

## Community extractive economic activities in the Silokek Geotourism area

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### Abstract

This paper is written based on the results of research in the Silokek Geopark tourist area, Sijunjung Regency, West Sumatra. The combination of the development of the concept of geological diversity with abundant natural resources, biological (rich flora and fauna) and culture, makes Silokek Geopark very potential to be developed into sustainable tourism. However, the problem of environmental pollution, and the management of the natural environment in the extractive economic dimension of the community, is still very worrying, so that it can have a negative impact on the development of tourism. This paper provides views related to community extractive economic activities to support sustainable tourism in Silokek. The research was conducted using qualitative methods, with observation and interview data collection techniques. The results showed that there is a need for a comprehensive understanding of the community in the tourism area regarding the changing functions of forests and rivers as a result of tourism development in the area. There is a need for motivation to shift the community's economy from an extractive economy (related to the exploitation of natural resources), community economic resources in managing forests, mining gold, river functions directly to a non-extractive economy in order to support sustainable tourism development.

**Keywords:** Extractive-non-extractive economy, Geological Diversity, Silokek Geopark; Sustainable tourism

### 1. Introduction

Sustainable tourism development not only considers tourism development to increase tourist interest and needs but also must consider development in the tourist area itself and the needs of the host community, local economy, and nature management. Guaranteeing sustainable development by not exploiting the natural or physical environment is an important part of the development of a tourist area. Especially in the style of tourism that is oriented towards the natural environment or ecological tourism (eco-tourism). In addition to being able to provide benefits to communities around tourist destinations today, sustainable tourism development must also be able to guarantee benefits for future generations.

One of the natural tourist destinations in West Sumatra is the Silokek geopark area, which is located in Sijunjung Regency with an area of approximately 3000 km<sup>2</sup>. Silokek Geopark has been designated as a national geopark on November 30, 2018, with 25 geodiversity sites, 12 biodiversity sites, and 17 cultural diversity sites [7]. Furthermore, [3], noted that this geopark area is geologically very interesting because this geopark has passed through three eras on a geological time scale. The oldest rocks (Paleozoic) are represented by the Kuantan Formation (some of which have undergone a metaphoric process); Middle-era rocks (Mesozoic) are represented by granitic magmas that form granite; and finally young rocks (Cenozoic) are represented by rocks from the Ombilin Formation [3]. Another uniqueness that is owned in the Silokek geopark area is the geological uniqueness in the form of karst tening rocks that are hundreds of millions of years old and granite rocks that are approximately 260 million years old. In the Silokek Geopark area there are also beautiful caves and waterfalls, which are still very natural and have tourism potential with their own uniqueness [3]. The combination of developing the concept of geological diversity with abundant natural resources,

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biodiversity (richness of flora and fauna) and culture makes Silokek geopark certainly very potential to be developed into sustainable tourism [4]. However, efforts to develop sustainable tourism certainly do not only talk about the uniqueness of nature, geological uniqueness, and abundant natural resources, but need a strategy on how to manage these unique and abundant resources to be sustainable and guarantee benefits for future generations for the benefit of tourism [6].

So far, studies on sustainable tourism development tend to look at tourism development to increase tourist interest only, as well as relating to the needs of tourists. The economy of communities around tourism and natural resource management is rarely a concern. For example, the tendency of natural resource management in tourism areas that is extractive in nature will have an adverse impact on overall natural resource management, and does not promise economic sustainability or tourism development. Two trends from existing studies can confirm the lack of attention to the economic and natural resource management dimensions of communities in tourist destinations. First, many studies pay attention to tourism destination management strategies in order to become sustainable tourism [9], [3], [7]. Second, tourism development studies that also discuss environmental preservation, but have not touched the economic dimension of the community related to the management of extractive and non-extractive industrial natural resources [12], [10]. From the trend of existing studies, it appears that studies on sustainable tourism development have not touched on the economic aspects and management of natural resources in the community. Extractive management of natural resources will certainly have a negative impact on the development of tourism itself and society as a whole.

This research complements the shortcomings of existing studies by looking at how the management of natural resources in tourist areas and the extractive economic dimensions of the community have implications for sustainable tourism development. Extractive management of natural resources, with the exploitation of nature and thinking of individual profit is certainly not in line with sustainable tourism development. Specifically, this paper answers how the management of natural resources in tourist areas and how the management of extractive economic dimensions in the community can lead to negative aspects of sustainable tourism development in Silokek. An in-depth look at how the management of natural resources and extractive economy in this community can provide an understanding for the preparation of policy plans in sustainable tourism development.

This research is based on the argument that sustainable tourism development, in addition to being influenced by the readiness of tourism in physical terms only, the interests or needs of tourists only, or prioritizing the number of tourist interests only, but also must take into account the social, economic, and natural environmental impacts. The negative impact of exploiting nature and taking wood in the forest for the benefit of individual communities certainly has a negative impact on the sustainability of tourism. Exploitation of nature for individual interests or as a livelihood is strongly influenced by public knowledge and awareness of environmental conservation. Thus, it is necessary to identify natural environmental management issues in tourist areas, in order to ensure the sustainability of tourism development.

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## 2. Literature Review

Ecotourism is a form of tourism inspired by the natural history of an area, including its culture. Ecotourism is also referred to as a way of utilizing and managing tourism resources in an environmentally friendly manner [1]. Furthermore, [1] states that there are 8 main principles that guide ecotourism, namely: having a natural area focus, providing educational services, ecological activities, contributing to the conservation of nature and cultural heritage, contributing to local communities, respecting and being sensitive to cultural values, consistently meeting consumer expectations and being marketed and promoted honestly and accurately. The concept of ecotourism developed into a geopark, with special specifications for the combination of nature, archaeological and cultural values. Geopark according to UNESCO 2004 is an area that has prominent geological elements including archaeological, ecological and cultural values that exist in a tourist area, where people in the tourist area are invited to participate in protecting and enhancing the function of natural heritage. Geopark can be said to be an area that has meaning as a natural heritage (geology) and becomes a place to implement sustainable economic development strategies carried out through a good and realistic management structure. But geoparks are not only that, but that humans who live in tourist areas can also maximize their economy through sustainable tourism development in the concept of geotourism [11].

Sustainable tourism refers to a type of tourism that takes into account the environmental, social and economic consequences of its tourism activities, considering the needs of tourists as well as the needs of the host, as well as nature. In the Quebec Declaration 2002, it is said that ecotourism (geotourism) means a form of sustainable tourism that includes active donation efforts in natural and cultural protection activities, involving the role of local communities in planning, management and development, transferring knowledge about culture, and nature and producing tour groups. This is in line with what was conveyed by the United Nations Commission on Sustainable Development 2002, that

ecotourism means sustainable tourism that guarantees equal, effective and active participation, from all stakeholders, claims the participation of local residents, and raises local resident mechanisms in terms of control and maintenance. In order to achieve sustainable tourism development, it is crucial to claim the participation of local communities, the preservation of nature, environmental, social and economic impacts, including the livelihood systems of local communities that should support the development of tourism.

The business of managing natural resources in a tourist area is often called extractive business. Usually it starts with natural exploration, extraction to processing to meet the needs, both individual and corporate needs. Silokek is very rich in natural resources, no wonder many people are engaged in this extractive business, for example taking wood in the forest to build houses or sell them, and gold mining activities. It's all for the benefit of individual people and can disrupt the balance of nature and pollution.

The characteristics of extractive businesses are that they seek profit from natural products, the materials are directly taken from nature. For example, mining extractive businesses, extractive businesses in agriculture, animal husbandry, and so on. However, without clear regulations, extractive businesses carried out can certainly be interpreted as irregularities.

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### 3. Methods

The people who live in Silokek village are the focus of this research. People who manage forests, take forest products to build houses and sell wood, and utilize rivers in their daily lives. The river is also utilized in gold mining activities in the Silokek community, and people around the village. By studying community groups who take forest products and utilize the river as a place to look for gold, a community problem solving model can be built in overcoming extractive and non-extractive businesses for sustainable tourism development in the future.

This research uses a qualitative method with an ethnographic approach. The ethnographic approach allows researchers to live and be close to research informants. The purpose of ethnography is for researchers to understand the point of view of the community, as well as their expectations about life and their world [2]. The main techniques in the research are observation and interviews.

The research informants were community members who collect forest products, and community members who conduct illegal mining (gold mining), as well as tourism managers. Informants were selected by purposive sampling, by first establishing the criteria of community members who work as forest product collectors and gold miners, as well as tourism managers. Data analysis was conducted by first coding the data, according to the themes found.

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### 4. Result

#### 4.1. Extractive activities Wood extraction in the forest

The current extractive activity of the Silokek community is utilizing wood in the forest, by cutting down and taking it, whose wood is used to build their own homes or build Rumah Gadang. The types of wood taken include surian wood, jua wood, bayua, timbalun, and so on. This activity has been carried out by the community since long ago. According to the Silokek community, the activity of taking strong types of wood in the forest has been done since long ago. The construction of Rumah Gadang requires several strong pillars, whose wood is taken from the forest. This is coupled with the main material of Rumah Gadang consisting of wood so that the need for wood is increasing. Knowledge of the types of wood that are strong and sturdy for building houses has been obtained by the community for generations. Currently, the collection of wood in the forest is also for sale, both to the surrounding community who want to buy, and to people outside the village who want to buy.

Silokek is surrounded by natural forests and adjacent to residential areas. Nagari Silokek Sijunjung District has a protected forest area of 25714.60 hectares and a production forest area of 12595.80 hectares according BPS Sijunjung 2022. This certainly facilitates access for residents to utilize the forest to meet their daily needs, such as taking wood to build houses or renovate houses, as well as for sale. This activity of forest utilization without clear regulations can certainly be a contributing factor to the destruction of plant species, deforestation, and only for personal interests without thinking about the consequences in the future. Recently, the issue of illegal logging has also emerged in the Silokek area, with illegal loggers as one of the actors carrying out illegal logging activities, both from the community and people who come from outside the Silokek area. This will have a negative impact on forest sustainability. The problem of forest destruction is certainly not only a natural problem, but there are human factors that are the actors behind it.

Illegal loggers who trade timber or forest products see the forest as a source of money without thinking about the consequences in the future.

Benefit extraction from forest resources can be divided into extractive and non-extractive utilization. Benefit extraction by taking resources is known as extractive utilization, while non-extractive benefit extraction is not done by exploiting resources, but utilizing the values and functions provided by the resources. Extractive utilization of forest resources includes logging, and taking forest products carelessly without clear regulations. This is the use of forests by utilizing existing resources. If the utilization of forest resources is carried out in tourism, it must take advantage of the benefits and functions of aesthetic values found in the forest environment.

#### 4.2. Extractive activities gold mining

Another extractive activity of the Silokek community is gold panning or mining. Batang Kuantan is a river rich in gold, and is utilized by the community as a main or side livelihood. According to the Silokek community, this extractive activity of mining gold has been carried out for decades. Even one of the online media, [sumbarsatu.com](http://sumbarsatu.com) said that being drained by Batang Kuantan made Nagari Silokek one of the river civilizations in West Sumatra. This river has become the primary "highway" used by the Silokek community to travel between villages and trade to the East Coast of Sumatra. Batang Kuantan as the main connecting route between villages is seen in local folklore, one of which is the story of Datuak Marabanso and Datuak Palowan. It is said that in the past, there were a pair of brothers who lived in Kampung Tuo Balai Tengah (now Durian Gadang) named Datuak Marabanso and Datuak Palowan Bosar. Every day, these two brothers worked as farmers. However, due to a disagreement between the two regarding the distribution of farm produce, Datuak Palowan Bosar left his brother for Tanjung Medan (now called Silokek) using a boat down Batang Kuantan. Whether or not the story is true, it appears that Batang Kuantan was already used as a primary route for traveling between areas along the river in the past.

In addition to being a link between villages, Batang Kuantan also serves as a major trade route connecting inland areas using the east coast of Sumatra. The utilization of the river as a trade route has been carried out since the time of the Nusantara kingdoms and continued until the Dutch Colonial period. There is history that says that during the Siguntur Kingdom, the crowded river trade route turned to Batang Kuantan and its tributaries. Inland traders would bring their forests and mines to Siguntur. Then, from the region, these traders set off for the east coast of Sumatra using the Batang Kuantan River using an ark to sell their merchandise to Chinese, Arab and European traders.

According to the Silokek community, gold mining used to be done traditionally using 'Jae' made of wood and the Jae was made by the community themselves, and they used to name the activity as panning for gold. If a household has ten members, then there will usually be ten Jae in the house. This means that gold panning skills have been inherited by all family members. This shows that gold panning has become a tradition for families living around Batang Kuantan, Silokek. Panning for gold in this traditional way does not cause the river water to become murky and brown, as shown in the picture below:



**Figure 1** Traditional gold panning; (Source: Kompas.id 2022)

The activity of panning for gold is still maintained by the Silokek people who live and work along Batang Kuantan. However, along with the development of technology, this gold began to be exploited on a large-scale using machines. This condition could have an impact on the existence of gold in Batang Kuantan. In addition, the fuel used in the machines can pollute the river, resulting in murky river water and excavation pits. Gold panning using machines can

also eliminate the traditional gold panning culture in the Silokek community. In fact, this culture can be a tourist asset that can be developed as one of the cultural events found in Silokek.



**Figure 2** Brown and murky Batang Kuantan water; (Source: Research Results 2022)



**Figure 3** Gold panning machine; (Source: Research Results, 2022)

In the picture above, on the opposite side of Batang Kuantan, you can see compressor machines, shooting machines and suction machines used as gold mining tools. The use of these machines certainly affects the water quality of Batang Kuantan, making it brown and murky. According to the Silokek community, mining gold using machines can increase their income. In one day, they can pocket 1-3 grams of gold, which is more than panning for gold using traditional methods.

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## 5. Discussion

The economic activities of the Silokek community described above, logging in the forest and gold mining in Batang Kuantan, are extractive activities, for private interests, and have not been managed with good regulations, certainly not in accordance with the principles of sustainable tourism development. There are at least 4 basic principles so that sustainable development in tourism can be achieved. First, it must be ecologically sustainable, which does not cause negative effects on the ecosystem. This first principle does not seem to be found in nagari Silokek along with the development of the Silokek area as a Geopark and as geological tourism [1]. The Batang Kuantan water is polluted and the forest is increasingly experiencing deforestation due to the continuous extraction of wood. Second, socially acceptable, which refers to the ability of local communities to absorb tourism activities and not cause conflict. This second principle does not seem to have been successfully carried out, because more people are involved in the extractive economy for their own benefit, not absorbing from tourism activities. Third, culturally acceptable, i.e., local communities are able to adapt to different tourist cultures. Fourth, it is economically profitable to improve the welfare of local communities.

In the Sustainable Tourism Charter, it is said that tourism development should be based on sustainability criteria, which means that development can be ecologically supported in the long-term while being economically viable, ethically fair and socially acceptable to society. That is, sustainable development is an integrated and organized effort to develop the

quality of life by managing the provision, development, utilization and maintenance of resources in a sustainable manner. Tourism development must be able to use resources sustainably, which means that its activities must avoid excessive use of non-renewable (irreversible) resources. This is also supported by local linkages in the planning, development and implementation stages so that fair benefit sharing can be realized. In its implementation, tourism activities must ensure that natural and artificial resources can be maintained and improved using international criteria and standards [5].

Based on the above description, it can be understood that in sustainable tourism development, existing resources (e.g., Silokek and Batang Kuantan forest areas) must be managed with regulations where all activities related to these resources must not be over-exploited [7]. Local communities must have a stake in tourism management, starting from planning, development and implementation, and realizing fair profit sharing.

Forests are a form of natural wealth that is truly valuable, especially the forests in Silokek nagari which are so green and dense, with a wealth of flora and fauna in them. Not only do forests add beauty, but they also provide a wealth of benefits. Not only are they a place for animals and plants to live, but they also preserve the biodiversity of people. When the rain comes, the water will be absorbed and stored under the roots of trees in the forest so that there will be no flooding and soil erosion. Forests can also be made into forest tourism with interesting attractions.

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## 6. Conclusion

The interests of the community to make a living in the forest and in the Batang Kuantan river as an extractive economic activity and efforts to conserve nature and rivers for tourism development sometimes cannot go hand in hand. People who are accustomed to using extractive economic activities to collect natural resources in the forest, for the needs of building houses or for sale, consider these activities not to violate the rules. This long-standing habit that has been inherited from one generation to the next has become a habit, so that people feel that what they do does not violate the rules. Likewise with the extractive economic activity of gold mining carried out in the Batang Kuantan river. This activity has been carried out for decades, and they do not understand that the use of machine technology in gold mining will result in turbid and brownish river water, and of course affect the natural beauty of Silokek and disturb the view of tourists. Moreover, for rafting tours on the Batang Kuantan river, it can affect tourist interest in rafting attractions.

Regulations built with the two issues above are certainly not easy. On the one hand, the community's extractive economic activities have been a habit for a long time, and they live in Silokek where the Batang Kuantan forest and river area is located. On the other hand, sustainable tourism requires the preservation of the environment and nature. Cooperation and synergy between the government, the community (indigenous people (kaum adat), cerdik pandai, and bundo kanduang), and tourism managers is needed by making clear regulations so that forest resources and natural resources are not exploited wildly.

This research is very limited, discussing only one aspect of the many aspects of tourism. The goal of future research should be to explore incentives and impacts for both and locals throughout all stages of tourism. This more holistic perspective will be important as we explore the ways in which ecotourism and other alternative forms of tourism can generate social, economic, and environmental benefits for local communities while also creating truly transformative experiences for tourists [1]. The contribution of a cross-cultural, holistically oriented anthropology to the broader endeavor of social scientists to understand tourism is also considered [8].

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## Compliance with ethical standards

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The authors state that there are no conflicts of interest in the publication of this article.

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