, the nature and the humanities landscape are extremely uncoordinated caused by newly built buildings, which breaks the integrity and unity of surrounding landscapes.

3.2.2 Serious environmental pollution in geological parks

Because our country has a large population and the tourism develops rapidly, but also lacks the plan and the management, national's ecology consciousness is not good. You may say where the tourists go, where the ecology is destructed and environment is also polluted. In the scenic spot, the sanitary sewage increases; trash and waste sharp increase as well. The high density traveling stream of people and the massive uncivilized traveling behaviors cause the environment to be destructed.

3.3 The image of geological parks are not prominent compared with scenic areas which causes the development barriers

The traveling development pays great attention to the scenic areas. Because our country scenic areas have multi-purposes, it causes the subject image of tourism development is not to be prominent. Some scenic areas not only are the forest park but are the geological parks as well, which causes subject functions of them are not prominent and the development barriers. In the traveling development, we must carry on the full feasible proof, construct the geological park with emphasis, specially carry on the good plan in the function districts and enable the tourist to obtain the specialized knowledge about tourism knowledge during the travel.

3.4 Human resources management problems of geological parks has seriously affected their sustainable development

In management system: the HR management system of the geological park is not perfectly formed. Our country traveling scenic area management system is not straightens out ye, especially in the cross administrative scenic areas. Traveling scenic areas without good HRM system are hard to realize the sustainable development. According to the staff quality, Jobholder's cultural quality and the specialized quality urgently await to enhance. Because of the contempt on training and disparaging willingness to introduce the specialized talented experts in traveling management, this kind of situation always cannot be solved. And on the other problem of the personnel, staff is insufficient in the busy season, and the staff leaves unused in the off seasons

All aspects above are the important problems faced by our country's geology park's sustainable development. Moreover, other series of hindrance problems exist as well, such as marketing and relations between geological parks with other traveling benefit bodies. Those are also deeply affecting the sustainable development of the geological park.

4. THE COUNTERMEASURES OF THE EXPLOITATION AND SUSTAINABLE DEVELOPMENT OF THE TOURISM GEOLOGY RESOURCES IN LIAONING

In the sustainable development theory and under the instruction of transformation thought of geological park's sustainable developmental strategies, the countermeasures, which the geological park sustainable development must adopt, are as follows:

4.1 Strengthening the fundamental research of geology and implementing integrated development pattern among production, study and research

As a high tasty scientific tourism activity, geological park's scientific content and the technology content must obtain fully manifests in the scenic area's development, the construction and the protection.⁴

The government must fully display the leading role, guide and promote the integrated development pattern among production, study and research. It will also fully encourage the enthusiasms of enterprises, the universities and the scientific research units and the promotion of the profession cooperation, impel the

⁴ Nagle G, Spencer K, *Advanced geography through diagrams[M]*. Oxford: Oxford University Press, 2002. 115—125.

fundamental research and the practice unifies, and pushes the geological park development together.

4.2 The theme of geological park localized "as eco-tourism"

The eco-tourism is the important choice to coordinate relations between the human and the geology. It is the traveling form to push the harmonious development between human and the nature.⁵ In the geological park, geological vestige has the typical characteristics of the monopoly; the development eco-tourism conforms to the geological park construction requirements. In the eco-tourism activities, the tourist unceasingly discusses the natural mystery, promulgates the natural law, and receives the vivid environmental protection education.

4.3 Training the traveling specialized talents for the geological parks

The geological traveling resources characteristics request the high quality talents majored in tourism, environment and geography. The geological park should reasonably to place the staff, tap staff's potential, carry on training of relative knowledge to the staff, which has the vital significance to the geological park sustainable development.

4.4 Strict control on Geology Park's capacity

The miniaturized traveling scale is the ecological environment quality of geological parks.⁶ Therefore the geological park tourist's quantity must in the reasonable scope. The traveling scenic areas must know saturated degree and the hazardous affects of the overload of tourists, and they should grasp the passenger capacity in traveling scenic area as necessary as possible, pay the attention to the causes for saturated degree and the overload situation, and finally try to take the certain measure to control the tourist quantity in the reasonable scope.

4.5 Increasing propaganda dynamics and enhancing the geological park's well-known ness

The geological park promotion is to disseminate contents and the values of tourism products and services

⁵ Garrett Nagle, Kris Spencer, *Advanced geography through diagrams[M]*, OXPORD university press, 2002,8

⁶ Niu Jiqiang & Xu feng, *Geology landform traveling resources development research in Mount Lushan area [J]*, Transaction of Xin Yang normal college(Natural science edition), 2004(4): 212—213.

to potential tourists, and establish potential tourists' cognition to the scenic area images. The traveling scenic area products' promotion must highlight the product characteristic, strengthen the competitive advantages, set up the brand superiority in order to stimulate the traveling demand and guide the traveling consume.

4.6 Setting up the crisis consciousness and strengthening the geological park' crisis management

The consciousness of crisis management is the important symbol of modern management movement towards the mature. The crisis of the geological park development possibly is caused not only by environment stability of the periphery geological

landform, the disaster and the weather situation and so on, but possibly by the scenic area outside big environment as well. The establishment of crisis early warning system of Geology Park can process the security problems, which possibly appear .as necessary.

4.7 Development of tourism industry persists the economic circulation development

No matter is in the traveling development, the design and the management process, circulation economy is all must be insisted. We must organize the tourism industry reasonably, carry on the tourism development, and pay attentions to environment protection, thus explore a new way for tourism economy development.

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