

## MANAGEMENT OF THE BATUR GEOPARK AS GEOLOGICAL CONSERVATION BASIS

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### ABSTRACT

The Batur Caldera is located in Kintamani District, Bangli Regency, Bali Province. The coordinates are 8 0 14.30' South Latitude, 115 0 22.30 East Longitude. The closest city distance is Bangli. The Batur Caldera contains the Batur Volcano and to the right is Lake Batur. Around it, in accordance with the beliefs of the local community, there are many temples, such as Besakih Temple and Pasar Agung Temple.

Indonesia's success in making the Batur Caldera a Geopark recognized by UNESCO, thanks to the hard work of the Bangli Bali Regent/Pemda, Kemenparekraf, ESDM Geology Agency. In an effort to promote themselves and improve the quality of Batur Caldera geopark tourist destinations.

Indonesia's wealth consisting of flora, fauna, cultural diversity, is a tourism asset that Indonesia already has that is able to realize love for national diversity as well as national unity. In addition, geological heritage (geoheritage) and sustainable geological diversity are the beginning of a geological park (geopark) towards nature-based tourism activities (geotourism). Geopark is the protection of cultural and natural heritage by emphasizing the potential between socio-economic and cultural development and the preservation of the natural environment. Geotourism as an earth heritage contains geological sites, which can produce science, scarcity, beauty, and education. Referring to conservation, education, and local economic growth.

In realizing Geotourism in Indonesia, it is necessary to have the role of Tourism Stakeholders, namely a group of tourism actors who are responsible for implementing tourism that is responsible for preserving nature and is sustainable, including the Central Government, Regional Government, Private sector, and the Indonesian Tourism Promotion Agency.

The government is supervised by the Ministry of Tourism and Creative Economy which is handed over to the Culture and Tourism Office in each region in the development of infrastructure, policies, regulations and promotions. In addition, the Geology Agency, as an institution that carries out geological conservation efforts in the context of sustainable development, is planning and preparing to organize the Geotourism. Besides that, there is the role of the community, several expert institutions in their fields to empower the community to be able to participate in the geotourism industry.

Keyword : Geopark, Geotourism, Stakeholders, Batur Caldera

### Introduction

Geopark is short for Geological Park, so if it is Indonesian it is Geological Park. The Geopark concept was first developed in Europe before 1999, namely to accommodate the idea of reuniting humans (including flora and fauna) with the earth which has provided a place to live and benefits. UNESCO included it as a program in 1999. Geoparks in Europe united in a network called Geopark Europe, which was formed in 2000. UNESCO itself only formed the Global Geopark Network in 2004. In the Asia-Africa region, in 2007 the Asia Pacific Geopark Network was formed. Its member countries are China, Japan, Malaysia,

Iran and Australia. Indonesia joined the Asia Pacific Geopark network in 2011.

Geopark is a management concept that combines three types of natural diversity, namely geological diversity (geodiversity), biodiversity (biodiversity), and cultural diversity (culture diversity). This concept is interpreted as a model for carrying out development activities in an area in a sustainable manner. The construction and development of the geopark itself is based on the aspects of conservation, education and growing economic value. These three pillars support the goals of geopark development, namely to glorify the earth's heritage, and its

development goals are aimed at the welfare of the local community.

### **Geopark Development Into Geotourism**

The use of geoparks to trigger growth in local economic value and tourism is one of the goals of geopark development. While the target of development is the improvement of the welfare of the local community. One of them is through coaching and education activities, where the local community does not function as an object but the subject of development, the community is actively involved from planning to geopark development.

Geopark as a tourism activity that is based on sustainable principles requires professional management. The management system is carried out jointly with the geopark management organization with the local community, local government and other stakeholders such as academics, related agencies and the business world. The geopark development master plan is used to control and evaluate the goals and objectives of the geopark development itself. In the master plan there is an action plan that includes short term, medium term and long term plans.

Implementation of a geology-based tourism program (geotourism) can be the closest effort to trigger local economic value growth, in addition to other sustainable economic sources such as agriculture, plantations, forest product processing, animal husbandry, sales of local handicrafts, service businesses (lodging, restaurants, tour guides), equipment rental), and so on.

### **Batur Caldera As A Geopark Recognized By UNESCO**

Indonesia has a huge opportunity to promote geodiversity, biodiversity, cultural diversity in the packaging of the geopark concept. There

are 127 active volcanoes along the Sumatra, Java, Nusa Tenggara to Maluku and Papua routes. The geological assets which are Indonesia's true wealth are believed to have a connection with biological and human life which produces culture, both in the past and in the present. This relationship continues to be studied, and has been practiced in the Kars area of Pacitan (East Java) and the Batur Caldera (Bali).

On 19-21 September 2012 the 11 th European Geopark Network Conference (EGN) took place, in Arouca City, Portugal. The EGN conference was attended by 42 countries, including Indonesia. The Indonesian delegation for the EGN conference was chaired by the Director General of Tourism Destination Development, the Ministry of Tourism and Creative Economy, and assisted by the Center for Geological Survey and the Geological Agency of the Ministry of Energy and Mineral Resources, the Regent of Bangli, Indonesian Geopark Consultants and the Indonesian Embassy in Lisbon. Apart from Indonesia, representatives from Asia came from Malaysia, China, Japan and Korea, who have succeeded in including several regions as part of the UNESCO Global Geopark Network.

The socio-economic dimension in geopark development is a priority for EGN. At this conference UNESCO and EGN members seek to develop geopark tourist destinations in Indonesia through the synergy of the conservation, education, local economic empowerment and sustainable tourism sectors. Indonesia's success in making the Batur Caldera a Geopark recognized by UNESCO, thanks to the hard work of the Bangli Bali Regent/Pemda, Kemenparekraf, ESDM Geology Agency. In an effort to promote themselves and improve the quality of Batur Caldera geopark tourist destinations.



Figure 1. Batur Caldera and Batur Volcano

The coordinates are 8 0 14.30' South Latitude, 115 0 22.30 East Longitude. The closest city distance is Bangli.

In the Batur Caldera there is the Batur Volcano which is usually used for hiking activities above the height of Mount Batur, we can see Mount Agung and Mount Rinjani and to the right is Lake Batur.

Around it, in accordance with the beliefs of the local community, there are many temples, such as Besakih Temple and Pasar Agung Temple. Not only that, around the Batur Caldera, there are other tourist objects, including: Kedisan, Batur Village, Fruit Writing, Trunyan, Kuban, Toya Bungkah and Songan. The recognition of the Batur Caldera as a UNESCO geopark is the first for Indonesia, which is expected to open the way and encourage other geopark managers in Indonesia to achieve the same success.

### **Scope of Tourism Stakeholders**

Stakeholders are groups in an activity that aims to achieve the goals of an organization. In America, Stakeholders are divided into two, namely the Public Sector and Private Sector, the Public Sector is the government and the Private Sector is a commercial tourism organization and a voluntary organization that oversees several tourism industries. Meanwhile in Indonesia, based on Law No. 10/2009, the scope of tourism organizations includes central government, local government, private and community organizations, including:

1. Central Government Organization: is the implementing element of the government, led by the Minister who is under and responsible to the President and has the task of assisting the Resident in carrying out some government affairs in the fields of culture and tourism.
2. Regional Government Organizations: are implementing elements of the Regional Government in the context of implementing decentralization and regional autonomy.
3. Private Organization: is a person or group of people (entrepreneurs) who provide goods or services to meet the needs of tourists and organize tourism.
4. Community Organization: is a community that organizes and resides in the area of a tourism destination and is prioritized to benefit from the implementation of tourism activities in that place.
5. Indonesian Tourism Promotion Board The government facilitates the establishment of the Indonesian Tourism Promotion

Board which is a private and independent institution. It consists of 2 organizational structures, namely the policy maker and the implementing element.

Awareness of this responsibility must be initiated by the central government and regional governments, including: developing a legal basis (laws, government regulations, ministerial decrees, and regional regulations), increasing public awareness through public education, increasing the role and development of non-governmental organizations, and development of information systems supporting sustainable tourism.

The role of the central government in managing the Batur Caldera geopark to become geotourism includes: the development planning process, tourism service standards, tourism strategy programs, inter-sectoral program planning and tourism development communication, inter-regional program planning, needs evaluation in developing geoparks into geotourism, measuring the impact of geopark development to be geotourist.

The role of the local government in managing the Batur Caldera Geopark to become geotourism, including: the local government has the authority to regulate its own households, including in the tourism sector. The local government is the party that will directly receive all the consequences and impacts of tourism, including tourism development initiatives by the local government, forging agreements with various parties who carry out tourism activities, such as: transportation, accommodation, catering services, entertainment and recreation, as well as other services. other personal services, maximizing linkages between development sectors in the region, elevating local identity in regional tourism development.

The environment which is a global issue has been exploited by the tourism sector to promote and provide geoparks to become geotourism. In line with these efforts, various related parties (stakeholders) must take responsibility for turning geoparks into geotourism. The responsibility for realizing eco-friendly tourism is the responsibility of all parties, the central government, local government, the tourism industry, the local community, tourists.

### **Management Of The Batur Caldera Geopark Area To Become Geotourism**

The management of the Batur Caldera Geopark area to become Geotourism. In

managing the geopark area there are 3 main elements, namely:

1. Regulation, namely controlling human or societal behavior with rules or restrictions. Regulation can take various forms, for example: Legal restrictions by the government (Regional and Spatial Regulations), institutional self-regulation, social regulations (norms), co-regulation, and markets. In principle, regulations in a geopark concept must be based on the principles of pro-growth, pro-poor and pro-environment.
2. Infrastructure (facilities and infrastructure). In the development of an area, especially in a tourism concept, easy accessibility (infrastructure) and completeness of the facilities owned by the area are the main requirements in its development. As we know, regional infrastructure can be divided into 4 parts, namely: transportation infrastructure, economic infrastructure, social infrastructure and environmental infrastructure. This infrastructure is one of the main keys to the success of geopark development, especially in improving the regional economic sector.
3. Community empowerment is one of the main prerequisites in geoparks as a gateway that will lead the community towards dynamic economic, social and ecological sustainability. Community empowerment has a close relationship with sustainable development. Through empowerment efforts, community members are encouraged to have the ability to optimally utilize their resources and be fully involved in the management mechanism of the geopark, its economy, social and ecology.

### Conclusion

Realizing conditions for sustainable management of natural resources and the environment is not easy, partly because efforts to prevent over-exploitation which results in environmental damage are hampered by weak law enforcement. It cannot be denied, until now there have been no cases of vandalism that have been punished in accordance with the people's sense of justice. Overlapping obstacles in the management of natural resources are felt in interrelated sectors, and there is still a tug-of-war of authority between the central government and regional governments.

The role of private stakeholders in managing the Batur Caldera geopark into geotourism includes the development of electronic information systems, increasing market

access and training, the institutionalization of community participation. Tourism is not only about developing and managing geoparks to become geotourism, but its management must consider the principles of sustainability and protection of both economic, cultural and environmental aspects. The balance between development and conservation is an essential factor for sustainable tourism.

The successful utilization of geological resources in the context of geology-based tourism development depends on the results of applying the principles of community-based sustainable tourism development. Cross-sectoral support in developing geotourism includes relevant agencies and stakeholders, such as community organizations, professional scientific organizations, local governments and local communities.

### References

#### Books

- Geology Agency. 2010. Living Above Three Plates, Energy, Minerals, and Geodiversity. Bandung: Geology Agency, Ministry of Energy and Natural Resources.
- Bronto, Sutikno. 2010. Geology of Ancient Volcanoes . Bandung: Geology Agency, Ministry of Energy and Natural Resources.
- Office of the Minister of State for the Environment. 2000. Tourism Agenda for Sustainable Quality of Life Development . Jakarta: Sectoral Agenda 21 Project.
- Kusumahbrata, Yunus et al. 2011. Reaching the Jambi Merangin Geopark . Bandung: Geology Agency, Ministry of Energy and Natural Resources.
- Marpaung, Harry. 2000. Introduction to Tourism . Bandung: Alfabet.
- Center for Education and Training of the Ministry of Culture and Tourism. 2010. Introduction to Tourism . Jakarta: Ministry of Culture and Tourism
- Suradinata, Ermaya. 1996. Government Organization and Management . Bandung: PT Ramadhan.
- Wow, Wrong. 2003. Tourism Management , Jakarta: PT. Pradnya Paramita.
- Wittir, SR. 2011. Bali and Nusa Tenggara Volcano Series . Bandung: Geology Agency, Ministry of Energy and Natural Resources.
- Yoeti, Oka A. 1993. Introduction to Tourism Science . Bandung: Space.
- \_\_\_\_\_, 2007. Tourism Planning and Development . Jakarta: PT. Pradnya paramita.

### Statutory Regulations

Law No. 5 of 1990 concerning Conservation of Living Natural Resources and Their Ecosystems

Law No. 23 of 1997 concerning Environmental Management

Law No. 32 of 2004 concerning Regional Government

Law No. 10 of 2009 concerning Tourism

Government regulations No. 27 of 1999 concerning Analysis of Environmental Impacts

Government Regulation of the Republic of Indonesia No. 38 of 2007 concerning the Distribution of Governmental Affairs between the Government, Provincial Governments, and Regency/City Regional Governments

Government Regulation of the Republic of Indonesia No. 41 of 2007 concerning Regional Apparatus Organizations

Presidential Decree No. 32 of 1990 concerning Management of Protected Areas

#### **Other Sources**

<http://www.toyadevasya.com/batur-caldera-trekking> .

<http://www.toyadevasya.com/batur-caldera-trekking.html>

[http://www.antarakalbar.com/berita/306829/unesco-tetapkan-kaldera-batur-as-](http://www.antarakalbar.com/berita/306829/unesco-tetapkan-kaldera-batur-as)

<http://www.antarakalbar.com/berita/306829/unesco-tetapkan-kaldera-batur->