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Review of Tourism Geography to Preservation of *Barong Ider Bumi* Cultures in Banyuwangi Regency Indonesia

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Abstract

Kemiren Village, one of the cultural tourism villages in Banyuwangi, has a unique tradition that is usually held every year. This tradition is often referred to as *Ider Bumi* or *Barong Ider*. *Barong Ider* is the main attraction for tourism. The aims of this study are: (1) knowing the Kemiren Village as the village that owns the culture, (2) knowing the *Barong Ider Bumi* tradition, (3) knowing the development of *Barong Ider Bumi* as a tourist attraction based on a Geography Tourism perspective. The method of this research is qualitative descriptive. Research steps start from determining the issues, observation, library research, and interviews. Data analysis was done by using the Geography Tourism perspective. Kemiren cultural tourism village seeks to maintain the authenticity of their ancestral culture and traditions. With the authenticity and wisdom of their culture, it becomes the main attraction for tourists. Although many new cultures are coming in, their culture and traditions are still very awake. The Kemiren Village Community made various improvements in terms of public services for tourists without changing the authenticity of their culture. Tourism Geography Study explained that's the cultural tourism of *Barong Ider Bumi*, which has attracted tourists by providing tourist facilities properly. *Barong Ider Bumi*, as cultural tourism, produces various advancements and improvements in terms of economic and social life in Banyuwangi.

Keywords: Barong Ider Bumi, cultural tourism, preservation ways.

INTRODUCTION

Indonesia has a variety of cultural heritages spread across various provinces, especially East Java. Cultural heritage is a legacy of the past in the form of physical culture (tangible) and cultural values (intangible). The cultural heritage of a community in an area is created through history over a long period of time that has been passed down from generation to generation [1]. One of the regencies in East Java that has a thick cultural heritage is Banyuwangi. Cultural heritage can be interpreted as a product or physical cultural product of different traditions and spiritual achievements in the form of values from the past that are a central element in the identity of a group or nation [2]. The cultural heritage of the Banyuwangi community is seen in sacred rituals and arts.

The cultural values of the past (intangible heritage) are covered by local cultures in Indonesia, including traditions, social system, folklore and legends, languages, performing arts (dance, songs, drama performances). This intangible heritage has been reflected in the relation between humans and their geography area/environment [3]. The geographical study of tourism has a long history and a well-established relationship with human geography [4]. Physiogeographic phenomena (elements of the physical environment) and sociogeographical phenomena (elements of the human or social and cultural environment) that have uniqueness, beauty and value, are interesting to visit so that they develop into tourist destinations [5].

Cultural heritage in a traditional society can be reflected in the pattern of settlement. Cultural elements are the main elements forming residential patterns and architectural styles of residential buildings. One of the cultural heritages found in Banyuwangi Regency is *Barong Ider Bumi*. Kemiren is a village located in the Glagah area. This village became the village of the Osing tribe, a native of Banyuwangi.

This area is known as one of the national cultural heritage areas. As a tourist village, Kemiren Village always holds a unique tradition that is usually known as the *Barong Ider Bumi*. The *Barong Ider Bumi* tradition is said to have become so ingrained in the life of the Osing tribe. This unique cultural heritage is said to be up to hundreds of years old. This tradition experiences turmoil in the midst of a rapid change of times. The community is trying to preserve this tradition so that it does not go extinct [6]. Community synergy as an effort to preserve this tradition becomes an interesting study object. The

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objective of the research is to describe the development of *Barong Ider Bumi* as a tourist attraction based on the Geography Tourism perspective.

MATERIAL AND METHOD

The research method used in this study is qualitative descriptive. Qualitative research is research that focuses on studies supported by a variety of methods that include a naturalistic interpretation approach to the subject of the study [7]. Subjects of qualitative research studies include the collection of various empirical data, case studies, interviews, observational texts, and various ways of collecting data. Researchers collect information through various data collection procedures such as literature review observations as well as from previous research. The obtained information was explained descriptively. Collecting information in the field is also complemented by literature reviews that are relevant to the topic and issues in this research. The main problem of this research is about cultural tourism and efforts to preserve the Barong Ider Bumi tradition.

Data Collection

The research area in this study covers the Banyuwangi district area in Kamiren village, Glagah. Kemiren village is one of the cultural tourism villages, which is one of the leading destinations in the Banyuwangi Regency [8]. This limitation is due to the lack of resources regarding Barong Ider Bumi and the originality of the Barong Ider Bumi culture in Banyuwangi. Regardless if there is a Barong Ider Bumi culture elsewhere, then it will not be included in our research discussion. The effort to preserve the Barong Ider Bumi culture is related to the role of society and the present context. Data collection was carried out through a literature study and interviews with cultural activists of Barong Ider Bumi.

Data Analysis

One of the studies in the field of tourism geography is culture. Tourism geography research focuses on tourism resource data ranging from natural resources, human resources, and human creation resources. Natural resource data is in the form of the Banyuwangi environment that supports *Barong Ider Bumi* tourism. Human resource data is in the form of human interaction in organizing the *Barong Ider Bumi* culture. Data on human resources is in the form of the ongoing process of

the Barong Ider Bumi ritual. Data analysis was carried out by understanding the concepts and cultural scope of Barong Ider Bumi, so observations and interviews were conducted with *Barong Ider Bumi* activists. Literature study data is used to strengthen observational data. Observation data is used to support the interview data. All of this data is used to develop *Barong Ider Bumi* tourism in Banyuwangi.

RESULT AND DISCUSSION

Kemiren Village of Banyuwangi, Indonesia

Kemiren Village is a small village located in the Glagah Subdistrict, Banyuwangi Regency, East Java Province. This village is 10 km from the center of the Banyuwangi Regency. This village has been designated as a tourist village since 1995. Within the administrative area, this village is bordered by Jambesari Village in the north, Olehsari Village in the south, Tamansari Village in the west, and Banjarsari Village in the east. This village has an area of 177.05 hectares [9,10].



Figure 1. Maps of Kemiren Village, Banyuwangi, East Java, Indonesia (Source: www.kemiren.com)

The people of Kemiren Village came from people who had exiled themselves from the Majapahit Kingdom, which collapsed around 1478 AD. They retreated to Mount Bromo (Tengger Tribe), Bali, and Banyuwangi. Those who fled to Banyuwangi then founded the Hindu-Buddhist-style Blambangan Kingdom. Blambangan later fell to the rule of the Islamic Mataram Kingdom in 1743 AD.

Kemiren Village was born during the Dutch colonial period around 1830. At that time, the condition of Kemiren Village was still in the form of rice fields and forests belonging to residents of Cungking Village. To avoid Dutch soldiers in their village, residents of Cungking Village were reluctant to return to their villages. Cungking villagers chose to cut down their rice fields and forests at that time so that they became Kemiren Village until now [11]. When cleared by residents of Cungking Village, many of the Candlenut and Durian trees were found in that place, hence the place was called Kemiren (Personal Communication, 2014).

Barong Ider Bumi

Barong Ider Bumi Ritual is a ritual in the Village of Kemiren. This ritual was held as an expression of gratitude for the safety of all members of the Kemiren Village community. The word ider in Javanese means to go around everywhere, while bumi means a beachhead [12]. So, the meaning of the *ider bumi* is the activity around the foothold, in this case, into the area of the Kemiren Village [13]. The Barong Ider Bumi tradition first emerged from one of Buyut Cili. Buyut Cili is a propagator of Islam in Blambangan and clearing the base (forest clearing) into Kemiren Village. After successfully mastering Blambangan, suddenly, Buyut Cili, whose name is unknown, disappeared, and no one knew his whereabouts until now.



Figure 2. Barong Ider Bumi (Source: www.kemiren.com)

Finally, the local residents built fireworks to appreciate their services, and then they were called *Buyut Cili* by villagers. This *Cili* word in *Osing* (Banyuwanginesse) means little or tiny. Once, *Buyut Cili* wanted to entertain his grandchildren on the second day of Eid al-Fitr by holding a barong procession that surrounds Kemiren Village. *Buyut Cili* is delighted while holding the palm and following the barong procession around the village. This event was later named *Barong Ider Bumi* (Personal Communication, 2019).

The background to the reappearance of this tradition is inseparable from myth when there was a plague of calamity. People were sick in the afternoon, then they died at the next day morning, and people's plants were attacked by pests. Even the villagers did not dare to sleep alone but rather in groups. Finally, the village elders made a pilgrimage to the tomb of *Buyut Cili*. After a few days, the village elder named Mbah Sanemah received instructions through a dream from *Buyut Cili* to look for two *polek* poles (*Alstonia scholaris*).

A short *polek* wood was put in the well so that the plague is gone, but the plague did not disappear. The village elder also had a second dream, which contained an order to take wood from the well to be made into the barong head and to hold a *slametan* ceremony. The barong head must also be paraded through the village streets. After the prophecy was carried out, the plague disappeared. One day the villagers never carried out the ritual. As a result, the owner of the barong became ill and convulsions, like barong movements and faces until he died. Therefore, the ritual is routinely carried out until now [10,13].

The *Ider Bumi* Ritual was held on the second day of Eid al-Fitr at noon around 15:00 WIB because the weather at that hour was not too hot. It is a form of syncretism that is a mixture of Islam with elements of local Javanese culture [14]. The element of Islamic culture is seen at the time of the ritual implementation, which is the holy day of Islam as the majority religion of Kemiren Village residents. Meanwhile, Javanese local culture elements can be seen in the use of offerings placed in three different places, namely in the ancestors' tomb, Barong's house, and the Kemiren village road. There is also a sequence of participants in the Ider Bumi ritual, including:

- 1. At the front, two people are carrying Kemiren banners, wearing Banyuwangi clothes, namely tulik clothes.
- 2. A group of Barong arts, which begins with a pair of tiger dancers, are standing on the right and left side that goes casually without attractions. Behind them, a pair of *pitikpitikan* (chicken plays) with the right position are walking while dancing. Behind a pair of chicken costumes, the position of the main character is *Barong Ider Bumi*, who walked while dancing, followed by a music group.
- Modin is village officials in the field of religion whose job is to sow offerings accompanied by customary stakeholders. This section is followed by children who fight for a sprinkling of offerings containing money.
- 4. The group of mothers dressed in typical Using Keiren with offerings, *Kinangan*, and

water put in *Kendhi* (jar) is placed in brass bowls carried with a carry.

- 5. Jebeng-tulik group is the youth with typical Banyuwangi clothing. Jebeng brought offerings of red and white rice jenang with water. Tulik has the duty to accompany the Jebeng by bringing an umbrella to protect offerings from the sun.
- 6. *Tumpeng* carrier groups.
- 7. The *jaran kecak* group, a horse that runs by moving its head and footsteps to the rhythm of music that rode by a government official and a child.
- 8. Tambourine music groups that wear Muslim clothing.
- 9. Ladies group of PKK in traditional dress.
- 10. A group of village officials with distinctive clothing.
- 11. *Kuntulan,* a music group whose voice sounds dominant in rituals, and
- 12. Community groups who follow the ritual journey as cheerleaders.

The procession begins by arranging the order of participants, and then they start walking from Barong's house then crossing the main village road. When the procession took place, there was a traditional figure from the ritual group who was doing utilities or throwing coins in the street for kids to compete with the amount of IDR 99,000. The number was chosen because of the symbol of Asmaul Husna or the good name of Allah, which numbered 99. During the parade, the barong in front of the line, followed by village elders. Village elders bring incense and recite prayers for the safety of all residents. The procession was accompanied by the wasps of distinctive Using music, which made the ritual so sacred and solemn.

The community will fight over bananas that are displayed when the procession reaches the end of the village. They believe that anyone who eats bananas will be saved and will be provided with convenience in life. After the ritual, the community held a pecel pitik salvation, prayed and ate chicken together. Pecel Pitik is a traditional food from young native chicken, which is burnt and given spices of grated young coconut and spices typical of the Osing tribe. The salvation begins with the reading of the Osing prayer followed by Arabic, as a statement of intention to hold a selametan (thanksgiving) and continue eating together [10,13]. The barong procession takes place after the Asr Prayer at 15:00 to 17:00 WIB before the Maghrib Prayer.

The implementation starts with a simple ritual in the *Barong* house and ends with a ritual of *ngalap* blessing (*selametan*) or a thanksgiving party with all the residents [11], followed by a meal with all residents (Personal Communication, 2014). *Barong Ider Bumi* has philosophical significance for the life of the people, especially the people of Kemiren Village.

Barong is a distinctive form of art that is still preserved by the Banyuwangi community, especially the Kemiren village community. Banyuwangi people use barong as one of the ritual media in carrying out the barong ider bumi ceremony. Barong Ider Bumi is considered as a sacred art that appeared around the 1800s due to the *pagebluk* (Javannesse; plague) that caused many disasters in the area, e.g. disease and crop failure. Therefore, this ritual is carried out as a belief that aims to drive away evil spirits and calamities that occur so as not to recur by getting safety and happiness in the next life. An understanding of this ritual shows that Kemiren villagers maintain cultural heritage. The cultural heritage of a community in an area is formed through a long history that has been passed on from generation to generation [1].

Barong Ider Bumi heritage has become a tradition inherent in the Banyuwangi community. Therefore, the art is still preserved because of the ancestral heritage, even though the religion of the villagers today is Islam, which does not teach belief in sacred objects. In this case, the Banyuwangi community has shown a cultural value. The concept of cultural value itself is the concepts that live in the minds of the majority of the community about things that must be considered very valuable in life [15].

Values emerge that indirectly influence integration in society through cultures and traditions that have lasted for generations. These values are (1) as a recommendation for social control, as a venue for friendship to reduce conflicts that can arise at any time in the community; (2) the ritual can increase people's confidence in navigating the future life [16]. In the development, the traditional rituals implementation in the village is increasingly well known and began to be designated as a tourism village of Osing by government in the 1900s [16].

The endorsement of the village of Kemiren as a tourism village has influenced the initial function of the *barong*. *Barong* function which was previously only a traditional ceremony. Now, it developed into an art that is also used in weddings, circumcisions, and guest greetings.

Efforts to Preserve *Barong Ider Bumi* in Tourism Geography Review

Apart from the stipulation of the local government, which states that the village of Kemiren is a tourist village, the art has improved the economy in the Banyuwangi area, especially the Kemiren area. The trigger for this economy is the large number of tourists visiting the Kemiren cultural tourism village, which is supported by the awareness and strong desire of the community in preserving and developing tourism in their area. Successful tourism development is a tourism development that is conducted together, including building together with the community so that tourism development can provide economic, social, and cultural benefits to the local community [17].

It makes the village and the arts more known and an increase in tourism in terms of economic and social. The economic improvement of Kemiren Village community can be seen from the number of tourist accommodation facilities, parking services, food shops and souvenirs, public toilets. Socially, efforts to preserve the tradition appear in the emergence to teach anyone, including tourists who want to learn about the tradition of *Barong Ider* and other traditional dances.

Tourism geography is the study of geography that is closely related to tourism, including weather, natural beauty, flora, fauna, sea, customs, and so on [18]. *Barong Ider Bumi* entered in the customs in the study of tourism geography. The relationship between the environment and various forms of tourism is fundamental. Since an area is formed, the existence of environment can be interpreted physically or in socio-cultural designation can directly influence the formation of the tourism geography process [19].

Barong ider as part of the tourism geography, especially cultural attraction, is only found in the Kemiran Village of Banyuwangi Regency because of the cultural and physical environment surrounding it. Therefore, *barong ider* as an art of cultural heritage should indeed continue to be preserved.

Cultural tourism is tourism that aims to broaden insights about other countries/cultures and to satisfy entertainment needs such as exhibitions, traditional celebrations, places of nature reserves, ancient reserves, and others [20]. *Barong Ider Bumi* as cultural tourism is not only seen as a ritual but has indeed become a customary practice of the people of Kemiren Village to carry out the tradition. The government and the community work together to preserve *Barong Ider Bumi*. *Barong Ider Bumi* preservation is manifested in the following efforts:

1. Studio

Studio (*Sanggar*) is one of the important efforts by the people of Kemiren Village to preserve the *Barong Ider Bumi*. This studio is used to practice dance for young people there. The young people there must indeed be able to master the dances that are typical of Kemiren Village. Besides, they also practice special dances to accompany *Barong Ider*. By involving young people in preserving *Barong Ider*, it is hoped that the preservation of the culture can continue to develop from generation to generation.

2. Annual Cultural Event

Kemiran community has the The awareness to preserve Barong Ider Bumi in Banyuwangi because it is an annual village clean ceremony that must be held (Personal Communication, 2019). The annual cultural event is an event held by the local government. The event takes place once a year and usually includes various festivals in it. The event is one of the efforts of the Banyuwangi local government to preserve the culture of Barong Ider. The government is committed to paying attention to traditional culture because the preservation of Barong Ider is also one of the attractions of cultural tourism.

3. The improvement in public services

The improvement in public services is related to the determination of Kemiren Village as a tourist village. It has increased public facilities and services, such as the availability of public toilets, restaurants, lodging places, souvenir centers, tour guides, and others. The improvement in facilities and services aims to make tourists more comfortable and impressed when visiting Kemiren Village. The facilities and services are expected to increase tourist attraction and the number of visitors who travel to the Village of Kemiren.

Improvement of this facility can be developed by villagers, such as cultural actors and tourism resources by collaborating with government or private parties [21]. These facilities include providing an information center office/studio about *Barong Ider Bumi* in the village office or the home of a traditional stakeholder. Tourism stakeholder also need to promote the Barong Ider Banyuwangi through online and social media attract investors attention to the to development and increase the number of tourist [22]. This facility can serve the needs of tourists regarding information, event schedules, and accommodation places to enjoy the cultural tourism of Barong Ider Bumi. In the study of tourism geography, as hotels, facilities, such restaurants, transportation facilities, souvenir centers, and proper road access are needed to improve the quality of cultural tourism in the village of Kemiren, Banyuwangi Regency Indonesia.

CONCLUSION

Kemiren Village in Banyuwangi Regency is a cultural tourism village that still maintains the authenticity of cultural and ancestral traditions. Barong Ider Bumi has its attraction for tourists because geographically, it has interesting tourism potential. Although many new cultures entered, the culture of Barong Ider Bumi is still very awake. The people of Kemiren Village have made various improvements in terms of public services for tourists without changing the authenticity of the Barong Ider culture. Tourism Geography Study can support the cultural tourism of *Barong* Ider Bumi, which has attracted tourists by providing adequate tourist facilities. As a result, the cultural tourism of Barong Ider Bumi is expected to contribute to progress and increase in terms of economic and social aspects of the Banyuwangi community.

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The Suitability of Mangrove Ecotourism Based on Its Biophysical Condition in Hamadi Beach, Jayapura City

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Abstract

Mangrove ecotourism is one of the potential sustainable tourism practice in which it is important to support local economic development and mangrove conservation. The purpose of this research is to identify the potential of natural resources in supporting mangrove ecotourism on the coast of Hamadi Beach, Jayapura City and to analyze the suitability of mangrove ecotourism land on the coast of Hamadi Beach, Jayapura City. The method used in this study is a survey method. The survey was conducted to see the biophysical condition of mangrove forests, which include mangrove length, mangrove density, mangroves species and biota species. Then, the biophysical data will be analyzed with Ecotourism Suitability Index (ESI). The survey results showed that the average mangroves' length was 254 meters, the average mangrove density of 12,367 individuals.ha⁻¹. Mangrove species found included *Avicennia alba, Avicennia lanata, Avicennia marina, Acrostichum speciosum, Bruguiera sexangula, Rhizopora apiculata, Rhizopora mucronata, Rhizopora stylosa*, and *Sonneratia alba*. The types of biota found consisted of birds, reptiles, amphibians, molluscs, crustaceans, and insects. The results of the suitability index of mangrove forest area in Hamadi Beach is very suitability Index (ESI) value of 77.78%. This study concludes that the mangrove forest area in Hamadi Beach is very suitable for ecotourism areas. Therefore, it is suggested to make a good and environmentally friendly ecotourism arrangement concept, so the community can travel while learning in the mangrove ecosystem area in Hamadi Beach.

Keywords: Ecotourism, Hamadi Beach, mangrove forest.

INTRODUCTION

Indonesia is a country that has great natural tourism potential with abundant natural resources. The potential of natural resources owned, both on land and ocean can be developed into educational tourism. One city that has great natural potential is Jayapura City. Jayapura City is one of the areas located on the coast of the sea with abundant natural resources.

One of the natural potential owned by Jayapura City is Mangrove Forest. There are many functions of Mangrove Forest, one of them is for recreation and tourism [1]. Mangrove forests in Jayapura City are found in Youtefa Bay, which one of them is found on Hamadi Beach. The Jayapura City Government has established the mangrove forest on Hamadi beach as a natural tourism park. The Regional Regulation of Jayapura City No. 1 of 2014 about Spatial Planning for 2013 - 2033 Article 45 states that the natural tourism park area in Jayapura City with an area of 308 Ha in the form of Youtefa Bay Natural Park, located in South Jayapura District, Abepura District, and Muara Tami District. Based on the Jayapura Regional Regulation No. 6 of 2010 about Spatial Planning Detail of South Jayapura District, is stated that the

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natural tourism park and marine natural park located in Youtefa Bay are designated as the Natural Reserve Area.

Indonesian Ministry of Forestry Regulation No. P.49/Menhut-II/2014 about Function Suitability Assessment Procedures of Natural Reserves Areas and Natural Conservation Areas states that Natural Reserve Areas are areas with certain characteristics, both on land and waters that have a primary function as a conservation area of biological and animals biodiversity and their ecosystems which also function as areas for life support systems. Referring to this regulation, the mangrove forest area in Hamadi Beach, which functions as a Natural Reserve Area, must always be maintained so that its function as a life buffer can be saved.

However, problems that threatened the existence of mangrove forests in the Youtefa Bay natural tourism park began to occur. The problem is the degradation of mangrove forest. The mangrove area in Youtefa Bay in 2017 was 233.12 Ha, which decreased by 8.12 Ha compared to the mangrove area in 2008. It was caused by the opening of mangrove land for development roads, bridges, and residential areas. Also, the community uses it for household purposes [2].

The problem of mangrove forest degradation is still possible to continue to occur because physical development is still ongoing, especially in the coastal areas of Jayapura City. That's why the pressure on the coastal areas of Jayapura City will

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always be increase. To respond to the existing problems, the City Government gave a discourse to make the mangrove forest area in Youtefa Bay, especially on Hamadi Beach, as an ecotourism area with the aim that the existence of mangrove forests will continue saved. Ecotourism is defined as responsible travel to natural areas that conserves the environment, sustains the wellbeing of the local people, and involves interpretation and education [3].

Therefore, it is necessary to study the suitability of mangrove forests in Hamadi Beach as an ecotourism area based on the natural resources potential of mangrove forests so that the existing ecotourism management can be sustainable later. The indicators of suitability for land ecosystems consist of landscape/naturalness, wildlife, topography, accessibility, and community characteristics [4]. So, the purposes of this study are to identify the potential of natural resources in supporting mangrove ecotourism on Hamadi Beach, Jayapura City, also to analyze the suitability of the mangrove ecotourism land on Hamadi Beach, Jayapura City.

MATERIAL AND METHOD

Study Area

This research focused on mangrove forests located on Hamadi Beach, Jayapura City (Fig. 1). The selection of research location is based on the Jayapura City Government's plan to make the mangrove forest in Hamadi Beach as an ecotourism area. Based on the Jayapura City Government's plan, it is necessary to study the suitability of mangrove forest land as an ecotourism area based on the potential of natural resources owned by mangrove forests in the Hamadi Beach. The research was conducted in March - August 2019.

Type of Research

The type of this research is quantitative descriptive with survey method. The survey method is an investigation to obtain the facts from the existing symptoms and look for factual information from a group or an area [5]. The survey of this research was conducted to see the ecological condition of mangrove forest, which includes thickness, the density of mangroves, types of mangroves, and types of mangrove biota.

Data Collection

Data collection techniques of this research are observation, interview, and documentation. The observation is data collection about the biological condition of mangrove forests includes mangrove density, mangrove types, and biota types in the mangrove forest. The interview is data collecting about mangrove conditions. Documentation is data collection in the form of documents or research supporting data that have been collected by the relevant agencies. The supporting documents include Jayapura City Spatial and Regional Planning (RTRW), the profile of South Jayapura District, and tidal data.

Data Processing

Mangrove Density

Data collection of mangrove density was carried out with the following steps.

- Determine the observation stations using line transects along the coastline, where 3 (three) observation sites are determined (Fig. 1.)
- Each observation station was made of 10 x 10 m² of square transect, which was placed perpendicular to the coast to the mainland with three plots.
- In each plot, determined of each mangrove and counted the number of each species, and measured the stem circle of each mangrove tree at breast height.
- Furthermore, the results of the calculation of mangrove species are calculated using the formula:

$$Density = \frac{Number of each species}{Area of plot}$$

Identification of Mangrove Species

The types of mangrove identified based on mangrove stands that enter the square transect. The sample of each mangrove species was taken and identified in the laboratory to determine the type of mangrove.

Identification of Biota Species

Biota data collection was done using visual methods. Biota was observed directly at each sampling site, taken using a scoop and gill net. Biota taken was photographed and identified using an identification book.

- Fish sampling is using a gill net to catch fish. Then, it was photographed and analyzed its species.
- Sampling of birds and insects was carried out by direct observation at each site. Every bird and insect that perched on the mangrove tree was photographed and analyzed for its species.
- 3) Sampling of Mollusca and crustaceans is done by taking biota directly on the

substrate, separating it from the substrate, and analyzing its species. In addition, interviews were also conducted with local fishermen on the species of shellfish that were caught.

4) Sampling of reptiles and amphibians were taken by direct observation of each species of reptile and amphibian in each sampling plot.

Identification of Tides and Mangrove Suitability for Ecotourism

Tidal data is collected from Navy of Jayapura City. The suitability mangrove as ecotourism is calculated by considering five parameters. mangrove length (m), mangrove density (ind.ha⁻¹), mangrove species, tidal (m), and biota (Table 1) [6].



Figure 1. Map of Study Area and Selected Sampling Sites in Hamadi Beach, Jayapura City (Source: Result Analysis, 2019)

		Id	Die 1. IVIa	LITX OF LATIU SUILA	Dility 10	ECOLOURISIII			
Class of suitability (score)									
Parameters	Weight	S1 (very suitable)	Score	S2 (suitable)	Scor e	S3 (conditional suitable)	Score	N (not suitable)	Score
Mangrove Length (m)	5	> 500	3	>200 - 500	2	50 - 200	1	<50	0
Mangrove Density (ind.100 m ⁻²)	3	>15 - 25	3	>10-15	2	5 – 10	1	<5	0
Mangrove Species	3	>5	3	3 – 5	2	1-2	1	0	0
Tidal (m)	1	0,1	3	>1 -2	2	>2 – 5	1	>5	0
Biota	1	Fish, Shrimp, Crab, Mollusca, Reptil, Aves	3	Fish, Shrimp, Crab, Mollusca	imp, [,] 2 Fish, Mollusca sca		1	One of the water biota	0

Table 1. Matrix of Lar	d Suitability for	Ecotourisn
------------------------	-------------------	------------

Source: Yulianda [6]

To count the suitability index of mangrove ecotourism with the formula:

$$ESI = \left(\frac{\sum Ni}{Nmax}\right) \times 100\%$$

Description:

ESI	= ecotourism suitability index
Ni	= parameter value to- <i>i</i> (weight x score)
N maks	= maximum value of tourism categories

The suitability land level divided into four classifications [6]:

S1 = very suitable (ESI 75 – 100%)

- S2 = suitable (ESI 50 – 74%)

- S3 = conditional suitable (ESI 25 49%)
- N = not suitable (ESI < 25%)

Data Analysis

Data analysis used in this research is quantitave descriptive. This analysis to describe the real condition of research location based on data processing that has been done.

RESULTS AND DISCUSSIONS

General Descriptions of Research Location

Mangrove forests along the Hamadi Beach are administratively included in the area of Tobati Village, South Jayapura District, Jayapura City. Tobati Village is located in South Jayapura District, with an area of 2.5 km². The entire location of Tobati Village is a settlement that is above sea level and has a tropical climate with moderate rainfall. The distance of Tobati Village to the business centers (markets and shops) is less than 1 km (650 m) by using the sea transportation system (speed boat or johnson motorboat, katinting motorboat and traditional boats to get to the beach or community pier. Furthermore, using land transportation with the 2-wheeled vehicles or 4-wheeled vehicles around 5-10 minutes. Tobati Village is one of two villages that are included in the administrative region of South Jayapura District, Jayapura City, where the Government of Tobati Village is in charge of three Neighborhoods and one Hamlet. The administrative boundaries of Tobati Village are as follows.

- East side : Pacific Ocean
- West side : Entrop Village
- Southern side : Enggros Village
- North side : Hamadi Village and Argapura Village

Tourism Potential

The tourism potential owned by Tobati Village is quite large. Tobati Village is a coastal area of Yotefa Bay, a part of which is heavily populated by mangroves. Also, some plants grow and species of animals and poultry that live in rock/coral mountains that surround the waters of the Tobati village. If the water recedes, the soil conditions look like silt mixed with sand and a lot of seaweed growing. In addition, on the west bank of Tobati village, a ring road has been made which connects the South Jayapura District and the Abepura District. East of Tobati Village, Youtefa Bridge has also been built, which connects South Jayapura District with Muara Tami District.

Natural Resources Potential

Mangrove length

Based on the measurement results, mangrove length is on an average of 254 m. The thickness of the mangroves in each sampling station showed in Figure 2. At Station I, the length of the mangrove was 352 m. The length of the mangrove at Station I is greater compared to other stations. The mangrove length at Station II and III is 200 m and 210 m, respectively. Mangroves in Station II and III close to residential areas, thus mangroves in Station II and III is directly affected by land conditions. Mangrove length has an impact on the ecological aspects of the substrate and coastal biota. The higher length of mangroves causes high amounts of organic matter in the substrate and the density of macrobenthos and plankton. Besides that, the mangrove length can also affect the salinity of groundwater around mangrove forests [7].



Figure 2.Mangrove Length for each sampling site on Hamadi Beach, Jayapura City (Source: Result Analysis, 2019)

The Species of Mangrove

Based on identification results, there are four mangrove families, namely Avicenniaceae, Pteridacea, Rhizophoraceae, and Sonneratiaceae. The species of mangrove found at the study site were nine species including Avicennia alba, A. lanata, A. marina, Acrostichum speciosum, Bruquiera sexangula, Rhizopora apiculata, R. mucronata, R. stylosa and Sonneratia alba (Table 2). Rhizopora sp. is the dominant spesies on sites. Rhizopora research sp. stretches throughout the Asian region [8].

The diversity of mangrove species can be a tourist attraction. Mangrove diversity can be used as a choice for tourists to enjoy the natural beauty of mangroves, while also increase knowledge about the environment and the importance of mangrove ecosystems in the structural coastal ecosystem [9].

Table 2. The Species of Mangrove on Hamadi Beach

No	The Species of Mangrove	San	Sampling Site				
NO.	The species of Mangrove	I	II	Ш			
1.	Avicennia alba	+	-	-			
2.	Avicennia lanata	+	-	-			
3.	Avicennia marina	+	-	-			
4.	Acrostichum speciosum	+	-	-			
5.	Bruguiera sexangula	+	+	+			
6.	Rhizopora apiculata	-	+	+			
7.	Rhizopora mucronata	+	+	+			
8.	Rhizopora stylosa	-	+	-			
9.	Sonneratia alba	+	-	-			

Source: Observation Results, 2019

Mangrove Density

Mangrove density is measured through a comparison between the number of individuals found in the sample plot and the area of the sample plot, expressed in ind.ha⁻¹. The largest mangrove density is 15,300 ind.ha⁻¹ at Site I, then followed by Site II for 12,700 ind.ha⁻¹ and Site III for 9,100 ind.ha⁻¹. Thus, the total mangrove density in Hamadi Beach is 37,100 ind.ha⁻¹, with an average of 12,367 ind.ha⁻¹ (Fig. 3). Refer to the Decree of the Environment Minister, Number 201 of 2004 concerning the Criteria Standard for Mangrove Damage, the mangrove forests in Hamadi Beach are considered good and very dense.



Figure 3. Mangrove Density for each sampling site on Hamadi Beach Jayapura City (Source: Results Analysis, 2019)

Tidal

Tidal measurement data at the study area using tidal signs at coordinates $S = 02^{\circ}32'23''$ and E 140°42'24'' obtained from the Navy database in 2018. Tidal data were calculated from December 1st to December 31st, 2018. Based on available data, it is known that the highest water level is 1.4 m, and the lowest water level is 0.1 m, with an average of 0.75 m. Type of tides in the study area is classified as Diurnal Tides.

Types of Biota

The types of biota found on Hamadi Beach, Jayapura City are fishes, birds, reptiles, amphibi, mollusca, crustacean, and insect (Table 3). All types of biota were found at all of the sampling sites. Biota found in mangrove forests can also be a tourist attraction [7]. So, the diversity of biota species in the area of mangrove forests in Hamadi Beach can also be a tourist attraction if the mangrove forest is used as an ecotourism area.

		A . I		Sampling Site			
NO.	Biota	Spesies	Local Name	I			
		Periophthalmus modestus	Mudskiper	+	+	-	
1	Fich	Anabas testudineus	Climbing Gouramy	-	+	+	
1.	FISH	Gemiramphus brasiliensis	Ballyhoo halfbreak	+	-	+	
		Chanos chanos	Milkfish	+	-	+	
		Laridae sp.	Gulls	+	+	-	
2	Avec	Ephippiorhynchus asiaticus	Black Necked Stork	+	+	-	
۷.	Aves	Sterna bengalensis	Lesser Crested Tern	+	+	-	
		Ciconia ciconia	White Stork	-	-	+	
2	Dontilo	Varanus salvator	Monitor Lizard	-	+	-	
3.	Reptile	Mabouya spp.	Lizard	+	+	+	
4.	Amphibi	Rana cancrivora	Crab-eating Frog	+	+	+	
		Polymesoda erosa	Young Clam	+	+	+	
5.	Mollusca	Polymesoda coaxan	Mangrove Clam	+	+	+	
		Octopus sp.	Octopus	+	+	+	
c	Crustacaa	Scylla sp.	Mangrove Crab	+	-	+	
0.	Crustacea	Thalassina anomala	Mud Lobster	+	+	-	
7.	Insect	Papilionidae sp.	Butterfly	+	+	+	

Table 3. Types of Biota in Mangrove Forest on Hamadi Beach, Jayapura City

Source: Observation and Interview Result, 2019.

Ecotourism Suitability Analysis of Mangrove Forest

Based on the vegetation condition of mangrove forests, the ecotourism suitability of mangrove forest was analyzed. The ecotourism suitability level of mangrove forests is assessed based on Yulianda [6].

In Table 4, it is known that the highest ESI value is in Site I that is 87.18%, then followed by Site III for 79.49%, while the lowest is in Site II for 66,67%. The average value of the three sites is 77.78%, so that the mangrove forest area in Hamadi Beach, Jayapura City, is included in the very suitable category to be used as an ecotourism area. It is supported by the ecological condition of mangroves that are still very good with high mangrove density, length of mangroves that are still good, and a large diversity of mangrove species. Also, the diversity of biota is very supportive, where we found seven types of biota in the mangrove forest of Hamadi Beach. The tidal height is also suitable for supporting mangrove life so that mangrove plants in the Hamadi Beach area can grow optimally.

 Table 4. Ecotourism Suitability Index (ESI) of Mangrove

 Forest on Hamadi Beach, Jayapura City

		,	, ,		
No.	Station	ESI	Information		
1.	Station I	87.18 %	Very suitable		
2.	Station II	66.67 %	Suitable		
3.	Station III	79.49 %	Very suitable		
Source: Analysis Result. 2019.					

Ecotourism is natural tourism, which contributes to social and environmental benefits [10]. In addition, ecotourism also has economic benefits by increasing regional revenue annually [11,12]. With these benefits, we must manage ecotourism well and sustainably so that these benefits can be obtained continuously.

Ecotourism efforts must provide economic incentives for conservation, empowering the local community, and environmental awareness. There are several components to develop the strategy of sustainable ecotourism [13-15], namelv:

- Respect and care to the environment;
- Rationalizing the exploitation of nonrenewable resource;
- Conservation of ecosystem and biodiversity;
- Provide opportunities for the community to manage their environment.

CONCLUSION

Potential natural resources found in Hamadi Beach are mangrove forests, where mangrove length is on average 254 m, mangrove density is high with an average of 12,367 ind.ha⁻¹, and mangrove species found in nine species. Other potential natural resources found are biota, which consists of fish, birds, reptiles, amphibians, mollusca, crustaceans, and insects. Mangrove forests in Hamadi Beach are very suitable to be designated as ecotourism areas. With ESI value of 77.78%, they are categorized as S1 or very suitable.

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The Pinisi Festival as a Tourist Attraction in Bulukumba District of South Sulawesi

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Abstract

The Pinisi Festival is a national tourism event. The festival is expected to develop the tourism industry in Bulukumba Regency. This study aims to describe and discover the Pinisi Festival's performance and influence as a tourist attraction. This study is qualitative research with a descriptive approach. The used data collection techniques of this research were observation, in-depth interview, and literature study. The results of this study showed that the Pinisi Festival was held for three days with a variety of activities, i.e. Opening Ceremony, Pinisi Trip from *Leppe' Eto Bira*, Fishing Contest, GEMARI (Eat Fish Movement) Campaign, Traditional Pinisi Launching Ritual, BergemBira Parade, The *Andingingi Kampong* Traditional Ritual, Crowbar Burns Ritual, Pinisi Expo, Bulukumba Traditional Dance Performance, Bulukumba Traditional Culinary Festival, and Photography Jamboree. The Pinisi Festival has an impact on increasing the number of both domestic and foreign tourists or increasing of 70% from the previous few months so that it can be used as a media promotion of the tourism development in Bulukumba.

Keywords: Pinisi Festival, tourist attraction, tourism event.

INTRODUCTION

The Pinisi Festival is a national scale tourism event. This event includes in the 100 Calendar of Event Wonderful Indonesia. The festival held in Bulukumba has been selected through strict curation based on established criteria, i.e. has Creative Value, Commercial Value and Communication Value, as well as CEO Commitment. These criteria were set in order to make the society get the direct impact of the event, as well as foster a sense of ownership and responsibility to maintain its sustainability [1]. Therefore, this festival is worth visiting.

The festival is held as a means to promote tourism potential and increase tourist visits to South Sulawesi and other cities in Indonesia. The Pinisi Festival is a merry and festive occasion with high historical and cultural values, which then reasonably fit the human needs in recreation. One of the human needs is recreation and refreshment [2]. These attractions are what tourists look for in Bulukumba.

Bulukumba Regency is one of the Level II Regions in South Sulawesi. The capital of this regency is located in the City of Bulukumba. The area of tourism sector in Bulukumba Regency has quite promising prospects, where Bulukumba regency has a substantial capital base, including its artistic and cultural potential and supporting geographical potential. Bulukumba Regency has

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many famous tourist attractions, including maritime tourism, nature tourism, historical tourism, culture, religion, and ecotourism.

Bulukumba is a multi-potential district, not only from the agricultural sector and the cultural sector, but also in the tourism sector. Bulukumba regency has promising tourist destinations. The tourism sector in Bulukumba has promising prospects with its substantial capital base, such as its arts, culture, and geographical potential. In addition to the cultural tourism potential, Bulukumba is also famous for its maritime tourism potentials, such as Tanjung Bira Beach area and Lemo-Lemo Beach. They are known for their clean white sand and quite complete facilities.

The development of tourism in Bulukumba does not rely on its natural tourism spots but also its conventions, events, and attractions to invite tourists to visit Bulukumba. According to Law No 10 of 2009, tourist attractions are all things that have a uniqueness, beauty, and value of diversity of natural resources, culture and home-made products that become the destinations of tourist visits. The attraction is what first draws visitors' interest to an area or, in the sense of development, tends to be developed first. Attraction is a tourist destination that presents different characteristics of each region. Regional attractions can be natural phenomena (geography, fauna, and flora) and events that contain cultural values, religion, sportsmanship, and other festivals [3]. Therefore, efforts to manage cultural areas as national heritage need to be done as a source of foreign exchange [4].

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The Pinisi Festival can be a tourism event to promote tourism objects in Bulukumba. Tourism event is a marketing strategy undertaken by the government to attract the attention of tourists and to introduce tourist destinations. Event tourism is the systematic planning, development and marketing of planned events as tourist attractions, and for their benefits to place marketing, image-making, and development [5]. Therefore, this festival presents various traditional cultures to entertain tourists, especially the people in Bulukumba.

The Pinisi Festival is conducted by the government to increase contribution and add value to the surrounding community. It is also supported by a study, which found that to make museums noticeable by tourists, managers need to create some appropriate marketing strategies to compete in the tourism industry, such as by implementing an atmospheric and event marketing strategy [6]. Besides, the promotion of tourist destinations, culture, and potentials of the area are also some effective strategies to attract tourists.

The Pinisi Festival has been held for ten years. However, this festival has not been included in the top 10 festivals of the tourism ministry. It is because this event does not yet have strong branding. Tourism events can create a favorable image for a destination, expand the traditional tourist season, develop tourist demand more evenly through an area, and attract foreign and domestic visitors [7]. Therefore, the author is interested in studying the attraction of the Pinisi festival for tourists and its influence on the level of tourist attractions that spread in Bulukumba Regency. This study aims to determine the effect of the Pinisi Festival as a tourist attraction on increasing tourist arrivals in Bulukumba Regency.

METHOD

This research is qualitative research with a descriptive approach, a theory that describes all phenomena, data, and information obtained compared with existing theories so that conclusions can be drawn. This study revealed the implementation of the Pinisi Festival as a tourist attraction in Bulukumba and the efforts that should be made by the local government in managing and the presence of supporting factors, especially those related to increasing the number of visits.

Data Collection

The data collection technique used in this study was Participation Observation. The author

conducted an observation during the Pinisi Festival. The author follows all the series of activities from the opening to the closing. The series of activities lasted for three days, from 12th to 15th September 2019. During the observation, the author involved actively observing the Pinisi Festival activities to obtain more accurate data.

After collecting the observation data, the author then conducted an in-depth interview with the informants. The number of informants in this research is three people, i.e. the Head of the Tourism Office of the Bulukumba Regency as the person responsible for the implementation of the Festival, the Secretary of the Tourism Office of the Bulukumba Regency and the Chair of the Organizer of the Festival of Pinisi in the Bulukumba Regency. In addition, author conducted a literature study for data collection.

The data analysis process is carried out in three stages, namely reduction, display, and conclusion/verification of data. Data that has been collected will be reduced and simplified so that data that is not needed will be sorted. After that, the data is presented by displaying models, typologies, matrices, and tables so that the entire data and its detailed parts can be mapped. Then we verified the data findings to the informant. The findings of the first informant will be compared with the second and third informants. Based on the information, the meanings, interpretations, and conclusions are made.

RESULTS AND DISCUSSION Potentials of Bulukumba Regency

Bulukumba is an area located in the southern part of South Sulawesi province. Bulukumba has enchanting highlands, lowlands, coastal areas, and wide-open seas. Also, natural resources and cultural uniqueness are very alluring. Moreover, the expertise of the community in making Pinisi Boat has well-known worldwide. Geographically, Bulukumba is located at coordinates between 5°20 to 5°40 South Latitude and 119°50 to 120°28 East Longitude. With territorial boundaries including:

- Sinjai Regency to the north side
- Selayar Regency to south side
- Gulf of Bone to the east Side
- Bantaeng Regency to the west side

The majority of people in Bulukumba are Muslim. They holds the principle of *Mali Siparappe Talla Sipahua*, which is an illustration of the inner attitude of the Bulukumba people in carrying out the mandate to reach unity and safety of the world and the hereafter [9]. The Pinisi Festival Attractions in Bulukumba, South Sulawesi (Suryayasa & Jam'an)

Administratively, Bulukumbaregency is divided into ten districts, consisting of 27 subdistricts, 109 villages, and 400,990 people. The area of Bulukumba reaches 11,554.67 km², with a coastline of approximately 128 km [10].

It is undeniable that Bulukumba is one of those districts with famous tourist attractions for domestic and foreign tourists. Bulukumba is known for its motto *Sailing Bulukumba*. It has an enchanting nature and is very prospective for tourism. Besides, there are cultural tourism, religious tourism, and technology tourism. These potentials are a huge asset and will contribute to increasing the economic turnaround and increasing regional income (PAD) from the tourism sector. Some of the top tourist attractions in Bulukumba that are worth visiting by both domestic and foreign tourists, such as:

Bira Beach

It is located in Bonto Bahari District, ±42 km to the east of the capital city of Bulukumba. Bira Beach is famous for its beautiful white sand and clear water that is wonderful for swimming and sunbathing (Fig. 1). Tourists can also enjoy the perfect view of sunrise and sunset.



Figure 1. Bira Beach (Source: bulukumbakab.go.id)

Lemo-Lemo Beach

This 508 hectares beach is located \pm 7 km from Tanaberu (Fig. 2). It also has a fascinating panorama compared to other beaches in Bulukumba.



Figure 2. Lemo-Lemo Beach (Source: bulukumbakab.go.id)

Samboang Beach

It is located in Eka Tiro village, Bonto Tiro District (Fig. 3). It has panorama beauty, curvy and sloppy shoreline, and enchanting coral refs.



Figure 3. Samboang Beach (Source: bulukumbakab.go.id)

Indigenous Region of Ammatoa

It is located in Tanah Towa village of Kajang District, ±56 km from the City of Bulukumba. The people still hold the message of the ancestors called *Passangnga Ri Kajang* and its cultural and natural authenticity. This area is untouched by technology, even just electricity. This village also upholds the ethics of politeness (Fig. 4).



Figure 4. Tanah Toa People (Source: bulukumbakab.go.id)

Pinisi Boat Making Area

It is located in Tanaberu, ±24 km from the city of Bulukumba. Tanaberu is a symbol of Bulukumba regency that is called *Bumi Panrita Lopi*. In Tanaberu, tourists can see firsthand the process of making Pinisi ships (Fig. 5).



Figure 5. Process of making Pinisi (Source: bulukumbakab.go.id)

Cliffs of Appalarang

It is located in Are village of Bonto Bahari District. It has beautiful cliffs with clear seawater, enjoyable an atmosphere, and wonderful coral reefs (Fig. 6). In this location, tourists can do snorkeling and Cliff jumping activities.



Figure 6. Appalarang (Source: bulukumbakab.go.id)

The Pinisi Festival

Bulukumba, which is one of the main tourist destinations in South Sulawesi, has various tourist objects. It includes Bira Beach with its clear white sand, the indigenous people of Ammatoa in Kajang with their local wisdom, and craftsmen of traditional Pinisi boat that has been known across the globe [11]. The resilience of the Bugis Makassar sailors is also very well known throughout the archipelago and worldwide.

In 2010, the Tourism Department of Bulukumba regency has started to held the Pinisi Festival and made it as an annual tourism agenda as a means to enliven maritime traditions in Indonesia, especially in Bulukumba. The aims and objectives of the Pinisi Festival are as follows:

- a. Empowering local potentials in supporting the government's *Twenty Million Tourist Visit* program to Indonesia.
- b. Preserve and introduce cultural diversity in Bulukumba to the world and to strengthen Bulukumba as one of the main tourist destinations in Eastern Indonesia.
- c. Exploring and developing regional culture as a means to enrich national cultural treasures.
- d. Educate young people to recognize and appreciate their culture and customs.

Profile and Activities of the Pinisi Festival as a Tourist Attraction

Based on the result of interviews and direct observations about profile and activities of the Pinisi Festival in which the activities lasted for three days, the series of activities are as follows:

Opening Ceremony

It was held at the Leppe' Pier, with original Pinisi Boat panorama. The Pinisi Boat has two masts with seven sails, followed by several other sailboats that will take part in the Leppe' to Bira Trip. The Opening Ceremony was opened by the Governor of South Sulawesi, who was accompanied by the Regent of Bulukumba who also gave a speech. The ceremony was opened by the *Gendang/Ganrang* beats by the South Sulawesi Governor and other officials, which also starts the Leppe' to Bira Trip.

Pinisi Trip from Leppe'toBira

This activity was joined by Pinisi boats and other sailboats from Bulukumba to Bira (± 20 miles away). Pinisi trip from Leppeto Bira was released directly by the Governor of South Sulawesi.

Fishing Contest

The fishing competition was joined by participants of the Pinisi trip from Leppe'E to Tanjung Bira Beach. Each team consists of seven participants with fishing areas across the Leppe - Bira (Flores Sea) track.

GEMARI (Eat Fish Movement) Campaign

This activity is a moral movement motivating people to consume fish regularly in the amount required for human health. This event involves tourists in the Pinisi Festival to cook the fish caught by the fishermen of the Trip Leppe, which were provided by the committee. Then they eat the cooked fish together.

The Traditional Pinisi Launching Ritual

In this activity, there are several performing rituals, as follows.

- The *Appasili* ceremony is a ward off misfortune ritual held in the morning before the Pinisi boat launching.
- The *Barasanji* is a reading prayer ritual before the Pinisi boat launching.
- The *Ammossi* ceremony is the highlight of the Pinisi boat launch ritual. This ceremony is a finding center of the boat ritual as a symbol of *the birth* of Pinisi boat into the world by traditionally pulling the boat into the sea.

BergemBira Parade

This activity shows cultural parade/carnival of participants from ten districts in Bulukumba. Each district showed unique characteristics of each region.

Andingingi Kampong Traditional Ritual

It is a Kajang Customary Community Indigenous Ritual as a manifestation of the closeness of the Kajang people to nature. The activity is a *replication* of the original traditional ritual *adingingi lino*, which in its performance, prohibited from being documented in any form.

Crowbar Burns Ritual

This custom is known as *Attunu Panroli*, which is one way to uphold justice. The ritual is carried out by the crowbar that has been burned and smoldered, held by the accused. If his hands are blistered, then he is the culprit. However, if his hand is fine, then he is not the culprit and free from the accusation.

However, at this festival, it does not intend to uphold justice. It is only as one of the cultural attractions that are performed together with the *Andangingi Kampong*, which shows the shaman's magic. They do not feel anything while holding the crowbar.

Pinisi Expo

This exhibition was held around Bira Beach. The expo shows the potential of the region, agricultural products, local culinary and creative industries in Bulukumba.

Bulukumba Traditional Dance

Bulukumba traditional dances were performed by dancers from the delegates of ten districts in Bulukumba Regency. It showed in Figure 7.



Figure 7. Traditional Dance (Source: bulukumbakab.go.id)

Photography Jamboree

It is a photography competition that captures objects and tourist attractions in Bulukumba, both in the form of landscape and human interest photos. The photography Jamboree participants capture every series of Pinisi Festival events.

Night Entertainment

Every night, in three days of the festival, the committee and the Event Organizer presented national and local artists to entertain the visitors, including traditional dance and Bulukumba traditional music *Turiolo* performed by artists under the Tourism Department of Bulukumba.

The Development of Pinisi Festival as a Tourist Attraction

Even though the Pinisi Festival is an annual event, but it won't immediately be able to increase tourist visits significantly. It is necessary to analyze several factors that can influence and obtain support from all components, such as government policy, transportation facilities readiness, availability of convention centers, hotels, restaurants, attractions, association support, and human resources.

important consideration Another that strengthens the potential of Bulukumba as one of the tourism cities is the existence of its strategic location. Developing a tourist attraction in a tourist destination cannot release the product components of attractions, accessibility, or facilities because these three components can make the attraction of a tourist attraction [12]. Accessibility requirements consist of access to information where facilities must be easy to find and easily reachable, must have access to road conditions that can be traversed, and get to the tourist attractions, and there must be an end of a trip [13]. Therefore, facilities and access to several attractions are very crucial to increase the number of tourist visits.

Pinisi Festival impacts are in the accommodation sector, restaurants, the renting hall service, the service rental industry, etc. Events have effects to attract tourists, help in improving infrastructure and capacity of tourism destinations, foster a positive destination image, and contribute to marketing public places. It also encourages better places to live, work and invest, and enliven the attractions or areas [13,15]. Indirect impacts are on the industrial sectors that are not directly needed when the tourism event (Pinisi Festival) takes place, such as the plantation industry, printing industry, advertising, etc. Other impacts are on the handicraft industry (making souvenirs), small stalls, etc. In addition to the multiplier effect, tourism event has several advantages and benefits for the development of several sectors. The benefits are:

- 1) Improve the tourism destination image
- 2) The tourists' impression that the destination is safe
- 3) Increase the number of foreign tourists and vice versa
- Occupy related services (transportation, accommodation, restaurant exhibition equipment etc.)
- 5) Introduce Indonesia with all its potential to the world.

Among many advantages and benefits of tourism events, the tourism industry in the future can surpass other industries as contributors to GDP after the oil and gas sector, the forestry sector, agriculture, etc. Additionally, the Head and the Secretary of Bulukumba Tourism Department mentioned that the Pinisi Festival is a cultural tourism and an annual event by the Bulukumba Government. The visitors are from domestic and foreign tourists who specifically come to watch the Pinisi Festival, which presents the unique potential of cultural and natural tourism in Bulukumba, i.e. *Butta Panrita Lopi*.

At least 10,000 people, both domestic and foreign tourists, gathered at the event. It resulted in an increase of 70 percent from the previous few months. Attractions are the primary elements of the destination appeal. They are the key motivators for visitation to a destination [14]. It shows that the Pinisi Festival can be an attraction for tourists. The following data illustrate the increasing number of tourists visiting the Bulukumba Regency in the past five years.

Table 1. The number of tourist in the Bulukumba Regency

Veere	Tou	Total	
rears	Foreign	Domestic	TOLAI
2013	3.425	115.343	118.764
2014	4.195	137.087	141.282
2015	3.760	156.770	160.530
2016	3.421	158.695	162.116
2017	3.036	186.145	189.181
2018	3.821	200.113	203.934

Source: Bulukumba Regency Culture and Tourism Office

The organizers only rely on a very limited budget from Local Government Budget (APBD) and State budget (APBN), so the event does not have a maximum impact on the development of tourism in Bulukumba. The lack of the event caused by the financial issues surely will affect the tourists visit in other events, such as meetings that are usually held either by government agencies, companies, or private parties.

As we know, the tourism industry is one of the leading sectors in a country. Tourism is one of the promising sectors, but only a few cities in Indonesia held national scale tourism events. The implementation of tourism events has a huge multiplier effect. Many employment opportunities are created as the event is held. Events are powerful drivers in tourism and prominent figures in the development and marketing plans of most destinations [15]. However, The Head of Tourism Department of Bulukumba stated that the event has not been effectively carried out. So the effect of the event is not optimal in helping people's economic situation and regional income.

On the other side, publication and promotion of the Pinisi Festival event are carried out nationally through radio, television, newspaper, internet, press conferences, as well as direct invitations to relations and related agencies and promotion through below the line activities (billboards, banners, archways, leaflets etc). These activities were carried out to invite visitors to come and watch the Pinisi Festival.

Furthermore, the Tourism Department distribute tickets with doorprizes (motorcycle, handheld transceiver, and other entertainment prizes), which was drawn on the closing night of the festival. Year to year, the Pinisi Festival still relies on the Local Government Budget (APBD), so the Government of Bulukumba through the Tourism Department builds a partnership with all parties who can support these activities. Therefore, the organizers should pay attention to things that are very important in holding the event, as follows.

- 1) Profitability; where a location can earns profits or losses in organizing events
- Promotion of associations; whether a predetermined location can increase credibility and increase membership
- 3) Novelty; to what extent a location presents a new location for organizing an event
- 4) Hospitality; to what extent the host and the local community welcoming visitors.

CONCLUSION

The Pinisi Festival, as a tourist attraction in Bulukumba, has various activities to increase the number of tourist visits, both local and foreign. Pinisi Festival impacts are in the accommodation sector, restaurants, the renting hall service, the service rental industry, etc. The involvement of the Tourism Department as the spearhead at the event will have more policies and authority, which has a crucial component in carrying out an event or festival. As Suggestions, the Tourism Department and the local government as the organizer of the Festival need to enhance cooperation and collaboration with other relevant agencies to gain more supports as a means to hold the festival optimally. It is also expected to improve the strategies that have been set to achieve targets and to attract tourists to visit Bulukumba.

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Visiting Tourism Destination: Is It Influenced by Smart Tourism Technology?

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Abstract

The development of technology has changed various sectors in life to be smart, including tourism. This study aims to analyze the effect of smart tourism technology attributes on visit intention and visiting tourist destinations. This study used a sample of 324 tourists in West Java Province, Indonesia. Partial Least Square is applied to test the relationship between variables. The results of the study revealed that smart tourism technology attributes such as smart information systems, smart tourism management, smart sightseeing, e-commerce systems, smart safety, smart traffic, and virtual tourism objects affect visit intention. The study also revealed the effect of visiting intentions on visits to tourist destinations. The findings of this study provide the basis for formulating strategies for implementing smart tourism technology that is appropriate in attracting tourist visits.

Keywords: Smart tourism technology, Tourism destination, Tourist behavior, Visit intention.

INTRODUCTION

The term smart tourism has been widely used throughout all stages of tourist travel. Tourists use smartphones to arrange travel plans and interact with other travelers to share in-depth reviews of their visiting experiences [1]. Tourism destinations can be smart because they use technology to gain a deeper tourism experience about the characteristics and meaning of human mobility [2]. The rapid development and adoption of Information Communication Technology (ICT) in the context of travel and tourism has significantly influenced tourism activities, attitudes, and behavior of tourists [3]. However, the existence of tangible technology is not enough to make a smart tourist destination. Thus, further research is needed to highlight the main elements of smart tourism technology. Therefore, this study identifies factors in technological attributes while clarifying the concept of smart tourism.

The increasing use of smart technology in the tourism industry is encouraging a lot of research on smart tourism. Most of the previous studies have discussed smart tourism that focuses on the experience of tourists [1], smart tourism city [4], and human mobility [2]. The discussion also found about tourist destinations in the context of health tourism [3], social media influences [5], and national culture [6]. However, there is still little attention to the importance of smart tourism technology in influencing tourist

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intentions and behavior. In particular, Smart tourism research from the perspective of smart tourism technology needs to be analyzed to understand tourist preferences about smart tourism.

This research focused on tourists in the Greater Bandung tourist destination. It is a tourist destination in Indonesia that is experiencing technological developments in the tourism sector. Based on data from the Indonesian government, the number of foreign tourist arrivals in 2018 was 15.81 million, with an upward trend of 12.58% from the previous year. Nationally, the tourism sector can produce a Gross Domestic Product of USD 19.29 billion, equivalent to 4.8% of Indonesia's total GDP [7]. To increase the quantity and quality of tourist visits in the future, Indonesian tourism stakeholders increasingly pay attention to the development of tourist attractions by adjusting to the concept of smart technology. It implies that the study of smart tourism technology will be useful for understanding the needs of tourists for smart technology. Smart tourism technology is crucial to be analyzed because smart tourism is developing in this country.

This research develops a structured and systematic approach to get a better understanding of smart tourism technology that is needed by tourists. The attributes of intelligent tourism technology are analyzed for their influence on visiting intentions and decisions to visit tourism destinations. This research is essential for the smart tourism industry to identify, set standards, and evaluate smart tourism technology that can improve the quality

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and quantity of tourist visits. The study was divided into several sections. The next part is a literature review, including some background information about technology in tourism, followed by a research framework and hypothesis development. The following parts are methods, data analysis, discussion, conclusions, implications, and limitations of research.

Smart Tourism

The era of information technology development has also influenced the development of the tourism industry. There are several studies analyzing information technology factors in the tourism sector, such as the evaluation of website quality [8], hotel ranking [9], smart city, and technology in the context of tourism [2]. Since the advent of the Internet of Things (IoT), travel and tourism have become a sector that is undergoing frequent changes [10]. The impact of technology in tourism has become a concern recently, and tourists are looking for suitable facilities and services to help and enhance the travel experience [3].

Several new trends in tourist behavior are driven by the development of communication and information technology, such as accessing more information via the internet, requesting better services, wanting more specific offers, becoming more knowledgeable, mobile, critical, and price-sensitive [11]. The focus has shifted from electronic tourism centered on the web site to smartphones and sensors that play a role before, during, and after the tour [12]. It shows that the development of technology has made changes in conventional tourism into smart tourism.

The concept of smart tourism has become an important issue in recent years, both theoretically and practically, that has emerged from the development of smart cities [4,12]. The true meaning of smart tourism is to focus on the needs of tourists by combining ICT [13]. Travelers use online information provided by social media, blogs, applications, and so on, rather than using non-online information in receiving and sharing travel information and even making reservations and using payment services [14]. Smart tourism has built a smart tourism ecosystem (STE), which is a system that collects, regulates, and implements tourism-related information and provides maximum service and experience value for tourists through smart technology and shares a large amount of information and values [4]. As technology traditional develops, tourism

attractions are challenged to be *smarter* in responding to requests from *new* tourists, environmental impacts, and technological development [15]. Tourists are becoming more dependent on information technology, self-service, and personal reservations when traveling. They like easier access, flexibility, personalization, and more excellent safety of a destination. Changes in tourist needs and behavior also bring challenges for the tourism industry to make tourist attractions and destinations smarter.

Tourism Destination and Visit Intention

The development of smart tourism is more than the application of information and communication technology in tourism destinations. The basis of this initiative is a cocreated value transformation, a change in destination-marketing strategy (destination relationship management), and different views on destination competitiveness (resources, big data) [16]. Smartness helps policymakers and managers make better decisions and organizations to function more efficiently; this is partly due to the large volume of data (known as big data) that can be collected and analyzed to improve planning and policy [2]. Efforts to optimize destination values through ICT systems that connect tourists with information sources, enable access to information, provide a face to face communication, and adjust information needed in a smart way [17]. Besides, ICTs and the environment with the availability of the internet at the destination are very important to maximize the tourism experience [16]. Smart destinations must-have technological resources deemed necessary to increase visit intentions.

Some elements of tourism destinations require specific services, such as attractions, facilities, accessibility, and human resources [4]. Accommodation, convenience, attractiveness, access, and additional services are components of smart tourism destination cities [4]. Buhalis and Amaranggana [12] describe four core dimensions of smart technology that can be embedded in a purpose: information, access, interaction, and personalization. For tourism destinations, it is essential to provide significant opportunities to use open data to develop cultural, transportation, marketing, and environmental scenes [18].

The influence of the internet has significantly changed the tourism industry in various ways. This phenomenon has become one of the most efficient ways to reach new tourism markets and encourage repeat visits to tourism destinations [19]. Various important factors that can influence selecting tourism destinations are accommodation services, food, traffic attractions, activities, and special events or festivals [4]. In the context of smart tourism, previous research showed the influence of travel intentions on the selection of smart destinations [3]. If prospective travelers have a high desire to visit a destination, they will try to visit it [20].

Smart Tourism Technology

The reason for tourism service providers to develop smart tourism is to enhance the tourist experience. Therefore, it is imperative to understand new tourists and their needs in the smart era to get a better understanding of tourist preferences on smart tourism attractions [15]. Smart tourism can maximize the use of tourism resources and also manage tourism cities, maintain tourism attractions, and improve the quality of life and communication between tourists and host residents [17]. Then, technologies such as smart devices, tourismrelated platforms, and ICTs can influence tourism experiences from the planning stage to after the tour [12]. Therefore, an intelligent system encourages visitors to explore the city and improve their travel service experience through direct feedback from the smart tourism technology system [20]. Based on this information, tourists can find exotic locations near where they are and can get information about monuments and roads in the areas they visit [21]. Specifically, tourism sites with a welldeveloped smart environment directly affect travel experiences using smart technology compared to those who do not [22].

Developments in the tourism industry require the originality, uniqueness, and intact resources of tourist attractions [23]. In tourist attraction recommendations, three important aspects must be considered: tourist preferences, tourist attraction themes, and sentiments on tourist attraction themes [24]. There are three components to tourist attractions, such as tourists, sites to see, and an image that makes an attraction different [25]. A smart tourism attraction must have a smart internet of things, data warehouses, and cloud computing. This technology allows tourism attractions to be smart in terms of generating real-time intelligence about the needs and desires of tourists while having the ability to respond.

Another opinion mentioned four forms of information and communication technology that are very important for setting up intelligent tourism systems: cloud computing, the internet of things, cellular communication, and artificial intelligence technology [26]. Tourism service providers maximize the experience of tourists by using virtual reality (VR), augmented reality (AR), beacons, or near-field communication (NFC), combined with tourist smartphones or other devices [27]. Tourist preferences of smart tourism attractions were identifed by smart information systems, intelligent tourism management, smart sightseeing, e-commerce systems, smart safety, intelligent traffic, smart forecasts, and virtual tourist attractions that should exist in a smart tourism attraction (STA) [15]. In this study, we identified the factors in the STA to analyze their effects on visit intentions. Tourism technology can influence future behavioral intentions [28].

MATERIAL AND METHOD

In this study, we try to understand how smart tourism technology influences travel intention, which then affects visiting tourism destinations. The measurement items were adopted from previous literature and modified for this study. Based on the consideration, the research hypothesis has been determined as follows.

The research framework is presented in Figure 1. Twenty-seven statement items of eight variables in smart tourism technology, three items measure travel intention, and three items measure visiting tourism destinations. The smart tourism technology attribute was adapted from Wang et al. [15] in measuring the tourist preferences of the smart tourism technology. Then the attributes of visit intention and visiting tourism destinations are adapted from Ghaderi et al. [3]. We use multi-measurement items to prevent measurement errors. All items of this study were measured on a 5-point Likert scale. ranging from strongly disagree (1) to strongly agree (5). The survey was written in English and then translated into the Indonesia language by researchers who are fluent in both languages. The questionnaire is shown in Table 2.

After completing the questionnaire, we surveyed Indonesians who had traveled to a tourist destination that uses smart tourism attributes before to get survey responses based on their experiences of smart tourism. We ask people who visit two or more tourism destinations to respond to a questionnaire about Smart Tourism Technology and Tourist Behavior (Susanto, et al.)

their most recent visit. The research survey was conducted online from 15th - 27th December 2019. Quota sampling techniques were used to recruit respondents aged over 20 years, those who are accustomed to searching for travel products online, making online reservations, and making payments online. A total of 324 respondents were selected in this survey. The demographic information for the sample is presented in Table 1.

Tabel 1. Demographics of respondents (n=324)

Demographic variables	n	%	Demographic variables	n	%
<u>Gender</u>			Monthly income (IDR)	
Male	129	40	< 2 mil.	120	37
Female	195	60	>2 mil. – 5 mil.	105	32
Occupation			> 5 mil.	99	31
Student	102	31	Education		
Civil servant	141	44	High School	90	28
Private	33	10	Bachelor	120	37
employees State employee	3	1	Master/Doctoral	114	35
Entrepreneur	15	5			

Source: processed research data, 2020



Descriptive statistical analysis was used to analyze the demographic characteristics of the respondents. Based on the results of the distribution of questionnaires to respondents, 324 guestionnaires can be used for data analysis. Forty percent of respondents were men, and 60% of respondents were women. Then, based on the level of education, it is known: 28% are high school graduates, 37% have a bachelor's degree, and 35% have a master/doctoral degree.

Based on income per month known: 37% respondents have income < IDR 2,000,000, 32% respondents have an income > IDR 2,000,000.-5,000,000.- then, 31% income > IDR 5,000 .000, -. Based on the type of work, 31% of respondents are students, 44% are civil servants, 10% are private company employees, and only 5% are entrepreneurs. Then, as much as 1% are state company employees, and 9% rest is outside the specified group. These results illustrate that the respondents in this study had a distribution of the amount spread across each group of characteristics, and none were dominant in certain groups.

Description:

- H1. Visit intention significantly influences selecting tourism destinations.
- H2. Smart information system significantly influences visit intention.
- H3. Intelligent tourism management significantly influences visit intention.
- H4. Smart sightseeing significantly influences visit intention.
- H5. E-commerce system significantly influences visit intention.
- H6. Smart safety significantly influences visit intention.
- H7. Intelligent traffic significantly influences visit intention.
- H8. Smart forecast significantly influences visit intention.
- H9. Virtual tourist attraction significantly influences visit intention.

Figure 1. Conceptual framework

Table 1. Exploratory factor analysis results

Indicators/Item	SIS	ITM	SSI	ECS	SSF	ITR	SFC	VTA
Tourism attraction website	0.848	0.589	0.592	0.478	0.601	0.656	0.551	0.630
Free Wifi	0.891	0.561	0.581	0.463	0.558	0.630	0.607	0.555
Online information access	0.906	0.615	0.677	0.516	0.511	0.561	0.577	0.554
Mobile application	0.930	0.622	0.619	0.507	0.586	0685	0.638	0.635
Quick-response code	0.897	0.615	0.634	0.464	0.566	0.625	0.563	0.561
Electronic touch screen	0.737	0.716	0.668	0.535	0.569	0.519	0.558	0.604
Smart card (band)	0.671	0.823	0.662	0.527	0.713	0.611	0.641	0.624
Electronic-entrance guard system	0.659	0.862	0.653	0.585	0.650	0.568	0.568	0.530
Tourist-flow monitoring	0.534	0.843	0.604	0.531	0.569	0.463	0.581	0.527
Crowd handling	0.568	0.868	0.606	0.492	0.614	0.608	0.630	0.602
Smart education	0.558	0.808	0.616	0.522	0.575	0.519	0.592	0.564
Personal-itinerary design	0.616	0.691	0.912	0.606	0.526	0.525	0.530	0.472
E-tourism-recommendation system	0.706	0.714	0.954	0.598	0.574	0.589	0.568	0.567
E-tour map	0.697	0.688	0.928	0.693	0.578	0.555	0.581	0.593
Mobile payment	0.569	0.609	0.652	0.964	0.581	0.511	0.536	0.545
Online coupons	0.544	0.604	0.660	0.955	0.562	0.470	0.531	0.550
Online booking	0.508	0.588	0.625	0.930	0.528	0.445	0.527	0.522
Intelligent-environment monitoring	0.522	0.638	0.514	0.701	0.858	0.571	0.617	0.613
Travel-safety protection	0.601	0.704	0.499	0.444	0.919	0.667	0.665	0.629
Smart emergency-response system	0.609	0.640	0.586	0.417	0.882	0.637	0.648	0.619
Smart vehicle-scheduling	0.679	0.641	0.593	0.449	0.663	0.929	0.705	0.592
Real-time traffic broadcast	0.629	0.585	0.514	0.480	0.644	0.924	0.710	0.599
Tourist-flow forecast	0.597	0.681	0.584	0.541	0.661	0.737	0.862	0.671
Queuing-time forecast	0.581	0.649	0.529	0.502	0.658	0.627	0.929	0.581
Weather forecast	0.636	0.606	0.509	0.465	0.642	0.694	0.913	0.621
Virtual tourism experience	0.620	0.620	0.495	0.533	0.627	0.604	0.666	0.946
Virtual travel community	0.670	0.668	0.615	0.545	0.701	0.616	0.655	0.953

Notes: SIS: Smart information system; ITM: Intelligent tourism management; SSI: Smart sightseeing; ECS: E-commerce system; SSF: Smart safety; ITR: Intelligent traffic; SFC: Smart forecast; VTA: Virtual tourist attraction; **Source**: processed research data, 2020

RESULT AND DISCUSSION

Smart Tourism Technology Dimensions

Table 2 illustrates 27 items of smart tourism attraction produced from eight focus groups. The dimensions of smart tourism attraction were assessed using exploratory factor analysis with the extraction of the main components. A varimax rotation with Kaiser normalization was applied, revealing eight factors that accounted for 73.57% of the variance. The first factor, *smart information system*, had six items representing the tourism attraction website, free wifi, online information access, dan mobile application. The next factor, *intelligent tourism management*, consisted of five items reflecting smart card (band), electronic-entrance guard system,

tourist-flow monitoring, crowd handling, and smart education. *Smart sightseeing* was the third factor consisted of three items reflecting personal-itinerary design, e-tourism recommendation system, and e-tour map.

The fourth factor, e-commerce system, included three items related to mobile payment, online coupons, and online booking. The fifth factor, *smart* safety, had three items representing intelligent-environment monitoring, travel-safety protection, and smart emergencyresponse system. The next factor, intelligent traffic, consisted of two items reflecting smart vehicle-scheduling and real-time traffic broadcast. The seventh factor, smart forecast, had three items representing tourist-flow forecast, queuing-time forecast, and weather

forecast. The last factor, *virtual tourist attraction*, had two items representing virtual tourism experience and virtual travel community.

All measurement items had loading values of more than 0.4. Thus, these items can be used for further analysis. Five dimensions extracted from the exploratory analysis have Cronbach's Alphas above 0.80, indicating its reliability [29]. The Bartlett's test of sphericity (p <0.01) and the Kaiser-Meyer-Olkin test (0.928) confirm the adequacy and reliability of the sampling used.

Measurement Model

Partial least square analysis (PLS) was chosen in this study, along with the bootstrap technique. The Bootstrap technique creates a large number of samples by randomly pulling cases from original sample research [30]. Compared to the structural equation modeling (SEM) method, PLS analysis is suitable for small sample sizes and can handle highly predictive models. Widely known, PLS is the right tool for analyzing existing theories and constructing formative constructs of structural models. Besides, a Confirmatory Factor Analysis was carried out to check the suitability of the model, the reliability and validity of the model, and the general method bias. The research hypothesis was tested with the structural equation model- partial least square (SEM-PLS) [29].

Confirmatory factor analysis was first carried out to assess the measurement model. In evaluating the measurement model, convergent and discriminant validity tests were performed. According to Chin [31], convergent validity is examined by using loading factors, composite reliability, and average variance extracted (AVE).

As shown in Table 3, the loading factor of all items is above 0.7, so it is accepted [31]. Composite reliability values for all constructs range from 0.898 to 0.965, which meet the requirements [32]. Then, to ensure reliability, Alpha Cronbach's score is higher than 0.7, ranging from 0.829 to 0.946, which meets the standard criteria of 0.7 [32]. Therefore, the convergent validity and reliability of each construct and item can be accepted. To demonstrate discriminant validity, the square root of each AVE construct must be higher than the construct correlation with other latent variables [33]. Besides, cross-loading of all items was tested, and the results showed that each loading of items in construction was higher in the construction measured than in cross loading in other items. It shows the discriminant validity of the measurement model is acceptable [31].

Table 4 shows the results of the discriminant validity analysis. It is recommended that the square root scores of all AVE constructs are the highest among correlated constructs [33]. In this study, the square root score has a greater correlation between each construct, which shows the accepted discriminant validity.

Structure Model

In analyzing the structural model (inner model), there are two criteria recommended for the significance of the path coefficient and the value of R^2 that was applied [29]. R^2 sizes are 0.75, 0.50, and 0.25 for all endogenous structures, which are substantial, moderate, and weak. The results of the study of R^2 in the intention to visit variable is 0.849, which is in the substantial criteria. The next step is to test the direct effect between the variables in table 5. The proposed hypothesis is analyzed with SEM, adapting the bootstrap technique.

As shown in Table 5, seven smart tourism technology attributes significantly influence the visit intention, and one attribute has no significant effect. Hypothesis 1 testing shows that the smart information system has a significant effect on visit intention (H1; β = 0.323, t = 7.272), Hypothesis 2 intelligent tourism management has a significant effect on visit intention (H2; β = 0.097, t = 2.513), and Hypothesis 3 smart sightseeing has a significant effect on visit intention (H3; β = 0.147, t = 2.213). Hypothesis 4 e-commerce has a significant effect on visit intention (H4; β = 0,134, t = 3,132), Hypothesis 5 smart safety has a significant effect on visit intention (H5; β = 0,087, t = 2,001), hypothesis 6 intelligent traffic has a significant effect on visit intention (H6; β = 0,106, t = 2,687), and hypothesis 8 virtual tourist attraction has a significant effect on visit intention (H8; β = 0,155, t = 2,872).

However, the results of hypothesis 7 testing show that smart forecast does not significantly influence visit intention (H7; $\beta = 0,481$, t = 6,875). The results also indicate that visit intention significantly influences visiting tourism destinations, supporting the H9 hypothesis (H9: β = 0,671, = 25,290). Figure 2 summarizes the results of this hypothesis.

Veriable	Мессина	Factor	Cronbach	CD	A)/F
variable	Measure	loading	alpha	CK	AVE
Smart tourism	Smart information system		0.935	0.949	0.759
technology	1. Tourist attraction home page	0.848			
	2. Free Wifi	0.899			
	3. Online information access	0.912			
	4. Mobile application	0.934			
	5. Quick-response code	0.898			
	6. Electronic touch screen	0.717			
	Intelligent tourism management		0.897	0.924	0.708
	1. A smart card (band)	0.802			
	2. Electronic-entrance guard system	0.857			
	3. Tourist-flow monitoring	0.860			
	4. Crowd handling	0.879			
	5. Smart education	0.805			
	Smart sightseeing		0.924	0.952	0.868
	1. Personal-itinerary design	0.916			
	2. E-tourism-recommendation system	0.954			
	3. E-tour map	0.925			
	E-commerce system		0.946	0.965	0.902
	1. Mobile payment	0.964			
	2. Online coupons	0.956			
	3. Online booking	0.929			
	Smart safety		0.863	0.916	0.785
	1. Intelligent-environment monitoring	0.867			
	2. Travel-safety protection	0.915			
	3. Smart emergency-response system	0.876			
	Intelligent traffic		0.835	0.924	0.858
	1. Smart vehicle-scheduling	0.918			
	2. Real-time traffic broadcast	0.935			
	Smart forecast		0.885	0.929	0.814
	1. Tourist-flow forecast	0.854			
	2. Queuing-time forecast	0.934			
	3. Weather forecast	0.917			
	Virtual tourist attraction		0.891	0.948	0.902
	1. Virtual tourism experience	0.949			
	2. Virtual travel community	0.950			
Visit intention	1. I intend to visit tourism destinations because of safety and	0.790	0.829	0.898	0.746
	security issues				
	2. For my future travels, I want to go to destinations with more	0.899			
	smart facilities				
	3. I will make an effort to visit tourism destinations when traveling	0.898			
Visiting	1. I prefer smart destinations rather than traditional ones	0.920	0.858	0.910	0.773
tourism	2. I will select a smart destination for future trips	0.916			
destinations	3. Smart destinations have more to offer compared to traditional	0.795			
	destinations. Hence I get more experiences and fun				

Table 3. Measurement Model

Source: processed research data, 2020

Table 4. D	iscriminant	Validitv
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	SIS	ITM	SSH	ECS	SSF	ITT	SFC	VTA	VI	VTD
SIS	0.871									
ITM	0.847	0841								
SSH	0.833	0.828	0.932							
ECS	0.831	0.786	0.799	0.950						
SSF	0.780	0.778	0.791	0.788	0.886					
ITT	0.760	0.761	0.807	0.786	0.817	0.926				
SFC	0.794	0.755	0.818	0.738	0.718	0.752	0.902			
VTA	0.827	0.822	0.904	0.806	0.799	0.788	0.753	0.950		
VI	0.875	0.835	0.857	0.836	0.811	0.804	0.757	0.858	0.864	
VTD	0.553	0.557	0.656	0.553	0.614	0.560	0.574	0.657	0.671	0.879

Notes: SIS: Smart information system; ITM: Intelligent tourism management; SSH: Smart sightseeing; ECS: E-commerce system; SSF: smart safety; ITT: Intelligent traffic; SFC: Smart forecast; VTA: Virtual tourist attraction; VI: Visit intention; VTD: Visiting tourism destinations.; **Source**: processed research data, 2020.

Hypothesis	Variables	Direct effect		To at an and to
		Path Coefficient	T Statistics	lest results
H1	VI – VTD	0.671	25.290**	Supported
H2	SIS – VI	0.323	7.272**	Supported
H3	ITM – VI	0.097	2.513*	Supported
H4	SSH – VI	0.147	2.213*	Supported
H5	ECS – VI	0.134	3.132*	Supported
H6	SSF – VI	0.087	2.001*	Supported
H7	ITT – VI	0.106	2.687*	Supported
H8	SFC – VI	-0.051	1.272	Not Supported
H9	VTA – VI	0.155	2.872*	Supported

Table 5. Sumr	nary of hypothesis results
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Notes: Significance *0.05; **0.01. SIS: Smart information system; ITM: Intelligent tourism management; SSH: Smart sightseeing; ECS: E-commerce system; SSF: smart safety; ITT: Intelligent traffic; SFC: Smart forecast; VTA: Virtual tourist attraction; VI: Visit intention; VTD: Visiting tourism destinations; **Source**: processed research data, 2020



Figure 2. Model result Notes: Significance *0.05; **0.01

We examine the attributes of the smart tourism technology that affect visit intention and then the effect of visit intention on visiting smart destinations. This study shows important attributes of smart tourism technology that can affect travel intention, such as smart information systems, intelligent tourism management, smart sightseeing, e-commerce systems, smart safety, intelligent traffic, and virtual tourist attractions. This study complements some previous research on technological factors that influence visit intention, such as mobile tour information systems [34] and smart tourism technology [28]. These studies validate the fact that smart tourism technology is positively related to travel intention. Based on the R^2 value, this study confirms the importance of smart tourism technology. R^2 value on visit intention shows the effect of all attributes of smart tourism technology on visit intention of 84.9%. This dominant influence shows the importance of technological factors in influencing visit intention. Theoretically, this study provides knowledge that smart tourism technology can increase exploratory power in predicting visit intention. More specifically, we have identified the attributes of smart tourism technology that have the most significant influence on travel intention, namely the smart information system. The availability of facilities such as tourist attraction home page, free Wi-Fi, online information access, mobile applications, quick-response codes, and electronic touch screens can provide the most significant contribution to visit intention.

The results also prove that a significant influence on visit intention of visiting tourist destinations. These results validate previous studies on the effect of visit intention on visiting smart destinations [3]. Visit intention refers to the willingness of potential tourists to visit destinations. Thus, this study reveals the importance of emotional assessment that is the desire of tourists in visiting tourist destinations. This study also reports that in the desire to travel, tourists choose and visit tourist destinations because of the availability of smart facilities, safety and security, and more experience and pleasure gained at smart destinations.

CONCLUSION

Based on the explanation of the results of the study, smart tourism technology attributes were found to have a significant direct effect on travel intention. The model construction has successfully confirmed the direct influence of exogenous variables in this study. Moreover, the constructed model in this study is a model that is suitable for explaining the smart tourism technology attributes that underlie the behavior of tourists to travel to tourism destinations.

The model in this study proves that there are attributes in smart tourism technology that do not significantly affect smart tourism technology, namely smart forecast. We assume that tourists intend to travel more because of the facilities available at these tourist destinations, not because of tourist forecast, queuing-time forecasts, and weather forecasts that are not essential factors in traveling. Apart from that, this research has successfully proven the important attributes of smart tourism technology that can be a reference for stakeholders in increasing tourist visit intention that affects visiting tourism destinations.

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Concentration-Dispersal Strategies to Assist Geotourism Destination Planning: A Case Study of Ciletuh-Palabuhanratu UNESCO Global Geopark

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Abstract

This article aims to identify and design a spatial model of geotourism destinations based on concentration and dispersal strategies in Cisolok Geoarea, Ciletuh-Palabuhanratu UNESCO Global Geopark, Indonesia. This study uses a qualitative approach with primary and secondary data collection. Primary data collection was carried out through field observations at the Cisolok Geoarea and semi-structured interviews with people directly involved in the development of the Ciletuh-Palabuhanratu UNESCO Global Geopark. The positioning of spatial elements based on satellites uses the Global Positioning System (GPS) technology. In the meantime, secondary data carried out through literature studies on policy documents, planning, and previous research. The analytical method used in this study includes qualitative analysis, map analysis, and descriptive analysis. Stages of research were carried out through the process of input, management, plotting, and conversion of data and information obtained. This study found that Cisolok qualified as a geotourism destination with the support of eleven integrated spatial elements. The results of this study can be a strategy for the dispersal of tourists visiting the Ciletuh-Palabuhanratu UNESCO Global Geopark, especially in Cisolok Geoarea.

Keywords: Ciletuh-Palabuhanratu UNESCO Global Geopark, destination management, geotourism, tourism planning.

INTRODUCTION

Geotourism destinations, also known as Geoparks [1,2], have the opportunity to develop sustainable areas [3]. Geopark contributes to promoting awareness of geological features (conservation, information, and education) and geological resources (geotourism and sustainable development) by involving community participation [4,5]. Geopark empowers local and communities provides them with opportunities to develop joint partnerships that are driven by geotourism through regional investment, create business opportunities, new jobs, and generate financial benefits for the local community [6]. Through tourist visits, geopark has a role in regional economic development. Tourist trips to the geopark encourage economic movement in the same direction [7], benefiting all people in the geopark region and contributing to sustainable regional development [8,9]. Besides, geotourism activities have the potential to damage the natural environment due to the uncontrolled carrying capacity of tourist attractions, and that is a challenge in developing sustainable geotourism destinations [10].

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Ciletuh-Palabuhanratu region has the potential as a geotourism destination [11]. The designation of the Ciletuh-Palabuhanratu region as one of the UNESCO Global Geoparks (UGG) provides opportunities for sustainable regional development through the development of geotourism, particularly in Cisolok Geoarea. Cisolok Geoarea has a geodiversity, biodiversity, and cultural diversity that has become a tourist attraction before the geopark [12]. To stimulate the development of geotourism requires planning of geotourism destinations in the Cisolok Geoarea, Ciletuh-Palabuhanratu UGG. Tourists need to find relevant information on Ciletuh-Palabuhanratu UGG [13], including information tourist attractions, on accommodations, accessibility, and activities. The concentration of facilities and services for tourists plays a role in minimizing the potential negative impacts on the socio-cultural environment and minimizing the cost of developing infrastructure, thereby offering opportunities to make destinations more attractive [14]. Concentrated tourism activities play a role in facilitating the flow of tourist visits, goods, and services to and within tourism destinations [15]. On the other hand, the dispersal of tourists from concentrated areas provides opportunities to distribute work and benefit income equally [14,16]. The combined strategy of concentration and dispersal becomes

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an effective strategy for sustainable regional development [17].

Previous research explained that the dispersal strategy in tourism destinations is needed to disperse tourists from the main tourist concentration center to reduce pressure on the core area. Destination management organizations (DMO) in Europe have succeeded in spreading a large number of tourists from vulnerable sites to other tourist attractions. It proves that dispersal strategies can reduce the negative impact on vulnerable tourist attractions [18]. In the Maldives, DMOs tend to prefer not to develop tourism destinations in residential areas to minimize disruption to established socioeconomic structures [19]. Tourism Development in Mexico is another example of successfully implementing a concentration-dispersal strategy by developing a staging area on a remote island (Cancun Island). It succeeded in making the island a leading tourism destination that brings in 2 million tourists every year [20,21,22]. Previous research and best practice examples showed the importance of studies related to the dispersalconcentration strategy, because it plays a role in reducing pressure on core areas in tourism destinations, triggering dissemination of socioeconomic impacts, increasing length of stay and total tourist expenditure, and increasing the attractiveness of tourism destinations through offering new tourist attractions for tourists.

The difference between this study and previous research is the scope of the study. This research is focused on the design of spatial models for geotourism or geopark destinations; no previous studies have designed or applied concentration-dispersal strategies in geoparks. Furthermore, in Indonesia, there has never been any research related to concentration-dispersal strategies, both in tourism destinations and geoparks. This article seeks to analyze geotourism destinations through a combination of concentration and dispersal strategies at Ciletuh-Palabuhanratu UGG, particularly in the Cisolok Geoarea. This study aims to identify and design a spatial model of geotourism destinations based on a concentration-dispersion hybrid strategy and implement it in the Cisolok Geoarea.

Concentration-Dispersal Hybrid Strategies

The development of unregulated geotourism destinations tends to have concentrated spatial patterns and indicate them as unsustainable tourism destinations. The role of appropriate regulation and management in the concentration of tourism activities has a function as an effective strategy and contributes to the achievement of sustainable tourism destinations [16.23]. Concentrated tourism activities contribute to limiting negative impacts and facilitating visitor management. A concentration strategy means and integrated controlled planning and development [17].

The strategy of concentration in geotourism destinations can be implemented through concentrating tourist services and grouping tourist attractions. The tourist service center, or staging area [14], is an area specifically designated for meeting the needs of tourists in geotourism destinations, including accommodation, tourist information centers, shopping centers, souvenirs, and other tourism support facilities. The grouping of tourist attractions provides destination competitiveness, attracts more and increases tourists' length of stay, provides efficient transportation and infrastructure access, provides comfort for tourists, easily accessible tourist facilities and services, and minimizes the impact of tourism activities [14,17,24]. The involvement and capacity building of local communities is certainly no less important to support sustainable regional development. To accommodate the function between conservation and tourism, local community involvement is needed in the development of geotourism destinations [10].

The concentration strategy is related to the dispersal strategy in supporting sustainable tourism destinations. Dispersal strategy is an effort to distribute tourists from concentrated service centers to reduce pressure on the area of tourist service centers or settlements, spread revenue. and increasing tourism the competitiveness destinations through of exploration and introducing secondary tourist attractions or new characteristics to tourists. Dispersal strategies mean distributing tourism activities to support employment and income equality on a national, regional, local, and specific scale [16].

Geopark as a Geotourism Destination

Integration between aspects of geodiversity, biodiversity, and cultural diversity has the potential to support the development of geoparks as pioneers and innovative strategies for nature conservation, land use planning, and sustainable regional development [25]. The geographical approach is needed in planning more comprehensive geotourism destinations between geological (abiotic), flora and fauna (biotic) elements, and the presence of local communities (cultural) [6]. It follows the concept of the geopark, which is a geographically integrated area with significant international sites and geological landscapes and is managed holistically as an effort to support environmental protection, education, and sustainable development [13].

Geotourism destination planning is related to the concept of the tourism system. The relationship between the existence of space and time elements that empirically explain the pattern and function of tourism destinations through the relationship between tourist behavior and destination structure [26]. There are previous studies relating to the planning of geotourism destinations in various regions, including Varkala Geopak, India [27]; Caldera Toba Geopark, Indonesia [28,29]; Langkawi Geopark, Malaysia [30,31]; Dong Van Karst Geopark, Vietnam [32]; Plateau North Kalimantan, Indonesia [33,34]; Jeju Geopark, South Korea [35, 36]; Bandung Basin Region [37-39]; and Bromo-Tengger-Semeru-Arjuno Biosphere Reserve [10]. There are five basic principles to consider in designing geotourism destinations through spatial models [15].

- 1. The destination physical characteristics. Travel patterns are closely related to physical characteristics, such as availability of access, costs incurred, distance and travel time, and route conditions between tourist attraction locations.
- 2. Tourism destination study, the character of each tourism destination has a different structure, so the planning model must adjust to the conditions of the study area.
- 3. Functional and normative. The integration of local regulations and the empirical conditions of spatial planning can influence tourism destination planning.
- 4. Explanatory and predictive. Explaining the actual conditions and can predict future market developments.
- 5. The integration of spatial elements, nature, and the relationship between the tourism components, including nodes, paths, and networks, becomes crucial in planning a model of tourist destinations.

Spatial elements are important ideas in supporting planning of geotourism destinations. It includes a) tourists generating regions, b) geotourism destinations, c) geotourism areas, d) geotourism service centers (primary, secondary and tertiary), e) route circulation (external and internal), f) gateway (primary and alternative), g) geotourism attractions (primary and secondary), and h) geotourism routes [14,15, 40].

MATERIAL AND METHOD

Object Study

The approach used in this research is qualitative research with primary and secondary data collection. The unit of analysis used in this study consists of five principles in designing tourism destinations (destination physical characteristics; tourism destination study; functional and normative; explanatory and predictive; and integration of spatial elements) and destination spatial elements. This research was conducted for six months in July-November 2018 in Cisolok Geoarea, Ciletuh-Palabuhanratu UGG, Sukabumi Regency. Administratively, Geoarea Cisolok covers three sub-districts, namely Palabuhanratu sub-district, Cikakak subdistrict, and Cisolok sub-district.

Data Collection and Analysis

Primary data were obtained through field observations at Cisolok Geoarea and semistructured interviews. Secondary data were collected through desk study in the form of spatial information, policy documents, and studies on the development of previous geotourism destinations. Observation activities aim to determine the position of spatial elements based on satellites using Global Positioning System (GPS) technology.

The results of observational data were processed through data collection (coordinate transformation, digitization, and editing), data plotting, and data conversion using geographic information system software (Esri ArcGIS) and graphic design software (Adobe Illustrator). Meanwhile, interviews were conducted with actors directly involved in the development of the Ciletuh-Palabuhanratu UGG, including Ciletuh-Palabuhanratu Geopark Management Agency, Tourism and Culture Office of West Java Province, and Tourism Office of Sukabumi Regency. The scope of the questions in the interview related to the condition of tourism, the direction of tourism development, and tourism management in the Cisolok Region, Ciletuh-Palabuhanratu UGG. This study uses qualitative analysis methods, map analysis, and descriptive analysis.

RESULTS AND DISCUSSION

Cisolok Geoarea generally has an irregular physical condition in the south and hills in the north with an altitude ranging from 0 to 2.960 m above sea level. These conditions cause the state of the slope is very sloping (more than 35°). The types of beaches on the coast of Geoarea Cisolok are coral, rocky, and sandy beaches. The climate in Geoarea Cisolok is affected by a tropical equatorial climate with an average annual rainfall of 2.565 mm and an average monthly rainfall of 84 - 376 mm. Cisolok Geoarea has a diversity of natural resources, including marine, coastal, river, and hilly resources. These conditions have the potential for the development of tourism, the existence of new tourism activities, namely adventure tourism that utilizes river flow as rafting attractions. There is an ecological wealth on the coast of Geoarea Cisolok, including terrestrial vegetation ecosystems, mangroves, seaweed, and coral reefs [41].

Socio-cultural diversity as a tourism potential is valuable in improving welfare in Geoarea Cisolok because the culture is in harmony with human values and enhances healthy people's lives and, is an indicator of community welfare. Socio-cultural diversity must be maintained and developed. The existence of natural and sociocultural conditions in Geoarea Cisolok has a close relationship following the development of natural history and culture. Cultural diversity in the Geoarea Clsolok includes Kasepuhan Cipta Gelar, Kasepuhan Sinar Resmi, and Kasepuhan Cipta Mulya. There are annual event celebrations, the Cisolok Fishermen's Party which has been celebrated 20th in 2017, and the election of the Fishermen's Princess as an additional tourist attraction at Cisolok Geoarea.

Identification of the existing tourism resources in Geoarea Cisolok helps in the design of spatial destination models, especially in the cluster of tourist attractions, accessibility, and tourism facilities. The Cisolok Geoarea as a Geotourism Destination was reviewed based on the identification of spatial elements in three sub-districts (Palabuhanratu, Cikakak, and Cisolok) and adjusted to local government policies.

Spatial Elements of Cisolok Geotourism Area

The design of spatial models in Cisolok Geoarea refers to five fundamental factors that have been identified according to existing conditions. The design includes 1) the physical characteristics of the destination, including access availability, road conditions (arterial and collector), and distance and travel time between geotourism attractions; 2) destination study areas through adjustments to the characteristics and structure of each region in Cisolok Geoarea; 3) functional and normative towards the policy integration of spatial planning and tourism plans with the empirical conditions of Cisolok Geoarea; 4) explanatory and predictive about the clarity of the empirical conditions of Cisolok Geoarea in predicting the tourist market, and 5) integration of spatial elements related to the nature and relationship with the tourism component.

Based on these basic references, the design of the spatial model in Cisolok Geotourism Destination includes 11 spatial elements, namely 1) tourist generating regions, 2) geotourism destinations, 3) external route circulation, 4) internal routes circulation, 5) primary gateway, 6) alternative gateway, 7) geotourism area, 8) primary service centers, 9) secondary service centers, 10) Geotourism Attraction (GA), and 11) Supporting Tourist Attraction (STA) (Fig. 1). The spatial elements in the Cisolok Geotourism destination, including:

1. Tourist generating regions

Tourists who visit the Cisolok Georoutism Destination, based on physical conditions, come from Jakarta, Banten, Bogor, Sukabumi City, Cianjur, and Bandung.

2. Geotourism destination

Ciletuh-Palabuhanratu UGG consists of three geoareas, namely Cisolok Geoarea, Simpenan Geoarea, and Ciletuh Geoarea. This research is focused on the Cisolok Geoarea as a geotourism destination, covering three administrative subdistricts, namely Cisolok, Cikakak, and Palabuhanratu.

3. External route circulation

The main accessibility for tourists to Cisolok Geoarea can be reached using land transportation via:

- BOCIMI (Bogor Ciawi Sukabumi) toll road, generally tourists from Jakarta, Banten and Bogor.
- b. In addition to using private vehicles, tourists from Jakarta, Bogor, and Banten can use public transportation (train) via Jakarta-Bogor-Sukabumi Route.
- c. Access tourists from Bandung and surrounding areas via the Purbaleunyi toll road by first passing through Cianjur and Sukabumi City.



Figure 1. Design of Cisolok Geotourism Destination Spatial Model

4. Internal route circulation

Internal route circulation has a function as a link between the geotourism attractions in the Cisolok Geotourism Destination. Also, internal circulation is accessibility between the gateway to the primary and secondary service centers in Cisolok Geotourism Destination.

5. Primary Gateway

The main entrance or gateway to Cisolok Geotourism Destination is identified via National Road III in Palabuhanratu Subdistrict from the direction of Sukabumi City.

6. Alternative gateway

There are four secondary gateways to Cisolok Geotourism Destination, namely three secondary gateways located in the west (Cisolok Sub-district) and one in the east (Cikakak Sub-district).

7. Geotourism Area

Geotourism area is a grouping of GA and STA. There are three geotourism areas in the Cisolok Geotourism Destination, including Cisolok, Cikakak, and Palabuhanratu.

8. Primary service center

Palabuhanratu Subdistrict is used as the primary service center in the Cisolok Geotourism Destination. It is supported by the existence of facilities and services for tourists. Also, Palabuhanratu sub-district has the function of spreading tourist movements between geoareas.

9. Secondary service center

There is a potential secondary service center located in Cisolok Subdistrict that functions as a spreading geotourism growth and alternative entrance to the western part of the destination.

10. Geotourism attraction (GA)

In total, there are nine GA scattered throughout the Cisolok Geotourism Destination. Two GA (Citepus Beach and Lalay Cave) are in the Palabuhanratu Geotourism Area; three GA (Cimaja Beach, Sukawayana Lava, and Cikakak Hill) are in the Cikakak Geotourism Area; and four GA (Habiebie Hill, Cibangban Beach, Karang Hawu Beach, and Geyser Hill) are located in the Cikakak Geotourism Area.

11. Supporting tourism attraction (STA)

A total of seven STAs are scattered throughout Cisolok Geotourism Destination. Six STAs based on cultural diversity are scattered in the Cikakak Geotourism Area (Pangguyangan Site, Tangkil Mountain Site, and Cangkuk Site) and Cisolok Geotourism Area (Kasepuhan Sinarresmi, Kasepuhan Ciptamulya, and Kasepuhan Ciptagelar). Meanwhile, there is one STA based on nature that is Tangkubanparahu Nature Reserve in Palabuhanratu Geotourism Area.

Concentration-Dispersal Strategy in Cisolok Geotourism Area

The implementation of the Concentration-Dispersal strategy in Cisolok Geoarea aims to reduce pressure on primary service centers in through spreading Palabuhanratu tourist movements to the secondary service center at Cibangban Beach, Cisolok. Current conditions, tourism activities are concentrated in the Area of Palabuhanratu Geotourism, efforts to spread tourists play a role in avoiding potential overtourism, disseminating tourism income, increasing competitiveness through exploration, and diversification of tourist attractions. The activity of spreading tourist movements has the potential to create jobs and income distribution. The application of the spatial model of Destination Geotourism in Cisolok Geoarea is shown in Figure 2 [42,43].

The main objective of the concentrationdispersal strategy in this study has relevance to that in previous studies, including to reduce pressure on the core area and spread income from tourism. Tourism activities in Palabuhanratu have beem developed before the Geopark



Figure 2. Application of Cisolok Geotourism Area Spatial Model

existed. Factors of tourist attraction, ease of accessibility, and availability of facilities for tourists such as hotels and restaurants are the reasons for the concentration of tourists in Palabuhanratu. The spread of tourists from Palabuhanratu directed to the Cibangban Beach Area, Cisolok, in addition to the potential to reduce overtourism is also a tool for income distribution. The presence of tourists provides new opportunities for entrepreneurs and creates jobs in Cisolok and Cikakak Geotourism Area. Encouraging tourists to explore the periphery of the destination can stimulate the economy in these areas [14-16].

The distribution-concentration strategy is also designed to increase the attractiveness and geotourism competitiveness of Cisolok destinations by presenting new features to tourists. It needs to be supported by marketing programs to increase the length of stay and total expenditure. In 2019, there were 2.5 million tourists who visited Ciletuh-Palabuhanratu UGG. The number has exceeded the original target of 1 million tourists. The high number of tourist visits to Ciletuh-Palabuhanratu UGG is inversely proportional to the income obtained. Only IDR 273 million was the revenue for the local government, which is very far from the set target of IDR 1.3 billion [44,45]. It is allegedly due to a leak from the tourist arrival route to Ciletuh-Palabuhanratu UGG. In response, the Regent of Sukabumi encouraged the development of thematic tourism by increasing the potential of villages in Cisolok Regency to be used as tourist villages [46].

These steps encourage integrated tourism products in Cicolok geotourism destinations. This step is classified as a visitor management strategy in response to problems at the destination, including differences in development, congestion, and failure to control visitor behaviour [6]. In this study, the concentration-dispersal strategy in the Cisolok Geotourism Area can also be a tool to prevent leakage of tourist arrivals [47]. This strategy is carried out through a spatial approach by considering space and time.

The intended space and time are geographical distances related to the time and distance required from tourist generating regions to the Cisolok Geotourism Area. The spatial aspect is one of the important aspects because it can influence the travel patterns of tourists in a destination [48]. In this case, tourism planners and decision-makers must design internal and

external circulation routes to Cisolok Geotourism destinations that are supported by accessibility [49]. Each route is directed to have a diversity of tourist themes to attract tourists [47].

In Figure 2, the potential of GA and STA is classified as a theme of cultural and coastal tourism areas, according to the Cisolok Natural Tourism Area. The establishment of the Cisolok Region as a Geotourism Destination through a concentration-dissemination strategy is expected to create a new gateway, a new staging area, and the grouping of new tourist attractions with Cibangban Beach is a primary tourist attraction because of its accessibility. Ironically, GA Cibangbang is not included in the Ciletuh-Palabuhanratu GA UGG directory. Instead, GA Cibangban fulfills GA criteria with geological processes, forms, tourism activities, basic knowledge related to geological phenomena, geohistory, and also Geo + (legend or ancient folklore local and origin of the occurrence of a place) [37].

Previous research has applied visitor management strategies through education, geotourism interpretation programs, and involving local communities. This research has a novelty in visitor management strategies implemented in Ciletuh-Palabuhanratu UGG through a spatial approach. The implementation of the Concentration-Dispersal Strategy is expected to contribute to environmental sustainability and economic equality at the Ciletuh-Palabuhanratu UGG.

CONCLUSION

The Cisolok Geoarea has 11 spatial elements. The Concentration-Dispersal Strategy is applied to the Cisolok Geotourism Destination to reduce pressure on primary service centers of Palabuhanratu Geotourism Area by spreading tourists to potential secondary service centers (Cisolok Geotourism Area, especially in Cibangban Beach) to equalize people's income, reduce the risk of over-tourism and diversify products to potential the competitiveness of Ciletuh Palabuhanratu UGG.

There are several suggestions for further research, including geotrail development of the Cisolok Geotourism Destination, planning interpretation along the geotrail, development of community based geotourism, mitigation system planning, marketing planning, and tourism zoning planning for the construction of a secondary service center in Cisolok Geotourism Area, especially on Cibangban Beach.

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Strategy Formulation of Balek Angin Lake as an Ecotourism Attraction to Support Sintang Regency's Sustainable Development Program

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Abstract

This study aimed to explore the strengths and challenges in formulating a strategy to support the development of the Balek Angin Lake area under the scheme of Sintang Lestari (Sintang sustainable development protocols). This research was carried out in May and June 2019, where field visits focused around the site of Balek Angin Lake located in Akcaya I and Jerora Satu Villages in Sintang subdistrict of Sintang Regency, West Kalimantan Province. This research used a descriptive-quantitative approach. The study uses questionnaires to 10 representative informants, in-depth interviews, and field observations in data collection. Data were analyzed descriptively and SWOT analyses were used to formulate the development strategy. The results of this study show some strengths supporting the development of the area as an ecotourism site, i.e. undisturbed ecosystems, well-protected fish both in quantity and species diversity, the existence of regulation protecting lakes issued by the head of local government (Sintang Regent), and the existence of local nongovernmental organization whose concern in nature protection of Balek Angin lake and upstream of Jemelak River. The main challenge, however, includes the widening business area managed by local residents, such as sand mining, plantation and settlement, disposals from households leading into the lake, and the decrease of household income as the result of the decrease of the price of Sintang's primary commodities. SWOT analyses result in 2.779 : 2.203, which means a horizontal integration strategy where collaboration among different stakeholders is needed. The strategy to develop Balek Angin Lake as an ecotourism site includes the enhancement of the ecosystem through protecting the upstream-downstream area, collaboration of local community and local government through the integration of local community, local NGO, local government, funding NGO, local academia and other environment-conscious stakeholders.

Keywords: Ecotourism, Sintang, strategy.

INTRODUCTION

The regency of Sintang is located in West Kalimantan Province, covering an area of 21.635 km². Sintang has a unique landscape ranging from tropical forests, watersheds, peat forests, granite hills, and so forth [1]. This kind of landscape has become one of the factors supporting the plan for the economic development of the region under the scheme of Sustainable Regency - a network of regencies under the organization called Lingkar Temu Kabupaten Lestari (LTKL) as an effort toward sustainable development. The primary themes covered in the forum are social forests, agrarian reforms, clean energy and electrification, forest and peatland fire prevention, sustainable commodities, conservation and restoration, waste management, and disaster resilience and management.

The development of sustainable districts requires changes in the attitude of the farming community in Sintang district to change the pattern of agriculture and harvesting natural products to be more environmentally friendly. The community must still be able to get the maximum benefits from nature while still paying attention to the preservation of nature [2,3,4]. One way to improve the economy of the community is to develop Ecotourism [5,6].

Ecotourism is a concept of developing ecofriendly tourism where local communities are given a primary role to manage it. The main points in ecotourism are environmental conservation, economic development, and community empowerment [4,6]. Ecotourism development is generally carried out in protected areas owned by local communities who still hold closely their customs and culture [7].

The development of protected lake-based ecotourism has been developed in various regions. The development of lake tourism in the Kamipang Region, Central Kalimantan is an example of tourism based on the attractiveness of natural potential and the uniqueness of

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culture and traditional arts [8]. The development of environmentally friendly tourism requires the willingness of tourists to pay the cost of improving the quality of nature, a condition where age, level of education, income, and the number of family dependents have a strong influence on the decision [9,10]. According to tourism profile in Sintang and the surrounding areas, there is a willingness from the tourists to pay when visiting a tourism site as long as it is at a low cost.

One of the potentials for the development of ecotourism in the Sintang Regency is Balek Angin Lake, located in Akcaya 1 and Jerora Satu villages of Sintang Regency. This lake is one of the 11 lakes deemed protected by the Sintang Regent Regulation No. 88 of 2018 concerning sustainable lake management in Sintang District. Among the main important points in this regulation is that lake management can be carried out by local communities by taking care of environmental aspects.

Balek Angin Lake is currently under the managementof a local non-governmental organization (NGO), namely Jemelak Lestari (JELAS). This NGO aims at managing the lake with

the concept of togetherness and community empowerment, which preserving the lake's ecosystem becomes its major concern. However, until now, there has been no development strategy related to ecotourism development of the lake. This study aims to determine the strengths of Balek Angin Lake ecotourism objects and to further formulate a development strategy to support the Sintang Lestari Regency program.

MATERIALS AND METHOD

Study area

This research was conducted in the area of Balek Angin Lake, Akcaya 1 and Jerora Satu Villages, Sintang Subdistrict, Sintang Regency, West Kalimantan Province (Fig. 1) in May-September 2019. Balek Angin Lake is a group of lowland lakes that are divided into several small bodies of water. The total area of the lake and its buffer zone is \pm 69 Ha. The water of this lake is reddish, typical of the water in the peat area. The water level is strongly influenced by the flow of rainwater and the flow of the Jemelak River. This change in water level affects the types of animals and plants that grow in the lake area.



Figure 1. Site map of Balek Angin Lake. Source: Regional Development Planning Agency of Sintang District, 2019.

Data collection and analysis

This study is descriptive quantitative research. The data were obtained through indepth interviews, questionnaires, and field observations [6,11]. The informants involved in the In-depth interviews were selected based on the purposive sampling technique based on the selection of informants' knowledge and experience regarding policy formulation in the village level. The total number of informants involved was ten people consisting of the Headman of Akcaya, Headman of Jerora Satu, three staffs of the Kelurahan Akcaya, three staffs of Jerora Satu village, the Chair of the NGO JELAS and his collage in JELAS from Jerora Satu Village. Interviews were conducted with each individual. For the Headman and staff of Akcaya, interviews were conducted at their office during working time. It' is also the same as the Headman and staff of Jerora Satu village, the interview was conducted at the village office. Whereas the Chairperson and member of the JELAS NGO were conducted in chairperson's private home.

Data from the interviews were then analyzed qualitatively and presented descriptively. In addition to in-depth interviews, the informants involved were also asked to fill out a questionnaire that was used to collect quantitative data for the SWOT analysis. This questionnaire consists of indicators of strengths, weaknesses, opportunities, and threats in the development of the ecotourism of Lake Balek Angin.

The results of the questionnaire were then analyzed using the Internal Factor Summary Analysis (IFAS) -External Factor Summary Analysis (EFAS) [12]. The preparation of IFAS-EFAS uses the weight, relative, and rating calculations to produce a weighted score based on Rangkuti [12], which was then entered into the IFAS-EFAS matrix table to determine the strategy to be taken [12-14]. Field observation was also used to confirm in-depth interviews and questionnaire data accurately. The results of in-depth interviews, questionnaires, and also field observations were then used to develop a strategy for the development of the ecotourism of Lake Balek Angin [11].

RESULT AND DISCUSSION

Competitiveness and Challenge of Balek Angin Lakeas tourism attractions

The main tourist attraction in Balek Angin Lake is a seasonal lake ecosystem with all types of biodiversity and culture. The results of indepth interviews and field observations showed that there were several advantages of Balek Angin Lake ecotourism objects. The main advantage was that the lake ecosystem is still maintained by the provenance of animals and plants native to the river.

Interview with NGOs indicated various types of freshwater fish are still survive, such as Toman micropeltes), Lais (Kryptopterus (Channa bicirrhis), Baung (Mystus nemurus), Tapah (Wallago attu), Catfish (Clarias nieuhofii), Gabus (Channa striata), Tengadak (Barbonymus schwanenfeldii), Biawan (Helostoma temmincki), Seluang (Rasbora spp.) and Kaloi (Osphronemus goramy). These fish species are one of the potential tourist attractions that can be developed in Balek Angin Lake. The attraction that can be developed is fishing ecotourism in nature by using a canoe to the middle of the lake, and then the catch can be cooked on the banks of the lake while enjoying unique natural surroundings.

This type of activity also includes relaxation tourism, where the target tourists are office workers from Sintang City who on weekends, will travel outside with one of the potential destinations is Balek Angin Lake. However, almost all fish species in the world, including freshwater fish in Kalimantan, are decreasing because of overexploitation for consumption [15,16]. Excessive cathing of fish is one of the main challenges in the development of Balek Angin Lake ecotourism. The management of the site needs to control the number of fish that being caught by either tourists or fishermen who come.

As for plant species, in the area of Balek Angin Lake, there are plants species such as *Putat* (*Barringtonia acutangula* (L.) *Gaertn.*), *Ubah Merah* (*Eugenia spp.*), *Ubah Putih* (*Eugenia spp.*), *Terinak* (*Shorea seminis*), *Kawi* (*Shorea balangeran*), and *Tembesuk* (*Fagraea fragrans*). These types of plants are plants that are resistant to the ever-changing of the lake's water level [17]. Some of these plants are used by aquatic animals as nests and foraging. It is similar to the function of coral reefs in the sea, but the place to live in this case is the dead skin from stems and twigs, especially in the *Putat* plant species.

Putat has cork-like bark that is broken and hollow. Also, in several other lake ecosystems such as in Lake Sentarum, Kapuas Hulu Regency, this *Putat* plant species has been developed as a natural honeycomb. The flower of *Putat* is one of the favorite foods of honey bees and can produce honey with superior quality [18]. This potential can then be developed into one of the new tourist attractions that are managed jointly by the community. Honey produced from this *Putat* plant can be one of the flagship attractions of Balek Angin Lake.

The types of animals and plants in Balek Angin Lake interact with each other and produce complex ecosystems (Fig. 2). This ecosystem may later be developed simultaneously as a leading tourist attraction. It is in line with Setiawan [11] that explained the development of superior animal and plant species can be used as ecotourism flagship species. The development and good management of flagship species will make ecotourism sustainable.

The existence of a non-government organization called JELAS (*Jemelak Lestari*/ Sustainable Jemelak) is also an advantage of developing Balek Angin Lake ecotourism. The NGO is a team of residents living around Balek Angin Lake, and they depend on the existence of the Balek Angin Lake ecosystem, as most of them are fishermen. The relationship between people who manage nature and nature forms a strong bond, especially in environmental protection and its sustainable use [19].

The Government of Sintang Regency provides full support for the development and sustainable management of protected lakes. It is stated in the development of access roads to the Balek Angin Lake, support the operation of local NGOs (JELAS) and also creating the regent regulation to manage the lake sustainably. It is stated in the Sintang Regent Regulation No. 88 of 2018 regarding Sustainable Lake Management in Sintang District. This regulation is an advantage of Balek Angin Lake being an ecotourism destination. Ecotourism is expected to be a solution to improve the economy of the community around the lake by not damaging the lake's ecosystem [5].

However, the weakness of the development of Balek Angin Lake as one of the ecotourism destinations in the Sintang Regency is the threat of ecosystem degradation from the expansion of community plantation areas, settlements, and household waste flow that can flow into the lake. It can be seen in the reduced population of big fish in the lake. Based on interviews with locals, in the 2000's the population of big fish in the lake is considerable. But now, it's hard to find a big fish in lake. Ecosystem damage, which is one of Balek Angin Lake ecotourism attractions, will adversely affect the level of tourist satisfaction, which will ultimately reduce the number of tourists [20]. Therefore, the management strategy of Danau Balek Angin must be carried out as well as possible.



Figure 2. Types of plants and animals in Balek Balek Lake (A) Putat (Barringtonia acutangula (L.) Gaertn.), (B) Seluang (Rasbora spp.), (C) Biawan (Helostoma temmincki)

The main threat in the development of ecotourism in the Sintang Regency is the tendency of orienting water tourism alike towards mass tourism Sintang citizens preferred a place with a crowd and modern attraction. This reason makes ecotourism is not a *cool* place to visit. This water tourism is in the form of a swimming pool and water park, which is located in the city center. This threat can become an opportunity if the management of Balek Angin Lake ecotourism can provide attractions that are more interesting than the existing objects. It has happened in several places where ecotourism has taken over conventional tourists because of better management [7,20,21].

Besides, the decline in public income is also a threat to the development of Balek Angin Lake ecotourism. Declining prices of staple commodities in the Sintang Regency, such as falling prices for natural rubber, palm oil, and pepper, make people reluctant to visit places, which requires money, and this must be managed properly so that tourist interest is maintained. One of them is holding several ecotourism events by cooperating with sponsors to finance it so that it can be done for free. Ecotourism management can also work with NGOs who can provide funding assistance so that the management of the site does not necessarily collect fees from visiting tourists and the number of tourists per day can be limited.

Strategy in Developing Balek Angin Lake as an Ecotourism Destination

Ecotourism development strategy formulation was based on a SWOT analysis of the data obtained from questionnaires, interviews, and observations. SWOT results were generated through SWOT analysis on a questionnaire, which is then processed using Internal Factor Summary Analysis (IFAS) and External Factor Summary Analysis (EFAS). IFAS and EFAS calculation results are shown in the following Table 1 and 2.

Table 1. Internal Factors Analysis Summary (IFAS) Matrix					
Internal Factors	Weight	Relative	Rating	Weighted Score	
Strengths					
The lake ecosystem is still maintained	3.6	0.103	3.5	0.360	
Many types of consumable fish are native to the lake	4.3	0.123	3.8	0.467	
Balek Angin Lake is among the protected lake based on Sintang regent	3.7	0.106	3.5	0.370	
regulation No. 88 in 2018					
Existence of local NGO to manage the lake	3.3	0.094	3.2	0.302	
Community's willingness to protect the lake	3.5	0.100	2.4	0.240	
Weaknesses					
The lake has not been managed in accordance with ecotourism principles	3.1	0.089	1.6	0.142	
Community awarness in protecting the lake is still low	3.5	0.100	1.4	0.140	
Waste of household activity flows into the lake	3.5	0.100	2.8	0.280	
The lack of people involved in lake management	3.4	0.097	2.1	0.204	
Lack of facilities and infrastructure on the lake	3.1	0.089	3.1	0.275	
Total Score	35			2.779	
Tabel 2 External Factors Analysis Summ	ary (FEAS)	Matrix			
External Factors	Weight	Pelative	Pating	Waightad Score	
	VVCIEIIL	IVEIGLIVE	Natilia	weighted score	
Opportunity	weight	Relative	Rating	weighted Score	
Opportunity The local government, through the tourism office, supports the	3.50	0.109	3.7	0.404	
Opportunity The local government, through the tourism office, supports the development of lake tourism	3.50	0.109	3.7	0.404	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer	3.50 3.10	0.109	3.7 3.2	0.404 0.310	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions	3.50 3.10	0.109 0.097	3.7 3.2	0.404 0.310	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency	3.50 3.10 3.10	0.109 0.097 0.097	3.7 3.2 2.0	0.404 0.310 0.194	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government	3.50 3.10 3.10 3.30	0.109 0.097 0.097 0.103	3.7 3.2 2.0 1.6	0.404 0.310 0.194 0.165	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of	3.50 3.10 3.10 3.30 3.50	0.109 0.097 0.097 0.103 0.109	3.7 3.2 2.0 1.6 1.2	0.404 0.310 0.194 0.165 0.131	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism	3.50 3.10 3.10 3.30 3.50	0.109 0.097 0.097 0.103 0.109	3.7 3.2 2.0 1.6 1.2	0.404 0.310 0.194 0.165 0.131	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism Threats	3.50 3.10 3.10 3.30 3.50	0.109 0.097 0.097 0.103 0.109	3.7 3.2 2.0 1.6 1.2	0.404 0.310 0.194 0.165 0.131	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism Threats Expansion of illegal gold, sand, and limestone mining areas	3.50 3.10 3.10 3.30 3.50 3.80	0.109 0.097 0.097 0.103 0.109 0.119	3.7 3.2 2.0 1.6 1.2 2.1	0.404 0.310 0.194 0.165 0.131 0.249	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism Threats Expansion of illegal gold, sand, and limestone mining areas Expansion of oil palm and rubber plantations around the lake	3.50 3.10 3.10 3.30 3.50 3.80 3.22	0.109 0.097 0.097 0.103 0.109 0.119 0.101	3.7 3.2 2.0 1.6 1.2 2.1 1.3	0.404 0.310 0.194 0.165 0.131 0.249 0.131	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism Threats Expansion of illegal gold, sand, and limestone mining areas Expansion of oil palm and rubber plantations around the lake Expansion of residential areas to the lake area	3.50 3.10 3.10 3.30 3.50 3.80 3.22 2.80	0.109 0.097 0.097 0.103 0.109 0.119 0.101 0.087	3.7 3.2 2.0 1.6 1.2 2.1 1.3 2.4	0.404 0.310 0.194 0.165 0.131 0.249 0.131 0.210	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism Threats Expansion of illegal gold, sand, and limestone mining areas Expansion of residential areas to the lake area Number of water attractions based on mass tourism (Swimming pool,	3.50 3.10 3.10 3.30 3.50 3.80 3.22 2.80 2.80	0.109 0.097 0.097 0.103 0.109 0.119 0.101 0.087 0.087	3.7 3.2 2.0 1.6 1.2 2.1 1.3 2.4 2.3	0.404 0.310 0.194 0.165 0.131 0.249 0.131 0.210 0.201	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism Threats Expansion of illegal gold, sand, and limestone mining areas Expansion of residential areas to the lake area Number of water attractions based on mass tourism (Swimming pool, water park)	3.50 3.10 3.10 3.30 3.50 3.80 3.22 2.80 2.80	0.109 0.097 0.097 0.103 0.109 0.119 0.101 0.087 0.087	3.7 3.2 2.0 1.6 1.2 2.1 1.3 2.4 2.3	0.404 0.310 0.194 0.165 0.131 0.249 0.131 0.210 0.201	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism Threats Expansion of illegal gold, sand, and limestone mining areas Expansion of residential areas to the lake area Number of water attractions based on mass tourism (Swimming pool, water park) The decline in community income due to the decline in the value of	3.50 3.10 3.10 3.30 3.50 3.80 3.22 2.80 2.80 2.90	0.109 0.097 0.097 0.103 0.109 0.119 0.101 0.087 0.087 0.091	3.7 3.2 2.0 1.6 1.2 2.1 1.3 2.4 2.3 2.3	0.404 0.310 0.194 0.165 0.131 0.249 0.131 0.210 0.201 0.208	
Opportunity The local government, through the tourism office, supports the development of lake tourism The distance between Danau Balek Angin and the city center is closer than other natural attractions Increasing number of local and foreign tourists in Sintang Regency Many tourism events are held and supported by the local government Support from NGOs and academic institutions for the development of ecotourism Threats Expansion of illegal gold, sand, and limestone mining areas Expansion of residential areas to the lake area Number of water attractions based on mass tourism (Swimming pool, water park) The decline in community income due to the decline in the value of agricultural and plantation commodities	3.50 3.10 3.10 3.30 3.50 3.80 3.22 2.80 2.80 2.90	0.109 0.097 0.097 0.103 0.109 0.119 0.101 0.087 0.087 0.091	3.7 3.2 2.0 1.6 1.2 2.1 1.3 2.4 2.3 2.3	0.404 0.310 0.194 0.165 0.131 0.249 0.131 0.210 0.201 0.208	

The results of the SWOT analysis based on the distributed questionnaire on IFAS showed the highest value on the strength factor is the aspect of the number and type of consumable fish native to the lake with a value of 0.467 and followed by the status of the Balek Angin Lake as a protected lake with a value of 0.370. Based on Fletcher [4], strength in a sustainable environment and clear and supportive regulations are the basis for developing an ecotourism site. Meanwhile, the two aspects with the high weakness value are the presence of waste flowing into the lake (with a score of 0.280), and the aspect of lack of supporting facilities (with a score of 0.275). This weakness must be overcome by all other supporting factors. Overall, the IFAS score indicates a total score of 2.779.

EFAS analysis showed the highest factor in the opportunity section is the aspect of support from the local government with a score of 0.404 and followed by the aspect of the proximity of the lake to the city center with a score of 0.310. This opportunity shows that there is great potential to make Lake Balek Balek an ecotourism site. The large lakebed is also the basis of ecotourism development [3]. Whereas the threat factor aspect, which has the highest threat score is the expansion of the Type-C mining area with a score of 0.249 and followed by the aspect of expanding residential area with a score of 0.210. Overall, the EFAS showed a total score of 2.203.

The overall value of SWOT analysis from IFAS and EFAS can be illustrated in the SWOT diagram, as shown in Table 3. The SWOT position shows the value of 2.779: 2.203, which means the strategy taken is a growth strategy by horizontal integration. This strategy requires coordination from various parties involved to achieve the desired goal [12]. This strategy indicates that there are many supporting factors in developing Balek Angin Lake ecotourism compared to its inhibiting factors. This development strategy through horizontal integration also means that the development of ecotourism in Balek Angin Lake must implemented in accordance with the principles of ecotourism [13].

The results of the SWOT analysis were then used to formulate a strategy that will be used in the development of the Balek Angin Lake ecotourism site. This analysis provides conclusions from all the factors that exist so as to produce the basis for developing the Balek Angin Lake ecotourism management strategy. The results of the strategy analysis are displayed in the following Table 4.

The results of the SWOT analysis, in-depth interviews, and field observations were used to formulate the Balek Angin Lake ecotourism development strategy. The strategy must be able to provide maximum benefits to the ecosystem and local communities. The following is the formulation of Balek Angin Lake ecotourism management strategies.

- Holding joint events tourism at local, regional, and national levels involving local communities, local NGOs, local governments, and funding NGO to protect the ecosystem of Balek Angin Lake
- Building efforts through cooperation with all relevant parties like Fisheries Agency of Sintang, NGO's which work in fisheries conservation, and so forth to increase the quantity and types of local fish
- 3. Stipulating a specific regulation to protect the Balek Angin Lake area from environmental damage due to the expansion of community businesses
- Involvement of local people in managing the ecotourism of Balek Angin Lake so that community income can increase and at the same time reduce the impact of environmental damage due to local community activities

	High (3.1 – 4.0)	Medium (2.1 – 3.0)		Low (1.0 – 2.0)		
High (3.1 – 4.0)	GROWTH	GROWTH		RETRENCHMENT		
	Vertical integration strategy	Horizontal integration		Turn-around strategy		
		strategy 🕈				
Medium (2.1 – 3.0)	STABILITY	GROWTH / STABILITY		GROWTH / STABILITY		RETRENCHMENT
		horizontal integration		Devastation strategy		
		2.779 : 2.203				
Low (1.0 - 2.0)	GROWTH	GROWTH		LIQUIDATION		
	Diversification strategy	Diversification strategy				

 Table 3. Internal Factors Analysis Summary (IFAS) - External Factors Analysis Summary (EFAS) matrix

Source: Data analysis, 2019.

Balek Angin Lake Ecotourism Attraction to Support Sintang Regency's Sustainable Development Program (Kamaludin, et al.)

	Table 4. SWOT Matrix					
$\overline{}$		Str	ength	We	akness	
	Internal Factors External Factors	1. 2. 3. 4. 5.	The lake ecosystem is still maintained Many types of consumable fish native to the lake Lake Balek Balek is among the protected lakes based on Sintang regent regulation No. 88 in 2018 The existence of local NGOs to manage the lake The willingness of residents to sustain the lake	1. 2. 3. 4. 5.	The lake has not been managed with the principles of ecotourism The level of community awareness in maintaining the lake is still low Waste of household activity flows into the lake Lack of communities involved in lake management Lack of facilities and infrastructure on the lake	
Ор	portunity	S-C) Strategy	W-	O Strategy	
1. 2. 3. 4. 5.	The local government, through the tourism office, supports the development of lake tourism The distance of Balek Angin Lake to the city center is closer than other natural attractions Increasing number of local and foreign tourists in the Sintang district Many tourism events are held and supported by the local government NGO's and Academic Institution support the development of ecotourism	1.	Managing the lake ecosystem through the collaboration of local communities, local NGOs, and NGOs by holding ecotourism events to attract tourists Building cooperation with local governments to maintain and enhance local fish resources in the lake	1. 2.	NGO together with local government build the awareness of local communities to protect the lake ecosystem The community, together with the local government, build supporting ecotourism facilities	
Thr	eats	S-T	Strategy	W-	T Strategy	
1. 2. 3.	Expansion of illegal gold, sand, and limestone mining areas Expansion of oil palm and rubber plantation around the lake Expansion of residential areas	1.	Local community together with local NGOs make regulations, prevent, and mitigate the impact of the expansion of community business areas threatening the lake area	1. 2.	Manage drainage channels around the lake area so as not to pollute the lake Increase the number of local communities involved in lake	
4. 5.	towards the lake area Many water-based attractions(swimming pools, water park) are mass tourism in nature Declining community income due to the decline in the value of agricultural and plantation commodition	2.	Local community together with local NGOs manage the lake ecosystem to have the same benefit as that of conventional tourism but still based on the concept of ecotourism		ecotourism management to increase the income of communities around the lake	

The strategy of developing ecotourism becomes the basis for developing sustainable ecotourism in an area [13]. Ecotourism development that does not have clear regulations may result in natural damage [22,23]. Ecotourism development must also involve as many parties as possible. The development of an ecotourism strategy that involves the parties will increase the chances of a program's success.

In the development of Balek Angin Lake ecotourism, the main focus is the local community. The program to be developed is for the advancement of local communities so that the development strategy must start from the community working together with local NGOs, local governments, NGO funds, and various parties who care about the environment.

CONCLUSION

In general, the major advantages of Balek Angin Lake as an ecotourism site are the wellpreserved ecosystem, the quantity and types of fish that are still well maintained, the regent's regulation which states that Balek Angin Lake is a protected lake and the presence of local NGO that manages Balek Angin Lake. On the other side, there are also challenges where community activities such as sand mining, oil palm and rubber plantations, community settlements, pollution originating from domestic community activities, and the decline in community income due to falling prices of Sintang Regency's superior commodities have become major threats. The SWOT analysis results show the number 2.779: 2.203, which means a horizontal integration. It means a strategy by coordinating from various parties involved to achieve the desired goal is required. The strategy to developeBalek Angin Lake ecotourism is through the improvement of its ecosystems to its natural condition like releasing the local native fish tillers, involvement of local communities and local government support through the integration of local communities, local NGOs, local governments, NGO funds, local academics and various parties who care about the environment.

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Development and Sustainable Tourism Strategies in Red Islands Beach, Banyuwangi Regency

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Abstract

Red Islands Beach in Banyuwangi is included in the Provincial Tourism Strategic Area (KSPP). It is an example of the application on tourism management by the community, due to the existence of the community group (POKMAS). Increasing the number of tourists each year causes the need for a sustainable tourism development strategy that also involves the surrounding community to maintain environmental conditions that continue to be sustainable. So, this study aims to formulate a policy of developing sustainable marine tourism on Red Islands Beach in the Banyuwangi Regency. Data was obtained by conducting FGDs and distributing questionnaires to 10 key informants consisting of the Chairperson of Pokmas, the Homestay Manager, the Chairperson of BUMDES in Sumberagung Village, Academics, Ecoranger, Restaurant Managers, and the Management of Waste Banks. The data was analyzed using a SWOT analysis strategy to describe internal factors (IFAS) and external factors (EFAS). The results of the scoring IFAS showed the value of the Strengths (3.337) and weaknesses (2.979), while external factors showed value of opportunity (3.135) and threats (3.224). The strategy that can be applied based on this analysis is Concentric Diversification Strategies. These strategies focus on adding products and services related to the tourism destination, which uses Weakness and Threat (W-T) components. This strategy are increasing human resources, providing education to the community, and negotiating with other interested parties in the Marine Tourism Region of Red Islands Beach.

Keywords: Red Island Beach, sustainable tourism, SWOT.

INTRODUCTION

Tourism has become one of the most developed sectors in Indonesia. According to data, the amount of foreign exchange from the tourism sector continues to increase from 2015 by 12.23 billion dollars to 19.29 billion dollars in 2018 [1]. Also, the number of foreign tourist arrivals increased by 12.58% in 2018, thereby being able to increase Gross Domestic Product (GDP), open employment, and improve the level of the Indonesian economy [2].

Tourism in Banyuwangi Regency, East Java, has a rapid development, with destinations that vary from the mountains, culture, and beach, which is the main attraction for tourists when coming to Banyuwangi. The unique landscape of the Banyuwangi Regency [3,4] and coupled with the City Branding of Banyuwangi Regency as *Sunrise of Java* is a factor in increasing local and foreign tourist visits to Banyuwangi Regency [5,6]. The average increase of local and foreign tourists reached 51.4% and 79.42% [1]. The

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development of tourism can increase the PAD of the Banyuwangi Regency, increase the community's economy, and encourage the development of infrastructure around the area [7,8].

The rapid increase in the tourism sector in Banyuwangi has encouraged the government to create a Tourism Development Area (WPP). It consists of three types, namely WPP I (forest area), WPP II (Around the Coast with difficult accessibility), and WPP III (having unique resources natural). One of the WPPs in the Banyuwangi Regency is Red Islands Beach.

Red Islands Beach is managed by the surrounding community that forms the POKJA and cooperates with Perhutani. However, in 2015, the management of Red Islands Beach was handed to the Community Groups (POKMAS). The development orientation of Red Islands Beach is an optimization of community capital and always involves the community in the process [9]. Community participation can be in the process of making decisions related to tourism development plans and the distribution of tourism benefits equally [10].

The development of the Red Island Beach Banyuwangi must be directed towards aspects of

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sustainable tourism. Sustainable tourism is a plan and development that aims to reduce the harmful effects of tourism on the environment, society and economy to achieve ecological (environmental) and social sustainability [11]. In its development, sustainable tourism aims to continue working to improve tourist satisfaction based on the components of sustainable development [12]. A core aspect of sustainable tourism is the participation of the community because harmonizing local people to achieve global goals can help in cultural diversity, environmental conservation, reducing poverty, and increasing respect for the local culture of the community [13-15]. Furthermore, the harmony between the community and sustainable tourism can encourage the creation of good governance and justice in the use of tourism aspects [16].

The previous research showed that to be able to achieve sustainable coastal tourism in Watulimo Trenggalek, strategies that can be used are by (a) increasing promotion, (b) protecting the environment and involving the community, (c) developing tourist attractions which varied and complements the supporting facilities, and (d) improves the quality of Human Resources (HR) [17]. The strategies required by a tourist destination to develop and achieve sustainable tourism are different; this is due to several things, such as the types of attractions, amenities, and accessibility [1]. The rapid development of the tourism sector in Banyuwangi, especially on Red Islands Beach, has led to a balance between the economic and environmental sectors in order to achieve sustainability. So this research aims to formulate a policy of developing sustainable marine tourism in Red Islands Beach, Banyuwangi Regency.

MATERIAL AND METHOD Study Sites

Red Islands Beach is located in Pancer Hamlet, Banyuwangi Regency (8°36'18.4" S and 114°01"31.8" E), which was approximately 67 km from the center of Banyuwangi Regency. The coastline was 3 km long with white, red, and fine sand. Not far from the shoreline, there was a hill, and that was characteristic of Red Islands Beach with a height of approximately 300 m. Tourist activities that can be done in these destinations include surfing, snorkeling, watching sunset and sunrise, and trekking.

Data Collection

Data collection is done by conducting FGDs and distributing questionnaires to selected

informants. Informants in this study consisted of the Chairperson of POKMAS (n=1), Manager of Homestay (n=2), Chairman of BUMDES in Sumberagung Village (n=1), Academics (n=2), Eco ranger (n=2), Restaurant Managers (n=1), and Waste Bank Management (n=1). The FGD process was carried out by explaining the results of a preliminary study of the sustainability status of Red Islands Beach Tourism, which was then continued by distributing questionnaires to informants.



Figure 1. Red Islands Beach, Banyuwangi Regency Questions consisted of some components:

- (1) Strengths: potential resources, supporting infra-structure, community opportunities, and information
- (2) Weaknesses: conditions of facilities and infrastructure, large waves, and unique souvenirs
- (3) Opportunities: Accessibility, investors and CSR, number of tourists, government planning
- (4) Threats: road conditions, availability of public transport, land problems, environmental disruption, and support from related agencies.

Direct observations were also made on the condition of infrastructure. It included the condition of the access road and tourist activities around the Red Islands Beach.

Data Analysis

This research used SWOT analysis to formulate the strategy for sustainable tourism development in Red Islands Beach. The SWOT analysis model compare opportunities and threats as external factors with strengths and weaknesses as internal factors. Internal factors were analyzed on the IFAS (Internal Strategic Factor Analysis Summary) matrix, and external factors were analyzed on the EFAS (External Strategic Factor Analysis Summary) matrix. SWOT analysis is strategic planning and in presenting the most appropriate data is by using the table, so it can analyze the relationships between components [18,19].

There were three stages in the SWOT analysis, namely: (i) calculation of weight and score. For weight had range value interval from 0.00 to 1.00. After weighting, the rating is given for each component to see the importance of it. After that, scoring had done by multiplying weight and rating, (ii) prediction of strategies based on awareness, and (iii) finding the position of existing conditions in the SWOT quadrant by subtracting the total amount for IFAS and EFAS. For X-axis, the value was obtained by subtracting the total value of Strenght and Weakness. For Yaxis, the value was obtained by subtracting the total amount of Opportunity and Threat.

RESULT AND DISCUSSION

IFAS and EFAS Matrix

In this study, the strategy of developing sustainable tourism on Red Islands Beach was obtained from the SWOT analysis. The main data used in this analysis was the data from the questionnaire that was distributed to ten informants, who had also participated in the FGD. The FGD activity aimed to give the community an opportunity in the process of strategy development and sustainability of the Red Islands Beach Banyuwangi. So, it can create harmony between the community and the local government. The results of identification and analysis were arranged as internal and external factors shown in Table 1 and 2.

Internal factor matrix consisting of strengths and weaknesses, which are a description of the factors that affect the sustainability of tourist destinations (Table 1). Internal analysis is quite effective for analyzing tourist destinations [20]. The strength component of developing Red Islands Beach as sustainable tourism is 3.332. While weaknesses indicate the value of 2.979, so, from internal factors, the development of Red Islands Beach is already classified as good and strong. The formulation of the right strategy is to maintain strengths and overcome existing weaknesses.

The opportunity and threat component can significantly influence the development and damage of future tourist destinations. The opportunity component of the external matrix shows a value of 3.135 and has a threat value of 3.224 (Table 2). This situation indicates the opportunity to develop marine tourism in Red Islands Beach is still small compared to the existing threats.

Tabel	1. Matrix	x of IFAS
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Internal Factors	,	Value	
Strength	w	R	S
Beautifull scenery	0.051	3.4	0.172
Has other tourism destination	0.048	3.2	0.154
Local wisdom	0.053	3.5	0.186
Dragon fruit potential	0.051	3.2	0.162
Seafood avaliable	0.051	3.1	0.157
Playground	0.056	3.2	0.178
Parking services	0.059	3.5	0.208
Public toilet and prayer room	0.058	3.3	0.192
Homestay	0.058	3.3	0.192
Information boar	0.057	2.9	0.165
Online promotion	0.061	3.3	0.200
There are POKMAS	0.063	3.4	0.215
Business opportunities	0.066	3.6	0.236
Environmental awarness	0.067	3.4	0.228
Ecoranger and trash bank	0.068	3.4	0.232
Tawang alun shrine	0.067	3.3	0.221
Surfing and snorkeling spot	0.068	3.5	0.239
Sub Amount	1		3.337
Weakness			
Big wave	0.120	2.6	0.313
Lack of souvenir shop	0.135	3.2	0.433
Lack toilet	0.147	3.2	0.469
Lack in trash management	0.150	3.3	0.496
Not optmalized the dragon fruit	0.147	2.8	0.411
There'isnt specific souvenir	0.150	2.8	0.421
Lack in dragon fruit product	0.150	2.9	0.436
Sub Amount	1		2.979
Notes: W=weight, R=relative, S=Sc	core		
Table 2. Matrix o	of EFAS		
External Factor		Value	
Opportunity	w	R	S
Easy Accessibility	0.117	3.1	0.364
Government participation in	0.114	3.1	0.354
planning			
CSR Program	0.092	2.7	0.249
Accessible geographic site	0.133	3.3	0.440
One of KSPP	0.137	3.3	0.450
Those is Airport	0 1 10	2 5	0 400

There is Airport	0.140	3.5	0.489
There is inverstor	0.117	2.9	0.341
Highest number of tourists	0.149	3.0	0.448
Sub Amount	1		3.135
Threat			
The road narrowed at some	0.108	3.4	0.368
point			
There isn't public trasnportation	0.097	3.1	0.301
Located within the mine map	0.108	3.6	0.390
area			
Tourist not aware about	0.114	3.4	0.387
environment			
Located within Perhutani area	0.092	3.0	0.275
There are land issues	0.117	3.2	0.373
Environmental disturbances	0.119	3.2	0.382
Have traffic when high season	0.117	3.0	0.350
Not yet supported by Tourism	0.128	3.1	0.396
Office			
Sub Amount	1		3.224

Notes: W=weight, R=relative, S=Score

Internal and external factors are essential components because these two factors can explain the general picture of the condition of a tourist destination or organization so that it can create an appropriate and optimal management strategy to be implemented [21,22]. The results of scoring in Table 1 and 2 show that the value of external factors is more significant than internal factors. It is because external factors have more influence compared to internal factors [23].

Grand Strategy Matrix

The results of the calculation of the difference between the components in internal and external factors were then used to determine the coordinates in determining the development strategy of the Red Islands Beach marine tourism using the grand strategy matrix. Horizontal axis value (X-axis) is the value of the difference from internal factors, namely strengths and weaknesses (X=3.332-2.979 = 0.353). Meanwhile, the vertical axis (Y-axis) is the value of the difference in external factors, namely opportunities and threats (Y=3.134-3.223 = -0.089). The coordinate points were obtained 0.353; -0.089. The location of these coordinates will determine the right strategy to be implemented under the description of internal and external factors on Red Islands Beach (Fig. 2).



Figure 2. Grand Staretgy Matriks of SWOT

Figure 2 shows that the strategy that can be implemented in the development and sustainable tourism is quadrant IV, the concentric strategy. Quadrant IV indicates that this tourist destination has a competitive position but is in a scope that makes it challenging to develop, so the right strategy for quadrant IV is concentric [19]. A concentric strategy is a strategy that maximizes the power to overcome the threats they have. This strategy is carried out by building tourist destinations that are compatible with products, technology, and markets. This strategy is suitable for tourist destinations with a threat but has an opportunity to develop [24].

Red Islands Beach Development and Sustainable Tourism Strategies

Red Islands Beach has the advantage of spots for snorkeling and surfing. having Snorkeling, scuba diving, and surfing become one of the essential components in marine tourism [25-29]. Snorkeling activities can provide incentives for local people and recreational service providers to protect coral reef ecosystems because the presence of swimmers can be a factor in the degradation of coral reef ecosystems [25]. It also acts as conservation efforts [28], able to increase public awareness to protect the environment [29] and participate in ecosystem monitoring activities [30]. In addition to the existence of a new airport in Banyuwangi, which has an international standard, making the Red Islands Beach a destination by foreign tourists who think that surfing is a necessity or a culture [29]. The theory stated, there is a relationship between tourists' perceptions of people's ability to explore their unique habits, and this can make tourists come to visit again [15].

The uniqueness of the landscape with various tourist activities that can be done makes the Red Islands Beach into the KSPP. So, it is very appropriate if it is developed into sustainable tourism to maintain the condition of the ecosystem. Besides, the government must also struggle to make plans related to tourism development. It relates to the current to improve the environment of tourism activities carried out voluntarily and based on community regulations [31]. Local identity and culture must also be maintained in the planning and implementation process of tourism development, and the steps that can be taken are to provide training to the community, reduce waste by initiating the community so that it can be recycled again [32].

Business opportunities on Red Islands Beach can encourage community economic improvement, increase employment, and be able to open new business [2]. It is because tourism is categorized as an agent of change in the economic and social sectors, but in its development, it takes the participation of local governments to be able to provide training, help the planning process, and the promotion [33].

Public awareness of the environment around Red Islands Beach is one of the substantial supporting factors in the development of sustainable tourism, which is indicated by the existence of eco rangers and waste banks. However, even though a waste bank is available, Development and Sustainable Tourism Strategies in Red Islands Beach (Parmawati, et al.)

the process in it is still in the sorting stage and has not yet reached the stage of processing or recycling into a product that has economic value. Souvenirs produced by recycling waste into a product of economic value can increase the curiosity of tourists to buy or try to make and add to the uniqueness of a tourist destination [32]. The existence of attractive products and services in the tourism sector and nature and cultural conservation process carried out by the community can increase the competitiveness of tourist destinations [34,35].

Strategy to Counter the Obstacle

The position of Red Islands Beach is on the map of the mining area, where this can create conflict in the future between the private sector and the community. The environmental impact produced by mining activities also affects the environmental conditions around the tourist activities area Mining around tourist destinations have an impact on the ecosystem and socio-economic community. Also, the existence of mining activities can cause protests by the local community because it can threaten the tourism sector by reducing the beauty of the tourist destination, so that there is a need for consultation with stakeholders and the local community. It must involve the local community in the process of decision making in every step of its development [36]. By doing this, it can create cooperation between the community and local companies that can support the development of tourism [37].

The strategy that can be applied based on this analysis is Concentric, which uses Weakness and Threat (W-T) components to overcome weaknesses and minimize threats on the Red Islands Beach. This strategy consists of:

- Improving the quality of human resources in the field of tourism. Thus, they can create unique products based on Red Islands Beach potential.
- (2) Establish tourism management of community, government, and academics
- (3) Educating the community to help in preserving the environment by involving tourists to recycle the waste that has been sorting. It can create more attractions from the process of making crafts with recycled waste.
- (4) Trying to negotiate with Perhutani, so the area will be owned by the community and become independent land.

(5) Negotiating with the local government of Banyuwangi Regency and PT. BSI as the owner of mining activity in the area, in order to continue and to be able on managing the Red Islands Beach into a marine tourism area.

CONCLUSION

This research contributes to the planning and development of strategies to achieve sustainable tourism by implementing synergy between the community, stakeholders, government, and private companies related specifically to marine tourism. The development strategy that can be carried out in the Marine Tourism of Red Islands Beach, Banyuwangi Regency, is the Concentric Diversification Strategy or WT (Weakness-Threat) strategy. This strategy is used to overcome the weaknesses and minimize threats that exist on Red Islands Beach. In this strategy, several points can be made, namely by increasing human resources, providing education to the community, and negotiating with other interested parties in the Red Islands Beach Tourism Area.

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Life Cycle Analysis of Ponggok Tourism Village, Polanharjo District, Klaten Regency, Central Java Province

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Abstract

This study aims at analyzing the development of Ponggok Tourism Village since its first progression as a tourism destination. Ponggok is one of the best tourism villages in Indonesia according to the 2017 report published by the Ministry of Villagers, Disadvantaged Regions and Transmigrations. However, the tourism village tends to be in a stagnant condition and even experience a decline in visitors. The life cycle analysis is chosen as the approach to fulfill the requirements needed to study the time series (longitudinal) data to dissect the development of Ponggok Tourism Village. The indicator and parameter of assessment in this life cycle analysis is the model stated by Laurenço: planning, action, and living. The technique of primary data collecting is through observation, mapping, interview, and Focus Group Discussion (FGD). Furthermore, the secondary data is acquired through literature studies and institutional surveys in accordance with the scope of the study. The result of the research shows that the development of Ponggok Tourism Village has, at least, four segments of time. The first segment occurred in 2007-2010, the second segment occurred in 2011-2013, the third segment was 2014-2016, and the fourth segment of time occurred in 2017-2018. In the aftermath of this study's results, it is recommended that Ponggok Tourism Village need to replan their strategies to avoid the stagnation-decline stage and to stimulate the occurrence of rejuvenation.

Keywords: Life Cycle Analysis, Ponggok, Tourism Village.

INTRODUCTION

Tourism is a global phenomenon and grows rapidly as one of the biggest economic sectors that can contribute to poverty alleviation in developing countries [1-3]. This opinion arises from the belief that tourism can generate foreign-exchanges, increase job opportunities, and encourage investment [4,5]. In addition to economic benefits, there is also a claim that tourism contributes to the forming social power transformatively, through the increase of individual welfare and the perspective on the importance and the needs of community empowerment [6,7]. In the cultural context, tourism acts as a media that can stimulate communication between interaction and individuals or groups with various cultural backgrounds [8] that finally influences the interests on cultural legacies and heritages, the appreciation of localities, and the increase of cultural infrastructure investment [9].

This global tourism development reaches Indonesia and can be seen from the growing numbers of tourist villages from 2010 up until now. In 2009, there are 144 tourist villages in

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Indonesia. That number grows drastically into 987 tourist villages in 2014 and 1,734 in 2019. According to the data from the Ministry of Village, Development of Disadvantaged Regions, and Transmigration, there are 1,902 potential villages in Indonesia that can be developed into a tourist village.

Although the quantity of tourist villages keeps increasing every year, the same cannot be said in terms of quality. One of the considered successful tourist villages is Ponggok Tourism Village, Polanharjo district, Klaten regency, Central Java province. This village was just awarded as the Best Tourism Village in terms of community empowerment by the Ministry of Village, Development of Disadvantaged Regions, Transmigration. Ponggok dubbed as and successful because previously, it was the poorest village in Polanharjo district, Klaten Regency. After the rapid growth of its tourism sector, Ponggok becomes one of the richest villages with annual Original Village Revenue (PADes) that worth billion Rupiah. However, Ponggok currently faces stagnation, even a decline. It was shown by the number of visitors presented in the Figure 1.

The starting point of tourism activities in Ponggok began in its development process in

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2007, the same year the Village Master Plan^a was created. It is used as the guideline to build and develop Ponggok in many sectors, including tourism. So far, Ponggok has been through the development process for 12 years, until this middle of 2019. This length of development period is ideal and adequate to analyze, considering the claim of the stagnant or even decline phase of the Ponggok's tourism, which is based on the statistics of the tourist visit as the early indicator.



Figure 1. The Number of Visitors of Ponggok Tourism

Tourism Destination

A tourism destination can be defined as a place or location that offers tourism products and a complete experience, managed by certain parties in order to attract the tourists to visit - to engage in tourist trips and staying for a certain period [10-12]. The characteristic of a tourist destination is identical to the spatial and social entity [13,14]. On the spatial entity, the characteristic of a tourist destination can be associated with cultural landscape, scale, physical boundaries, and spatial hierarchy [13]. While in the social entity, the characteristic emphasizes its association with the condition of the local community that covers the economic structure, social structure, and social organization, and political institution [14].

Furthermore, as an industry, tourism should, ideally, has four components needed to attract the tourists to visit, to provide all the accommodation. It covers a) attraction; b) amenity; c) accessibility; d) ancillary services. These four components are commonly referred to as '4A' [15].

The availability of those components on a tourism destination or tourism region based on spatial perspective will create a pattern based on the characteristics or the usage that suitable for

the physical setting of each tourism destination [16]. It also explained that a tourism area/destination can have one or many attractions. It is also called the nucleus. Then one or more Nucleus will have supporting areas which commonly used as functional land or aesthetic area called Inviolate Belt. A group of Nucleus and Inviolate Belt that receives intervention from the local community by building various facilities such as toilets, restaurants, accommodation services, or Tourist Information Center (TIC) will be called as Zone of Closure. The Nucleus and Inviolate Bels within the Zone of Closure are connected with Path. The Zone of Closure that has Nucleus and Inviolate belt can be connected on a bigger scale (in the presence of access) and will be called Circulation Corridor [16].

In addition, the making of a tourism destination from a spatial perspective is also related to tourist's activities and movement. There are two models to see the tourist's activity and movement in a certain destination or region, by the territorial and linear model [17]. As understood, the territorial model is used to find the tourist's activity intensity, while the linear model is used to find the movement direction and pattern of the tourist.

Last but not least, here is the literature review of the tourism village. The tourism village is commonly understood as a tourism destination that integrates tourism attraction, public facility, and accessibility infrastructure and is assimilated with the community's life structure and customs [18]. Chronologically, two perspectives support the basic idea of how to manage a village as a tourism destination. The first is the global tendency to choose local small-scale village accommodation, which management is inseparable with the local community, by the tourist. The second is the sustainability of community-based tourism that is managed based on spatial limits administratively.

Life Cycle Analysis

A tourism destination will surely endure changes and development from time to time. Therefore, a conceptual approach emerges to read the life cycle of a tourism destination by examining its various aspects of changes such as land usage, economy building, and the destination's marketing efforts [19]. In the 80s, Butler proposed a model of life-cycle analysis that can be applied to a tourism destination called Tourism Area Life Cycle (TALC [20].

^a Also known as *Rencana Pembangunan Jangka Menengah Desa (RPJMDes)*.

More than 30 tourism regions or destination had been studied using this model (TALC). For example, Hovinen [21] applied TALC to analyze the growth of Lancaster County tourism destination in Pennsylvania; Butler [22] used the approach to analyze the development of tourism destinations in Scotland's highlands and Haywood in 1986 with a similar approach for the research. The TALC model started to be massively implemented in the '90s, with its prominent figure [15,20].

Even though the TALC has been a common approach to monitor or evaluate a tourism destination's development, it still has a limitation. The linear narration of TALC cannot accurately and strictly analyze the complex interaction and power that acts as a determining factor in the creation of a tourism destination [23,24]. Besides, the unclear parameters of each TALC's indicator caused unmeasured justification to determine the extents and the stages of development of a tourism destination [20]. This condition affects the assessment of the tourism destination growth due to its relative measurements.

Butler, in his writings as TALC creator, even criticizes the approach himself. The life-cycle of a tourism destination cannot be seen as linear anymore [25]. Also, the principal consideration to assess the development of a tourism destination is not only the number of tourists visit but also lies instead in its management intervention and the impact of the intervention on the destination's growth. Reflecting on the TALC's limitation, this research also applies the life cycle model analysis by Laurenco because it has better precision in its measurements, with scales represented by intensity level.

The life cycle itself is a graphic tool used to monitor the stages of growth of a region or destination in a long period [20,26]. Life cycle analysis lies on a foundation of its empiric longitudinal data of the development process of an area or region. The life cycle analysis emphasizes three factors that will be depicted in a curve diagram or chart based on Holton's guasimodel intensity calculation at each development period or stage. It covers planning, action, and living (impact of the intervention in the form of activity). Those three levels of life cycle analysis have their indicators each. On the planning level, there are indicators such as area strategy, area development guide, planning proposal, area new body, and area framework that will be measured by its intensity. On the action level, the indicators are investment sums, infrastructure building, region's new image, etc. On the living level, the indicators used will refer to two parties; the residents and newcomers or visitors. It covers economic and social opportunities and environment rejuvenation.

The explanation about life cycle analysis above will be the conceptual basis to describe and analyze the development of Ponggok Tourism Village in its function as a tourism destination for a certain period. The latter also serves the objective and focus of this research.

MATERIAL AND METHOD

Regarding the research objective, to describe the development of Ponggok Tourism Village as a tourism destination, this study is done by the descriptive-qualitative approach. The involving of a descriptive research approach in tourism subject commonly has three reasons: 1) renewing the study on tourism, 2) examining and studying phenomenon changes so it can be described thoroughly, and 3) giving a clear distinction between research and action [27]. However, it needed to be underlined that this study could be categorized as qualitative research due to its hypothesis in the early observations kept developing throughout the research process, along with the data collection and analysis [27].

Meanwhile, life cycle analysis in this study tend to be descriptive-qualitative could be implemented into two steps. The first step is identification and description of existing component conditions, as well as spatial patterns in Ponggok Tourism Village. The second step is identification and description of important events in Ponggok Tourism Village as a tourism destination and its implication to the changes in terms of spatial-space.

Firstly, identification and description of existing component conditions in Ponggok Tourism Village categorized into attractions, amenities, accessibilities, and ancillary services. Meanwhile, the spatial pattern of the tourism destination components could be classified and analyzed with the theoretical foundation [16], which was distinguished into the nucleus, inviolate belt, zone of closure, path, and circulation corridor.

Secondly, as mentioned above, stated the alteration and development of a particular tourism destination cannot happen naturally and free of intervention [20]. Therefore, the use of life cycle analysis to examine and study the

alterations of a tourism destination emphasizes three factors, i.e. planning, action, and living. These three factors aforementioned will be the premises to identify and describe important events that occurred that were implicating the changes and developments in Ponggok Tourism Village. Below are the variables of this research.

Table 1. Factors of life cycle analysis

Factors	Description
Planning	Intensity and orientation of planning and tourism policy
Action	Intensity of tourism investation, development of tourism infrastructure
Living	Tourist arrival, revenue, participation of local community

Source: Adapted from Alvares & Laurenço [20] and Butler [28].

Alteration and development of a certain tourism destination were linearly connected to geographic dimension (place and space) [28]. In other words, the use of life cycle analysis in studying the changes and development of a tourism destination must also include its spatial implications. In this research, the life cycle analysis that related to its spatial implication was analyzed from the data of the map categorized according to the period and segments. The former is also classified based on the changing factors reviewed from the time-series changes and development.

Data Collection

The data obtained from this research were categorized into two classifications, primary and secondary data. The primary data were obtained through observations, mappings, and interviews. The interview was categorized into an in-depth interview with open-ended questions, a structured interview with the closed-ended question, and a Focus Group Discussion (FGD). On the other hand, the secondary data were obtained by two means literary study and institutional survey concerning various documents that connected with the focus of the research. For the data gathering process during the research, there are some tools used, such as a tape recorder, GPS, interview guidelines, ArcGIS 10.2.2, and Avenza Maps.

The research employed a descriptive technique to analyze its data. The data is classified and analyzed according to different stages that each represents: 1) identification and description of the existing component condition of a tourism destination in Ponggok Tourism Village, as well as its spatial pattern; 2) identification and description of important events occurred in Ponggok Tourism Village as a tourism destination and its implication to changes in terms of spatial-space. The data was then reduced according to the data required. Afterward, the analyzed data presented completely using intelligible sentences based on the result.

Additionally, this study uses the triangulation method to determine the accuracy and validity of the data. This method can be understood as a process to trace the data/information source by examining the evidence from various sources then use it to build a coherent justification according to the study's theme or topic [29]. Refer to various triangulation methods [30], this study used a method (data source triangulation) because it used field observation method, interviews, mapping, FGD, literary study, and then compares it to each other. In other words, this process compares all data obtained from all methods to find correct information.

RESULT AND DISCUSSION

Ponggok Tourism Village as a Tourism Destination

According to Regional act, Klaten Regency No. 7 in 2006, about the Guide to Create Organization and Procedures of Village administration, Ponggok has a total area of 77,2255 ha, comprises administratively of four hamlets, i.e. Ponggok hamlet, Kiringan hamlet, Jeblongan hamlet, and Umbulsari hamlet. In orbital, the distance between Ponggok Tourism Village to district capital is 2.5 km with est. travel time of 5 minutes; to regency capital is 14 Km with an est travel time of 25 minutes; and to the province capital is 90 km with est. travel time of 120 minutes. Figure 2 is the map of Ponggok tourism village.

The altitude of Ponggok is 225 m above sea level. So, it is categorized as a plain landscape. Their location is in the watershed, specifically Upstream Bengawan Solo sub-watershed. It is the reason why there are a lot of water springs found in Ponggok. The soil type is gray regosol soil. It is in the tropical climate, with alternately rainy and dry season throughout the year. The average temperature is 28–32.5°Celcius. The wind speed average is 20–25 km.hour⁻¹. The rainfall in 2014–2016 reached 2047-2467 mm.year⁻¹ and averaged 179-200 mm.year⁻¹.



Figure 2. Map of Ponggok Tourism Village

According to the data acquired from the Book of Ponggok Village Profile [31], the land usage of Ponggok is considered as varied. However, the majority of lands were used as irrigated rice fields that cover 55.87 ha or equal to 67.3% of the total area. The second usage is for the residencies, which cover 12.99 ha or equal to 15.6%. The smallest usage is for Green Space, which existing use is as public cemeteries. It covers 0.2 ha or 0.2% of the total area.

Ponggok has tourist water-based attractions as its main element. Majority of them are the springs or bathing pools such as Umbul Ponggok, Umbul Besuki, Ponggok Ciblon (Umbul Banyu Mili), and Umbul Sigedang-Kapilaler. Besides that, there are also fishing pools such as Kolam Pemancingan Waduk Galau. The amenities in Ponggok is considered adequate/complete. It has homestays, restaurants, mini markets, TIC, banking facilities (ATM Centre), parking lot, public restroom, signage, and trash bin. Figure 3 is a picture of tourist attractions in Ponggok Tourism Village.

On the tour accessibility, Ponggok Tourism Village can be reached by land transports. The road classes available to access the village from the Regional Activity Center are artery road, local primary road, and neighborhood or village road. All of the roads have been paved with asphalt or concrete. Figure 4 shows the road condition as one of the parts to access the Ponggok Tourism Village.



Figure 3. Tourist Attractions in Ponggok Tourism Village



Figure 4. Cutting Segment (Section), accessibility of Ponggok Tourism Village



Figure 5. Spatial Pattern of Ponggok Tourism Village Area

On the management sides, Ponggok now relies on two core local organizations, i.e. BUMDes Tirta Mandiri and Pokdarwis Wanuwa Tirta. BUMDes Tirta Mandiri manages Umbul Ponggok and Ponggok Ciblon while Pokdarwis Wanuwa Tirta is responsible for Kolam Pemancingan Waduk Galau, Umbul Sigedang-Kapilaler, and Umbul Besuki. To be specific, in the tourism destination spatial pattern, Ponggok has three zones of closure. They are the zone that covers the area of Dusun Ponggok and Dusun Jeblogan, then zone that covers Dusun Kiringan, and the zone of closure that covers Dusun Umbulsari. From the inviolate belt subject, there are four main zones (Fig. 5). The connectivity between a zone of closure and inviolate belt with the nucleus inside was connected with each and circulation corridor in the form of primary local road and neighborhood or village road.

Time Series Development of Ponggok Tourism Village

The development of Ponggok from its progression as a tourism destination until the end period of this research can be seen through the longitudinal (diachronic) data that has time series characteristics. Therefore, the basic concept used in this research is leaning toward the life cycle analysis of a tourism destination. This research used Laurenco's model of crossevents life cycle analysis to answer the need. This model emphasizes three big aspects that will be depicted in a curve diagram/chart. Those three aspects affect the development of a tourism area/destination. They will be examined by its intensity according to each aspect of planning, action, and living.

This research used a limited period, specifically, when the Master Plan of Ponggok (RPJMDes) in 2007 was formulated as the first fundamental intervention to develop the tourism activity in Ponggok. Therefore, the time to do the periodic analysis is only limited to the events that happened 12 years before.

Moreover, the planning aspects that occurred and had huge impact on Ponggok Tourism Village as a tourism destination are namely: the disposition of RPJMDes 2007-2013 and the disposition of RPJMDes 2014-2019. On the other hand, the action aspects comprise as follows.

- the construction of infrastructures, such as:
 - Gateway
 - public sanitation facilities
 - irrigation retaining wall
- establishment and provision of capital for BUMDes Tirta Mandiri
- cooperation with Yogyakarta Diving Center
- renovation of Umbul Ponggok
- aid fund for:
 - UKM (small and medium-sized entreprises)
 - PKK (family welfare movement)

- RW (local communities)
- construction of multi-purpose building
- website building and social media accounts for marketing
- construction of fishing pool Waduk Galau
- renovation of Umbul Ponggok area
- reacquisition and renovation of Ponggok Ciblon
- planning arrangement of Umbul SIgedang
- construction of riverside in Umbul Sigedang-Kapilaler area
- Program of community and women empowerment of Ponggok Tourism Village.

esides, living aspects that occurred in Ponggok Tourism Village as a tourism destination between 2011 until 2016, are namely, the implementation of One House for One Bachelor program, settlement of health care insurance premium for underprivileged communities in terms of income from the tourism sector, women empowerment program through PKK by launching locally processed food products such as fishbone steak, and revenue from the tourism sector, reached the total of 3 billion IDR in 2014, 4,7 billion IDR in 2015, 10 billion IDR in 2016, and 12 billion IDR in 2017. The summary of Ponggok Tourism Village development based on planning, action, and living each year since 2007 up to 2018 is drawn in Figure 6.

The summary of Ponggok Tourism Village development can be called as a plan-process behavior. This behavior is depicted in a bdimensional graphic curve, to explains more about the intensity of planning, action, living as explained before. Moreover, this behavior can also be classified with Butler's life cycle analysis. This resulted in a conclusion that the development of Ponggok can be classified in 4 segments of time. The classification of segments of time presented in the curve-graphic (Fig. 7).

- a) 2007-2010: exploration and involvement
- b) 2011-2013: development
- c) 2014-2016: consolidation
- d) 2017-2018: stagnation-decline

The development of a tourism area or destination will surely in line with the changes in the spatial-space. It also happened in Ponggok. Each segment has a certain form of spatial-space according to the classification above. This spatialspace transformation can be considered as a consequence of the tourism activities happened there. Figure 8 is the figures for the spatial-space transformation in Ponggok Tourism Village per each time segment.



Figure 8. Summary of the time series development in Ponggok Tourism Village



Figure 6. The classification of time segments in the development of Ponggok Tourism Village



Figure 7. Spatial-space transformation in Ponggok Tourism Village for each segment of time

CONCLUSION

According to the life cycle analysis, we discovered that the development of Ponggok Tourism Village has four segments of time as reviewed through the intensity of planning, action, and living. The first Exploration and

Involvement happened from 2007 to 2010, the development stage happened from 2011 to 2013, the consolidation stage happened in 2014-2016, the stagnation-decline stage happened in 2017 to 2018. The inter-segment development also implied the changes in the spatial-space of the tourism constellation. From this research, it could be further concluded that Ponggok Tourism Village, as a tourism destination, should make a replanning to avoid the stagnation-decline stage and to stimulate the occurrence of rejuvenation.

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Influences of Marketing Mix Elements on Ecotourism Clientele - Jimma Zone, Southwest Ethiopia

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Abstract

This study assessed the influence of marketing mix elements (7 Ps i.e. Product, Price, Place, Promotion, People, Process and Physical Evidence) on ecotourism clientele in Jimma Zone, South West Ethiopia. According to the data received from the Jimma Zone Cultural and Tourism office, a total of 23 woredas are under the Jimma zone. From these, the researchers selected six, which are endowed with ecotourism resources. The target population for this study was all Government staff working here and the research was conducted in July 2019. The study adopted a census or total enumeration method because the total population of the study was small. The instrument for the study consists of a structured questionnaire. Multiple regression analysis and descriptive statistics were used as a method for data analysis. The findings of the study revealed that physical evidence made the highest contribution followed by product development, promotion, process, people and place on ecotourism clientele. This implies marketing mix elements enhances ecotourism development and the key stakeholders should consider the proper implementation of such marketing mix elements for sustainable development and promotion of ecotourism in Jimma zone.

Keywords: Marketing Mix, Ecotourism Development, Ecotourism Destinations, Consumer Behaviour, Multiple Regression.

INTRODUCTION

Tourism is increasingly becoming an important economic sector in many developing countries [1]. However, for the successful development of tourism, the Society, State, and Private companies must work in collaboration and cooperation with each other [2]. This industry is one of the major sources of foreign exchange, earnings, and the most viable and sustainable economic development option. It contributes 11% of the world GNP [3]. The governments have always tried to strategize tourism in such a way so that the less fortunate group of people can benefit from the trickledown effect [4].

In this context, Ecotourism emerged as a sustainable form of tourism. Ecotourism can help in cultural preservation, environmental conservation, and increase community income at a tourist attraction [5]. Ecotourism continues to generate revenue for the third world countries, like, African countries. For example, in Ghana, the tourism sector stands fourth behind gold, cocoa, and foreign remittances and earned revenue that is equivalent to 6.2% of Gross Domestic Product [6]. In East Africa, the ecotourism market is the niche market, especially in Tanzania, Kenya, and Ethiopia. It was because

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Address : Dept. of Hospitality and Tourism Management, Jimma University, Ethiopia these countries were endowed with natural and cultural products and resources that support ecotourism development [7].

With abundant ecotourism resources in Ethiopia and on paper having 15% of its land protected [8], most of these protected areas do not have legal status and are practically inadequately protected [9]. As different writers state that Ethiopia has a long way to go to benefit from tourism. For instance, according to a report published by the World Tourism Organization in 2002 [10], the share of Ethiopia from the tourism sector was just less than minuscule. A total of 156,327 international tourists visited Ethiopia and accounted for 77 million USD in revenue, with a 5% growth rate compared to 2001. In 2005, international tourists visiting Ethiopia showed considerable growth, although not up to expectations [10].

Even after Ethiopia was endowed with natural and cultural products and resources, ecotourism development lacks either new products or is unable to attract a new market as expected. One of the major reasons for this problem is the inability to develop an effective marketing mix.

Different scholars define the marketing mix in different ways. The marketing mix, defined as the elements an organization controls that can be used to satisfy or communicate with customers [11]. The marketing mix is the set of marketing tools that the firm uses to pursue its marketing objectives in the target market [12]. The tools of marketing have been classified into four broad groups and have been referred to as 4Ps of marketing; product, price, place, and promotion [13]. The marketing mix has been described as the internal elements or ingredients that make an organization marketing program [14].

However, it is asserted that the four Ps model is unnecessarily restrictive, while an expanded marketing mix is recommended because it should include, people, physical evidence, and processes. Other scholars of services marketing [15,16] also agree that the traditional marketing mix of 4Ps needs to be extended to 7Ps. The marketing mix then translated to become the 7Ps of marketing, where the extended Ps caters for service marketing [17].

It is well known that the characteristics of tourism, specifically ecotourism make it impossible to taste or test the benefits expected before purchase. Even more, it cannot be moved from its location while it is still intangible, means that customers cannot hold, touch, taste the product until it is purchased. Therefore, it makes the proper application of marketing mix elements necessary to link the potential ecotourism product with the potential tourism market and to the rest of the world. This study focuses on investigating the influence of the seven components of the marketing mix, as being product development, price, place, promotion, people, physical evidence, and process upon ecotourism clientele in Jimma Zone.

Hypotheses

For this research the following hypotheses were formulated and tested at 0.05 significance levels.

- H₀₁: There is no significant effect of product planning and development on ecotourism clientele in Jimma Zone.
- H_{02} : There is no significant relationship between price and ecotourism clientele in Jimma Zone.
- H₀₃: There is no significant effect of promotion on ecotourism clientele in Jimma Zone.
- H₀₄: There is no significant effect between distribution strategy and ecotourism clientele in Jimma Zone.
- H₀₅: There is no significant relationship between people (personnel) and ecotourism clientele in Jimma Zone.
- H_{06} : There is no significant effect between Process and ecotourism clientele in Jimma Zone.
- H₀₇: There is no significant relationship between physical evidence and ecotourism clientele in Jimma Zone.

MATERIAL AND METHOD

The population of this study consisted of the Government officials in selected tourism destinations in the Jimma zone. As per the data received from the Jimma Zone Cultural and Tourism office, the total woredas under the zone is 23. From a total of 23 woredas, the researchers

purposively selected six areas which are endowed with ecotourism resources. These areas were selected because they offer a wide range of potential resources for ecotourism.

The study adopted a census or total enumeration method because the total population of the study is small. Therefore, all the members of the population were involved and no part was selected for another. All the 120 staff comprised of Govt. officials (administrators and experts) at the selected tourism locations were given questionnaires and out of 120 distributed questionnaires 110 (91.6%) were returned. The research was conducted in July 2019.

Data Collection

The data was collected by administering a structured interview and self-administered structured questionnaire. The instrument for the study consists of a structured questionnaire in which the dependent and independent variables were measured on a five-point Likert Scale. The questionnaire items on the variables were adapted from previous studies based on the similarities with the present study. A pilot survey was also conducted on ten random respondents out of the sample size to test the reliability of each item of the instrument.

Data Analysis

Method of analysis involved descriptive and inferential statistics. The descriptive statistics have shown the variation in responses and opinions using mean and standard deviations. Inferential analysis was done using statistical tools. This tool includes the regression analysis with the aid of SPSS that tested the effect of the predictor variables on the dependent variables.

RESULT AND DISCUSSION

Product planning and development

According to the respondents, the aggregate mean score and standard deviation of each of the variables of marketing mix elements were shown in Table 1. Most respondents stated negatively regarding ecotourism product planning and development in the Jimma zone. It seems that the reasons for such responses are the lack of fundamental infrastructure at the destination, absence of technical know-how regarding tourism development, and unavailability of trained staff.

Price

The prices are a bit on the higher side, and not enough discounts were provided to make the destination attractive, though food has been rated as inexpensive (Table 1). It can be due to the eagerness of service providers to earn more money in less amount of time. On top of that, as a lot of tourists don't come to these places, it may also because the providers want to extract as much money as possible from whosoever is visiting their destination. It is not uncommon to see as private enterprises many times are shortsighted and look only for immediate profits rather than long term gains.

Place

The means of reserving accommodation and making payments were not well provided (Table 3). It was attributed to the lack of online booking

facilities on the website. As far as the tourists traveling to the destination is concerned, there are only two flights to Jimma in a day from the Capital Addis Ababa. Apart from that, many tourists may also find it more interesting to travel by road to see the countryside, though the condition of the road is not good.

Promotion

The promotion efforts of the service providers are not good enough to attract the customers (Table 4). It may be because the service providers were not well versed with the tools and techniques of promotion and don't have good IT skills.

Table 1. Descriptive statistics of product planning and development

Variables	Min	Max	Mean	Std. Dev.
1. Brand identity is being represented by the names of Ecotourism destinations	1.00	4.00	1.99	0.82
2. Customers (tourists) feel satisfied by the products offered at ecotourism destination	1.00	4.00	2.12	0.85
3. Attractions at your destination and environment are encouraging	1.00	4.00	2.20	1.02
4. Customers are attracted by the services and facilities at your destination	1.00	4.00	1.84	0.83
5. Perception of your location is positive, and it encourages people to visit your destination	1.00	4.00	1.98	0.81
6. Your souvenirs, gift, etc are patronized by customers	1.00	5.00	2.14	0.91
7. Most customers that visit your destination want to come back	1.00	4.00	2.19	0.87
8. Present potential in Jimma Zone is enough to be attractive as an ecotourism destination	1.00	5.00	2.00	0.98
Aggregate mean			2.05	
Source: Field Survey, 2019, N=110.				
Table 2. Descriptive statistics of price				
Variables	Min	Max	Mean	Std. Dev.
1. Cost of a trip to your destination is reasonable	1.00	5.00	2.73	0.92
2. Accommodation is inexpensive	1.00	5.00	2.59	1.12
3. Cost of food is affordable	1.00	4.00	3.00	1.02
4. Discounted price for a longer stay is provided	1.00	4.00	2.26	0.77
5. Discounted price is provided for group visitors or business visitors	1.00	5.00	2.11	1.08
6. Discounted price is available for meals	1.00	3.00	2.10	0.80
7. Discounted price is available for accommodation and relaxation facilities	1.00	4.00	1.82	0.95
Aggregate mea	n		2.37	
Source: Field Survey, 2019, N=110.				
Table 3. Descriptive statistics of place				
Variables	Min	Max	Mean	Std. Dev.
1. Means of confirming reserved accommodation, make & confirm payment are well provided	1.00	3.00	1.89	0.74

Aggregate mean		1.85	
3. Roads to traveling locations are good	1.00	4.00 1.92	0.80
2. Tourists come by airlines	1.00	3.00 1.75	0.71
1. Means of confirming reserved accommodation, make & confirm payment are well provided	1.00	3.00 1.89	0.74

Source: Field Survey, 2019, N=110.

Table 4. Descriptive statistics promotion

Variables	Min	Max	Mean	Std. Dev.
1. Website provides enough information about your ecotourism products and services	1.00	4.00	1.88	0.98
2. Trade shows adequately promote your tourism destinations	1.00	4.00	1.99	0.96
3. Marketers /Ambassadors are employed to inform people about your tourism services	1.00	4.00	2.14	1.07
4. Direct mails are used to pass information to create awareness and encourage patronage	1.00	5.00	1.98	1.04
5. The name of your ecotourism location is sufficient to tangibilize your services	1.00	4.00	2.04	0.95
6. The logo used for ecotourism destination is enough to attract customers	1.00	4.00	1.95	0.94
7. Travel agencies are used to organize ecotourism trip	1.00	4.00	1.94	0.96
8. Travel magazines provide tourism information regarding your destinations	1.00	4.00	1.91	0.89
9. Newspapers provide tourism information regarding your destinations	1.00	4.00	1.70	0.94
Aggregate mear	1		1.95	

Source: Field Survey, 2019, N=110.
People

The results displayed in Table 5 indicate the paucity of education and training to the staff of the service providers. Though the number of hospitality and tourism programs in the country has been continuously increasing, still not many Universities offer courses at the post-graduate level, which can help people to be trained better for higher positions. Other than this, not many institutes offer short-term training in various departments of the hotel. The providers also employ people with less education to save money.

Process

The results in Table 6 indicate that the staff was deprived of adequate training. It also appears that the local community neither knows the benefits of tourism nor have any vested interests in tourism projects. It may be due to low levels of education in the community.

Table 5. Descriptive statistics of people

Variables	Min.	Max.	Mean	Std. Dev.
1. Staff is well trained	1.00	5.00	2.82	1.06
2. Client friendliness and treatment is emphasized during the training and selection of personnel	1.00	5.00	3.01	0.99
3. Staff appearance positively impacts on the satisfaction of our customers	1.00	5.00	3.25	0.91
Our staff are equipped with flexible skills that encourage patronage	1.00	5.00	3.07	0.87
5. Staff involved in the tourist visit experience offer good service by their attitude towards tourists		5.00	3.01	0.98
Aggregate mean				

Source: Field Survey, 2019, N=110.

Table 6. Descriptive statistics of process

Variables	М	1in.	Max.	Mean	Std. Dev.
1. Procedure of service delivery is appreciated by the tourists	1.	.00	4.00	2.19	0.79
2. Tourists are given a warm welcome	1.	.00	4.00	2.71	0.68
3. Tourists always enjoy staff company	1.	.00	4.00	2.94	1.01
4. Tourists are provided with good food	1.	.00	4.00	2.64	0.73
5. Tourists are quickly linked with their hotels	1.	.00	4.00	2.23	0.78
6. There are good options for the entertainment of tourists	1.	.00	4.00	2.73	0.76
7. Local community are welcoming and friendly to tourists	1.	.00	4.00	2.34	0.88
8. Life is very easy for tourists at your center	1.	.00 5.00 2.52 0.9		0.92	
	Aggregate mean			2.53	

Source: Field Survey, 2019, N=110.

Variables	Min	Max	Mean	Std. Dev.
1. Photographs showing all aspects of ecotourism destination are available	1.00	5.00	3.55	1.17
2. Photographs of past tourists are displayed as testimonials	1.00	5.00	2.65	1.12
3. Gift items, artwork, and souvenir are displayed for sale to remove the intangible nature of ecotourism services	1.00	5.00	2.38	1.08
Aggregate mean			2.85	

Source: Field Survey, 2019, N=110.

Table 8. Desci	riptive statistic	s of ecotourism	clientele
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Variables	Min	Max	Mean	Std. Dev.
1. Our hotels are more popular than others in Southwest, Jimma zone	1.00	4.00	1.82	0.76
2. Our hotels are making good profits from places for children and others to play	1.00	3.00	1.57	0.65
Abundant natural tourist attractions and satisfactory services of our resorts led to consistent patronage	1.00	3.00	2.06	0.82
 Our hotels' dynamic actions, quality of accommodation, pricing, and service quality stimulate constant visits by current and potential tourists. 	1.00	3.00	2.11	0.79
5. Due to abundant ecotourism resources and a good atmosphere that makes it conducive for tourists all over the world, our resort made increased patronage over time.	1.00	3.00	1.86	0.72
6. The comfort, security, amenities, shelter, ambiance, vistas, recreational facilities, convenience, food, and beverage facilities of our resorts led to consistent patronage.	1.00	3.00	2.07	0.65
7. The average income generated in our resorts annually is very high	1.00	3.00	1.99	0.71
 Overall, tourists' patronage is high because our resorts provide beautiful landscapes, natural resources, and scenic environment to tourists. 	1.00	3.00	2.03	0.75
Aggregate mean			1.94	

Source: Field Survey, 2019, N=110

Physical Evidence

As shown from Table 7, the respondents felt that even when photographs of ecotourism destinations are available, there are not many photographs of past tourists displayed as testimonials. Also, not enough souvenirs were displayed for sale to the tourists It looks like that tourist was either having privacy issues because they are not allowing the service providers to display their pictures as testimonials or the service providers do not have the required knowledge of tools and techniques of promotion. Apart from leaving the main city of Jimma, the less availability of souvenirs may be due to the limited number of artisans.

Ecotourism Clientele

Table 8 illustrates that the majority of the respondents did not agree that ecotourism clientele consistently is more or the hotels/ resorts can make more profits as compared to other tourist attractions in the studied area. It may be due to the inability of the suppliers to create the uniqueness of their tourism product, along with the dearth infrastructure and appropriate training of the staff.

Regression Analysis

Regression analysis was used to assess the relationship between one dependent variable and several independent variables. The researchers have presented a regression model in Table 9. The independent variables were product development, price, place, promotion, people, process, and physical evidence. And the dependent variable, which is affected by the independent variable, is ecotourism clientele.

The first step of the multiple regression analysis is testing multicollinearity. Multicollinearity inflates the variances of the parameter estimates. Hence, this may lead to a lack of statistical significance of individual predictor variables even though the overall model may be significant. Other stated Collinearity Statistics gives two values-Tolerance and VIF (Variance Inflation Factor). As one can see, Tolerance is just the inverse of VIF. A value of VIF higher than five (or Tolerance less indicates than 0.2) the presence of multicollinearity. In social sciences research, a VIF value as high as 10.0 is considered to be acceptable [18].

So as researchers try to illustrate data on the correlation's matrix, there is no apparent multicollinearity existing among the variables. They rather have moderate collinearity. Also, as the researcher examined collinearity statistics of tolerance and variance inflations factors (VIF) value on the coefficient Table 9, is close to 1 or greater than 0.2 and no more than 5. This finding indicates that there is no presence of multicollinearity.

The next part of the multiple regression analysis that is important is the Model summary Table 10 and the ANOVA Table 11. The Model Summary Table 10 includes the R Square value, which serves as the proportions of the variation in the dependent variable (ecotourism clientele) explained by the variation in the independent variable. In other words, this means that the R Square depicts how good the regression model is at explaining the variance in ecotourism clientele.

Table 9. Regression model for coefficients							
Model	Unsta Coe	ndardized fficients	Standardized Coefficients	t	Sig.	Collinearity S	tatistics
	В	Std. Error	Beta			Tolerance	VIF
(Constant)	949	.894		-1.062	.291		
Product development	.183	.038	.252	4.765	.000	.569	1.756
Price	007	.022	014	348	.729	.968	1.034
Place	.076	.034	.108	2.207	.030	.671	1.490
Promotion	.159	.032	.244	4.955	.000	.655	1.526
People	.138	.035	.183	3.984	.000	.756	1.323
Process	.187	.045	.220	4.122	.000	.559	1.788
Physical Evidence	.254	.042	.297	6.015	.000	.654	1.529

a. Dependent Variable: Ecotourism clientele

The outcomes are as follows:

Estimated Ecotourism clientele (Y) = -0.949 + 0.252*Product -0.014*Price +0.108* Place +0.244*Promotion +0.183*People +0.220*Process +0.297*Physical Evidence +e- (Indicates random error)

Fable 10. Mode	summary of R	square
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Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.915ª	.838	.826	1.14400
a. Predictors: (Constant), P	hysical Evidence, Pric	e, People, Place, Pro	motion, product developmen	t, Process

Model	Sum of Squares	df	Mean Square	F	Sig.	
Regression	n 688.009	7	98.287	75.101	.000 ^b	
1 Residual	133.491	102	1.309			
Total	821.500	109				
a.	Dependent Variable: Ecot	ourism Cli	entele			
b.	Predictors: (Constant), Ph	ysical Evic	lence, Price, Peo	ple, Place, Pr	romotion, product, Process	
		_				
		Ta	able 12. Test of s	tudy hypoth	eses	

Hypotheses	Coefficient P- Values	Conclusion
H_{01} . There is no significant effect of product planning and development on ecotourism	P=.000	Reject H₀
clientele.		
H_{02} . There is no significant relationship between price and ecotourism clientele.	P=.729	Fail to Reject H₀
H_{03} . There is no significant effect of promotion on ecotourism clientele.	P=.001	Reject H ₀
H ₀₄ . There is no significant effect between distribution strategy and ecotourism clientele.	P=.030	Reject H ₀
${\rm H}_{\rm 05}.$ There is no significant relationship between people (personnel) and ecotourism clientele.	P=.000	Reject H ₀
H_{06} . There is no significant effect between Process and ecotourism clientele.	P=.000	Reject H ₀
H ₀₇ . There is no significant relationship between physical evidence and ecotourism	P=.000	Reject H_0

The value of the R square - which is the proportion of the variation in the dependent variable accounted for by the seven independent variables - was acceptable. The coefficient of determination (R square) is a measure of how good prediction of the criterion variable that can be selected by knowing the predictor variables. Accordingly, 83.8% of the variation in the dependent variable was explained by the set of the above independent variables. However, Rsquared measures the proportion of the variation in the dependent variable explained by independent variables, irrespective of how well they are correlated to the dependent variable. This is not a desirable property of a goodness of fit statistic. Conversely, adjusted R - squared provides an adjustment to the R- squared statistic such as an independent variable that has a correlation to dependent variable increases adjusted R- squared and any variable without a strong correlation will make adjusted R- squared decrease. Therefore, to see the success of the model in the real world adjusted R- squared more is preferable than R- squared [19]. Accordingly, adjusted R- squared, the variation is explained by the regression of dependent variable on the combined effect of all the predictor variables is 82.6%. Hence, generally speaking, the independent variables can predict the dependent variable by 82.6%.

This is a good finding, but in order to find out if it is significant one must study the ANOVA table. The ANOVA table 11 shows that the finding is significant because the p-value is less than significance level 0.1%. This indicates that the overall model was reasonable fit and there was a statistically significant association between marketing mix and ecotourism clientele.

Summary

After the analysis, hypotheses of this study were tested. Table 12 presents the summary of findings of the hypotheses.

The ecotourism clientele of the studied area has a significant effect due to *product planning and development*. According to the result of the first research hypothesis, it can be stated that the null hypothesis has been rejected. Many researchers have also suggested previously that different dimensions of product development, such as product quality and product lines/product mix were positively and significantly correlated with the corporate performance of profitability, sales volume, and customer loyalty.

It was further established that a relationship exists between product size, product design and profitability, sales volume, and customer loyalty [20]. Hence, the findings of this research are in line with the findings of other researchers regarding this aspect. In addition, it is also important to note that most of the respondents have also stated negatively regarding ecotourism product planning and development in the Jimma zone. It looks like the provision of infrastructure, funding of the tourism sector, and training to the local people can be the way forward.

Whereas the variable *price* is concerned the researchers were not able to find enough

evidence to reject the null hypothesis. It may be possible that the clients are looking for better ecotourism products and facilities, even if they have to pay a higher price. However, attention should also be paid that at the same time, the respondents have also stated that the prices are a bit on the higher side, and not enough discounts provided to make the destination attractive. Keeping the above in view, it can be stated that more research needs to be done regarding this aspect.

Considering the effect of place or accessibility on ecotourism clientele, the finding depicted that place has a significant effect on ecotourism clientele in the selected tourism destination. It can be stated that according to the result of the third research hypothesis, the null hypothesis has been rejected. This finding is consistent with the other researchers according to whom the place must be easily accessible, possess an attractive appearance, have a physical pleasant, convenient, functional environment, and have safe and pleasant surroundings [20]. Whereas this factor is concerned, it has also not been rated positively. Maintenance of roads, as well as provision of a greater number of flights, can be one of the aspects to be looked upon by the Government. In addition, better distribution strategies, such as online booking facilities on the website, can also be considered.

The fourth hypothesis ascertained whether promotion has any significant influence on ecotourism development in Jimma Zone. The findings revealed that promotion has a significant influence on Ecotourism clientele in the studied area. Other researchers also explained promotion refers to all activities by the company that communicate the merits of the product and persuade target customers to buy it. Different promotional strategies, such as advertising, personal selling and public relations, can be used to ensure that the customer buys the product [21]. However, in the case of the Jimma Zone, this attribute has also been rated negatively. Training of tools and techniques of promotion, as well as digital marketing, may help to overcome this limitation.

The finding of the fifth hypothesis depicted that the attribute *people* have a significant influence on the development of ecotourism clientele in the studied area. It means that tourism destinations with qualified and experienced personnel would have a larger number of clients than those with inexperienced personnel. As other researchers have stated, people include all human actors who play a part in the delivery of services and thus affect the perception of buyers. Given the inseparability nature of tourism products, many stakeholders were involved in the buying and selling, namely the customer, other customers, and the firm's personnel in the service environment [22].

People generally cannot be separated from the total service. They enhance the tangibility of the product-service combination [23]. Additionally, tourism is labor- intensive, and the tourism experience is dependent on a tourist's interaction with local communities and welltrained personnel working in those destinations [24]. The attribute of people has been rated as neutral by the respondents. Keeping in mind that any destination with experienced staff will be patronized more by the clients. Thus, training for the people working in the tourism industry can be undertaken.

The statistical results for the sixth hypothesis revealed that the effect of the *process* on ecotourism clientele at selected ecotourism destination has a significant effect. This finding is supported by other researches, in which it has been stated that in services marketing, how the service delivered is paramount. For example, service system performance determines the length of customer waiting time [25]. The process element can be a major way of differentiating a service provider from the competition [25]. The rating for the attribute process is also not satisfactory. Proper training of the staff and tourism awareness programs in the community can help to correct the situation.

The findings of the study also revealed that physical evidence has a significant influence on ecotourism clientele in the selected ecotourism destinations in the Southwest Oromia region of Jimma zone. There are similar findings in other researches also regarding physical evidence. According to one of the researches, the physical evidence included aspects such as the service provider's building/facilities and staff appearance, while other aspects are personal hygiene and uniforms. in addition, promotional materials and branding strategies are all elements of physical evidence that serve to tangibilize a service offering to a customer.

These physical evidence cues are what potential customers use to evaluate accurately or inaccurately things like service quality [25]. This attribute has also not been rated very well by the respondents. The potential clients may feel attracted to the destination if they can see some pictures of other people enjoying at the destination. It may help to evoke a feeling within the potential clients to enjoy the destination the same way as other people have enjoyed. It may also help if they can see some souvenirs etc. from the place. These things may also help to provide some tangibility to the highly intangible nature of tourism.

CONCLUSION

This study investigated the influence of marketing mix elements on ecotourism clientele in Jimma Zone, Southwest Ethiopia. From the literature review, the researchers identified seven independent variables (7ps of the marketing mix) and one dependent variable of ecotourism clientele. The main finding of this study was that 6ps out of 7ps of marketing elements significantly influenced the ecotourism clientele, and these elements are not doing well in the Jimma zone. The standardized coefficient (Beta weights, β) of the variables indicated that Physical Evidence made the highest contribution (β=.297, p<.01) followed by Product Development (β=.252, p<.01); Promotion (β=.244, p<.01); Process (β=.220, p<.01); People $(\beta = .183, p < .01);$ and Place $(\beta = .108, p < .05)$ in influencing the ecotourism clientele.

In tourism, it is not only an attractive environment that is important, but an effective application of all the marketing mix elements also plays a vital role. Provision of essential infrastructure, appealing product, a good website, easy accessibility, ambient conditions, layout and symbols, decor, friendly staff along with well-trained people at the tourism office can help to create a positive image in the minds of the potential customers. It can also subsequently help in giving a mesmerizing experience to the tourists. It is quite clear from this study that the destination was unable to take the benefits of the elements of the marketing mix. The destinations may gain a competitive advantage by first finding their USP (Unique Selling proposition) and thereafter, leveraging on it. In the future, in-depth studies regarding the effects of marketing mix elements may also be conducted at other ecotourism destinations.

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Jebel Qatrani as Geotourism Sites in Egypt: An Exploratory Study

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Abstract

This research aims to identify the natural and geological features of Jebel Qatrani and to explore the role of geosite management in enhancing Jebel Qatrani as geotourism sites. A single case study was applied to reach the research aim. This research is based on a qualitative approach to obtain adequate information for achieving the research aim, direct observation was used for data collection. The results revealed that Jebel Qatrani has attractions such as fossils, rocks, mountains, and fossilized trees. The results indicated that Jebel Qatrani is characterized by unique diversity in geological and geomorphological. Jebel Qatrani has a history and geological importance. The results reported that there is a lack of marketing activities or promotion plans for promoting Jebel Qatrani. Also, there is no pamphlet and brochures to provide information to visitors. The results reported that there is a lack of signboard in place, and there is no food and beverage service. This research has several limitations. Firstly, this research focused on one case study of Jebel Qatrani. Secondly, the literature showed there had been a clear lack of prior research studies on geotourism sites in Egypt, in particularly Jebel Qatrani. Future research should address more geosites in Egypt; it also should undertake to test the findings of this research.

Keywords: Attraction, Egypt, Geoheritage, Geosite, Geotourism, Management.

INTRODUCTION

Today, the new trend in modern tourism towards untraditional forms of tourism, such as geotourism, may expand the current offer of destinations [1,2]. So, there are manv destinations still isolated and unknown. However, it has become places that need to be explored to meet the tourists' expectations [3]. On the other hand, the knowledge and experience of geological heritage are essential in terms of future renovation [4]. Moreover, the current list of UNESCO geosites will be expanded through unique sites and buildings. So, it is important to combine with different specialties, such as geology and tourism science [5,6].

Tourism destinations are facing a quite complex competitive environment, and this situation may get more complicated in the next years [7,8]. Further, the current situation has forced the destinations managers to seek out innovative strategies to achieve customer satisfaction and loyalty [9,10]. It is explained that the degree to which a country can benefit from its tourism industry depends largely on this competitive position on the international tourist market [1].

The world pays more attention to the protection and preservation of the landscape and promoting unique sites with a geological and geomorphological feature [4,11]. There are many

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different definitions of geotourism introduced recently. Almost all of them refer to particular geologically or geomorphologically significant places. It means geosites and geomorphosites represent a fundamental resource for geotourism [12,13]. Moreover, the geotourism represents a recognition process and giving a broader meaning to geosites, which lead to better and more efficient conservation of geoheritage and geosites [14].

Unfortunately, few sites have been declared as parts of the geological heritage of Egypt, such as Wadi Al-Hitan (Whale Valley), which is included in the list of the UNESCO World Heritage Sites [15]. Also, a study reported that there is a little of attention that given by the tourism industry and the official to the geological features, as well, the availability of tourist guides and brochures in the Egyptian geological sites are rarely found [16]. Therefore, this paper aims to identify the natural and geological features of Jebel Qatrani as geotourism sites and to explore the role of destination management in enhancing Jebel Qatrani as geotourism sites in Egypt.

METHOD

Study Area

Geosites are considered heritage sites that must be conserved for future generations. It is also considered as other natural and human heritage places [17]. The geosites are evidence of climate changes, tectonic evolution, and the related changes in the history of life at the surface of the Earth [12,18]. It allows the reconstruction of ancient processes and past climates, environments, and geographies. Also, it

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is important to observe the recent period and current processes and geological features [19,20].

Geosites maybe rank local, regional, national, or global, which depending on the territorial uniqueness of the represented geological phenomena [21]. Furthermore, the rank is determined by the comparison with other geosites known on the local (city), provincial, national (country), or global levels. The determination of geosites investment should be provided. Thus, future geotourism destinations are most likely to be successful [12,22].

Jebel Qatrani is located in Fayoum governorate, Egypt (Fig. 1). It is a mountain that was turned to the attention and care of the UNESCO world of the invaluable fossils containing. It also contains the oldest paved road in the world, as well as different quarries, a mountain of Qatari, which is located in the northern part of the Lake of Qaroun. The area is about 110 km and a height of about 300 m and reaches in the eastern part to 350 m, and rises from Lake Qaroun about 400 m, and the distance between him and the lake is not more than 10 km [18,23].

Qaroun Protected Area includes the Qatrani mountain within its boundaries. A group of primate fossils discovered in Jebel Qatrani of Fayoum is dated to the Eocene age [18]. These finds include a crushed cranium that is the oldest skull found to date of a higher primate [24]. Jebel Qatrani formation is located at Fayoum Depression about 320 m thick and consists of siliciclastic conglomerates, sandstones, and sandy mudstones with subordinate carbonaceous shale and carbonates interbed [25]. It is characterized by its variegated white, grey, green, yellow, brown, and red colors. Pedogenesis led to intense geochemical and mechanical alteration of most rocks forming the Jebel Qatrani Formation [18].

Additionally, Jebel Qatrani Formation is composed of variegated sandstones, pebbly sandstones, sandy mudstones, sandy limestones, and shales. The Jebel Qatrani Formation is fossiliferous and particularly have land-animal remains and silicified wood fragments. A thick Oligocene basaltic sheet is known as the Widan EI-Faras basalt outcrops locally [17].

Research Data

A single case study was applied in this research to identify the natural and geological features of Jebel Qatrani as geotourism sites and to explore the role of geosite management in enhancing Jebel Qatrani. This research is based on a qualitative approach since its main aim is to understand the context better from practitioners [26]. To obtain adequate information for achieving the research aim and objectives, one stage was considered to be the most appropriate form of data collection instruments, including direct observation.



Figure 1. Location of Jebel Qatrani Area in the map of Egypt [18]

The major final component in the research design is to find specific techniques for data collection. There are two basic sources of data, namely secondary data and primary data. The secondary sources were previous research, books, articles, journals, reports [27]. Primary data is data collected specifically for the research by the researcher [26].

The researcher uses one method for data collection, which is direct observation. During the observation, the researcher took photos of Jebel Qatrani. An observation checklist included the issues related to endowed resources, created resources, site management, and situational conditions in Jebel Qatrani. Secondary methods were by searching in several database sources. It was to investigate previously conducted studies that discussed geotourism sites.

RESULT AND DISCUSSION

Direct observation reported that Jebel Qatrani features a spectacular view of the color of its rocks and its beautiful natural scenery. It contains a mountain of Qatrani on important geological aspects, which gave the importance of the world. The geological aspect is the numerous amounts of the rarest excavations of vertebrate animals in the world, which are the ancestors of most vertebrate animals. The archaeological site was characterized by the presence of several Pharaonic and Roman monuments. It also has some archaeological quarries of basalt and gypsum, which explain a large era of human life on earth [28].

Endowed resources in Jebel Qatrani

Endowed resources refer to the geological and natural attraction in Jebel Qatrani. The observation reported that Jebel Qatrani is characterized by all issues in the checklist (Table 1) that discussed below.

Table 1. Endowed resources in Jebel Qatra	ani
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Observation checklist		Yes	No
1.	There is a unique diversity in geological and geomorphological forms.	V	
2.	There is an ideal geological features (cracks and folds).	٧	
3.	It has features for different geological ages.	٧	
4.	There are many rocks and colour mountain.	٧	
5.	There are different fossils and fossilized trees.	٧	

Diversity of geological forms in Jebel Qatrani

The observation reported that Jebel Qatrani is characterized by a diversity of natural, geological, and geomorphological features. It also represents a journey through time geological exploration, where visitors can read the events of the deep past, specifically during the confluence of the Eocene and Oligocene. It was where the Jebel Qatrani site tells the story of a journey within the geological era (Fig. 2).



Figure 2. Diversity of geological forms in Jebel Qatrani (Source: Personal Documentation, 2019).

Geological features in Jebel Qatrani

Geological formations in Jebel Qatrani represent one of the important natural resources because of its great economic value. Hence, it is a treasure of Egypt's natural treasures. In relation to the ideal geological structures in Jebel Qatrani, the observations noted that Jebel Qatrani contains many folds and cracks due to the climate changes during different geological ages (Fig. 3).



Figure 3. Geological features in Jebel Qatrani (Source: Personal Documentation, 2019)

Geological Ages in Jebel Qatrani

In terms of geological ages, it has evidence back to Eocene and Oligocene age. The observation noted that Jebel Qatrani was showing a geological change in different geological eras and the climate change through millions of years (Fig. 4).



Figure 4. Geological ages in Jebel Qatrani (Source: Personal Documentation, 2019)

Rocks in Jebel Qatrani

The observation found there is several form of rock in Jebel Qatrani, which were formed by the climatic changes. The different forms of rock were added an aesthetic feature to Jebel Qatrani (Fig. 5).

Colour Mountain in Jebel Qatrani

The observation noted that Jebel Qatrani is characterized by its spectacular view and the

colours of its mountains. For example, the Red Mountains are made up of iron oxides, while the White Mountains were made up of limestone and Black Mountains consist of basalt (Fig. 6).



Figure 5. Illustration of the rocks in Jebel Qatrani Area (Source: Personal Documentation, 2019)



Figure 6. Colour Mountain in Jebel Qatrani (Source: Personal Documentation, 2019)

Widan El Faras and Basalt Mine in Jebel Qatrani

The observation noted that Widan El-Faras basalt consists of several individual lava flows of early Oligocene capping extensive deposits of sandstone, mudstone, and some limestone that form Qatrani Formation. As well as, the locality of Widan El-Faras, it found the basalt mine area behind Widan el Faras mountain of (upper area of the Gebel Qatrani) (Fig. 7).



Figure 7. Widan el Faras and Basalt Mine in Jebel Qatrani (Source: Personal Documentation, 2019)

The World's Oldest Road

The road was built for moving blocks of basalt from the Widan El-Faras mines to the shore of the ancient Lake Moeris, the bigger ancestor of Lake Qaroun. The road ended in a quay not far from Qasr Al-Sagha Temple, an Old Kingdom temple still standing north of Lake Qaroun (Fig. 8) [28].

Open Air Museum in Jebel Qatrani

The Jebel Qatrani Open Air Museum is located inside the Petrified Forest area, the north of Lake Qaroun few kilometers from Jebel Qatrani and the ancient basalt quarries. The museum was built in early 2018. The most important exhibits in the museum are including the Petrified that considered one of the most famous petrified forests in the world. The Petrified Forest is home to 35 million years old (Fig. 9) and Arsinoitherium (Fig. 10). The direct observation found that there are different types of fossils in Jebel Qatrani, such as Sirenia (Fig. 11) and Eocene snake (Fig. 12), Masracetus Whale.



Figure 8.The world's oldest road in Jebel Qatrani (Source: Personal Documentation, 2019)



Figure 9. Petrified Forest in Jebel Qatrani (Source: Personal Documentation, 2019)



Figure 10. Arsinoitherium in Jebel Qatrani (Source: Personal Documentation, 2019)



Figure 11. Sirenia in Jebel Qatrani (Source: Personal Documentation, 2019)



Figure 12. Eocene snake in Jebel Qatrani (Source: Personal Documentation, 2019)

Created resources in Jebel Qatrani

In the created resources, the observation found the transportation facilities and accessibility into the Jebel Qatrani is difficult, it is due to lengthy travel times, high costs and entry barriers. It also noted that there is no public transportation to Jebel Qatrani, the area of Jebel Qatrani need private transportation with Fourwheel drive cars.

The observation noticed that there is no pamphlets and brochures in Jebel Qatrani. However, it found that there is a recreational activity such as camping. In addition, there are no shops or places for selling souvenirs to visitors. The observations showed that there is no medical service or ambulance point within or near Jebel Qatrani. It observed that there is a telephone network in someplace, and it is not in other places that affect the communication between visitors and tourist groups (Table 2).

Table 2. Created resourcesin Jebel Qatrani

Observation checklist		Yes	No
1.	There are transportation facilities		٧
	available to visitors to Jebel Qatrani.		
2.	There are maps, pamphlets and		v
	brochures for Jebel Qatrani.		
3.	There are recreational activities in	v	
	Jebel Qatrani such as camping.		
4.	There are places to sell souvenirs in		V
	Jebel Qatrani.		
5.	There are medical services within or		V
	near Jebel Qatrani.		
6.	There is a communication network	V	
	within Jebel Qatrani.		
7.	There is food and beverage service		V
	within or near Jebel Qatrani.		
8.	Accommodation services are available	V	
	near Jebel Qatrani.		
9.	There are signs in the roads and tracks	V	
	to Jebel Qatrani.		
10.	Level of cleanliness of Jebel Qatrani.	V	
11.	There are bathrooms in Jebel Qatrani.		V

The observation found that there is not outlet for serving food and beverage to the visitors in Jebel Qatrani but there are hotels and restaurants provided food and beverage facilities such as, Byoum hotel and hotels/restaurants in Tunis Village. As well as, there is accommodation service near Jebel Qatrani.

In terms of signboards and tracks in Jebel Qatrani, the observation results found that there is a lack of road signs and tracks signs in the place, which might cause the visitors and tourists to get lost in the desert. It is found only in the main road and the entrance to Jebel Qatrani.

Although the area of Jebel Qatrani is cleanliness and pure, there are no garbage cans in the area of Jebel Qatrani. The observation found that the bathrooms were only found in the management building at the main entrance of Jebel Qatrani and the Open Air Museum.

Site Management and Situational Conditions in Jebel Qatrani

The environmental regulation refers to preserve the geosites such as; prevent collect, remove, or damage any material in the geosites. It also prevents collecting any fossils and walking inside the tracks and follows the instructions in the geosite. However, the observation noted that there are regulations to protect the environment within Jebel Qatrani, but not all visitors following these regulations. Because there is no one provided information or explain the guidelines and the instructions to visitors. For that, Jebel Qatrani management should allocate staff to accompany the visitors. The observation reported that the area of Jebel Qatrani did not have any promotion activities (Table 3).

 Table 3.
 Site Management and Situational Conditions in Jebel Qatrani

	Observation checklist	Yes	No
1.	There are regulations to protect the environment within Jebel Qatrani.	٧	
2.	There is a variety of marketing activities used for Jebel Qatrani.		٧
3.	Visitors are presented their ID before entering Jebel Qatrani.		٧
4.	Visitors are accounted and registered before entering Jebel Qatrani.		٧
5.	Visitors are accompanied by staff in Jebel Qatrani.		٧
6.	Security procedures are available to protect visitors in Jebel Qatrani.		٧

During the observation, the researcher found that Jebel Qatrani accessible from all directions. So, anybody can enter at any time and get out at any time without being controlled. Also, the observation found that there is no accurate count of the number of visitors to the site, and no one counts them. It also observed that there is no ticket for entering Jebel Qatrani. The observation noticed that visitors are not accompanied by staff in Jebel Qatrani. As well as, there is a lack of security procedures in place to protect visitors in Jebel Qatrani (Table 3).

DISCUSSION

Direct observation aimed to identify the natural and geological features in Jebel Qatrani and to explore the actual situation to use Jebel Qatrani as a geotourism site. The observation checklist was depended on the literature review and all points in the list identified in the study of [9]. The site of Jebel Qatrani is proposed to be inscribed under the natural criterion of the operational guidelines for World Heritage 2005. The nature conservation sector of the Ministry of Environment identified the Jebel Qatrani as a fossil site of major importance from the scientific point of view and one of the most important site in the whole African continent, in terms of fossil richness in its management plan [28,29].

Endowed resources in Jebel Qatrani

According to the literature reviews, geosites differ by their unique geological features, which determine their value for science, education, and tourism [30,31]. Furthermore, it was mentioned that the geosites showing the links between the geological characteristics and the biotopes (ecological interest) [32]. As well, the geosites involved the geological and geomorphic features, which contribute to the formation of the sense of place for any geosite [33]. More specifically, these features include different kinds of landscapes, landforms, rock outcrops and types, sediments, soils and crystals [24,32].

The observation data confirmed literature reviews that the Jebel Qatrani area is characterized by a diversity of natural, geological, and geomorphological features. It also found that Jebel Qatrani is characterized by its spectacular view and the colours of its rocks and its natural landscapes. The red mountains are made up of iron oxides, while the White Mountains are made up of limestone. In addition, black mountains consist of basalt. On the other hand, the observation results matched with the previous study that the geosite representing the geological heritage of the Earth [34]. Key characteristics of selected geosites have good potential for increasing the awareness of geological heritage [24,35].

Created resources in Jebel Qatrani

However, the literature review reported that infrastructure plays an important role in site management. The geoheritage and geosites have confronted many challenges, such as the accessibility and infrastructure issues, and the lack of sustainability of geoheritage [36,37]. With regard to that, observation indicated that the transportation facilities and accessibility into the Jebel Qatrani area are difficult. It is due to lengthy travel times, high costs, and entry barriers. It is due to lengthy travel times, high costs and entry barriers. It also noted that there is no public transportation to Jebel Qatrani.

In addition, the previous studies mentioned that there is a lack of interpretative information available to visitors and no coordination to ensure geosites management [38,39]. The observation confirmed that there are no pamphlets and brochures in Jebel Qatrani.

In terms of recreational activity, the observation noted that there is a recreational activity such as camping. The literature review confirmed this result that the entertainment industry can be a major supplier to the tourism sector. It is playing a major role in marketing sites and competitive strategy [3,9].

However, the literature review highlighted that medical services are considered one of the main facilitating resources that must be within or near the sites [40]. Also, healthcare must be found inside the protected area to serve the visitor [41]. The study results reported that there is a medical service in Jebel Qatrani.

The goals of geosite development are as follows. It was to develop a greater awareness and understanding of the significant contributions that tourism can make to the environment, people, and the economy, to improve the quality of life of the host community, to provide a high quality of experience for the visitor, and to maintain the quality of the environment [29].

Geotourism sites play an important role in enhancing the living standard of the local community through increasing the chances of work, and the local community would be involved in developing the plan of geosite [33]. As well, geosites enhance the local economy through developing the different sorts of productions of the local groups and supporting the income sources for an area's adjacent geosites. It also can strengthen the relationship between the local communities and their land [22,32].

On the other hand, a study revealed that geotourism sites should have shops or outlets to promote its products to the visitors through the making of local handicrafts such as the production of fossil casts and souvenirs by local enterprises [42]. To reduce the poverty, it must be generating sufficient revenue and employment for the local community around the protected area [41].

Site Management and Situational Conditions in Jebel Qatrani

It is interesting to note that the observation confirmed that there are regulations to protect the environment within Jebel Qatrani. These results matched with the previous study, which said that management strategies in a protected area were directly applied through rules, regulations, and laws enforcement, or indirectly through site design, visitor education, and communication [13]. Direct strategies are often preferred because it is necessary and more effective. Also, it was reported that law enforcement in a protected area is required to support the protection of natural resources and visitors [12].

Geotourism sites should promote its products to its visitors through the making of local handicrafts, such as the production of fossil casts and souvenirs by local enterprises [42]. Geosite should have various recreation activities that help to raise public awareness about the geotourism concept, importance, and value of the site [43]. Also, for the development of geotourism marketing, geological heritage should be linked to educational aims and economic use [13]. On the other hand, marketing gives the ability to attract and satisfy visitors in the site [40]. However, the area of Jebel Qatrani did not have any promotion activities.

Moreover, safety and security concerns can affect the choice of geotourism sites and effects on the demand for geosites. It was reported that it should increase safety and security for visitor and local community around the protected area [41]. Besides, safety and security must be an increase in a protected area, so it should be identifying the visitor ID to achieve that. But, the observation noted that Jebel Qatrani was accessible from all directions. So, anybody can enter at any time and get out at any time without being controlled. There is no accurate count of the visitors' number of the site.

CONCLUSIONS

The results showed that Jebel Qatrani is characterized by a diversity of natural, geological, and geomorphological features. Also, it showed that geological formations in Jebel Qatrani represent one of the important natural resources because of its great economic value. The results showed that the transportation facilities and accessibility into the Jebel Qatrani are difficult. There is no public transportation to Jebel Qatrani. The observation noticed that there is not pamphlet and brochures in Jebel Qatrani. However, there is a recreational activity such as camping. In addition, there are no shops or places for selling souvenirs to visitors. The observations showed that there is no medical service or ambulance point within or near Jebel Qatrani.

The observation reported that the area of Jebel Qatrani did not have any promotion activities. However, the observation results found the Italian project works in the Open Air Museum in Jebel Qatrani. The observation confirmed this result that Jebel Qatrani was accessible from all directions. So, there is no control over the number of visitors to the site and. It also observed that there is no ticket for entering Jebel Qatrani and a lack of security procedures to protect visitors in Jebel Qatrani.

The study recommended that the local community should be involved in the development strategies of the geosites. They should support the marketing activities of Jebel Qatrani by promoting its products to its visitors through the making of local handicrafts such as the production of fossil casts and souvenirs.

This research has some limitations. First, this research focused on only one case study of Jebel Qatrani. Secondly, the literature showed there had been a clear lack of prior research studies on geotourism site in Egypt, in particularly Jebel Qatrani. Therefore, this research offers several opportunities for potential future research. This research was conducted in one case study. Further research should address more geotourism sites in Egypt. Further research should test the findings of this study with other geotourism sites in Egypt to identify how to generalize the findings.

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FOCUS AND SCOPE

Competitiveness of destinations, products and Indonesian tourism business; Diversification of tourim products; Incentive system of business and investment in tourism; Information, promotion and communication in tourism; Tourism supporting infrastructure: Security and convenience in tourism; Tourism policy; Unique tourism community life (living culture); Local knowledge, traditions, and cultural diversity; Diversity and attractions in ecotourism; Diversity of natural attractions in ecotourism; Pluralistic diversity of ecotourism society; Diversity of ecotourism activities; Hospitality of the local resident; The quality of torism services; Quality of HR in tourism (Standard, accreditation and competence certification); The market share of tourism and integrated marketing system; Package of tourism attraction; Development of tourism regions; Community based Eco-Toutirsm.

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