

In Critique Of History, Concepts And Approaches On “Why Should We Make Geoparks?”

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ABSTRACT:- As a result of the unconscionable use of natural and cultural resources throughout human history, irreversible destruction has occurred on nature. Human beings have developed important receptive attitudes and behaviors to these problems within the framework of "Nature Conservation Concept". In many countries around the world, the properties of natural, historical and cultural values have been preserved and the sustainable uses of these values have been planned. Such areas have been declared “protected areas” as a result of national and international efforts. These initiatives have led to the emergence of a variety of usage and concept development. By recognizing that the protection of values is a common problem of humanity, the “modern concept of protection”, which aims at rational protection and use, has gained importance today. The wide scope of the concept has led many disciplines to approach this concept from their own point of view and with the definitions that defined, different concepts have shown up.

Features of natural heritage sites were identified with the establishment of the UNESCO World Heritage Committee in 1972. The features revealed are considered to be the beginning of a new understanding of Nature Conservation and management. Instead of isolation, prohibition and dehumanization in nature conservation, the “Geopark” program has been initiated which focuses on the sustainable use and rehabilitation of the site. Geoparks have emerged as the latest ring in the management form of natural heritage sites aimed at ensuring sustainability. Each discipline approached the concept of Geopark from its own perspective and different concepts were come up by making different definitions.

With the work, the Digne Declaration published in 1991 and the “United Nations Conference on Environment and Development” held in Rio de Janeiro in 1992, as a priority, within the framework of "decisions on environmental protection, environmental management and promotion" these questions: “How did the concept of nature conservation evolve into the concept of geopark?”, "What is a geopark?" and “Why should we make a geopark?” scientifically explained. For this purpose, thesis, papers, articles, reports and books were scanned and the information obtained was compiled. Emphasis has been placed on definitions related to the contemporary concept of nature conservation and management. Studies related directly or indirectly to geopark applications have been examined.

Key words: Nature Conservation, Geological Heritage, Geopark, UNESCO, Sustainability.

I. INTRODUCTION

Human beings perform life activities in accordance with the characteristics offered by the natural environment in which they live. In other words, man adapts to geography. But as the needs of humanity begin to increase, it begins to adapt to the space in which it lives with technology, which is an indicator of its knowledge. Numerous changes have occurred in both the physical structure of the Earth and the forms of life that are forming on it. Unplanned growth caused by population growth, industrialization, urbanization, and unconscious use of natural and cultural resources have caused irreversible damage to nature. In the historical process, human beings have tried to find solutions to the problems. In particular, the problem of limited natural resources on earth and the danger of extinction has attracted the attention of all public opinion, and the “Nature Conservation” has begun to come to the fore (Kılıç ve Caravankiran, 2009).

The term of “protecting” in the dictionary sense is to keep someone or something away from external influences, danger, a difficult situation, to spare, to prevent dangerous, harmful situations, to prevent an ongoing situation from changing (TDK,2009). Conservation, when considered together with the term of nature, is the forward-looking attitude and actions taken against the erosion,degradation, destruction or loss of nature (Kiper, 1998). In the context of natural and historical heritage, "conservation" encompasses two main approaches that are intertwined and contradicted over time. These are:

- (a) to restrict all types of permanent, i.e. irreversible physical intervention and the use of these interventions, taking into account natural and historical heritage,
- (b) to direct irreversible physical interventions and its forms of use when necessary, taking into account the use of natural and historical heritage.

Nature conservation is the comprehensive protection of the natural environment and its elements in order to ensure the life principles and assets of humans, animals and plants in a balanced structure (Dudley,2008:261). The rapid growth of the world's population and the growing environmental problems after the Industrial Revolution have increased the loss of biodiversity and the consumption pressure on natural areas and natural resources so nature conservation has become a priority requirement. Due to the lack of physical boundaries of natural systems and the elements it contains,it has emerged that a cross-border holistic approach should be adopted in the actions to be taken to protect nature (Caner, 2007).

Recently, there has been an increase in the view of using natural resources, especially in tourism, in addition to culturally valuable resources. The most important factor in this is the formation of a "quality of life perspective" approach, which is measured by cultural, recreational (relaxing, entertaining) and traditional values of today's conditions. The quality of life approach within the scope of nature protection is to provide areas where people can benefit from the natural environment, and the protection of natural life and landscape.

Many disciplines are involved in investigation, evaluation and sustainability planning when it comes to natural life and nature conservation. There are opinions and practices regarding the protection of nature and the effective use of nature. The last study is the "Geopark" application, which is put forward by UNESCO as the management plan of natural areas and evaluated by different disciplines.

II. AIM

With this study, the publication of the Digne Declaration in 1991 and the "United Nations Conference on Environment and Development" held in Rio de Janeiro in 1992, primarily within the framework of "environmental protection, environmental management and promotion decisions", "How did the understanding of nature conservation turn into a Geopark concept?", "What is a Geopark?" and "Why should we do Geopark?" It is aimed to give a scientific explanation to the questions.

III. DATA AND METHOD

In this study, meta-analysis method was applied. The data sources of the study constitute the information obtained by scanning thesis, papers, articles, reports and books. The information is compiled under two main headings, “Why should we make a geopark?” scientific explanation has been made to this question in the findings and discussion section.

1. NATURAL HERITAGE AND NATURE CONSERVATION AREAS

From the moment human beings began to engage in agriculture, they exhibited some negative behavior on nature: spoilage, consumption and pollution... This change and transformation was accelerated by the Industrial Revolution. The population continues to grow, with the development of technology, industrial activities increase, develop and transitivize. In parallel with all these developments, threats and pressure on the environment are increasing. Great importance is attached to developing international behavior against these threats. It has become a necessity to protect natural areas in the face of the rapid consumption and destruction of nature, the phenomenon of "Cultural and Natural Heritage" has been created and it has been accepted that the protection of values is a common problem of humanity. Preserving the common heritage of humanity is possible by preserving the environment in which they take place. This approach leads us to the term of “nature conservation areas” (Zafer,1991:2).

Humanity develops and tries to implement various methods of Nature Conservation in order to protect the rapidly disappearing nature and pass it on to future generations. But the issue of deciding on the management of an area for conservation purposes is also a process and again requires the resolution of some disputes (O'conner et al.,1990). These disputes can sometimes show an economic and sometimes scientific character. This situation; the contradictions that emerge over time, the contradictions arising from the use of resources and the increasing participation are also reflected in protected area management approaches (Beresford & Phillips, 2000). These changes over time have led people to seek different methods of protection.

Today, the term of “modern conservation” has emerged, which aims at rational conservation and use of Earth Resources (Ervin et al.,2010). This term is based on the combination of the following two principles, which have long been accepted today as a basic approach (victory, 1991: 11):

- 1) Planning resource management based on accurate and precise inventory
- 2) Taking protective measures to prevent consumption of resources.

Conservation initiatives were formed in the form of "putting the resources under lockdown" against the destructive effects of development activities by the powerful and elite who wanted to benefit from the beauty of nature. However, today, protected areas are regions with certain boundaries, where education and socio-economic development are aimed for the broad public with an appropriate organization and management.

1.1. Towards Geopark Understanding (Historical Process)

Considering the history of nature conservation, it can be seen that a new term was born roughly every century. "Term of nature conservation" has a historical course that has to be handled since the ancient period. The first conservation term in history originated in 252 B.C when an edict was issued by Emperor Asoka of India for the protection of animals, fish and forests. In 1084, the King of England, William I, ordered a land survey for conservation purposes (Ant and Stipproweit, 1985). This work, published as "Domesday Book", was a book that formed the basis for preparing realistic plans for the management and development of the country, including the evolution of forests, fisheries, agricultural lands, hunting reserves, fertile soil resources all over England (MacKinnon et al., 1986: 295).

With the support of UNESCO (United Nations Educational, Scientific and Cultural Organization), established in 1946, modern practices for the protection of natural heritage began with the establishment of the IUPN (International Union for the Protection of Nature) in 1948. In 1958, it changed its name to the IUCN (International Union for the Conservation of Natural Resources). In 1972, with the establishment of the UNESCO World Heritage Committee, the characteristics of areas of universal value were determined. With the publication of the Digne declaration in 1991, declaration of “It is time to recognize that human life is once lived and that the life of the Earth is one. The Earth feeds us. Each and every one of us is committed to it.” formed the term of geological heritage. In addition, with the "United Nations Conference on Environment and Development" held in Rio de Janeiro in 1992, it was decided to realize environmental protection, management and promotion of the environment as a priority.

In the expressions used in the declaration regarding the environment, the necessity of protecting the physical environment has emerged. Two main factors are effective in this. These are (Gumus, 2008);

- a. With the developing technology, the demands have increased and the opening of hard-to-reach places to meet this demand has started to threaten the nature. With the effect of mining, settlement and agricultural activities, the environment is rapidly changing, deteriorating and disappearing.
- b. Understanding the scientific and aesthetic values of geological and geomorphological formations as well as the raw material values.

Nature conservation has gained a new dimension with the term of geological heritage. Some innovations have come to the conservation of natural heritage with geotourism. Sustainable use has been introduced instead of prohibition and dehumanization. In addition to increasing awareness and knowledge, human-induced environmental pressure has also been effective in this development (Gümüş, 2019a:18). In the historical course of nature conservation areas, differences in approach are observed in terms of purpose, management, form, local people, context, perception, management techniques, finance and management skills (Thomas, 2006:34). Looking at the historical course of the approach, it can be thought that it would be correct to group it into three periods. These periods are:

1. Prohibition and dehumanization period (Begins in 252 B.C)
2. The period of lockdown of resources against destructive influence (begins with the proclamation of the U.S. Yosemite Valley National Park in 1864)
3. Modern organization and management period (signing of the “Convention for the Conservation of World Cultural and Natural Heritage " in 1972)

1.2. Nature Conservation Perspectives

The assessment of the historical process of studies on nature conservation provides a clue about the nature conservation perspective. Protection of wildlife, protection of species and genetic diversity during the period of dehumanization and prohibition; ensuring the continuity of environmental services, protecting certain natural and cultural features during the period of lockdown of resources; in the modern conservation period, tourism, recreation, scientific research, education and sustainable use, etc. it seems to serve the purposes.

Today, in national and international platforms, national parks and other protected publications (Nature Park, Nature Reserve, etc.) are more accepted about the "approach to preparing and making management plans", which is a means of managing natural resources (Dudley et al., 2005: 108). Management receives threats that

hinder the development of natural and cultural resource values and uses the strategies of the relevant groups for the purpose of creating plans (Eagles et al., 2002). Today, participatory management plans for protected areas are seen in the world as feasible plans that are agreed on the basis of participation of relevant parties in this process (Ervin et al., 2010: 33). When looking at applications that are considered as Modern organization and management period, we see the evaluation of the term of landscape, which includes the terms of environment, landscape or natural environment. Nature conservation approaches are derived from the term of landscape that includes the environment that human beings affect, shape and are affected by.

The term of space corresponds to the word "landscape" in English and is used as a synonym for the term of landscape. Landscape is used to express the appearance of any space and all of the parts that make up the view (Duncan,1997). The term was first raised by German Otto Schlüter in 1906 (James and Geoffrey,1981). Each landscape can be considered as a place with its own unique character (Meinig, 1979). Lewis (1979) emphasizes that the term is included in different definitions according to the perspective viewed; nature, system, habitat, ideology etc...

If Figure 1 is examined, it can be concluded that nature conservation and evaluation approaches are accepted as natural heritage as a whole, and evaluations are made with four approaches to explain its conservation and sustainability.



Figure 1. Systematic Scheme of Approaches to Nature Conservation Approach.

Since its emergence, the term has been tried to be defined and explained by different perspectives of different eoles (Aplin,2007). Basically, it emphasizes the interaction between man and nature (Fairclough, 2003). Each discipline has approached the subject from its own point of view and has revealed different terms by making different definitions. Geologists have created the terms of geological heritage and geotourism, landscape engineers and biologists have created the terms of cultural ecology and eco-tourism. Geographers, on the other hand, have evaluated the situation by integrating this term in terms of cultural landscape, cultural heritage and nature tourism.

1.2.1. Cultural Heritage Approach

In order for humanity to live its life together with nature in the face of nature, the activities it exposes lead to the formation of a culture. Human beings recognize and describe their living spaces and create a powerful element and a serious source of wealth that strengthens their feelings towards these areas. Human beings leave culture as a legacy not only for the values it has, but also to provide opportunities for learning and development to new generations, to protect and preserve the natural environment that makes people feel good. It is important at this point that the term of cultural heritage is defined as "all material elements and abstract values that were created by previous generations and believed to have national and universal significance" (Gümüşçü, 2018: 108).

All kinds of works and values that come from generation to generation are seen as the wealth of countries. These are named as "Cultural Heritage" because they should be protected by considering future generations. Values that include historical, archaeological, architectural, scientific-technological artifacts and natural monuments and should be protected are considered "concrete cultural heritage".

Culture and civilization are the sum of products that man reveals by processing nature and sometimes destroying it. The components of a region that embody both a cultural feature of the landscape and its interactions are cultural heritage (Panizza and Piacente, 2003: 350). Based on this statement, the destruction of nature, which has increased with the population increase in the last century, led to the emergence of the idea of nature conservation and natural heritage (Kazancı et al., 2017: 3) and explains the evaluation of the term within the phenomenon of cultural heritage.

1.2.2. Cultural Landscape and Eco-Tourism Approach

Man designs his life in harmony with mutual interaction with his environment. The traces of this mutual interaction lead to the emergence of "cultural landscape" or "cultural geographical view" (Gümüşçü, 2018: 6). The view that protected areas are a whole that is shaped by the time factor of the interrelationships with human, social environment and ecological systems, rather than protecting them with the "conservation" approach by isolating them from their surroundings, on a wide scale from a single building scale to an area scale (Taylor, 2009) and as a result of this, the term of cultural landscape came to the fore.

With the use of the term of cultural landscape in fields such as science, politics and planning, the issue of defining, understanding and managing the changes in cultural landscapes has started to be addressed.

Sauer (1925) defines this term as "the environment shaped by human activities on natural appearance" (Sauer, 1925). Plachter and Rossler (1995) define "cultural landscape" as "cultural formations that explain the process of society and settlement with the effect of social, economic and cultural criteria reflecting all kinds of human, cultural and symbolic dimensions formed by nature and human being together with the physical opportunities created by the natural environment". Plachter and Rossle explain the geographical area as the intervention of people who give it the landscape character, and emphasize that human beings shape, change and in some cases destroy nature through culture. This definition played an important role in shaping views on World Heritage in particular (Aplin, 2007). Rogers et al. (2013), on the other hand, state that the term of cultural landscape, which emerged with the emphasis of the human being, the traces left by humans on nature and the shaping of it, has become an effective perspective. Different disciplines such as anthropology, ecology, architecture, landscape architecture have started to study on the term of cultural landscape. In addition, in the application area in the 1960s and 1970s; with a reaction to the preservation of high historical value areas such as monuments, archaeological sites, architectural examples and historical sites with the concept of heritage, the concept gained momentum and rapidly spread to cultural heritage management, planning and implementation areas (Jacques, 1995). UNESCO 2012 recommendation can be given as an example.

The European Landscape Convention (APS), which includes the determination, protection, management and planning of landscapes, came to the fore with the international recognition of the changes in landscapes. For this reason, conservation-based and sectoral-based plans and projects completed without landscape awareness and without the landscape evaluation process cause damage to landscapes with significant resource value and irreversible resource losses. The first eco-museum (Ecomusee Le Creusot-Montceau-Les Mines) was established in France in 1973 in order to protect, develop and catalog the cultural and industrial heritage by establishing a relationship between the term of "eco-museum" and the cultural landscape. Wight (1994) defines ecotourism as a travel experience that respects the integrity of local cultures in natural areas and contributes to the preservation of the ecosystem.

The radical and rapid changes in the cultural landscape caused some problems (Antrop, 2004). Fairclough (2003) states that changes play a role in the formation of the current structure of cultural landscapes. According to him, the important point here is to establish a good balance between change and preservation. While controlling the change that constitutes the character of the cultural landscape, on the other hand, it is necessary to minimize losses and harmonize existing needs by making the most effective use of the change. This expression has opened a new era in the understanding of "nature tourism" by finding a place for itself in the term of "ecomuse".

1.2.3. Cultural Ecology, Biodiversity and National Park Approach

There are many studies that examine the change in sites. The first studies on change were made by geographers (Barker, 2003). Following this, ecologists, landscape ecologists and researchers working on global change started to work on this subject (Foster & Motzkin, 2003). Especially those working on ecology stated that the effects of change on the habitat, flora, fauna and agricultural landscape (Burgi & Turner, 2002) are on the axis of examining and preserving, while Melnick (2014) states that the effects of change on the regional

climate or carbon emissions are on the axis of examining and protecting. All these approaches are considered as a “cultural ecology perspective” approach.

The first person to use the term of “cultural ecology” is Julian Steward with his article "Creating Ways of Environmentally Compatible Cultural Change" published in 1955. Sanal (2019) argues that Steward has the following phenomenon on the basis of cultural ecology: “*Political and social structures that develop under the influence of the natural environment in communities that use the natural habitat have a great impact on human existence behavior.*” Cultural ecology is the process of society's adaptation to the environment. While explaining the cultural development of human in cultural ecology research, there are examinations covering life in physical area, biological and cultural environment.

In the ecology-based approach, the protection of nature is understood as "protecting the existence of plants and animals living in nature, their growing and living environments, and the nature parts and natural elements that are worth preserving in the light of certain criteria for the guarantee of human health and life" (Yucel, 1995). From the term of Nature Conservation in the sense of ecological landscape, it is understood that all measures covering the continuous protection and improvement of nature, which is the basis of life for people, animals and plants, and the protection of nature from all kinds of harmful effects, and destruction. As can be seen, Nature Conservation covers all encouraging and protective measures that protect wild animals, plant species, their natural habitats, landscape and landscape parts under their natural conditions. However, what is missing in this definition is that human influence is not included.

Conservation and partial restoration of biodiversity within the cultural landscape is fundamental. By making “*national parks*”, it is aimed to protect areas with natural, cultural and tourist values in the long term and to transfer them to future generations in the continuity of biodiversity, in the protection of endangered species.

1.2.4. Geological Heritage Approach

The terms of natural-cultural landscape and ecology have evolved into a new term over time and have been interpreted as "geological heritage". The necessity of handling the term of site in all its aspects and evaluating it together has been effective in this.

Human beings need the resources provided by the natural environment in order to continue their life activities. However, global disasters such as global climate change, extinction of species, depletion of natural resources that occur with the increase of human activities have increased human awareness about the earth. Especially, the great physical damage caused by the World War II has led to a significant change in nature conservation thinking. In order to repair the physical damage that occurred during the war, all countries engaged in intensive production-consumption activities. Kazanci et al. (2017) emphasizes that these increasing activities require more raw materials and while more industrial raw materials and minerals are consumed, they cause great environmental damage, especially pollution. With the increasing welfare level, environmental awareness has developed in people minds and the protection of nature has emerged as a need.

Until recently, with nature conservation, only living beings come to mind, and now the need for physical environment (topography, landscape, geological and geomorphological formations, etc.) protection has emerged. Especially, it was effective to see that the features that emerged as a result of the shaping of the geological structure under the influence of geomorphological processes, that witnessed the geological history of the world, which differ from their counterparts with their extraordinary visuals, that cannot be recreated or replaced when they disappear (ProGeo Group, 1998), are under the threat of extinction due to anthropogenic reasons. The idea of preserving these elements as the common heritage of all humanity has developed in order to provide a better understanding of the formation, configuration and processes of the Earth and to transfer information to future generations.

One of the main reasons for the formation of this approach is that geological and geomorphological formations have scientific, aesthetic and intellectual importance beyond their raw material values. Another reason is the understanding that many unique natural geological structures and geomorphological features can become extinct (Geological Extinction), just like living things, if they are not preserved (Gümüş, 2019a). In this, the use of the term of geological heritage in the Digne declaration in 1991 was an important step ,and soon ProGEO was established in 1993 for the need to protect geological heritage (Progeo, 2020). Thus, the name of the "World Science Conservation European Working Group", which was formed as a result of the first international meeting on geoconservation held in the Netherlands in 1988, changed to the “European Geological Heritage Conservation Community (ProGEO)”.

"Geological heritage" cannot be described as the natural wealth provided to us by the inanimate environment, contrary to what is believed due to the word “heritage”. It is the legacy of the world of the past to the present world. In other words, they are the documents of the geological evolution of the earth (Kazanci et al., 2017: 9) Therefore, the main theme of the Digne Declaration where the term geological heritage was first used was "Rights of the Earth" and its first clause is as follows: "*It is time to realize that the earth's life is once just as*

human life is accepted once (ProGeo, 2020)." With this approach, globally accepted geosite and geological heritage determination criteria were started to be established (Wimbledon et al., 1995). The traces that allow us to understand the events in the life of the earth even after millions of years and accepted as "resource values": and those under threat of extinction are called "geological heritage" to emphasize the need for protection (Kazancı, 2010: 60).

The term of geological heritage is a natural formation that has witnessed the geological history of the earth, which can be separated from its counterparts thanks to its visuals, has the nature of a geological document, cannot be recreated and is in danger of extinction. These formations include all geological-geomorphological formations such as fossils, minerals, crystals, ornamental stones, mines, caves, fairy chimneys and natural monuments such as coasts and sand dunes (Inan, 2008). In short, the geological heritage consists of all kinds of geological structures and geomorphological features that have the quality of a document regarding the geological history of the earth, can also have visual beauty, cannot be replaced in case of disappearance, and are under threat of extinction. Geological and geomorphological formations that have survived until today have an important place in illuminating the world history. Evidence of the geological history of the earth is embedded in these formations. In other words, geological heritage is expressed as geosites belonging to the area or region where geological formations exist (Wimbledon, 1996). However, Reynard and Panizza (2005) revealed that the term "Geomorphosis", which they define as surface shapes that have specific boundaries and that can be distinguished scientifically from the surrounding structures, has a special importance in understanding the history of the earth, should be considered within this term.

Geosite or geomorphocytos are evaluated with the term of "geological protection". Looking at the historical period, the oldest conservation initiative known as "Geological Protection" was for Baumann Cave in Germany (1665), but no significant progress was made (Doughty, 2008). The first successful conservation was the cessation of the operation of basalt columns named Giant Causeway as a quarry in 1741 by the city council decision (Erikstad, 2008).

The idea, which has recently developed in international public opinion and organizations such as IUGS, IUCN, UNESCO, ProGEO, is to make the geological heritage a promotional and tourism tool for the development of the local people (Dowling and Newsome, 2005: 205). With the same approach, the geopark program in UNESCO is becoming increasingly prestigious as a tool for both nature conservation and continuous development (Unesco, 2020). An important part of the 2030 International Sustainable Development Goals published by the United Nations Organization is related to nature conservation. Geological conservation is necessary to respond to the present challenges of the human community, such as preserving our earth's resources for future generations, mitigating the impact of global warming, and reducing the risks of geological hazards.

Two important issues stand out in geological protection. The first is to start geological protection with education (Burek and Prosser, 2008: 312). The second is to ensure that the geological heritage is protected by the public (Kazancı et al., 2012). Because it is not possible to provide separate security for each of them to protect the geological heritage, which is mostly found in rural areas.

In summary, the effective method of geological protection is that each country introduces its geological heritage to its citizens and prepares it as a development tool. In this context, geotourism and geopark applications come to the fore (Kazancı, 2017). The visibility of this term consists of the Geopark application used in geotourism.

1.2.4.1. Geotourism

Space, landscape, natural area, etc. regardless of the term used, the relationship established between the characteristics of an area that gives "place perception" and tourism leads us to the term of "geotourism". At the basis of this term, it would not be wrong to say that there is a form of cultural landscape-based tourism that exists in regions with important geological structure and geomorphological features in order to attract visitors to special interests.

The term of "geotourism" was first defined by Hose in 1995 as "a type of tourism focused on geology and landscape" (Kocan, 2011: 72). With another definition, Geotourism is a type of tourism that requires interdisciplinary integration in the tourism industry in order to protect and interpret cultural and non-biological assets within geosites for societies (Bahram, 2009: 17). Informing tourists about the natural features of any place as a general definition, protecting it, promoting the cultural identity of the local people living there and the people that contribute to the economic, scientific value, aesthetic, educational, historical and international significance of flora, the presence of animals, archaeology, geology, traditional architecture, local music and arts that protects a sustainable tourism activity (Dowling and Newsome, 2006; Akbulut, 2009b: 69). In short, it is the visit of nature and geological heritage items for touristic purposes.

In their studies conducted with Bruno and Perrotta (2012) and Hurtado, Dowling, and Sanders (2014) in order to identify geological heritage resources and raise awareness, they developed the "geotourism typology model" by adapting the cultural tourism typology model developed by McKercher (2002) to geotourism.

Stoffelen and Vanneste (2015), on the other hand, brought landscape-tourism and tourism-landscape interactions to a comprehensive geotourism approach for the purpose of sustainable development. With this approach, they terminalized geotourism in terms of both tourism and landscape and integrated geotourism into two areas (Altnay Özdemir and Kızıllırmak, 2019: 951). A series of planning and management decisions taken by Hull (2010) on the basis of the United Nations Development Program (UNDP) by integrating geotourism into the scope of the destination development strategy to promote the development of a sustainable tourism industry in Iceland can be given as an example.

Those who participate in the geotourism activity are called "geotourists". Geotourists want both to be in touch with nature and to gain new information, and besides, they need to socialize by moving away from their daily routines (Dowling and Newsome, 2010: 7). These needs are fulfilled in geosite-geomorphocyt areas. Geotourism contributes to the development of both local people and the country economically (Farsani et al., 2012). Geotourism activities can take place not only in geoparks but also in geosites outside of geoparks (Newsome et al., 2012: 20). Majka (2007) states that getting support from professional tour guides in visiting these areas is an important factor in reaching the targeted purpose.

The first geopark application for the protection of geological heritages in geotourism started in the 1990s. This geopark is the "Haute-provence Geological Reserve" of France, which contains many fossils and interesting rocks located in the Southern Alps and is accepted as Europe's largest open-air museum (Mckeever and Zouros, 2005). The formations accepted as geological heritage are evaluated in two different categories. These are geosites that do not have visual value but have scientific value and have visual value as well as scientific value (Altnay Özdemir and Kızıllırmak, 2019: 953).

2. GEOPARKS

Geoparks is open to visitors; nature conservation, research, education and geo-tourism area where geosites of the same or different types of natural, cultural or scientific value belonging to the earth's past are found collectively; administration not smaller than pedestrian walking distance has been established (Kazancı,2010: Yılmaz, 2002). Akbulut and Unsal (2012) has described the geopark as "natural areas where geological and geomorphological heritage are found collectively that constitutes rare, aesthetic, scientific and economic value in a geographical area that includes the protection of natural and cultural resources". Geopark is an area where all natural and cultural heritage, especially the elements of geological heritage, are taken under protection, scientific studies are carried out, socio-economic development is also aimed while doing this and its borders can be determined (Gumus,2008). The geopark area can contain more than one element such as previously announced "National Park" and "Natural Monument" or "Special Protection Area" in the same geography. From this aspect, geopark can also include previously announced areas with special status according to the current legal legislation or it can also be produced for a small area within a nature reserve (Ciftci and Gungor, 2016). Common point; is nature protection, scientific and economic value. Kazancı and Urun (2019) states as based on the integration of culture- history- nature- human.

UNESCO describes geopark areas as geographical areas where natural areas of international geological importance are managed with a holistic conservation method with the term of education and sustainable development. Geological heritage of this areas sustainable use of land resources in connection with all other aspects of the region's natural and cultural heritage aims to use it to improve awareness and understanding of the main risks related to natural disasters faced by society, such as reducing the impacts of the climate change. As a vision, today on the historical and social importance of the geological heritage of the geopark region, it has been identified as a set of practices that strengthen their identity with the region through the creation of innovative local business by raising awareness in local people.

UNESCO's work about geoparks started in 2001. In 2004, contributing to a global network with the cooperation of national geological heritage initiatives and the Global Geopark Network (GGN) has been created, from which its members benefit. On 17 November 2015, 195 member states of UNESCO approved the creation of new label, UNESCO Global Geoparks during the 38th General Conference of the organization. Thus, it means that the importance of managing important geological sites and formations in a holistic way is recognized by governments. Global Geopark Network (GGN) has been created legally and is a non-profit organization with an annual membership fee. This network is a dynamic network where members are determined to work together to raise the quality standards of their geopark related practices, to share their ideas about implementation and to participate in joint projects. Under the basic network, it is divided into regional networks and each network comes together twice a year. Local communities are strengthened with a bottom-up approach in geopark practice (Figure 2) and give them the opportunity to develop harmonious partnership with the goal of promoting the region's important geological processes, features, time periods, historical themes related to geology or extraordinary geological beauty. UNESCO Global Geoparks are created by a bottom-up process including all relevant local and regional stakeholders and authorities in the region (e.g. landowners, community groups, tourism provider, local community and local organizations). This process requires a firm commitment by local

communities, a strong local multi-partner partnership with long-term public and political support and the development of a comprehensive strategy that will meet the goals of all communities while demonstrating and protecting the geological heritage of the region (UNESCO, 2020).

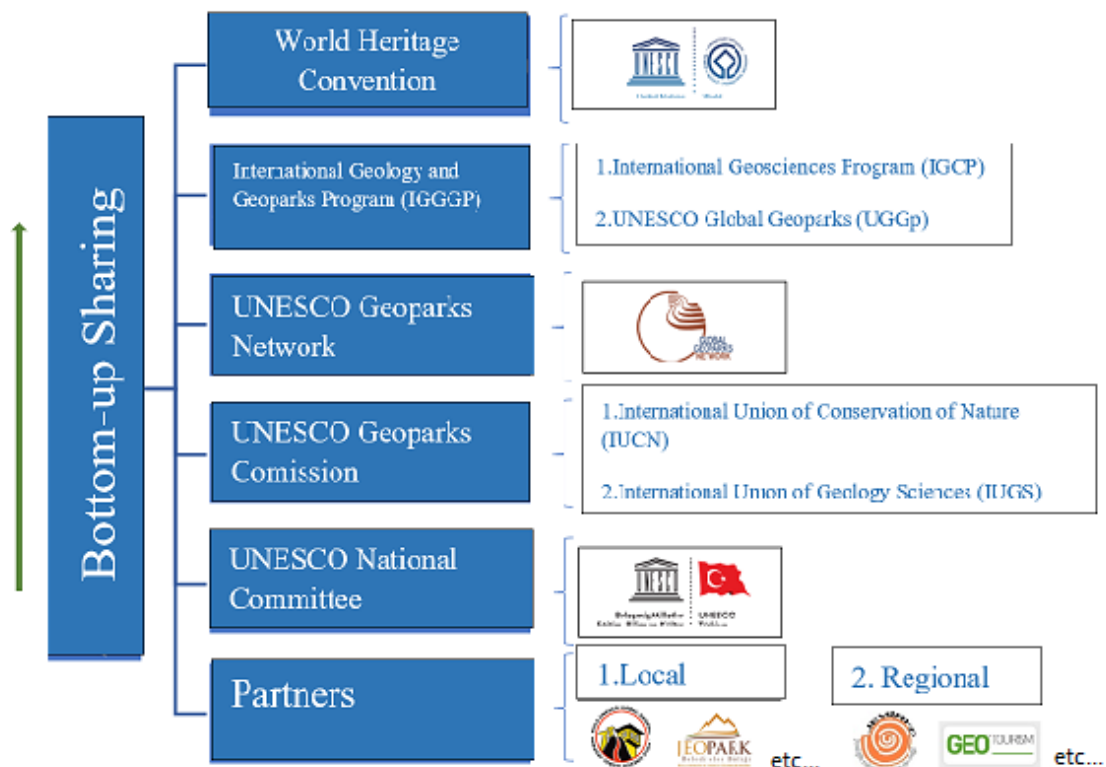


Figure 2. Sampling of the Approach Applied in Geoparks.

Geoparks are areas with clearly defined boundaries and sufficient surface for real regional economic development. This area is the size where geosite elements are located within walking distance. For this reason, Geoparks contain a certain number of geological areas that are of particular importance in terms of scientific quality, rarity, aesthetic appeal or educational value. The majority of areas found in a Geopark are part of the geological heritage but because they contain archaeological, ecological, historical and cultural values, they create a general image depending on the geological heritage and the development of geotourism and play an active role in the economic development of the regions. It has direct impact on the region by affecting resident’s living conditions and environment. It enables local people to realign the values of their natural heritage in their region and actively participate in the cultural revitalization of the region as a whole.

III. RESULTS AND DISCUSSION

Until this section, geoparks have been discussed in terms of their history, term, approaches and features. Then, although UNESCO has other protection programs (MAB, IMP, IOC, Ramsar vs.) it is necessary to seek an answer to the question of ‘‘Why geopark?’’. Why does this term cause a general excitement? Moreover, why does the nature conservation term focus on park practice? This process that started with the declaration of Yosemite Valley as a national park in 1864 reached its peak in 2000 with the geopark application, which entered the literature as modern parks, as a result of the change in local, national policies and environmental attitudes, it will be appropriate to understand the philosophy of this development and transformation by evaluating the enthusiasm of presenting environmental, political and cultural importance as a laboratory to the changing practice of land management and the questions will be answered.

As the knowledge and experience of human beings increase, their sensitivity towards the environment they live in has increased, as they get to know the environment, they have begun to realize its value. When Yosemite Valley was declared a national park in 1864, with the transition to the ‘‘park’’ system in nature conservation, a significant improvement has been observed. the description of parks as ‘‘ great places where researchers, tourists, enthusiasts, local residents spend time using tourism technology and applications’’ (John,2008:1) In terms of nature protection reveals an important determination in terms of natural and cultural

heritage conservation. Parks are areas where the application or usage stages of change in nature conservation understanding can be defined and how natural structures are formed or built are conceptualized. An effective and comprehensive protection-use criterion have been established with national parks on the environment. Formation has been improved and today's geopark term has been strengthened. However, in order to protect nature, the answers of questions ‘*Which border should I use it? What should be my limit?*’ have not been clarified. However, there is a known fact. This is that we have to protect and use what nature offers us in a sustainable environment. The term of geopark from the national park term has been formed as product of this idea.

The basic link of development is composed of the preservation of natural and cultural heritage, which started with natural park practices, discussing the goals for their future transmission, putting them under legal protection and starting to include their economic aspects in the field of education. The development in understanding, acceptance and change can be seen in the articles in which American Geographers Association evaluates national parks in terms of historical geography. What are the elements that drive the development of these thoughts? Analyses can be listed as follows (Dilsaver;2008):

1. Natural parks have maintained as natural resource reserve areas where natural process, environmental change, destruction and effects are observed and endangered species are protected.
2. They gained functionality as cultural and natural heritage warehouses where natural cultural identities and cultural landscape are evaluated, rehabilitated or restructured.
3. Natural parks have seen precious places serving cultural activities as holiday destinations where modern life is defined and where the story of the past is told against the destruction of natural and historical heritage,
4. It has been provided an educational environment for natural sciences, history, anthropology and geography with the park systems created. Congress, guided walks and museum exhibitions, which not only provide information about natural resources but are also designed to environmental awareness, patriotism and even spiritual morality, began to take place. Parks have expanded their hinterlands as inspirational and educational recreational areas. Parks have been perceived as necessity to teach leisure activities, cooperation and competitive thoughts the essence of industrial democracy in the education of young people and improved.
5. It has developed practices as components of the regional economy. With these, it has created a balance against consumption economically in any field.
6. Threats have been controlled with private land use, environmental management and protection laws. The pressure on nature caused by overpopulation has protected the area against the damage of economic competition on land use such as mining, road construction, building. Protection philosophy has been designed and improved against this destruction. Natural parks have designed and managed a park system based on their own experiences such as visitor use and infrastructure development and have created public service ads in terms of development process. Thus, it has developed corporate culture.

Apart from these, mapping studies of areas protected by national park practices have started. CBS studies regarding in park- features, routes or activity areas have been developed (Youngs,2008). This enabled the areas to be considered as a new research-study area for geographers.

Despite of these improvements, it has been observed that national parks are approached through two kinds of opinions, positive and negative (Young,2008). These are: the view capable of supporting social development (positive) and negative thinking that encourages urban dwellers to nature (those who perceived it negatively have concerned that harm could be done). The views on the development of evaluations are as follows:

- a. Examination of financial well-being with the view of public health and welfare and increase in property values and tourism and fresh air opportunity
- b. Behavioural anxiety has been effective at the point of social cohesion and participation, examination in terms of alienation and criminal activities.

With all these ongoing approaches, parks have been perceived as prerequisite for promoting an ecosystem of interconnected elements that control and direct nature, matter and energy flow from the environment. There has been a need to expand the borders to include land, water, plants and animals. This has increased the number of protected areas. Because park advocates have continued to see nature as beneficial and modern life as harmful. Besides, it is not possible to decrease variations and combinations, for this reason these tensions have begun to increase the types of protection over new areas.

These ideas, which were developed in order to stop the negative developments on the natural landscape and to prevent the earth from losing the quality of a permanent living environment, have officially encouraged the ‘*natural area protection*’ that emerged to protect the natural parts that have not yet been exposed to negative effects by national governments and international organizations and pioneered the implementation (Demirozer, 2019). Which landscape views are actually defined in the national park system or national park

classification has been opened to question. In the cultural landscape or area classification, the need for new researches has emerged on the borders separating those inside or outside the park. Border determinations made with barbed fences have triggered the separation of interior or exterior spatial elements. Some of the physical elements have been put aside in the term of parking (Byrand, 2008). Based on this understanding, a new classification and management approach has been needed to evaluate the landscape as a whole. This gap is filled with geoparks. Based on this thought, in 1972 "Natural Heritage Protection Convention Act" was signed. With the agreement on the Protection of UNESCO World Cultural and Natural Heritage dated 1972, cultural heritage has been defined as "Physical and biological formations or natural features of communities that are formed from such formations, which have exceptional universal value in terms of aesthetic or science" and has showed that how people interact with nature and maintaining the balance between the two is a basic need. This agreement has created the "World Heritage Convention" by linking the terms of conservation of nature and protection of cultural assets in a single document. In 1991, with the support of UNESCO, in Digne, France with the participation of more than 20 experts from thirty countries, the "1. International Geological Heritage Symposium" was the first scientific event on the conservation of geological heritage and the term "geopark" has been accepted by many researchers. Final declaration of this conference (*International Declaration of the Rights of the Memory of the Earth*) has brought forward the issue of protection of geological heritage. On the other hand, the idea of bringing together geological heritage sites in Europe through a network to cooperate more effectively in line with the objectives of nature conservation and sustainable local development was shaped by Guy Martini and Nikolas Zouros "30th International Geology Conference" hosted by Chinese city of Beijing in 1996 (Gumus,2008).

Geoparks, which is a new term of nature conservation and area management, in 2000 by under the leadership Prof. Dr. Nikolas Zouros and by geoparks in Greece, Germany, Spain and France, "European Geoparks Network" was established and geopark studies started. These four geoparks are Reserve Geologique de Haute-Provence (France), Natural History Museum of Lesvos Petrified Forest (Greece), Vulkaneifel (Germany) ve Maestrazgo Cultural Park (Spain). European Geoparks Network are responsible for registration and coordination of geoparks within European borders. Then, in 2004 Global Geoparks Network (GGN) and other regional networks of geoparks were established. With these formations, geoparks have been directed towards the goal of realizing international unity as a new nature protection and area management. For this reason, the criteria to be followed when determining a geosite and geopark in a country were determined in the 1998 Rome Grand Conference of ProGeo and it was suggested to be followed (Kazanci,2001:9). By bringing an international standard to the geoparks, it has become clear that these areas should be preserved in the geopark status and evaluated within their geotourism potential. These expressions, in which in the geological and geomorphological importance of the term of "Geoheritage" are revealed, show us that the features that have emerged since the existence of the world should be considered as parts of a whole in the protection of nature and nature. Geoparks have been established on three important functions. These are:

- Educational function; to instil awareness of nature and nature protection in society, to provide information about the earth and to provide information about the contributions of earth sciences to daily life.
- Protection function; to protect geosite and geological heritage, to transfer it to the next generations and to enable them to benefit.
- Economic contribution function; to increase the number of visitors and visiting standards, to get a value for service with geotourism activities (JEMIRKO,2020).

While creating a geopark area according to these functions, it is expected to fulfil certain objectives. In other words, geoparks are geographical areas with vision and mission. The goals targeted by geopark applications can be briefly itemized as follows:

1. Education of the society about in earth science and environmental issues,
2. Ensuring sustainable development,
3. Preservation of geological heritage for the next generations.

Geoparks are conservation status that reflects the earth's geological history. It is term that examines geological processes, analyses and interprets them together with their geomorphological features. Earth sciences, humanities and natural sciences, which are accepted as the natural heritage of the world, have had opportunity research and practice sustainability with an interdisciplinary approach within the framework of the "geopark" approach, which is the paradigm of the 21st century.

Geoparks enable us to establish relationship between geology, geomorphology, human, ecology and biology. Protecting geologically important areas in recent times is important both naturally and culturally (Barettino et al., 1999). Against the destruction caused by human factors in natural areas, humanity has started to take some preventive measures. People first made legal arrangements for the protection of these values with the desire to pass on the cultural heritage that constitutes value in their close environment to future generations. With the rapid change of transportation conditions and technology, when human beings discovered new land

parts, they started to consume natural resources in these areas rapidly, and after a while, the protection of biological resources in these areas became a current issue (Akbulut, 2013:2).

For this purpose, in the "cultural ecology" approach, the term "biodiversity" has been adapted to geological protection within the scope of serving this situation and has been associated with the term of "geodiversity" (Gray,2004:434). In 2000, in this new status, which started under the leadership of Prof. Dr. Nikolas Zourros, the term of geodiversity was used as an abbreviation of geological and geomorphological diversity. The term includes not the numerical abundance of geosites, but the infinite wealth of relationship and interactions between different formations. Gumus (2019b) states that geodiversity is one of the most important criteria used in understanding the value of the geopark in comparing potential geopark sites. Geodiversity refers to all kinds of natural geological (rock, mineral, sediment, fossil, structure) and geomorphological (surface features, landscapes, processes) formation, including soil and water, that form the physical surface within certain boundaries. In the IUCN legislation, the geological heritage is considered within "biodiversity" (Kazancı,2017:9), literally it is the equivalent of all kinds of geological and geomorphological formations that form the physical surface.

Organizations have been established to protect geotourism and geodiversity. They have been established in order to share ideas and to create a world community with a strong and bright future by cooperating in ensuring sustainable development. European based ones have led. These are, UNESCO Global Geoparks Council, European Geoparks Network, European Geological Heritage Community-ProGEO and besides these, International Geotourism Association (IAGt) and Italian Geology and Tourism Association (Geologia e Turismo). As it is seen, the cooperation of transnational organizations is at the front in the protection of nature. This fulfills an important mission for geoparks that create geotourism and visibility on the basis of geological heritage.

Geoparks clearly demonstrate that geodiversity is the basis of all ecosystem, human interaction with landscape, promoting connections between the geological heritage and all other aspects of the region's natural and cultural heritage. Geoparks encourage awareness of the planet story read in rocks and landscapes, preserving the value of areas of significance in the history of earth geology, including their shapes and geological formations, which are key witnesses to the development of our planet and the determinants of our future, and to develop specifically for geo-tourism and education.

Geopark is an area where all natural and cultural heritage, especially the elements of geological heritage, are taken under protection, scientific studies are carried out, socio-economic development is also aimed while doing this, and its borders can be determined (Gumus,2008:4). This area is a geographical area that includes the protection of natural and cultural resources (Akbulut,2009a:265), in terms of their aesthetic and scientific value, they are a tool of nature education and geotourism in terms of their rarity and economic value. These values are natural areas where geological and geomorphological heritage are found collectively. For this reason, geoparks are tools of nature protection, nature education and geotourism (Kazancı and Urun, 2019:46). It contributes to research, evaluation and sustainability planning with its mission and visions. It reveals opinions and practices regarding the effective use of nature and creates data for different disciplines.

The term of geopark draws attention to the nature consumed by humans by raising awareness of the facts of geological protection and geological heritage, and tries to instil the idea of nature conservation. Therefore, it can be said that it contributed to the emergence of environmental awareness and even to base patriotism on scientific foundation. It is clear that this is in close relationship with education, history, geography, ecology, landscape, citizenship and environmental protection (Kazancı,2017). As individuals get to know the area they live in, they will do their best to protect and develop it.

The geological structure and geomorphological features are the special properties of the region where it is located, it is a local richness, it is unique to the region. Kazancı and Urun (2019) state that these features are unique to the region and that they are the infrastructure to create a local identity and they are used to make difference to the areas. This difference reveals cheap and permanent investment potential with geotourism activity, which shows itself as a new type of nature tourism together with geoparks. It creates the potential to become a tourism centre with natural landscaping, environmental planning and introduction to countries and communities. This potential provides reverse mobility to rural areas that have been evacuated for various reasons. It shows the interregional population imbalance in a regulatory secondary role. This value, which can be realized with geoparks, strengthen the matter of fact of the countries with "service industry" or "hidden economic power". Considering the areas where geoparks are centred around the world, it is observed that geoparks constitute an indicator of development. With the geopark practices, an important step of global economic evaluations is formed with the tourism implementation plans of the areas with geodiverse areas that have long been forgotten in national economy practices (Carvalho and Rodrigues,2010:467).

Despite everything, the contribution of the geopark practice, which has made it an important centre of attraction in a short time in terms of "regional development", which hosts many different activities that can be active in all seasons, is high. Perhaps the most important contribution of the geoparks is that they are

the gateways to the world for the people living in the region, as they regularly attract visitors from all over the world. Thus, regular and long-term contributions are made to cultural interaction and integration with the world, which are much more important besides economic contribution. The development of synergy between the actions and requests of stakeholders such as local people and local decision makers by raising awareness in the interaction with local cultures in geopark practices also provides regional integrity with the partnership between local authorities, stakeholders and NGOs. This integrity is explained by Carvalho and Rodrigues (2010) as ‘‘the relationship between youth-city-environment and culture’’.

In the understanding of geopark, there are geological and geomorphological formations and scientific and educational features beyond the only landscape value of a place. It is cannot be mentioned that geological heritage where geomorphological features are not expressed. Therefore, terms such as geomorphological protection, geomorphosite (Panizza and Piacente,1991) and geomorphotope (Grandgirard,1999) have started to be used, not only geology-based protection. When the subject is the nature protection and nature, the basic terms of the globally accepted ‘‘geopark’’ understanding in terms of geomorphology have been revealed and the evaluation of the effective role of geomorphology in this issue has been interpreted within the integrity of practice. The terms brought by the geopark understanding are defined in terms of geomorphology. It is important to evaluate the geomorphosite and cultural application approach within these terms. Because in UNESCO and ProGeo studies, the natural environment has been handled as a whole. However, studies have neglected biodiversity, atmospheric environment and most importantly geomorphology. Geomorphosites have termually scientific, cultural/ historical, aesthetic or social/economic raw material value (Panizza,2001), the definition of the earth as a wide surface shapes/ landscapes (Reynard and Panizza, 2005) where climate and life history are preserved, and to contain morphological elements that have a certain value for tourism (Lelenicz, 2009:7) are an important element for geotourism.

In geopark practices, it is obligatory to become a member of UNESCO or European Geopark Network and to continue coordination in geopark practices. A geopark within the Geopark Network enhances progress by sharing methods and experiences for both the development of the network and the conservation of the geological heritage. In this way, it promotes the creation of new by-products linked to the geological heritage, a complementary mood with other Geoparks Network members and supports work with local business. This approach is important for ensuring and continuity of dialogue, cooperation and information sharing in the field of science and education, which has been the biggest deficiency in nature conservation terms until now. Geopark is the management mechanism that will support local development in rural development, which brings and effective control. However, this development includes not only economic but also social and cultural elements. It has changed the understanding of museum and created the opportunity to see and learn on site. A natural site and culture systematic is created in the understanding of the museum. Interaction with the experience, materials and technology offered by the museum is evaluated. Educational activities are organized to ensure that individuals actively satisfy their curiosity with a ‘‘*constructivist approach*’’¹³. A geopark creates the perfect setting for open-air museums called *exomuseum* where these goals are achieved (Melendez, et al., 22008).

It ensures that the riches that nature gives us are prevented from being used out of purpose and transferred to future generations as a legacy and to increase the awareness of the public towards nature. The term of ‘‘park’’ in nature conservation understanding, geoparks arouse excitement in the development of societies, in the education of societies and in the introduction of the earth and natural environment to societies, in response to the new modern and sustainable perspective change.

IV. CONCLUSION

Geoparks arouse great excitement as an effective method in the conservation of natural heritage by introducing sustainable use instead of prohibition and depopulation.

Geopark practice is important for ensuring and maintaining the dialogue, cooperation and information sharing in the field of science and education, which has been the biggest deficiency in nature conservation terms until now. It creates an excellent setting for open-air museums called geopark *exomuseum*. In a short time, it turns the area where it is established into an important centre of attraction in terms of ‘‘regional development’’, which hosts many different activities that can be active in all seasons. They provide a more consistent and applicable framework that also takes into account geological and geomorphological elements. It prioritizes the sustainable use and rehabilitation of the field instead of isolation, prohibition and depopulation in nature conservation. It creates the potential to become a tourism centre with natural landscaping, environmental planning and promotion to countries and communities. It raises awareness of geological protection and geological heritage phenomena. The features accepted as the natural heritage of the world create an opportunity

¹³ John H. Falk and Lynn D. Dierking introduced the term of constructivist approach in museums in their article ‘‘the Museum Experience Revisited’’ in 2014.

to research and practice sustainability with an interdisciplinary approach around the earth sciences, humanities and natural sciences. It encourages the awareness of the planet story read in rocks and landscapes to protect the value of areas that are important in the world geological history and to develop them in geo-tourism and education. It sets an international standard in nature conservation and improves cooperation.

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