



Geotourism Development from the Perspective of Triple Bottom Line Approach: A Case Study at Aik Berik Geosite, Lombok

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Abstract

Purpose: The purpose of this research is to analyze how geotourism development at the Aik Berik Geosite, Rinjani Geopark, Lombok, Indonesia uses the Triple Bottom Line theory approach and to design a tourism development model that is relevant and in accordance with the rules of the Triple Bottom Line theory.

Research methods: This research is a descriptive case study. The data analysis techniques are interactive data analysis techniques with data collection techniques in the form of observation, interviews, document studies and focus group discussions (FGD).

Findings: The Aik Berik Geosite is still not optimal in developing tourism in accordance with triple bottom line principles both from a social, economic and environmental perspective. The Aik Berik Geosite is still unable to maintain its cultural richness and meet visitors' expectations, so the visits continue to decline, which has an impact on the welfare of the community, until finally the community expands its land because tourism is unable to provide economic prosperity, which causes environmental degradation.

Implications (10pt, bold): The results of the FGD recommend that the Rinjani-Lombok UNESCO Global Geopark Management Agency apply the pentahelix concept in tourism development at the Aik Berik Geosite so that the Aik Berik Geosite is able to maximize economic, social and environmental benefits.

Keywords: triple bottom line, sustainable tourism, geopark, geosite tourism, stakeholder

INTRODUCTION

Tourism in Indonesia is a very important economic sector. The tourism sector is not only an economic engine, but tourism is also an attractive tool for



reducing unemployment. In 2019, Indonesia's tourism sector became the largest foreign exchange earner, surpassing the oil, coal, gas and palm oil sectors by earning USD 25 billion in foreign exchange (Putra et al., 2021).

Indonesia has advantages in natural tourism, because this country has natural landscapes (lakes, karsts, mountains, valleys, calderas, etc.) that are unique and most complete in the world which are the result of a long geological process, apart from that, Indonesia's position is on the equator, This causes Indonesia to have unique biodiversity (flora and fauna) and diverse and very unique cultural diversity that accompanies every expanse of nature as a result of the feeling, intention and creativity of this natural beauty so that Indonesia is nicknamed the "Zamrud Katulistiwa" (Emerald of the Equator).

Until now, the diversity of this geological heritage has been utilized for its natural beauty through a series of tourism activities and placing the surrounding community as objects in the management of the area. so that the existence of these natural resources is now threatened with massive damage, not only caused by natural factors (erosion, weathering, etc.) but also due to human actions themselves (vanadilsm, encroachment, etc.). Therefore, Indonesia, through the Geological Agency, the Department of the Ministry of Energy and Mineral Resources, has collaborated with the Indonesian Commission for UNESCO (KNIU) since 2008 together with the Ministry of Education and Culture, the Ministry of Tourism, the Ministry of Environment and Forestry, the Ministry of Maritime Affairs, the Ministry of Economy, BAPPENAS, and the Regional Government has implemented the Geopark concept in the use of natural resources.

The geopark concept is recognized as a sustainable development concept which has a noble aim, namely changing the mindset of the use of natural resources (especially geological resources) which have only recently been utilized through extractive activities (mining) which have been replaced with conservative ones with the aim of improving the regional and local economy as well as as a medium for revolutionary change in society's mentality to be more disciplined, work together, respect each other and maintain the values of a clean, ethical life (DPMPTSP, 2018). The development of geoparks in Indonesia is very massive, this is proven by the existence of 24 geoparks in Indonesia consisting

of 10 UNESCO Global Geoparks, 10 national geoparks, and four national geopark candidates (Network Geoparks, 2023).

In this applied research, the authors are interested in researching more deeply about the Rinjani Geopark, especially one of its geosites which experienced phenomena and events that were not in accordance with the rules of sustainability in accordance with the triple bottom line (TBL) concept applied by Elkington (1997). In this applied research the authors apply a case study design (Yin, 2003). The theory used in this research is sustainable tourism theory with indicators from Panasiuk's book (2011) which adapts the triple bottom line theory which has also been applied in previous research such as Gurbanli (2022) which is equipped with stakeholder theory from Freeman & Reed (1983).

The aim of this applied research is to form a model for implementing geotourism with an appropriate triple bottom line approach to increase the sustainability of tourism at the Aik Berik Geosite. As a case study, the model designed and applied in this research can be applied in other geosites in the Rinjani-Lombok UNESCO Global Geopark area.

RESEARCH METHODS

This research is a case study as designed by Yin (2018). This descriptive case study approach allows researchers to describe in depth the phenomena that occur at the Aik Berik Geosite. The data collection method is an effort to collect information through interviews and observations both structured and unstructured, documentation, visual materials as well as efforts to design protocols for recording information and recording (Creswell, 2009).

The authors used semi-structured interviews based on the triple bottom line indicators established by Panasiuk (2011). To explore and obtain information regarding the extent to which geotourism development at the Aik Berik Geosite can be relevant to the triple bottom line concept approach. Document studies focus on internal official documents that present information about the situation or rules of institutions (Moleong, 2011).

Observation is an activity carried out to obtain a clearer picture of social life, which tends to be difficult to obtain if using other methods (Nasution, 2009). The authors use complete participant observation in this applied research, which means the authors are fully involved in what the data source does naturally, in

this case the authors' data source is the Rinjani-Lombok UNESCO Global Geopark.

Neuman (2013) interprets focus group discussion as a qualitative research technique in which specific participants are "interviewed" informally in a group discussion setting. Meanwhile Onwuegbuzie et al. (2009) stated that focus group discussions are a way of collecting data in qualitative research, which involves the participation of a small group of participants in an informal discussion group, which has a focus or topic on a particular problem. In applied research The authors used five small groups consisting of one representative from the Aik Berik Geosite Pokdarwis, one representative from the Rinjani-Lombok UNESCO Global Geopark Management Agency, one person from the Central Lombok Regency Tourism Office, one representative from the Provincial Environment and Forestry Service West Nusa Tenggara (NTB), one representative from the Association of Indonesian Geologists (IAGI) and one representative from Tourism Academics from the State Islamic University of Mataram (UIN Mataram).

As for the data analysis technique in this research, the authors used interactive analysis techniques (Miles et al., 2014). The first stage is data collection. The data is then condensed or simplified and categorized based on themes or indicators in the authors' research. After the data is categorized or patterned, the data is presented in the form of a description. After that, inference (conclusion drawing) is done. Each theme or variable indicator explains the conclusions, then from the many conclusions a major conclusion is drawn which is the main answer to the research question.

FINDINGS

Geotourism is one of the newest concepts in tourism whose main focus is to promote geological and geomorphological landscape features as tourist attractions. Having a new market segment in the tourism sector is based on geoheritage and geodiversity conservation. Through appropriate sustainability measures (Ólafsdóttir, 2019). Newsome (2005) has defined geotourism as a form of natural tourism that specifically emphasizes geology and natural landscapes. Geotourism is generally divided into form aspects, process aspects and tourism aspect.

The tourism aspect at the Aik Berik Geosite is still not optimal if studied using the triple bottom line approach. To find out whether the Aik Berik Geosite tourist attraction has implemented sustainable management in accordance with the basic principles of sustainable development with a 3P or triple bottom line approach, an indicator is needed to measure this.

Profit (Economic Aspect)

The indicators used in this research are indicators from Panasiuk (2011) which have been adapted using John Elkington's triple bottom line theory which has also been applied in previous research by Gurbanli (2022). There are seven variable indicators combined into four variables.

Table 1. Profit Indicators

No.	Variable	Variable Indicator	Implementation
1	Economic profitability	Ensure the welfare of local communities	Not optimal
2	Local prosperity	Destination competitiveness	Not optimal
3	Quality of employment	Long-term business sustainability	Not optimal
4	Social equity	Maximize the economic benefits of the tourism sector for local communities	Implemented

Based on the results of interviews and the authors' observations, it can be concluded that the Aik Berik Geosite is still not optimal in implementing several variables even though social equity has been implemented quite well. However, several variables such as economic profits, community prosperity, quality of work have not been implemented optimally.

People (Social Aspect)

The people or social aspect has an important role as a determinant of social welfare for the community around the tourist attraction and visitors (Jauharie & Firdaus, 2024). In this research the authors apply seven indicator

variables which are combined into four variables to dig deeper into the application of people or social aspects in the tourist attraction of the Aik Berik Geosite.

Table 2. People indicators

No.	Variable	Variable indicator	Implementation
1	Welfare of the community	• Building community welfare • Building social infrastructure • Access resources • Exploitation of human resources	Not optimal
2	Cultural wealth	• Maintain and develop local culture, traditions and customs	Not optimal
3	Meeting expectations of visitors	• Providing a safe and enjoyable tourism experience, which can meet the needs and expectations of tourists	Not optimal
4	Local control	• Involve local communities in planning and decision making for destination management	Implemented

Likewise, with the social aspects, several variables are still not implemented optimally even though one variable has been implemented.

Planet (Environmental Aspect)

The environmental aspect is a principle of sustainability which explains that environmental resources are utilized as key elements optimally in environmental development (Sulistiyadi & Entas, 2019). In the planetary perspective there are four variables and six variable indicators.

Table 3. Planetary Indicators

No.	Variable	Variable Indicator	Implementation
1	Physical integrity	• Maintain and build landscape quality • Prevent ecological pollution	Not optimal
2	Biological diversity	• Promote and protect the environment, natural habitats and wildlife • Minimize the impact of tourism on the environment	Not optimal
3	Effective waste management	• Minimize the use of scarce and non-renewable resources in tourism development	Not optimal
4	Clean environment	• Minimizing water, air, land pollution and reducing waste by tourists and tourism businesses	Not optimal

For environmental aspects, all variables have not been implemented optimally. The Rinjani-Lombok Management Agency, UNESCO Global Geopark Rinjani, has not taken definite steps to minimize pollution, minimize resource utilization, prevent ecological pollution and maintain landscape quality.

From the results of the FGD, the authors recommend a model for implementing geotourism-based tourism with a triple bottom line approach to increase sustainable tourism at the Aik Berik Geosite tourist attraction.

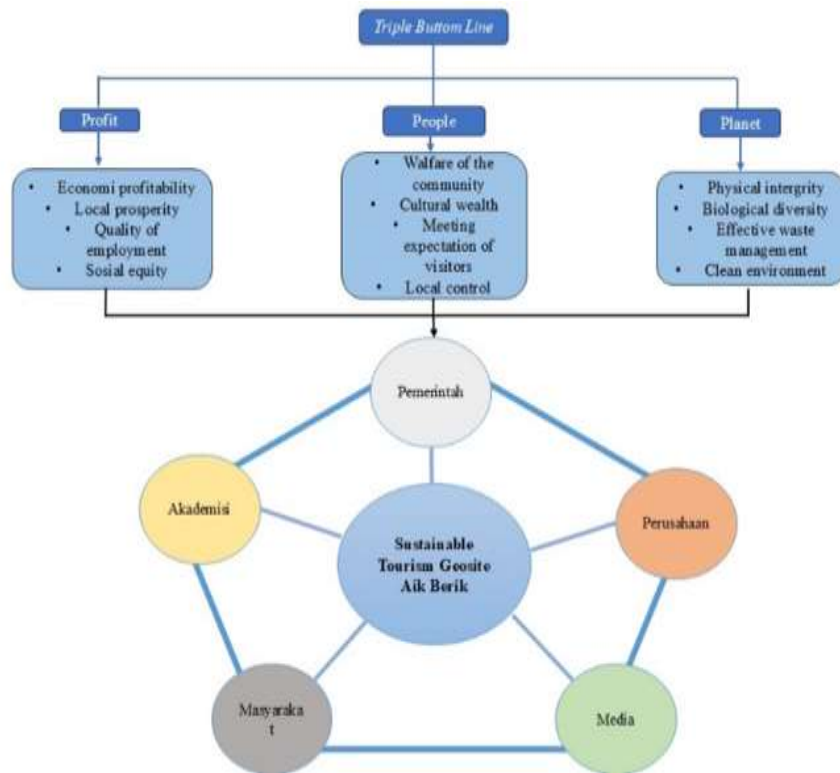


Figure 1. Sustainable tourism model with a triple bottom line approach to improve sustainable tourism at the Aik Berik Geosite

This model (Figure 1) illustrates how the development of a geotourism model at the Aik Berik Geosite using a triple bottom line approach can be carried out optimally. With the help of stakeholders who work together and engage each other to improve sustainable tourism at these tourist attractions. The model is based on the triple bottom line theory by maximizing profit, people and planet perspectives by maximizing 12 variables to maximize benefits from a profit perspective, social perspective and environmental perspective.

To carry out and implement this theory more effectively, pentahelix cooperation is needed between various stakeholders or stakeholders who also benefit from this tourist attraction. Each stakeholder has a role to play in supporting the success of this model.

CONCLUSION

The economic aspect of the Aik Berik Geosite is still not optimal even though the tourist attraction has succeeded in distributing its economic benefits. This tourist attraction is also able to raise the standard of living of people who previously worked as agricultural laborers. However, people's welfare has

decreased recently due to the emergence of similar new destinations and decreasing tourist spending in these destinations. The decline in welfare is also influenced by the quality of workers whose ability to make new products is still very minimal. Even though the products at the Aik Berik Geosite are very diverse, the amount of raw materials and diverse culture at this Geosite can actually be developed into a tourism product that can stimulate the growth of economic value in the destination.

The social perspective is also not implemented well enough. Although there are several variable indicators that are less than optimal, such as damaged and neglected public facilities which cause discomfort for tourists visiting the destination. The absence of cultural preservation and tourism development is a very unfortunate thing even though this village or geosite has many customs that can be used as cultural attractions to support the main attractions such as the Gendang Beleg dance, then there is the Balang catching culture where all these customs are actually capable of used as a geoproduct to add value to the Aik Berik Geosite destination.

The environmental perspective is the thing that is most affected in the development of this Geosite because the conversion of forest functions carried out by farmers causes ecological disruption and there has been no action to prevent ecological pollution. There is no use of non-renewable resources such as water management and waste management for compost recycling systems. As well as other actions to minimize the impact of environmental pollution due to tourism activities.

To form a model for implementing geotourism with an appropriate triple bottom line approach to support sustainable tourism at the Aik Berik Geosite, pentahelix collaboration between stakeholders is needed to collaborate with each other to improve sustainable tourism in accordance with triple bottom line theory and indicators.

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