Geotourism as a Contemporary and Sustainable Type of Tourism

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Abstract

The contemporary concept of creating and development of geotourism and geoparks is due to the expanding environmental awareness among tourists and providers of tourist services during the last decade. The development of this type of tourism based on sustainability, conservation and enhancement of cultural and natural heritage in established geoparks as protected areas has spread in many destinations around the world and represents an outstanding opportunity for creating an attractive tourism brand. This will enable the destinations to attract tourists who pursuit quality services and products on one hand, as well as to facilitate the protection of tourist resources from excessive exploitation and devastation from the saturation that occurs during the concentrated and short tourist season. This however, is achieved only by diverting the strategic developmental directions of tourism towards new more sustainable forms. Linking geology and tourism is a relatively new idea for tourist destination development. Opposed to eco – tourism, which puts the focus on the protection of natural resources on one hand, geotourism on the other hand, not only protects but also stimulates the improvement of the overall natural and anthropogenic heritage through an integrated networking cooperation of all involved stakeholders.

*Keywords: geotourism, geodiversity, geoparks, sustainable tourism, tourism brand*

**Introduction**

Contemporary knowledge of tourist flows and demand for tourism products shows changes in the development directions of the tourism industry. Tourism demands become more sophisticated while choosing a travel destination where tourists can meet their needs, is becoming unpredictable. There is a need for given regional units, and even countries, to develop specific recognizable brands through which all providers of tourism products and services would have a joint appearance on the tourism market. Creating a tourist destination with its own individual offer that is based on sustainable tourism development can be seen in the contemporary concepts of creating and developing geotourism activities and geo - parks. The relative unfamiliarity of the Republic of Macedonia as a destination for foreign tourist clientele, as well as the fact that it is an area which abounds with a rich diversity of natural and anthropogenic heritage, represents an extraordinary opportunity for creating a branded destination, and in that sense to develop geotourism activities on its territory. Geotourism and the creation of geo – parks represents a program of networking and strictly controlled development encouraged and supported by UNESCO through the European Geopark Network. Contemporary research shows that tourists are becoming more interested in studying the geology of the Earth. Evidence for this is the expansion of the European and Global geo – park networks with new members each year.

**Values of geodiversity**

Geotourism is based on the values of abiotic environment. Specifically the basis of this selective form of tourism is geodiversity. Geological diversity is the diversity of geological, geomorphologic and soil forms and phenomena. It contains their constituent elements, relations, characteristics, interpretations and systems. The issue for the importance of its conservation and management is being brought up.

In order to determine the tourism value of geodiversity, first it is needed to identify the different values ​​that geodiversity can have for man and the importance of preserving it.

These values ​​can be used in tourism terms. The division of the values of Earth resources according to Bennett and Doyle is as follows[[1]](#footnote-1):

* Indigenous value;
* Cultural value;
* Aesthetic value;
* Economic value;
* Functional value;
* Scientific and educational value.

***Indigenous value*** is determined by the ethical beliefs that given resources are important simply because they are what they are, rather than for what they might be used by man. Specifically, the value in the foreground puts diversity of nature, despite its utilitarian value. This value manifests difficulties for its correct definition because it involves ethical and philosophical dimensions about the relationship between society and nature and that have changed through history and in different regions.

***Cultural value*** is the value that is given by society on certain aspects of the physical environment that have social significance. Included are:

- Folkloric value;

- Historical -archeological value;

- Spiritual value;

- Value as sense for the surroundings.

As examples for the individual cultural values ​​that are important to tourism, numerous spatial entities on the territory of the Republic of Macedonia can be considered.

Thus, folkloric value is shown in numerous sites in the republic. As an example for it can be mentioned the Devil’s Wall near Sveti Nikole which exact origin has not been yet determined. Initial estimations are that it has been created naturally by erosion. It is important to say that there exist many legends which make it an attractive locality for tourists, and measures for its future protection are needed. Interesting to mention as another important example in the Republic of Macedonia is Kuklica, in Kratovo, which is a geological reserve and famous for its stone pillars that ressemble dolls. Around them exist many legends that give a mystical dimension of the site. Despite these beliefs it has been proved that they were formed as a result of natural erosion processes. The diversity of volcanic rocks led to the creation of such interesting formations. Besides the so called stone dolls, fossil remains of petrified wood have been found in this area, similar as in the geo - park on the island of Lesbos and the vicinity of Chemnitz - Germany. Therefore, Kuklica belongs to one of the three existing locations with petrified trees.

Historical - archaeological value manifests diversity and uniqueness in the entire spatial region in this part of Europe. There are numerous examples in the Republic of Macedonia for the existence of the first civilizations in Europe through numerous prehistoric archeological sites. Until today more than 4.000 archaeological sites in this region have been excavated. As an example in the Republic of Macedonia where in the past locals were using natural materials that were found in the immediate vicinity of their residence, represent the buildings and homes built in the Reka - Miak region, where the builders became renowned for their specific building techniques and mastery. As another example for successful using the morphology of the area of living by ancient civilizations specifically can be mentioned the construction of the megalithic observatory Kokino that can even be mentioned among the most important and one of the oldest ancient observatories in the world with more than 3800 years old. It is believed that even it was considered and used for various religious rites and ceremonies.

All human societies attach spiritual or religious significance to the natural environment. Legends and stories about the genesis of man are associated with Earth and its geological forms and phenomena. Thus, a large number of natural sites have been considered sacred, where people can communicate with their spirits and gods. In Macedonia religion and beliefs have deep roots. Examples for holy sites in Macedonia exist many. It is believed that most churches are built in places that before the emergence and expansion of Christianity in this region had a great spiritual importance. Thus, there exist more than 2500 churches and monasteries in Macedonia. Other important holy places in Macedonia that were used in the distant past and still are considered religious sites are: Cocev Kamen, Lesnovski Crater, a large number of cave churches and so on.

Many of today's societies feel a great connection with their physical environment and manifest connections which are based on the values in cultural and economic terms.

***Aesthetic value*** of geodiversity is a less tangible concept. It refers to the existence of aesthetically attractive - motivational elements of the region. This includes visual, auditory and olfactory appeal. Aesthetic appeal can be derived from the great diversity of macro and micro landforms. The entire territory of the Republic of Macedonia is recognizable for its outstanding values ​​which are characterized by aesthetic features.

From an ***economic perspective*** there exists an endeavour to determine the financial value of the environmental elements. Mineral resources that have economic value can be divided into: mineral fuels, industrial minerals, metals, precious and construction minerals etc. There also could be included fossils, alternative energy sources, as well as soils and landforms. In Macedonia, one of the most significant mines is the Alshar mine, which is important for its mineral Lorandite which is a mineral of thallium and is very rare in the world. It is being used for scientific purposes. The mineral antimony can also be found in the mine. Macedonia is the only place of rubies in Europe. Most can be found in the surroundings of Prilep, and that mostly in locations that are used for exploitation of high quality marble. It must be mentioned that still these findings are under-utilized, since they are being sold on the European and global markets as the less valuable mineral corundum. Other important finds are the findings of gypsum in Macedonia, in the Debar region, which is in third place in the world, for its purity, but has also not been used enough. There also have been found numerous fossils of skulls such as of rhinos and mastodons near Veles, fossils of giraffes, rhinos and deers near Delčevo. Near the village of Old Istevnik remains of mastodon have been discovered and in the village Oresani, Skopje - fossil remains of mammoths. It is believed that the richest fossil areas in Macedonia are in Tikveshija, Veles - orizarski and Valandovo areas.

The economic value of geodiversity through geotourism can determine the existence of certain facts. *First*, there is an increase of the tourists traveling to destinations where alternative and sustainable forms of tourism are being developing, and which include a diversity of geological and geomorphologic forms. Numerous recreational activities like skiing, speleological tourism, glacier climbing, canoeing, climbing, etc., can only take place in specific landforms and geological environments. *Second*, in many regions of the world geological / geomorphologic forms that exhibit a degree of attractiveness are under conservation. Often they are located within national parks or declared as monuments of nature and natural rarities, which are protected from degradation. During the last decade numerous specialized geo - parks for this purpose have been created. Local geological activities and partial tourist products are being developed in those specialized parks. These activities will attract tourists (fossicking, geological trails, visiting museums, visitor and educational centers, etc.).

***Functional value*** of geodiversity consists in the value and significance that soils, sediments, rocks and landforms have in the environmental systems (physical and biological). This value can be divided into *utilitarian* value of geodiversity for man if they are being considering in the places where they have been found without their extraction from the Earth; and value in terms of *providing substrates, habitats and abiotic processes* that allow balance of the processes of the physical and ecological systems.

***Scientific and educational value*** is perhaps one of the most important values. Namely, for determining other geodiversity values, it is necessary to study the physical environment in order to be adequately valued and used. Geological and geomorphologic studies are necessary for the development of geotourism activities in given areas. Inventory, valorization and categorization of various forms must have a primary importance when planning their inclusion in the tourism offer. Geotourism activities are largely based on providing educational information to tourists. Geotourists themselves exhibit greater knowledge of geology and geomorphology as scientific fields unlike in the past.

**Beginnings and development of geotourism**

Geotourism manifests its analog phenomena that may date back to ancient times. Man has been fascinated by various geological and geomorphologic phenomena, forms and processes which he began to visit outside of the place of residence. Thus, we can say that the first organized visits to these values ​​began in the XVII century. Specifically, the first geoconservation activities associated with visiting of caves (Baumannshölle in Germany in 1646). Consequently, the discovery and attainment of caves can be considered as the first analog phenomena of geotourism.

Modern lifestyle has led to increased interest in engaging geotourism activities that has started to occur on a global scale. It can be said that abiotic environment has attracted people since distant times, but only in the last few years, geotourism attractions have become more attractive. This is primarily due to the development of global environmental awareness, combined with the uncontrolled development of mass tourism. Additionally the influence on the study of geology as a science in the educational process should also be mentioned, as well as the promotion of geological concepts through mass media. Geological interpretation emerges as the initiator for awaking the interest of people to visit the newly discovered values. The contemporary form of geotourism as a selective tourism type occurs almost at the same time as the first modern tourist trips. That is, the first tourist trips include elements of geotourism and occur simultaneously with the development of industrialization and transportation (railways). The preconditions for the emergence and development of modern geotourism can be determined. *First*, it was the research and promotion of geological phenomena which helped to increase the interest in people to see and visit those places to see and visit. *Second*, after developing interests by the tourists, the willingness to engage in these tourist movements which had the aim to visit the natural areas untouched by human influence has occurred. At the beginning only the people coming from higher social classes could afford this. As the *third* phenomenon for the development of modern geotourism are considered the development of communication and transport links with these areas which enabled people a relatively easier and faster accessibility.

**Defining and determining geotourism**

When defining geotourism, numerous difficulties in the professional and scientific community can be encountered. Geotourism considered as a system consists of three subsystems. Specifically, these subsystems are: **forms** (landscapes, landforms, sediments, rocks, fossils), **processes** (tectonic, abrasive, climate, erosion, accumulative) and **tourism** (attractiveness, accommodation, package - tours, interpretation, promotion, management) that are being balanced into harmony and accordance, during the performance of geotourism activities. As a spatial entity where successfully all three subsystems of geotourism are being accomplished are the declared geoparks.

Geodiversity and geoconservation represent the resource basis for the development of geotourism within the officially declared geo - parks. Unlike the treatment by the *Travel Industry Association* of the United States of America, where geotourism is being equated with geographic tourism in a given area that includes all the natural and cultural values ​​that make the destination distinctive, the *European Geoparks Network (EGN)* treats the matter in a different manner. Namely, geotourism represents a segment of the activities undertaken by the geopark within its confines.

The sublimed definition of geotourism would be: *Geotourism represents a contemporary niche form of tourism with specific interest that is being developed in a given area because of its geodiversity values (the sum of geological, geomorphologic and soil phenomena, processes, relations, characteristics, interpretations and systems), combined with other natural (biotic) and anthropogenic values; ​​facilitates geoconservation through sustainable development, interpretation and promotion of these values ​​in that area, which generates benefits for the local communities.*

According to the above said, the essential features that distinguish geotourism as a separate tourism form can be determined. These geotourism elements contribute to the establishment of this tourism type. Thus, it involves given interdependent components that must be present in order to develop authentic geotourism.

There exist five key ***principles*** that are fundamental to geotourism[[2]](#footnote-2):

* + *Geologically based*

Geotourism is based on the Earth heritage with a focus on its geological forms and/or processes. Unlike ecotourism that depends on the natural environment where it is being developed, geotourism can be developed in natural as well as in urban environments. Resource basis of geotourism is the abiotic environment or the geomorphologic and geological heritage. It is actually the central motive for visiting those areas. A given area must abound with aesthetic and / or significant scientific and educational values if its aspirations are to be declared as an official geopark in the European (Global) Geopark Network.

* + *Sustainable*

Geotourism supports economic sustainability, causing benefits to local people as well as geoconservation. The adequate management of geoparks should create a balance between the usage of these resources on the one hand, and conservation on the other. It assumes an assurance that the type, location and level of geotourism exploitation not cause any damage to the geological features of the surrounding areas, especially in the natural settings.

* + *Geologically informative*

The education for landforms and their processes, as well as geo - interpretation are important tools in creating positive geotourism experiences. Geotourism attracts people who show interest in interacting with the environment in order to expand their knowledge, awareness and concern.

*- Creates local benefits*

Involvement of local communities not only creates benefits for the communities themselves and the environment, but also improves the quality of the tourist experiences. Locals can be involved in various geotourism and geoconservation activities such as providing educational activities, provision of services, facilities and products. The benefits of geotourism development can be financial - the revenues from geotourism activities in an area can be used to finance geoconservation projects.

*- Satisfaction of tourists*

Positive experiences of visitors and tourists of the geotourism activities are necessary for long-term development of this tourism type. In this regard it is worth to mention the importance of visitors’ and tourists’ safety during the visit. Geo-interpretation should be of high quality and should correspond to the category of visitors. Geotourism experiences should match or even exceed the realistic expectations of visitors.

**Parallels between geotourism and ecotourism**

There exist different positions in the scientific and professional public towards what actually geotourism is. Often it is equated with ecotourism, but it should be emphasized that it exhibits other characteristics that differentiate this type of tourism as a separate one. There can be identified several similarities and differences between ecotourism and geotourism:

* Namely, the two forms of tourism occur in a natural environment. However, geotourism can even be developed in an urban and industrialized environment.
* Ecotourism encompasses natural values ​​in a given area (flora and fauna, combined with cultural heritage), while geotourism has its main focus towards the abiotic (geological and geomorphologic) values, which can be combined with other natural and anthropogenic values.
* The main focus of both forms of tourism is placed on sustainable development. Ecotourism has a general approach towards tourism development, while geotourism can be specified on a strictly defined area – a geopark.
* Ecotourism and geotourism initiate protection and conservation of natural values​​. The difference of geotourism is that it aims towards protection, and the main focus is even enhancing and improving the values, in order future generations equally to enjoy them.
* Both forms are directed towards generating benefits for the local population and have unlimited growth potential.
* In both types of tourism educational activities are included, but in geotourism they play a relatively more important role and have a more centralized position in the tourist offer.

**Conclusion**

In the contemporary and complex market environment which is characterized by high competitiveness, regions that offer tourism products and services begin to consider themselves as complete areas and destinations with a defined brand and distinctiveness. Unlike in the past when there existed individual offers of partial products by individual service providers within the mass tourism, in recent years supply has shifted towards providing complete service packages which are created for specialized and defined tourist clientele. In these conditions the Republic of Macedonia is still a relatively unknown destination for foreign tourists. The affirmation of such types of tourism which are based on sustainability, conservation and enhancement of anthropogenic and natural heritage by the domestic population represents a modern phenomenon and need. The specialization of the contemporary tourism offer with complementary elements, the joint performance at the tourism market, the emergence of sustainable niche tourism forms as well as the involvement of all stakeholders in the tourism developmental processes, begins to occur also in our country where diverse opportunities for tourism development can be identified, and in that sense also the development of geotourism.

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