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TOURISM POTENTIAL IN AY ISLAND, CENTRAL MALUKU REGENCY

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Abstract

Tourism in Indonesia has very great potential. The potential of Indonesian tourism is classified into three resources: natural tourism potential, cultural tourism potential, and man-made tourism potential. (buatan). Tourist visits with an interest in natural attractions in Indonesia are also very promising, due to Indonesia's geographical condition as an archipelagic country. There is one region in Indonesia that consists of many small islands, namely the Banda Islands, Central Maluku Regency, Maluku Province, which is famous for its natural beauty and historical tourism. Many tourism potentials have already been identified, but they have not been well developed because they do not consider sustainability aspects. Therefore, further identification of the tourism potential on Ay Island is needed, along with an analysis of the assessment factors that can determine the viability of developing the tourism potential. To achieve this objective, the study began with a descriptive-qualitative analysis of the existing conditions at the research location and described the potential tourism sites. It then analyzed the factors affecting the feasibility of developing these potentials using the ADO-ODTWA analysis. The research results indicate that there are 3 beach locations suitable for development and 4 cultural potential sites, with 2 of them being suitable for development.

Keywords: *c ADO-ODTWA, Banda, Beach, Cultur, Tourism.ommon public culture, election, human rights, liberal democracy, post-secularism, separation of power and Universalist religion*

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Introduction

One of the growing areas of research in Indonesia is tourism. Tourism in Indonesia holds considerable potential and has become one of the key sectors driving economic growth. Its development not only fosters economic enterprises but also empowers local communities. Indonesia is endowed with vast regional diversity, owing to its geographical location at the convergence of three tectonic plates. This unique geological setting contributes to the country's rich and valuable natural variety. These diverse landscapes and cultural features have been utilized by local communities as tourist attractions, drawing interest and visits from both domestic and international tourists.

Tourism can be categorized based on the type of attraction it offers. According to Pendit (as cited in Marsono, 2018 in Harira, 2020), tourism can be classified into three main types: natural tourism, cultural tourism, and special interest tourism. Among these, natural tourism is the most commonly found in Indonesia. Natural tourism refers to a type of tourism that is primarily based on the beauty of natural landscapes and ecosystems (Pendit in Marsono, 2018 in Harira, 2020). Given Indonesia's geographical characteristics as an archipelagic country with lowlands, highlands, and mountainous regions, the nation possesses a broad range of natural variations and potential tourism spots. One of the regions in Indonesia comprising many small islands is the Banda Islands, located in Maluku Province.

The Banda Islands consist of two sub-districts, namely Banda and Banda Islands Subdistricts, and comprise 12 islands: Banda Besar, Neira, Gunung Api, Ay, Run, Syahrir, Hatta, Keraka, Suanggi, Nailaka, Manukang, and Batu Kapal Islands. The Banda Islands are well-known for their natural beauty and historical significance. Historically, Banda District played a vital role in global trade, particularly due to its abundance of nutmeg—a highly valuable commodity at the time. One notable event is the exchange of Run Island for Manhattan Island, documented in the Treaty of Breda signed on July 31, 1667, in Breda, the Netherlands (Nusantara Spice Archive Sources of the 17th–18th Century, 2021).

Furthermore, the Banda Islands are designated as a National Strategic Area (Kawasan Strategis Nasional/KSN), alongside the Seram KAPET and border regions, as stated in Indonesia's National Tourism Development Master Plan 2010–2025, regulated under Government Regulation No. 50 of 2011. According to the Central Maluku Regency Tourism Development Master Plan (RIPPARDA) of 2016, the Banda Islands possess flagship tourism potentials categorized into three main types:

- Marine nature tourism, such as the Banda Sea Marine Park and Malole Beach;
- Historical tourism, such as Belgica Fort and the Old Well;
- Mountain tourism, such as Mount Banda Api.

In addition to these, there are many other tourist destinations scattered across nearly every island in the Banda Archipelago. One of the most notable is Ay Island. Ay Island is often referred to as the "Heart of the Banda Islands" due to its role as a key vegetable-producing area. Another important island is Run Island, known for its natural and historical tourism assets, such as Sebelah Beach and Fort Revenge. However, these potential attractions have not been optimally developed due to the lack of proper identification and assessment. Therefore, it is necessary to conduct thorough identification and evaluation of these tourism potentials to support their development. The urgency of this research lies in the fact that the Banda Islands have been officially designated as a National Strategic Area, which should be a focal point for development. This aligns with the mission of Pattimura University, which is to become a center for the development of human resources, science, technology, and arts that are excellent, characterized, cultured, and archipelagic-based.

Research Methodology

This study was conducted in three stages: data collection, data processing, and data analysis. The research approach employed is quantitative descriptive, using a scoring analysis technique based on the ADO-ODTWA (Analysis of Operational Area – Tourism Object and Attraction Assessment) framework. Primary data were collected through direct observation, while secondary data were obtained from institutional documents and literature studies, including relevant journals and findings from previous research related to the study object. The scoring analysis method is used to evaluate the feasibility value of historical landscapes and the natural tourism potential of each site as a tourist attraction. The outcome of this analysis will classify each site based on its potential category. A detailed assessment of each category is presented in the following table.

Table 1. Criteria for Tourism Attraction Assessment

Number	Elements/Sub-elements of Tourist Attraction:	Score				
1	Uniqueness of Natural Resources	Available 5	Available 4	Available3	Available 2	Available 1
	a. Variety of Island/Mountain Views at Sea					
	b. Coastal Beauty					
	c. Fauna	30	25	20	15	10
	d. Harmony of Coastal Views and Surrounding Landscape					
	e. Lake					
2	Nature tourism activities that can be done: a. Sunbathing b. Surfing	Available 5	Available 4	Available 3	Available 2	Available 1

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	c. Swimming d. Boating e. Enjoying the scenery	30	25	20	15	10
3	Cleanliness of the tourist site, not affected by: a. Ports b. Settlements c. Markets d. Waste e. Vandalism	Ada 5 30	Ada 4 25	Ada 3 20	Ada 2 15	Ada 1 10
4	Comfort: a. Free from disturbances caused by the local community b. Free from unpleasant odors c. Free from noise pollution d. No disruptive traffic e. Good visitor services	Ada 5 30	Ada 4 25	Ada 3 20	Ada 2 15	Ada 1 10

Sumber: *Pedoman ADO-ODTWA Dirjen PHKA, 2003*

Table 2. Accessibility Assessment Criteria

No	Element/Sub element	Score			
1	Road Condition	Good	Moderate	Poor	Bad
		30	25	20	15
2	Distance from the city center	<5 km 30	5-10 km 25	10-15 km 20	>15 km 10
3	Travel time from the city center	1-2 jam 30	2-3 jam 25	3-4 jam 20	≥5 jam 10

Sumber: Pedoman ADO-ODTWA Dirjen PHKA Tahun, 2003

Table 3. Supporting Facilities Assessment Criteria

Number	Elements/Sub-Elements of Supporting Facilities and Infrastructure	Score				
		≥4	Availabale 3	Availabale 2	Availabale 1	Non Availabale
1	Facilities: a. Food stalls b. Bank c. Market d. Souvenir shop e. Restaurant	50	40	30	20	10
2	upporting Infrastructure): a. Post office b. Community health center (Puskesmas) c. Drinking water supply network d. Electricity network e. Telephone network	50	40	30	20	10

Sumber: *Pedoman ADO-ODTWA Dirjen PHKA Tahun, 2003*

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Tabel 4. Assessment Criteria for the Feasibility of Historical Tourism Attraction Potentials

Authenticity of Historical Landscape				
No.	Criteria	Skor		
		1 (Low)	3 (Moderate)	5 (High)
1.	LandUse	Experiencing land changes >50%	Experiencing land changes 25 - 50%.	Non Experiencing land changes <25%.
2.	Building	Building elements undergo structural changes and alterations. They do not represent the character and architectural style of the past. There are few old buildings around the site with an age of more than 50 years.	Building elements undergo structural and element assimilation but still represent the character and architectural style of the past. There are quite a number of old buildings over 50 years old around the site.	Building elements do not undergo changes in character, structure, or elements. They strongly represent the character and architectural style of the past. There are many old buildings over 50 years old around the site.
3.	Spatial pattern	The arrangement pattern of landscape elements and buildings has changed from the original condition.	The arrangement pattern of landscape elements and buildings has slightly changed from the original condition.	The arrangement pattern of landscape elements and buildings has not changed from the original condition.
4.	Accessibility and Circulation	Access and circulation to the landscape have undergone changes in characteristics."	Access and circulation to the landscape have undergone changes but still retain their original characteristics."	Access and circulation to the landscape have remained unchanged and relatively unaltered, with their original characteristics still intact
Historical Tourism Attraction				
1.	Historical Association	The element has no historical association	The element has a weak historical association	The element has a strong historical association
2.	Integrity	The character, structure, and function of the element are not integrated and harmonious with the surrounding environment.	The character, structure, and function of the element are fairly integrated and harmonious with the surrounding environment.	The character, structure, and function of the element are well-integrated and harmonious with the surrounding environment.
3.	Rarity	The character and structure of the element are common, easily found elsewhere, and do not possess historical value.	The character and structure of the element are distinctive, but can still be found in certain places and hold historical value	The character and structure of the element are unique, rarely found elsewhere, and hold significant historical value.
4.	Aesthetic Quality	The character and structure of the element do not possess aesthetic value or architectural style that reflects its uniqueness from the past.	The character and structure of the element still retain some aesthetic value or architectural style that reflects its uniqueness from the past.	The character and structure of the element exhibit aesthetic value or architectural style from the past in nearly all parts, including ornamental details.
Physical and Environmental Condition of the Historical Landscape				
1.	Physical Condition	The landscape condition is unmaintained	The landscape condition is well-maintained	The landscape condition is very well-maintained
2.	Environmental Condition	The surrounding environment does not support the existence of the landscape/element	The surrounding environment supports the existence of the landscape/element, but its character is not prominent	The surrounding environment supports the existence of the landscape/element and enhances its character
3.	Vegetation	Natural vegetation density >80%	Vegetation density between 40-80%	Vegetation density <40%
4.	topography (%)	>45	>15–45	0–15

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5.	Soil type	>90% soil volume	>15-90% soil volume	0-15% soil volume
Ease of Access				
1.	Ease of Access	Entry permits to the tourist area are difficult to obtain, the tourist site is located in a hard-to-reach area, and it is risky if visited by many people.	Entry permits to the tourist area are not too difficult to obtain, the tourist site is moderately accessible, and there is a moderate risk if visited by many people.	Entry permits to the tourist area are easy to obtain, the site location is easily accessible, and the risk is low or even non-existent when visited by many people.
2.	Capasitas	- The location and access roads of the tourist site cannot accommodate vehicles. - The site can only be reached by foot, and it can accommodate fewer than 100 visitors.	- The location and access roads can accommodate small vehicles such as bicycles and motorcycles. - The site can only be reached by small vehicles and can accommodate between 100 and 300 visitors.	- The location and access roads can accommodate medium to large vehicles. - There is adequate parking space, and the site can accommodate more than 300 visitors.
3.	Clarity	- There are no signs or directions to reach the tourist site. - Local residents provide very limited information about the site's existence.	- There are a few signs or directions to reach the tourist site. - Some local residents are aware of the site's existence.	- There are many signs and clear directions to reach the tourist site. - Local residents are well informed about the site's location and existence.

Source: Harris & Dinnes in Sukmaratri, 2018

Results and Discussion

Ay Island possesses significant potential, both in terms of natural resources and cultural heritage. This is influenced by the island's rich natural environment as well as its history of foreign occupation. Below are the various potentials found on Ay Island that are frequently visited by tourists.

Figure 1. Map of Natural Potentials on Ay Island

Source: Personal Documentation, 2024

Figure 2. Map of Cultural Potentials on Ay Island
Source: Personal Documentation, 2024

A. Perk Welvaren

Perk Welvaren is one of the largest Perks on Ay Island, covering an area of 16,598 m². This Perk is located near residential settlements and serves as one of the main tourist destinations on Ay Island, alongside Benteng Revenge, due to its relatively intact condition and the clear visual experience it offers. The site can be accessed on foot because it is close to the local community. However, in its current state, parts of the Perk's interior have been built over with residential houses, reducing its original authenticity. Additionally, several walls of the Perk have been damaged and collapsed.

Gambar 3. *Perk Welvaren*

Source: Personal Documentation, 2024

B. Perk Matalenco

Perk Matalenco is a frequently visited site located near residential areas, covering an area of 16,469 m². The current condition of this Perk is that only the gate walls remain. The site can be accessed on foot.

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Gambar 4. *Perk Matalenco*

Source: Personal Documentation, 2024

C. Benteng *Revenge*

Revenge Fortress is a Dutch fort built in 1616 on Ay Island by Adriaan van der Dussen with the aim of monopolizing the clove trade on the island. The existing condition of the fortress remains intact, although the walls are overgrown with grass. Revenge Fortress is a main tourist destination on Ay Island and can be accessed on foot.

Figure 5. Revenge Fortress

Source: Personal Documentation, 2024

D. Old Bethlehem Church

Old Bethlehem Church is a church built in 1611 and is the oldest church in Southeast Asia, located on Ay Island. Although the church is no longer in operation, the building still stands intact and can be fully appreciated visually. In front of the church, there is an old Dutch cemetery, which is one of the destinations frequently visited by tourists. This cemetery contains the graves of several Dutch nobles and their family members.

Gambar 6. Gereja Tua Betlehem

Source: Personal Documentation, 2024

Gambar 7. Makam Tua Belanda

Source: Personal Documentation, 2024

E. Sabla Beach

Sabla Beach is one of the beaches located on the western side of Ay Island and is accessible via a path that passes through a nutmeg forest. It can be reached either on foot or by motorbike. However, visitors must park their motorbikes in an open area near local residents' gardens and continue the journey on foot to the beach. Alternatively, it can be accessed by sea transportation such as a ketinting or longboat, with an estimated travel time of approximately 15 minutes from Ay Island's pier. Stretching about 1.42 kilometers, the beach features a long expanse of white sand and offers stunning natural views, including a scenic vista of Rhun Island. Currently, the beach lacks supporting facilities such as toilets and seating areas for relaxation.

F. Sabla Parbai Beach

Sabla Perbai Beach is one of the beaches located on the northern left side of Ay Island and is easily accessible through the local residential area. It can be reached on foot or by motorbike. Alternatively, it is also accessible by sea transportation such as a ketinting or longboat, with an estimated travel time of approximately 10 minutes from the Ay Island pier. The beach stretches approximately 0.4 kilometers and features a long expanse of white sand with a beautiful natural landscape, including a scenic view of the open sea. Currently, the beach lacks supporting facilities such as toilets and seating areas for visitors to relax.

G. Nama Beach

Nama Beach is one of the beaches located on the northern right side of Ay Island and has good access through the local residential area. It can be reached either on foot or by motorbike. Alternatively, it is also accessible via sea transportation such as ketinting or longboat, with an estimated travel time of approximately 10 minutes from the Ay Island pier. The beach stretches for about ± 0.53 km and features a mix of white sand and shiny black sand, with stunning natural scenery, including views of the open sea and Mount Api. Currently, the beach lacks supporting facilities such as toilets and seating areas for visitors to relax.

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From the description of this potential, it is clear that Ay Island possesses a high degree of both natural and cultural diversity. However, these potentials have not yet been fully developed. To optimize these resources, a feasibility analysis is needed to assess the development potential using the ADO-ODTWA analysis method. The following section presents the feasibility assessment of the existing tourism potentials on the island.

Figure 5. Beach Location Assessment

1. Sabla Beach						
Criteria	**Weight**	**Value**	**Score**	Max Score	Indexs (%)	Information
Attraction,	6	90	540	720	75	high
Accesibility	5	70	350	450	78	high
Supporting facilities	3	30	90	180	50	medium
eligibility level					68	
2. Sabla Parbai Beach						
Criteria	**Weight**	**Value**	**Score**	Score Max	Indexs (%)	information
Attraction	6	90	540	720	75	high
Accesibility	5	70	350	450	78	high
Supporting facilities	3	30	90	180	50	medium
Level Eligibility					68	
3.Nama Beach						
Criteria	weight	Value	Score	Score Maxl	Index (%)	information
Attraction	6	90	540	720	75	high
Accesibility	5	70	350	450	78	high
Suporting facilities	3	30	90	180	50	medium
Level Eligibility					68	

Sumber: Analisis data primer, 2024

Based on the calculation results presented in the table above, it is evident that Pantai Sabla, Pantai Sabla Parbai, and Pantai Nama are considered feasible for development as tourist destinations, with an overall feasibility percentage of 68%. In terms of attractiveness, the area scores 75%, indicating a high level of natural appeal and suitability for tourism development. The accessibility criterion also shows a favorable score of 78%, suggesting that the sites are relatively easy to access and thus feasible for tourism growth. However, in terms of supporting facilities and infrastructure, the area only reaches a 50% feasibility score, indicating the need for further development to meet the standards of a nature-based tourism destination. In addition to the assessment of natural tourism potential, an evaluation was also conducted on the historical landscape potential found on Ay Island. The following table presents the assessment of the historical landscape for each historical site identified:

Table 6. Assessment of Historical Landscape Location

Tourism object	Variabel									
	Landscape Authenticity		Historical Attraction				Accessibility Ease			Score total
	Land Use	Building	Historical Association	Integrity	Rarity	Aesthetic Quality	Accessibility	Capacity	Clarity	
Perk Welvaren	5	5	5	3	3	5	5	3	3	37
Perk Matalenco	1	1	3	1	3	1	5	3	3	21
Fort Revenge	5	5	5	3	3	5	5	3	3	37
Old Church and Dutch Cemetery	5	3	5	3	3	5	5	3	3	35

Tourism Feasibility and the Geopark

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Development Concept for Ay Island

Based on the analysis in Table 6, it is evident that Perk Welvaren and Fort Revenge are the sites with the highest feasibility scores, each scoring 37 points. These high scores are attributed to the relatively intact condition of both structures, which still visually represent architectural forms from the past and are well-preserved. Following closely is the Old Church Complex, which scored 35 points. In contrast, Perk Matalenco received the lowest score of 21, primarily due to the collapse of its main structure, leaving only the gateway standing as a visual remnant. Tourism sites with high historical landscape feasibility scores can serve as primary attractions to draw visitor interest. Meanwhile, those with medium to low significance—like Perk Matalenco—can still be optimized through improved tourism infrastructure, such as enhanced accessibility and additional visitor facilities, thereby increasing their tourism value.

From the feasibility assessments and identification of tourism potential on Ay Island, it is clear that the area holds significant opportunities for tourism development due to its strong natural and cultural appeal. However, these assets have not yet been adequately developed, nor have they been managed with a focus on sustainability and conservation. To address this, the Geopark concept is proposed as a comprehensive and sustainable tourism development strategy. The Geopark framework not only focuses on the preservation of geodiversity but also promotes the conservation of biodiversity and cultural heritage, while encouraging local community empowerment in tourism area management (Farsani, Coelho, & Costa, 2011). Furthermore, Geoparks serve as strategic tools for community-based tourism development, contributing to local well-being, identity, and resilience (Hosseini, Bagherpour, & Sahraian, 2021).

The integration of environmental, socio-cultural, and economic sustainability makes the Geopark approach highly relevant for Ay Island. This holistic strategy ensures that tourism development not only generates economic benefits but also maintains the ecological and cultural integrity of the island (Reyjol et al., 2021). Therefore, the application of the Geopark model is well-suited for the sustainable development of Ay Island's tourism potential.

A. Environmental Aspects

The development of tourism on Ay Island must prioritize the sustainable management of natural resources while safeguarding the island's unique ecosystems. Sustainability in tourism is achieved by balancing ecological integrity with socio-economic benefits, ensuring that development does not compromise the needs of future generations (UNEP & WTO, 2005). This entails comprehensive planning that integrates land-use regulation, resource allocation, biodiversity protection, and long-term environmental stewardship. Currently, Ay Island does not have a formal waste management system. Waste disposal practices remain informal, with residents commonly disposing of household waste by dumping it in surrounding forest areas or through open burning. Although the visible waste is temporarily minimized, these methods have serious ecological implications. Open dumping and burning can lead to soil degradation, biodiversity loss, and the release of air pollutants such as dioxins and particulate matter, which pose health risks and contribute to climate change (Wilson et al., 2012). Such practices also threaten the long-term ecological carrying capacity of small island ecosystems, which are particularly vulnerable to environmental pressures due to limited land area and fragile habitats (Rocamora & Wulf, 2018).

Furthermore, poorly managed waste systems in tourist destinations often lead to the degradation of natural attractions, reducing the quality of visitor experiences and undermining the economic value of tourism (Zhou & Ap, 2009). Therefore, integrating sustainable waste management solutions is essential to any tourism development strategy on Ay Island. Community-based waste segregation, composting, and the introduction of decentralized waste treatment facilities such as biogas digesters or pyrolysis units could help address the issue effectively (Guerrero, Maas, & Hogland, 2013). In addition to waste concerns, preserving the island's biodiversity is crucial. Ay Island hosts both marine and terrestrial ecosystems that are vital for maintaining ecological resilience and sustaining the livelihoods of local communities. The island's coral reefs, coastal mangroves, and nutmeg-based agroforestry systems are ecologically valuable and represent important assets for eco-tourism. The degradation of these ecosystems would not only result in environmental loss but also diminish the core appeal of Ay Island as a tourism destination (Saarinen, 2006; Honey, 2008).

Promoting environmental education, involving the local community in conservation initiatives, and enforcing zoning laws that restrict overdevelopment in ecologically sensitive areas are necessary measures. Participatory planning approaches that empower residents to take part in environmental decision-making have been shown to foster stewardship and enhance sustainability outcomes in community-based tourism models (Giampiccoli & Saayman, 2017). In conclusion, sustainable tourism development on Ay Island requires a multidimensional strategy that integrates environmental protection with tourism planning. By addressing issues such as waste management, biodiversity conservation, and community engagement, the island can maintain its ecological integrity while fostering responsible tourism.

B. Economic Aspects

The development of tourism on Ay Island holds considerable potential to enhance the local economy, primarily by leveraging the island's abundant natural beauty and rich cultural heritage. These resources form the foundation for a community-based tourism model that actively involves local residents in tourism-related services, thereby ensuring that the economic benefits remain within the community. Residents of Ay Island have begun to capitalize on tourism by offering essential services such as boat transportation to nearby natural attractions, acting as local tour guides, and providing homestay accommodations for visitors seeking immersive experiences. These activities align with the principles of community-based tourism, which emphasize local ownership, capacity building, and benefit-sharing (Giampiccoli & Mtapuri, 2020).

The island's economy has traditionally relied on agriculture and fishing. Ay Island is known for its production of nutmeg and various vegetables, which are not only consumed locally but also distributed to other parts of the Banda Islands. This agricultural output has earned Ay the nickname "the heart of the Banda Islands." Fishing remains a vital livelihood as well, contributing to both local food security and income generation. In recent years, small-scale businesses have become increasingly prominent. These include family-owned kiosks selling snacks and basic goods, as well as emerging ventures such as local eateries (warung), which cater to both tourists and residents. The development of tourism has opened new economic avenues for women and youth, who participate by preparing and selling local foods, handmade crafts,

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and cultural souvenirs. According to Su and Xu (2020), this kind of localized economic diversification is a key component of sustainable rural tourism, fostering resilience and reducing dependence on single income sources.

Moreover, tourism has the potential to stimulate multiplier effects within the local economy — increasing demand for agricultural produce, fish, and artisanal products. This, in turn, encourages the preservation of traditional occupations and enhances community pride in local identity. When local communities are economically empowered and tourism is managed inclusively, it can result in a more equitable distribution of tourism gains and long-term economic sustainability (Scheyvens & Russell, 2012). However, to maximize these economic benefits, targeted capacity-building programs and policy support are essential. These may include training in hospitality, financial literacy, and sustainable business practices, as well as improving infrastructure such as roads, ports, and waste management systems to support tourism growth. When combined with environmental and cultural sustainability efforts, this holistic economic strategy can transform Ay Island into a thriving model of integrated, community-led tourism development.

C. Socio-Cultural Aspect

The development of tourism on Pulau Ay continues to consider the local community and its cultural identity by promoting inclusive participation in tourism planning and management. The local government of Pulau Ay has proposed initiatives to ensure that tourism development respects and celebrates the community's heritage. One such initiative includes the organization of a cultural event lasting three days, which will feature daily traditional activities such as fishing, farming, and nutmeg processing — from harvest to preparation for sale. This event also aims to showcase the unique cultural heritage of Pulau Ay, including the "Adat Buka Kampung" (traditional village-opening ceremony) and the Maruka dance, which is traditionally performed during this ceremony. These forms of cultural expression play a vital role in maintaining the intangible heritage of the community and serve as a medium for cultural transmission to younger generations and visitors alike. Events like these not only enhance cultural pride but also offer potential for cultural tourism that aligns with sustainable development goals (UNWTO, 2018).

Pulau Ay's social structure is characterized by religious and cultural diversity. The community comprises approximately 15 Christian-headed households residing near the coastal area, with the remaining majority of the population identifying as Muslim. Religious infrastructure on the island includes a church located near the Christian settlement and a mosque situated close to Benteng Revenge, both of which reflect the pluralistic nature of the island's social fabric. From a sustainability perspective — encompassing environmental, economic, and socio-cultural dimensions — Pulau Ay demonstrates supportive conditions for community-based tourism, though these are not yet fully optimized. The existing cultural and social resources are assessed through the ADO-ODTWA (Analytical Descriptive Object - Object of Natural Tourism Attraction) framework, which helps evaluate the feasibility of developing tourism potentials. This analysis reinforces the viability of Pulau Ay's cultural assets as core components of sustainable tourism planning. Integrating local knowledge and participation in tourism management is essential to achieving long-term sustainability (Scheyvens, 1999). Moreover, promoting cultural heritage in tourism aligns with broader efforts to safeguard local identities in the face of modernization (Su et al., 2019). Pulau Ay, therefore, holds promising prospects for socio-culturally sustainable tourism that benefits both residents and visitors.

Conclusion

After conducting an assessment of the tourism potential on Ay Island, it is necessary to carry out tourism area planning. Based on the analyzed potentials, there are three beaches with equal feasibility values suitable to be developed as tourist attractions: Sabla Beach, Sabla Parbai Beach, and Nama Beach. In addition, there are historical sites with potential to be developed as heritage tourism destinations, such as Revenge Fortress and Perk Welvaren, which still have well-preserved physical structures. From a sustainability perspective—considering social-cultural, economic, and environmental aspects—the conditions on Ay Island fully support the planning and development of tourism.

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