

---

## INTRODUCTION TO GEOPARK

**Moh. Al-Fayedh**

Geological Engineering, Gorontalo State University  
mohalfayedh@gmail.com

### A. Introduction

Geopark is an area or area that consists of several geological heritage sites that have uniqueness, scarcity, or protected geological beauty. The existence of geopark has its value for education, science, culture, and also socio-economic development. As evidence of past events, the geopark provides information about the earth's history and may not only have geological links but still present archaeological, ecological, historical, or cultural value (Patzak and Eder, 1998).

Another definition of the geopark is a region with various sites that have international geological connotations managed with the concept of comprehensive sustainable development (Nikolava and Sinnyovsky, 2019). The application of the concept of geopark in several countries in Europe was not enough to make geopark known to the public. The formation of geopark in an area also has some influences that need to be considered, in line with the developments in the scope of geopark can also increase anthropogenic pressures on the environment and can be a threat to sensitive biodiversity. Therefore, in the formation and development of geopark, it is necessary to have a strong methodological approach as well as very well-defined measures. For the management of geopark that pays close attention to sensitive environments and in particular protected plants and animals and is very vulnerable to human activities, and other important cultural sites.

International programs aimed at recognizing sites that have geological or geomorphological substances seem less developed than biological conservation. The biodiversity protected is known by various designations such as World Heritage, Ramsar, and Human and Biosphere Reserve (MAB). World Heritage conferences can identify geological and geomorphological values either directly or indirectly. Direct identification of these values can be through geological formations and physiography of extraordinary value.

### B. Discussion

#### 1. The Purpose and Concept of Geopark

Geopark has three main objectives: protection, education and research, and local economic development. Besides being useful for extensive education and scientific research, geopark can be an important aspect of the economic development of the local population. The existence of geopark can create a variety of jobs and new economic development related to similar things. The development of new tourist and artisan orientations can be excelled, such as the creation of new crafts with geological implications (Patzak and Eder, 1998).

This potential is very strategic to support the geological resource conservation program and the development of the geological-based tourism sector through the geopark concept (Arifin et al, 2021). Sharing the concept of geopark has been widely developed and has been realized much, but it is still unknown to the public, and only known by the surrounding geoscience experts (especially geologists and geomorphologists). This can cause problems in the development of international geopark, due to the management of geopark carried out continuously throughout the world. Considering that geopark is one of the programs that have international interests. Of course, the geopark will cover a large area where he is located. Usually, the area taken will be larger than the area of one municipality and there must be many landowners concerned, the administrative interests of the area to be used are certainly very important. Therefore, there needs to be Geoheritage awareness and concepts in the geopark to the wider community and also in the government environment. As well as the need for planning related to this, and clarifying the status of geopark in national legislation.

The main focus of the concept of the geopark is geological heritage but geopark is not just for geology (Nikolava and Sinnyovsky, 2019). In the development of the geopark concept, a very negating approach to territorial development is needed. In the maintenance of geological heritage and also in promoting it to tourists it is good to continue to pay attention to the cultural values that exist in this area, and at the same time help maintain better environmental, economic, and social conditions in the local population. This concept in the geopark development relationship is how synergy is provided based on UNESCO initiatives and needs in terms of maintaining and also utilizing natural and cultural wealth.

The Geopark concept was developed to meet the growing demand from Earth scientists and non-governmental organizations for a global framework to promote and protect the biodiversity of exceptional value (Eder and Patzak 2004). The goal is for Geopark to represent a global network of regions that will complement the World Heritage List, by providing a means to recognize important international sites that have outstanding value but do not meet the strict criteria for the World

Heritage List. Unlike other geological designations, the Geopark initiative combines a highly innovative approach to the preservation of Earth's heritage, by integrating it into sustainable regional economic development strategies, primarily through Geotourism.

## **2. Geopark Features**

Geological features contained in the geopark describe the area where it is located and, also the geological history, processes, and events of its formation (Patzak and Eder, 1998). With collaboration between UNESCO Global Geopark and Global Geopark Network made a decision that made several standards mandatory for the creation of geopark. There are 4 mandatory requirements to have an area that is to be founded by UNESCO Global Geopark. Matters relating to the above criteria or requirements are set out in the Operational Guidelines for UNESCO Global Geoparks, as follows: 1) Geological Heritage of International Value, 2) Management, 3) Visibility, 4) Networking.

Geological Heritage of International is the initial requirement that must be owned in an area that will be established by UNESCO Global Geopark. The assessment will be conducted by scientific professionals who are part of the "UNESCO Global Geopark Evaluation Team", the results of which will determine whether the existing site is an international value site.

The second requirement is management. The UNESCO Global Geopark is managed directly by a body that has authority and is legally recognized by applicable laws in the country. As stated by Patzak and Eder (1998), its association with natural parks, making the geopark under the authority of the government where it was founded. This governing body must also complement all administrations, all actors, and all appropriate local and regional authorities. Administrative completeness must also be agreed upon by all partners who collaborate in geopark planning, providing social and economic needs for residents, protecting the landscape where residents live, and also missing the existing cultural identity. The design of all these plans should be comprehensive, incorporation of governance, development, communication, protection, finance, and partnership of THE UNESCO Global Geopark.

The third is visibility. One of the offers and promotions provided by UNESCO Global Geopark is to develop a sustainable local economy, especially through Geotourism activities. UNESCO Global Geopark must have visibility that can stimulate the growth of Geotourism in the area. Transparency on the part of UNESCO Global Geopark is needed by local communities where this can build more confidence in the visibility of UNESCO Global Geopark in the future, therefore it is necessary to provide a special website that contains information about geopark, leaflets, and detailed maps of areas that can connect geological sites. A UNESCO Global Geopark must also have a corporate identity.

The fourth is networking. The cooperation carried out by UNESCO Global Geopark not only with residents but also in collaboration with other UNESCO Global Geopark, where this cooperation is established under the auspices of the Global Geopark Network (GGN). Not only that this cooperation relationship also occurs in regional environments, to learn from each other, as a liaison, which can improve the quality of the label of the UNESCO Global Geopark. With GGN membership owned by UNESCO Global Geopark and cross-border cooperation, making UNESCO Global Geopark contributes to improving understanding and also assisting the peace-building process.

Apart from some of the above requirements, the main focus of the UNESCO Global Geopark itself is divided into several parts among namely natural resources, geological hazards, climate change, education, science, culture, women, sustainable development, local knowledge, and geo-conservation.

## **3. International Geopark**

Digne Convention held in 1991 became the beginning of the emergence of the philosophy behind the initiative in the form of geopark (Martin, 1994). Since 1991, relevant progress has been made in various countries aimed at protecting and conserving biodiversity, in this case, done through national programs aimed at protection and also to promote geological sites or areas. One of the recommendations in response to the signing of the 'Declaration of the Right to Earth Memory' is to squeak a global network of the geopark and seek direct support from UNESCO, by integrating geodiversity into a major set of activities. In 1997, UNESCO's division of earth sciences responded to this and was responsible for continuing to develop the concept of UNESCO's geopark program and also support national and international efforts in the preservation of earth's heritage. Recognizing that the preservation and international recognition of geological heritage are not covered by any of UNESCO's existing programs, a new initiative proposal that could promote Geopark's global network was submitted to the Executive Board in 1999.

A feasibility study on the development of the Geopark program is commissioned to evaluate whether new initiatives should be issued by UNESCO to promote the geopark's global network, as well as to examine how these initiatives relate to other UNESCO-related programs such as the International Geological Correlation Program (IGCP), and the Human and Biosphere (MAB) program. Applications for the Geopark program to be integrated into the IGCP and MAB were rejected by the Executive Board in 2000 but IGCP board members were invited to act as Advisory Advisory Bodies (Jones, 2008). Although budget constraints are a significant factor, serious concerns about the overlap of "labels" and

the decline of biosphere "labels" are serious. At the same time in 2000, the organization called the European Geopark Network (EGN) was formed through agreements from several countries in Europe, then in 2001 officially established cooperation with UNESCO.

In February 2004, the Global UNESCO Network of Geoparks was established at a meeting of UNESCO's international expert group in Paris. UNESCO's Global Geopark is not a legislative designation but its activities must comply with the international, regional, and national laws of the country in which the geopark was established.

Since the development of the UNESCO Geopark initiative in 1999, the concept of Geopark has grown rapidly, with the establishment of the European Geopark Network and china's National Geopark Network in 2000. The development of the National Geopark Global Network in 2004 has encouraged other countries such as Australia, Brazil, Iran, Malaysia, and Vietnam to develop the Geopark Program and some of them have successfully achieved Global Geopark status. In 2007, the European Geopark was distributed in 15 European countries. At the time of writing, there are 31 members of the European Geopark Network, bringing the total Global Geopark to 52. At present, there are 169 UNESCO Global Geoparks and spread across 44 countries.

#### **4. Geopark Indonesia**

The basic concept of a geopark is an area with a wealth of geological elements in it. and put local communities to play an important role in managing and protecting existing natural heritage. Unesco is very instrumental in the development of geopark around the world.

Geopark is one of the best and strategic locations for development in the tourism sector. In one geopark area, visitors will be able to feel more benefits ranging from educational tourism, natural scenery, to getting to know the local culture, these three things we can get with just one visit to the Geopark area.

In Indonesia, geopark began to appear in 2010 when the Ministry of Tourism authorized a series of scientific studies and developed several development programs aimed at geopark. Since the start of this movement, 6 regions have been designated (Toba, Gunung Sewu, Merangin, Rinjani, Batur, and Raja Ampat) as national geopark (Hidayat and Nasution, 2019). in 2012, Batur Geopark was designated as a Global Geopark and continued with the establishment of Mount Sewu into a global geopark in 2015. Since then the world began to recognize the quality of geopark programs in Indonesia, and sustainably in 2018, Ciletuh Palabuhanratu and Mount Rinjani officially became UNESCO's Global Geopark. In 2019 The Toba Caldera has been officially added to the Global Geopark Network (GGN), and in 2020 Indonesia has been awarded 5 geoparks officially become UNESCO Global Geoparks including (Geopark Batur, Geopark Sewu, Geopark Ciletuh, Geopark Gunung Rinjani, Geopark Danau Toba) and 15 national Geoparks.

The development of geopark in Indonesia is regulated in Presidential Decree No. 9 of 2019 on the development of earth parks (Geopark) which was set on January 25, 2019. This regulation is made based on article 4 paragraph (1) of the Constitution of the Republic of Indonesia of 1945 and law No. 29 of 2014 on search and rescue.

#### **5. Geopark Gorontalo**

Indonesia is one of the countries in the world that is still aggressively developing geopark programs in its territory. The development continues to make Indonesia's geopark more familiar to the world, and many hope that there will be many new Geoparks formed. This initiative continues to grow where it is seen that some areas are trying to continue to develop existing geopark, one of which is in the province of Gorontalo. The development of geopark areas in Gorontalo province is the result of collaboration between agencies including the Porontalo provincial government, the Geological Agency of the Ministry of ESDM, the Research and Community Service Institute of Gorontalo State University - ESDM And Geopark Study Center, and SRIREP - Research Institute for Humanity and Nature, located in Japan.

Gorontalo province has abundant biodiversity including lakes, waterfalls, hot springs, bays, beaches, special volcanoes, etc. Gorontalo province is one of the regions in Indonesia that has a large area that can show large geodiversity, but there are still some areas that have not been explored, in the sense that the area is not yet worthy of Geosite.

There are 13 locations located in Gorontalo province that have been identified as candidates for Geosite areas, namely, Lake Limboto, Otanaha Fort, Soekarno Landing, Olele Marine Park, Bubohu Religious Tourism, Dulanga Beach, Dulamayo Pine Forest, and most recently Botubarani Whale Shark.

### **C. Conclusion**

Geopark is an area with a wealth of geological elements in it. and put local communities to play an important role in managing and protecting existing natural heritage. Unesco's existence plays a role in the development of world geopark, recorded 169 UNESCO Global Geoparks and spread across 44 countries and will continue to grow. Success in the geopark sector encourages various countries to

continue to develop all the potentials in their region, not least Indonesia by having 5 UNESCO Global Geoparks and more than 15 National Geoparks. Hal this indicates that Indonesia is quite successful in this sector. Gorontalo is one of the areas that are continuing to develop the potential of Geoparks in their area. There are 13 locations located in Gorontalo province that have been identified as candidates for the Geosite area, one of which is Botubarani Whale Shark Tourism. With continued progress until now, Geopark becomes one of the Tourism Sectors that greatly impact the development of the world economy.

### Acknowledgment

The author would like to express the deepest gratitude to DITJEN BELMAWA, Ministry of Education, Culture, Research and Technology, Republic of Indonesia, which has funded the 2021 Village Empowerment Development Program (P3D) Geological Engineering Student Association, Universitas Negeri Gorontalo. This program also received support from The Research Institute for Humanity and Nature (RIHN: a constituent member of NIHU) Project Number 14200102.

### References

1. Arifin, Y, I., Manyoe, I. N., Napu, S, S, S. (2021, July). Geological study of Pantai Indah for geotourism development based on geological observation and assessment of science, education, tourism and the risk degradation. In *Journal of Physics: Conference Series* (Vol. 1968, No. 1, p. 012048). IOP Publishing.
2. EDER, W., PATZAK, M. 2004. Geoparks—geological attractions: a tool for public education, recreation, and sustainable economic development. *Episodes*, 27, 162– 164
3. Jones, C. (2008). History of Geoparks. Geological Society, London, Special Publications, 300(1), 273–277. doi:10.1144/sp300.21.
4. Nikolova, V., Sinnyovsky, D. (2019). Geoparks in the legal framework of the EU countries. *Tourism Management Perspectives*, 29(), 141–147. doi:10.1016/j.tmp.2018.11.007.
5. Patzak M., Eder, W. 1998. "UNESCO GEOPARK". A new Programme- A new UNESCO label. - *Geologica Bale.*, 28, 3-4; 33-35.

### Glossary

UNESCO	is an international organization under the PPB that deals with all matters related to education, science, and culture that aims to increase mutual respect based on justice, the rule of law, and human rights.
Anthropogenic:	a source of pollution that occurs unnaturally or that arises from the results of human activities.
Geomorphology:	is a branch of geological science that studies the form of nature and its formation process.
Physiography:	is the declutter of the land shape that covers various aspects, one of which can describe the physical aspects of the land.
Geoheritage	is a site or area that has a diversity of high scientific value, as a legacy that can describe records that have been or are happening on earth.
Geodiversity	is a picture of the diversity of geological components found in an area.

### Biography

#### Moh. Al-fayedh



Born on April 4, 2001 (20 years old). At the age of 5 Fayedh and his family decided to move to Kendari Southeast Sulawesi. And there also Fayedh began to enter the level of education that is kindergarten (kindergarten). A year later Fayedh graduated from his studies at the school, and because there was one thing or another Fayedh family decided to return to central Sulawesi more precisely in Batui, Kab. Banggai. It was there that Fayedh returned to elementary school in 2007. Then continued by studying in junior high school (junior high school) in 2013. At the beginning of 2019 fayedh who was then 18 years old managed to graduate from high school (SMA) with a satisfactory final result. And now he is pursuing his study in geological engineering, Gorontalo State University. And recorded as an active student of the 4th semester of the class of 2019.