

## IDENTIFYING NEW TOURIST DESTINATIONS IN BALIKPAPAN'S PROTECTED FOREST: A SOLUTION TO PROLONGED SOCIAL CONFLICTS

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**Abstract:** *Optimizing tourism potential in the Balikpapan Protected Forest (BPF) is one of the efforts that the Balikpapan government can make to reduce the long-standing social conflict in the area. However, these measures must be implemented wisely to ensure that biodiversity and natural ecosystems in BPF remain protected. This study aims to identify the location of the BPF area to be proposed as a potential location for a new tourist destination. Data collection was carried out through observation, in-depth interviews, and focus group discussions. The data analysis used in this research is descriptive analysis, which is carried out by describing tourist destinations based on the 6A tourism principles (attractions, accessibility, amenities, additional services, available packages, and activities). The results show that there are 11 potential new tourist destinations in the BPF area. Most of it is agrotourism that uses social forestry land. Prospective new tourist destinations have specific activities, are easy to reach, and provide accommodation, amenities, and additional services. The addition of new tourist destinations in the BPF area can attract more visitors and increase sales of agricultural products. The government's agrotourism management plan in tourist forest areas has the potential to minimize social conflict, improve the regional economy, and provide a vehicle for environmental education for the community.*

**Key words:** *agrotourism, conflict mitigation, economic benefit, environmental education.*

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## 1. Introduction

Damage to protected forests is a serious threat to human lives because forests are terrestrial ecosystems that are home to most of the terrestrial species in the world [25]. Deforestation causes adverse climate change, including low rainfall, high temperatures, and increased atmospheric CO<sub>2</sub> emissions [14]. Depletion of forest resources and pollutant emissions as a result of deforestation have long-term impacts on the climate [11]. For example, deforestation in Gombe, caused by dependence on firewood, has resulted in loss of biodiversity and threats to cultural continuity [1]. Deforestation can also occur owing to economic development and urbanization, which causes a decrease in forest cover, land impoverishment, and environmental damage [33].

The Balikpapan Protected Forest (BPF) is a state forest area located in Balikpapan City, East Kalimantan Province, Indonesia. This area covers a total area of approximately 14,832 ha [39]. BPF is managed by a provincial government agency, namely the Balikpapan City Protected Forest Management Unit Regional Technical Implementation Unit [39], which is directly responsible for the East Kalimantan Provincial Forestry Service. One of the important roles of BPF is to maintain the availability of clean water for the residents of Balikpapan. Within the BPF area, Manggar Reservoir has significant water storage capacity, serving fresh water for the majority of the population of Balikpapan City.

BPF was formed through the merger of two protected forest areas, namely the Sungai Wain Protected Forest (HLSW) with

an area of approximately 9,955.23 hectares, and the Manggar Protected Forest (HLSM) with an area of approximately 4,999 hectares [39]. HLSW is a tropical rainforest that is rich in biodiversity and is a research location for the flora and fauna of Kalimantan. There are several rare species, such as orang utans, proboscis monkeys, gibbons, sun bears, and endemic birds, making the BPF important for biodiversity conservation [15-17, 23].

However, BPF also faces prolonged social conflict, especially in HLSM, which has been inhabited by the people of Java Island since the 1960s through a transmigration program [45]. This conflict began when HLSM was designated as a protected forest in 1996, which gave rise to land ownership disputes between the government and the local communities [37]. To overcome tenure conflicts in BPF, community empowerment is needed through increasing skills in utilizing local natural resources and human resources to create new environmentally based sources of livelihood, for example, tourism [21, 39].

The regional government plans to optimize the existing tourism potential as a step to reduce social conflict while increasing community income and regional income. Some tourist destinations do not fully accommodate the interests of the community, so it is necessary to identify potential new destinations by involving local communities without changing the function of BPF as a conservation area. This is an important step in preserving the forest area while supporting the local economy. This study aims to identify the

location of the BPF area to be proposed as a potential location for a new tourist destination.

**2. Materials and Methods**

**2.1. Research Area**

The research location can be seen in Figure 1. The research was conducted in 2020 in BPF, which is located in North Balikpapan District, Balikpapan City, East Kalimantan Province, Indonesia. BPF is approximately 15 km from the city center, which can be accessed using various modes of transportation. The population

of Balikpapan City was recorded at 727,665 people in 2022, while in Balikpapan District specifically, the population is 183,444 people [13]. The BPF area is separated by the main road connecting Balikpapan City and Samarinda City, the capital of East Kalimantan Province. Apart from road facilities, Balikpapan also has an international airport, so Balikpapan is a transportation center to other cities in the province. The establishment of the new capital city of Indonesia (IKN) in East Kalimantan Province also makes Balikpapan the city closest to the nation's capital.

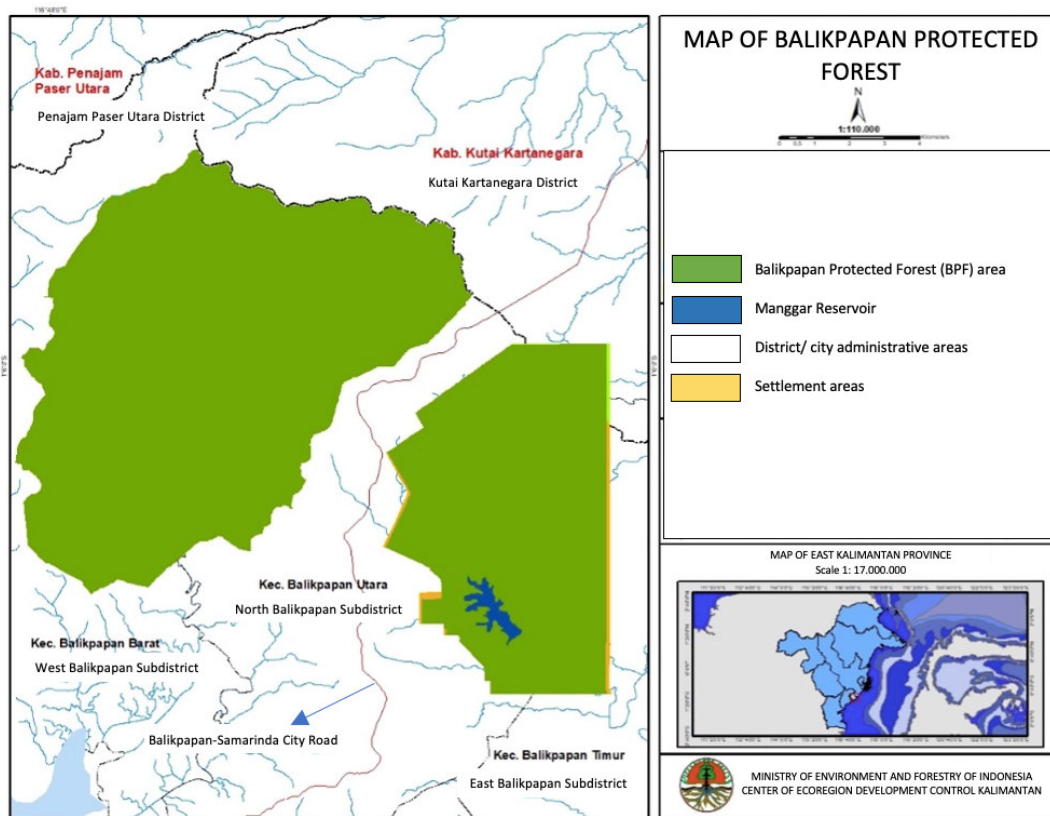


Fig. 1. Location of Balikpapan Protected Forest (BPF)

## 2.2. Data Analysis

The data collected were in the form of primary data and secondary data. Primary data collection was carried out through observation, in-depth interviews, and focus group discussions. In-depth observations and interviews were carried out to determine the tourism potential and how the place could be developed for tourism. Meanwhile, secondary data collection was carried out through literature and document studies.

The initial informant for the in-depth interviews was selected from the literature, which resulted in the selection of existing tourist destination managers that were already operating at BPF. There are three existing tourist destinations in BPF (Table 1): (1) the Environmental Education Tourism Area (KWPLH) with rehabilitated endangered sun bear species as the main attraction; (2) Sungai Wain Tropical Rain Forest with forest tracking and bird-watching as the main attractions; and (3) Balikpapan Botanical Garden, with a collection of endangered flora as the main attraction.

Subsequent informants were identified using the snowball sampling method to gather the relevant data. The search for key informants stopped when the informants recommended the same informants. This was to ensure that all potential informants were identified and that information was collected completely. Informants who represented stakeholders in this study were people

who had strategic positions, namely leaders or representatives of institutions related to tourist destination. Interview was recorded using a digital voice recorder combined with note-taking.

Focused group discussions (FGD) were also conducted on several occasions where possible. For example, when the research team visited the Balikpapan Botanical Garden, the manager and its staff welcomed the team. In the first hour, we conducted FGD, followed by in-depth interviews in the subsequent hours. The research team split up to conduct interviews with the informants.

## 2.3. Data analysis

The collected data was analysed descriptively to provide an overview of the potential tourist destinations in BPF. A descriptive analysis was carried out to describe the tourist destinations based on the 6A tourism principles, which is widely used as a basis for developing tourist destinations to ensure visitor satisfaction. Initially, Cooper et al. [10] introduced the 4A principle of tourism development where a tourist destination was considered a product with four main attributes, namely: attractions, accessibility, amenities (including accommodation, restaurants, shops, and other supporting facilities), and additional services (additional facilities). Furthermore, tourism principles developed into 6A after Buhalis [7] added available tour packages and activities.

List of informants and their roles in Balikpapan Protected Forest (BPF)

Table 1

No.	Stakeholders/ Institutions	Informants	Roles related to Balikpapan Protected Forest	Data collection
1	Balikpapan Botanical Garden	The manager and the staffs	A local government institution established for endangered plant conservation	Observation, in-depth interview, and FGD
2	<i>Sungai Wain</i> Tropical Rain Forest (HLSW)	The manager and the staffs	A tourist destination located in BPF, established since early 2000s.	Observation, in-depth interview, and FGD
3	Sun Bear Environmental Education Tourism (KWPLH)	The manager and the staffs	A tourist destination located in BPF, established since mid-2000s.	Observation, in-depth interview, and FGD
4	Forest Management Unit (KPHL Balikpapan)	Field forestry officer	An institution responsible for managing BPF.	In-depth interview, and FGD
5	Forest Farmer Group " <i>Wana Lestari</i> "	The group leader and several members	A group of local people living in the surrounding BPF area, who were granted 100-150 hectares of forest area through a social forestry program.	Observation, in-depth interview, and FGD
6	Forest Farmer Group " <i>Mitra Bersama</i> "	The group leader and several members	A group of local people living in the surrounding BPF area, who were granted 100-150 hectares of forest area through a social forestry program.	Observation, in-depth interview, and FGD
7	Forest Farmer Group " <i>Harapan Sejahtera</i> "	The group and leader several members	A group of local people living in the surrounding BPF area, who were granted 100-150 hectares of forest area through a social forestry program.	Observation, in-depth interview, and FGD
8	A member of a forest farmer group	The owner of an agrotourism " <i>Petik Buah</i> "	A forest farmer who managed about 2 hectares of the BPF forest area through a social forestry program using agrotourism.	Observation and in-depth interview
9	<i>Karang Joang</i> Village Government	The Head of Village Government and sub-village leaders	BPF areas are in the Karang Joang administrative areas.	Observation, in-depth interview, and FGD
10	Local public figures	A local public figure in <i>Karang Joang</i> Village	A forest farmer who managed about 2 hectares of the BPF forest area through a social forestry program.	Observation and in-depth interview

The development of potential tourist destinations in BPF also refers to several studies in the literatures such as *Tourism Principles, Practices, Philosophy* by Goeldner and Ritchie [18] and *Tourism Destination Management: Achieving Sustainable and Competitive Results* by Stange and David [34]. Several other studies report that institutional aspects are also important in supporting the sustainability of tourist destinations [24, 28]. However, institutional aspects are not used as a reference because BPF is a state forest managed by the government, the only institution that is allowed to manage forests based on regulations.

### 3. Results and Discussions

#### 3.1. Results

##### 3.1.1. General Results

There are three tourist destinations in BPF, namely: (1) Environmental Education Tourism Area (KWPLH) with the main attraction being the endangered sun bear, which has been rehabilitated; (2) *Sungai Wain* Tropical Rain Forest with the main conservation objectives of forest tracking and bird-watching; and (3) Balikpapan Botanical Garden, with a collection of rare plants as a special attraction.

The results of the survey on potential new destinations show that there are 11 new tourism potentials that can be agrotourism, which utilises agricultural land provided by BPF through social forestry schemes. Of the 11 potential new tourist destinations, three destinations are already operating and accepting visitors, and one destination will operate soon. Other destinations are still potential places proposed by research informants. This third tourist destination that is

already operating in BPF was formed on the initiative of the local community and is managed by an independent community. Table 2 presents the potential for new tourist destinations in BPF.

The identified tourism potential is presented in Table 2. Most of it was proposed by informants taking into account the local characteristics available in their respective villages. For example, the Kampung Tape Tourism Village was proposed by a forest farmer group, namely "Tani Makmur", because the villagers are producers of fermented sticky rice or what is known as "tape". These local products are distributed and sold to shops and restaurants throughout Balikpapan City.

Almost similarly to the Kampung Tape Tourism Village, the concept of the "Meranti Forest", tourist village was also formed because of the initial idea of a group of forest farmers, namely "Mitra Bersama" who saw the tourism potential in their village. There is a 20 hectares forest area planted with Meranti (*Shorea leprosy*). Based on an interview with a member of the farmer group, the Meranti forest was initially established through a rehabilitation program several decades ago. The beauty of the "Meranti Forest" tourist forest will also be complemented by fish-based culinary tourism, because most of its members have small-scale freshwater fish cultivation in their backyards. Based on the official website, the Meranti Forest tourist village officially opened on March 12, 2022, offering forest tracking, camping, and rental places for activities [43].

Apart from the Tourism Village, interviews and observations also revealed

that there are spots in Manggar Reservoir that have tourism potential. Manggar Reservoir is equipped with buildings that aim to facilitate local and national sporting events, such as rowing, canoeing, and swimming. This building was constructed and managed by the Balikpapan City

Youth and Sports Department. From this building, a beautiful view of the reservoir is visible. The idea to develop Manggar Reservoir tourism began with members of forest farmer groups around the location who wanted to add it as an additional attraction.

Table 2  
*Potential tourism destinations identified in the Balikpapan Protected Forest (BPF)*

No	Tourism potentials	Attractions	Manager/Administrator	Information
1	Agrotourism "Kebun Pak Agus"	Fruit and vegetable harvesting	A member of the forest farmer group	Receiving visitors
2	Tourism village "Kampung Tape"	Local culinary: Fermented sticky rice	Forest farmer group "Tani Makmur"	Receiving visitors
3	Agrotourism "Petik Jambu Kristal"	Guava and other fruits harvesting	A member of forest farmer group "Harapan Sejahtera"	Receiving visitors
4	Agrotourism "Wana Lestari"	Agroforestry; Fishing	Forest farmer group "Agro Wana Lestari"	Planning stage
5	Tourism village "Hutan Meranti"	Forest tracking, camping and local culinary	Forest farmer group "Mitra Bersama"	Planning stage
6	Wood bridge on Manggar Reservoir	Scenic view of Manggar resevoir from the wood bridge; fishing	Forest farmer group "Wana Tirta"	About to begin operation
7	Bike tracking	Bike riding through agricultural areas and forests	Forest farmer group "Harapan Sejahtera"	Planning stage
8	Agrotourism "Tunas Harapan"	Agroforestry; "Kelulut" honey farm	Forest farmer group "Tunas Harapan"	Planning stage
9	Agrotourism "Mekar Maju"	Agroforestry; "Kelulut" honey farm	Forest farmer group "Mekar Maju"	Planning stage
10	Agrotourism "Karet Benua"	Agroforestry, Culinary cassava-based food; Compost making	Forest farmer group "Karet Benua"	Planning stage
11	Manggar Reservoir	Scenic view of Manggar reservoir from a sport facility	-	-

Another tourism potential in BPF is agrotourism which was also expressed by the informants in this research. Agrotourism is closely related to the long-standing agricultural practices carried out by local communities in BPF. This agricultural practice was facilitated by a community forestry program (Hutan

Kemasyarakatan / HKm) which began in the mid-1990s at the research location. The community forest program aims to reduce social conflict as well as conservation efforts in BPF.

At the time, BPF was still divided into HLSW and HLSM. Officially, the community forestry program in BPF,

particularly in HLSW, started in 2011, with an area of 1,400 hectares located outside the forest core zone [37]. However, historically, the illegal occupation of HLSW areas by the community has existed from the mid 1990s. In 2004, around 1,100 hectares of HLSW areas were reported occupied by the local community due to poverty [31]. Mentioned before, the agricultural practices in HLSM started more than five decades ago when the government initiated the transmigration program in the 1960s [45].

### 3.1.2. The Accessibility Aspect of Tourism Potentials

Accessibility makes it easy for tourists to get tourist locations. Accessibility can be

in the form of transportation facilities, stations or terminals, directions, airports, roads, and so on [42]. Judging by the accessibility aspect, the tourism potential in BPF is relatively easy to reach from the nearest city, namely Balikpapan City. Table 3 shows that the distance to the tourist locations is between 10-20 km from the city center. The furthest location is the "Pick Crystal Guava" agrotourism, which is located 23 km from the city center of Balikpapan. On the other hand, there is no tourism potential in BPF, which is less than 10 km from Balikpapan City.

To describe accessibility to tourism potential in this research, the type of vehicle that can pass through the road is used as an indicator of road quality (Table 3).

*Accessibility of tourism potential in Balikpapan Protected Forest (BPF)* Table 3

Tourism potentials	Distance from city centre		Type of vehicles			Transport options	
	11-20 km	> 20 km	Buses	Cars	Motorcycle	Public transport	Public transport
Agrotourism "Kebun Pak Agus"	√		√				√
Tourism village "Kampung Tape"	√		√				√
Agrotourism "Petik Jambu Kristal"		√	√			√	√
Agrotourism "Wana Lestari"		√		√		√	√
Tourism village "Hutan Meranti"	√			√			√
Wood bridge on Manggar Reservoir	√			√			√
Bike tracking	√				√		√
Agrotourism "Tunas Harapan"		√		√		√	√
Agrotourism "Mekar Maju"		√		√		√	√
Agrotourism "Karet Banua"		√		√		√	√
Manggar Reservoir	√		√				√



If the road is accessible by bus, it means the road can be accessed by other small vehicles, such as cars or motorbikes. This description is relatively easier compared to the type of road (gravel, asphalt, or concrete), whose condition is greatly influenced by the climate in tropical regions. For example, the agrotourism "Petik Guava Crystals" is the furthest away, but can be reached by bus, which means cars and motorbikes can also reach this location.

The quality of the roads to access tourism potential in this study is mostly in the high to medium category. Except for the "bike tracking" tourist destination which can only be accessed by motorbike, this shows that the quality of the roads is not optimal. However, most of the tourist potential in BPF can be accessed by private car or motorbike.

The transport routes available at several BPF tourism potentials are public transport vehicles in the form of small cars with a maximum capacity of 8-10 passengers. However, because it is located close to Balikpapan City, online transportation can also reach all the tourism potential in BPF, especially using motorbikes. This is supported by cell phone signals which cover all the tourism potential in BPF.

### **3.1.3. The Attraction and Activity Aspect of Tourism Potentials**

The research results (Table 4) show that the potential for developing tourist attractions in BPF includes activities

related to family education and agriculture.

The results of the interviews with the agrotourism manager at "Pak Agus Gardens" show that family-related activities such as picnics and family gatherings have been held several times at this place. This activity occurs at the request of visitors by looking at the existing potential, and the management views this as an opportunity for tourism development. This phenomenon also occurs in agricultural tourism attractions. The potential for agricultural tourism attracted the interest of visitors who asked the management to explain in detail the process of planting several types of plants to elementary school students from North Balikpapan.

The tourism potential that creates activities can be an attraction for visitors as well as a realistic option in developing the potential for agricultural-based tourism in BPF. This can be seen in one of the agrotourisms "Pak Agus Gardens" which is very popular with visitors. Visitor data show that from 2018 to 2020 (before the COVID-19 pandemic) there was a trend of increasingly more tourists visiting the "Pak Agus Garden" destination (Table 5). However, during the pandemic, there were no tourist visitors due to the lockdown policy implemented by the government from early March to early July 2020 to prevent the spread of the disease. Of the three agrotourism potentials (Table 4) surveyed, only the "Pak Agus Garden" agrotourism has an official visit record document.

Plans for developing attractions of tourism potentials in BPF Table 4

Tourism potentials	Development of tourist potential attractions
Agrotourism "Kebun Pak Agus"	Venue for family events: social gathering, picnics, corporate meetings, family gatherings; walking through farmland; construction of playgrounds and camping ground
Tourism village "Kampung Tape"	Homestay construction for visitors, tracking to the forest
Agrotourism "Petik Jambu Kristal"	Track construction crossing agroforestry lands, environmental education, camping ground establishment
Agrotourism "Wana Lestari"	Track construction crossing agroforestry lands
Tourism village "Hutan Meranti"	Forest tracking establishment; local guava farm harvesting; bamboo forest tracking, river travelling and fishing
Wood bridge on Manggar Reservoir	Fishing, agricultural product harvesting
Bike tracking	Track construction crossing agroforestry lands
Agrotourism "Tunas Harapan"	Fruit and vegetable picking, agricultural education
Agrotourism "Mekar Maju"	Fruit and vegetable picking, agricultural education
Agrotourism "Karet Banua"	Fruit and vegetable picking, agricultural education
Manggar Reservoir	Venue for family events

The number of institutions visiting "Kebun Pak Agus" agrotourism Table 5

Year	Number of institutions	Information
2018	14	Data have been recorded since November 2018
2019	33	
2020	19	<ul style="list-style-type: none"> <li>• Data have been recorded up to July 2020;</li> <li>• Temporarily closed due to Covid-19 from March to June 2020</li> </ul>

An interview with Agus Basuki, the founder of agrotourism "Pak Agus Garden" (Figure 2), indicates that visitors are dominated by three categories, namely students from educational institutions, a small number of families and government agencies. There are eight main activities that attract visitors to this

location (Table 6). All these activities are carried out using agricultural land covering an area of around 4 ha. On several occasions, the management also introduced the surrounding tourism potential in the form of a reservoir area which is around 2 km from the agrotourism location.

Another agrotourism potential that is of great interest to visitors is the "Petik Jambu Kristal (PJK)" agrotourism, the PJK Destination managed by one of the members of the forest farmer group, namely "Harapan Sejahtera", which is located in North Balikpapan. PJK agrotourism utilises agricultural land planted with guava (*Psidium guajava* L.), and a small portion of this land is planted with other agricultural commodities. Based

on an interview with the owner named Eko, the agrotourism "Petik Jambu Kristal" initially started by simply planting guava to increase income while meeting the demand for fruit in Balikpapan. However, as time went by, the owner saw an opportunity for agrotourism considering its close location to the connecting highway between Balikpapan City and Samarinda City.



Fig. 2. "Kebun Pak Agus" agrotourism located in Balikpapan Protected Forest

*Tourism activities recorded in “Kebun Pak Agus” agrotourism*

Table 6

Categories	Activities
Agriculture	Fruits and vegetables picking
	Eating on the spot with local food
	Walking around agricultural land
Environmental education	Feeding animals
	Compost making
	Agricultural education
	Planting agricultural plants
	Education about local agricultural products

Of the various attractions that can be offered, it turns out that the "PJK" agrotourism only relies on the activity of picking guava fruit as the main attraction. However, the owner plans to develop the PJK destination by utilising 20 hectares of agricultural land located in another area within an affordable distance of around 500 meters from the PJK location. The fruit picking activity has the potential to be developed because there are several other types of fruit trees at this location, such as durian, snake fruit, and other local plants. Fruit diversification for fruit picking agrotourism and the addition of facilities in the form of a gazebo are believed to attract the interest of visitors [2]. Tourist attractions will also be added by developing educational activities in the form of making compost, making natural fertilizers and pesticides, as well as general agricultural cultivation education as a means of environmental learning for students [35].

#### **3.1.4. Amenity, Ancillary Services and Available Packages**

The study has shown that the accommodation facilities to support tourism potentials in BPF are mainly hotels, homestays, and other rent houses available in the city of Balikpapan. Official statistical data stated that the total number of hotels and other accommodations in Balikpapan City was 174, but only 15 of them were located in North Balikpapan District [4]. Most of the hotels and other accommodations in Balikpapan were found in the Districts of South Balikpapan (71) and Balikpapan City (50). From the observation, the closest hotel to the BPF tourism potentials was a 5-star hotel located about 10 km away. Hotels and other accommodations in Balikpapan City were supported by various transportation options that make it easier for visitors to get to tourist sites in BPF.

In BPF, there are also homestays which are only available in *Sungai Wain* Tropical Rain Forest tourism. Interviews with the manager state that these homestays are provided to HLSW visitors for supporting animal observation activities. For instance, bird-watching is usually conducted in the morning or evening. However, limited availability of homestays to support BPF tourism potentials provide the opportunity for the establishment of new homestays or other affordable accommodations. These new affordable accommodations might also provide a source of income for the local people.

Other facilities related to amenities are local restaurants, which can be found along the main road connecting between Balikpapan and Samarinda City. This means that the distance between tourist potentials in BPF and local restaurant facilities is between one to three kilometres. There are also small canteens, located even closer to tourist potentials in BPF. These small canteens were provided by local people for serving students at various schools and universities located in North Balikpapan Districts. There are

several prominent universities located the district which are also close to BPF: Kalimantan Institute of Technology, Balikpapan Polytechnic, and School of Oil and Gas.

Observations further report that ancillary services (additional facilities) are also relatively easy to find around BPF (Table 7). Buhalis [7] stated that telecommunications facilities were included as additional facilities in tourism. The most important telecommunications facility at the time of this study was phone cellular services, represented with cellular towers (BTS/Base Transceiver Station). However, the presence of BTS as an indicator of cellular signal coverage was difficult to detect. Therefore, this study used data from the Central Bureau of Statistics for the City of Balikpapan to determine the number of BTS around BPF. From these data sources, the number of BTS towers in North Balikpapan District was 115 out of a total of 460 BTS in Balikpapan City. This figure was the second largest after South Balikpapan, with 127 BTS.

*Ancillary services or additional facilities available near BPF* Table 7

Ancillary services	Quantity	Nearest location	Distance from BPF (Km)
ATM centre	2	Jl. Soekarno-Hatta km 10, Balikpapan Utara	1 – 3
Health services/ clinic	2	Jl. Soekarno-Hatta km 12, Balikpapan Utara	0 – 5
Police stations	1	Jl. Soekarno-Hatta km 23, Balikpapan Utara	0 – 6
Convenient stores	3	Jl. Soekarno-Hatta km 12, Balikpapan Utara	0 – 3

Regarding the available packages, the results showed that almost none of the operated agrotourism visitors who

participated in this study used tour packages that are usually provided by tour agents. Visitors find more information

about tourist destinations from friends or family and the mass media. This means that the existence of these tourist destinations was still unknown by travel agents. Official data reveal that the number of travel agents in Balikpapan City in 2019 was 195, the largest among a total of 10 cities or regencies in East Kalimantan Province [5]. However, the number of travel agents in Balikpapan that still survived after the Covid 19 pandemic was unknown. The tourism sector was one of the worst affected sectors by the global pandemic.

### **3.2. Discussions**

#### **3.2.1. The Difference Between Conventional Tourism and Agrotourism and How to Develop It**

From the research, agriculture-based tourism or agrotourism relies heavily on activities on the tourist site to attract visitors. Activities such as fruit and vegetable picking, eating on the spot, or agricultural education are the main attractions themselves. This is different from conventional or nature tourism which distinguishes between the aspects of attractions and activities. Nature tourism relies on natural beauty, such as beaches, mountains, or rivers as the main attraction for tourists, while the activity aspect is used as an additional attraction that supports the main attraction. Moreover, Sadd and Gouthro [32] categorized 11 types of events or activities conducted in conventional tourist destinations, namely: (1) business or corporate events; (2) fundraising; (3) exhibitions or markets; (4) entertainment; (5) festivals; (6) government and civil events (7); special events/celebrations; (8) marketing events; (9) meeting/convention; (10) social events;

and (11) sports events. However, these events might be incompatible when implemented in agrotourism.

Based on the literatures, there are several methods to develop agrotourism. Roman et al. [30] suggested that innovations for agrotourism can be carried out through product, process, marketing, and organizational. The authors stated that product innovation is carried out by adding products, while process innovation is carried out by adding technology. Meanwhile, marketing innovation is done to get closer to potential visitors, and organizational innovation is achieved by increasing the capacity of managers. For agritourist destinations that are already operational in this research, product and marketing innovation should be carried out to maintain the number of visits. On the other hand, for agrotourism potentials, process and organizational innovation can be achieved by collaborating with the government tourism institutions in Balikpapan City, at the East Kalimantan Province or Ministry of Tourism.

The other strategy for developing agrotourism potentials in BPF is to combine with culinary tourism, which is known as gastronomic tourism. Gastronomy tourism can be defined as a tourist trip with the main intention is to taste special foods made in a certain area [19]. In this case, the authenticity (indigenous) or the originality of the food and drink in a certain area is the main attraction for tourists to visit [26]. An example of gastronomic tourism is a wine-producing and plantation area, which is one of the famous tourist destinations in Australia [8]. Another example is culinary tourism in Andalusia, Spain [12].

One of the tourism potentials identified in BPF in this study, Tourism village

"*Kampung Tape*", can be categorized as culinary tourism and can be integrated with agrotourism "*Kebun Pak Agus*" due to the proximity of the location. Other tourism potential identified in BPF can also develop culinary tourism with the main ingredients of the agricultural products they produce.

### **3.2.2. Agrotourism for Developing Countries and Its Impact on Biodiversity**

Agrotourism might have economic benefits for developing countries. A study conducted by Bhatta and Ohe [3] states that agrotourism plays an important role for the economics of developing countries by providing new jobs, alleviating poverty, and developing rural areas. Research conducted by Jęczyńsk et al. [20] reported that income from agrotourism can contribute 30% of total household income in Poland. In the Philippines, direct sales of agricultural products from farmers have increased due to agrotourism [38]. Meanwhile, in Thailand, agrotourism is able to involve 90% of farmers as workers and contribute 80% of household income [9]. In other developing countries, such as Vietnam, agrotourism can also alleviate poverty in the area [36].

Part of the BPF areas used for agrotourism certainly have lower biodiversity compared to previously tropical rain forests. Tropical forests have been turned into agricultural land and settlements, causing a significant reduction in biodiversity. However, agrotourism in BPF can be considered an effort to resolve tenurial conflicts.

Research on the impact of agrotourism on forest sustainability, especially in tropical forests, is limited. However, farmers utilised land applying agroforestry

in a social forestry program in the agrotourism in BPF. In this case, the social forestry program can bridge the need to provide land for food as well as forest conservation efforts. Moreover, a study conducted by Waithe [41] reported that farmers involved in agrotourism in Trinidad play important roles in the conservation of tropical forests and the environment in several activities: reforestation, species rotation, organic farming, and local consumption. In Bali, the implementation of agrotourism supports forest conservation efforts in Buyan Lake and Tamblingan Nature Parks [40]. However, in Kenya, agrotourism has a negative impact because it creates conflicts between animals and humans due to the construction of tourist facilities [22].

### **3.2.3. Agrotourism and Its Roles to Support Environmental Education**

Agrotourism can potentially be integrated with environmental education. In agrotourism, environmental education can be taught to visitors, and it can influence the view and behaviour of tourists towards the surrounding environment. In this study, agrotourism owners present information on agricultural activities to visitors from the beginning of planting to post-harvest. Owners such as Agus Basuki might easily share information about agricultural activities because they understand agricultural knowledge which has become part of their daily activities.

Several studies have revealed that agrotourism can support environmental education. A study conducted by Brune et al. [6] reported that experiences in visiting agrotourism raise visitors' motivation in purchasing local foods. Moreover, the study also revealed that close

communication with local food and farmers expand the visitors' perspective about local foods. Further, a study conducted by Peroff et al. [27] reported that farmers involved in agrotourism are motivated and actively share their views about land stewardship and sustainable food production to visitors. The environmental education topic presented in agrotourism might not only be limited to agriculture. It can be about local culture and ecology [44].

However, not all agrotourism managers have enough capacity and capability to deliver environmental education to visitors. This is a considerable challenge for agrotourism implementation in BPF. Here, the role of government institutions or private sectors is necessary to provide adequate trainings about environmental education and how to deliver it to visitors. For the BPF management institution, collaboration with other government institutions need to be established, considering the limited budget and human resources to provide trainings to its forest farmers.

#### 4. Conclusions

Eleven new tourism potentials were identified that could be developed at the BPF location. The agrotourism scheme is an appropriate tourism model to be implemented in the Balikpapan Protected Forest Area based on the character of the community, the majority of whom are social forestry farmers. The potential for agrotourism development is supported by good accessibility, amenities, additional services, and available packages. The government plans to develop agrotourism by involving local communities in forest areas, which has the potential to minimize

social conflict, provide employment opportunities for local communities, encourage the economy of communities in and around the forest, increase regional income, and become a vehicle for environmental education for the community. This information can be input for local governments in preparing future management policies for the BPF area.

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