



Sustainable tourism development strategy: Integration of environmental, social, and economic sustainability in business and economic research

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Received Date: October 6, 2024

Revised Date: January 30, 2025

Accepted Date: January 30, 2025

ABSTRACT

Background: Tourism development in Kabui Bay, Raja Ampat, faces unique challenges in integrating local economic interests with environmental and social sustainability. **Methods:** This study evaluates the tourism potential in Kabui Bay by focusing on implementing ecotourism principles and local community participation. The study identified key factors influencing sustainable tourism development through a qualitative methodology that included in-depth interviews, field observations, and document analyses. **Findings:** The results showed that although Kabui Bay has excellent potential as an ecotourism destination, there is an urgent need for sustainable infrastructure development, capacity building of local communities, and effective marketing strategies to attract tourists. **Conclusion:** The research recommends closer cooperation between government stakeholders, the private sector, and local communities to ensure that tourism development brings equitable economic benefits while maintaining the cultural values and natural wealth of Kabui Bay. **Novelty/Originality of this article:** This study uniquely highlights integrating ecotourism principles with local community participation, emphasizing the need for sustainable infrastructure and strategic collaboration for balanced tourism development.

KEYWORDS: community participation; ecotourism; environmental sustainability; sustainable tourism development.

1. Introduction

Kabui Bay, located in South Waigeo District, Raja Ampat Regency, is a destination rich in natural beauty and cultural diversity, making it a potential tourism center. Its strategic location and accessibility from the regency capital further increase its potential as a tourist destination. Despite its various natural and cultural attractions, tourism development in Kabui Bay faces several challenges, mainly related to inadequate infrastructure, limited active participation of local communities, and lack of effective marketing strategies.

Kabui Bay, located in the South Waigeo District of Raja Ampat, is a destination brimming with tourism potential, celebrated for its stunning natural beauty and rich cultural diversity. The area is part of Raja Ampat, a region recognized for its commitment to sustainable

Cite This Article:

Manggaprouw, R. E., Wurarah, R. N., & Mustiah, D. (2025). Sustainable tourism development strategy: Integration of environmental, social, and economic sustainability in business and economic research. *Journal of Economic, Business & Accounting Research*, 2(2), 85-103. <https://doi.org/10.61511/jembar.v2i2.2025.1216>

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marine tourism. It is critical to preserving its unique ecosystem and cultural heritage (Gustiarini et al., 2023). An analysis of travelers' opinions of Raja Ampat Tourism Destinations, including areas such as Kabui Bay, underscores visitors' positive perceptions, particularly appreciating the region's cultural diversity and underwater beauty (Adiastuti et al., 2018). This aligns with broader efforts in villages such as Saporkren to develop tourism that capitalizes on natural and cultural potential while ensuring sustainability and community benefits (Komiter & Rahardjo, 2023). The approach taken in Raja Ampat towards tourism development, with a focus on EduEco Tourism, emphasizes ecological balance and environmental education, which will directly benefit areas such as Kabui Bay by promoting responsible tourism that respects and preserves the natural and cultural environment (Rasyid et al., 2022).

Fujiwara et al. (2021) state that the preservation of natural landscapes and integration of local cultures, as seen in Kaga Beach, Japan, suggests that any natural attractions in Kabui Bay should also aim to maintain harmony between human activities and biodiversity, including unique terrestrial ecosystems or culturally significant sites. The potential for mangrove ecotourism, such as that explored at Sungai Kupah, suggests that mangrove areas in Kabui Bay could serve as excellent sites for nature-based tourism, offering educational and recreational opportunities Nurani et al., (2019). Similarly, the diverse attractions at Suwuk Beach, including coastal vegetation and a range of recreational activities, suggest that Kabui Bay could benefit from a mix of natural and man-made attractions to cater to various visitor interests (Mongi et al., 2015). The study of the Tihlepuai Bay Clam Farm highlighted the importance of sustainable marine ecotourism, suggesting that Kabui Bay could also focus on conservation efforts to protect its marine life while accommodating tourists (Tuhumena, 2023). As seen in Konga Bay, planning for sustainable tourism development can ensure that Kabui Bay remains a beautiful, enjoyable, and long-lasting tourism landscape that benefits local communities (Yusiana, 2011).

Dowling (1991) explain that a balance between tourism development and environmental protection, as discussed in the context of Shark Bay, Australia, is critical to maintaining the natural beauty and ecological integrity of Kabui Bay. Educational programs, such as those developed for Hanauma Bay, can enhance the visitor experience at Kabui Bay by integrating science and culture into the tourism offering (Saputra, 2021). The diversity of fiddler crab species in Sungai Liku Nature Park shows that small-scale fauna, such as crabs, can also be an attraction in Kabui Bay, contributing to overall biodiversity.

However, challenges that stand in the way of realizing Kabui Bay's tourism potential must be addressed. The lack of adequate infrastructure, such as transport facilities, accommodation options, and waste management systems, poses significant barriers to attracting and accommodating tourists. Infrastructure improvements are crucial to overcoming the challenges hindering the full realization of Kabui Bay's tourism potential. Seetanah et al. (2011) highlighted the significance of infrastructure in tourism destination development. Infrastructure support such as transport, accommodation, and waste management are key barriers that must be addressed to improve tourist attraction and experience. Research by Wani & Nagaraj (2022) confirms that sustainable infrastructure such as transport, water supply, waste management, and sanitation are critical to ensuring tourism sustainability. Investment in infrastructure can also drive regional development (Yan et al., 2022). In this context, it is essential to understand that tourism infrastructure includes physical, social, and cultural aspects (Turayev & Atamurodov, 2021). Support from the government and stakeholder collaboration are also necessary for the success of tourism destinations (Mccomb et al., 2016). By improving tourism infrastructure, Kabui Bay can increase its competitiveness in the tourism industry and support sustainable tourism practices. By better understanding sustainable tourism models, tourism practitioners and other stakeholders can guide sustainable tourism development efforts (Wanjiku et al., 2022).

Involving local communities in the development of tourism in Kabui Bay is essential to ensure the sustainability of the tourism industry in the region. The active participation of the local population not only helps preserve the cultural heritage but also ensures that the

economic benefits of tourism are pretty distributed among community members (Mak et al., 2017). In this context, effective marketing strategies are also vital in raising awareness of Kabui Bay as an attractive tourist destination (Shyshkin & Onyshchenko, 2023). Utilizing digital platforms, collaborating with travel agents, and participating in tourism exhibitions and events can help increase the visibility of Kabui Bay and attract more tourists to the area (Shyshkin & Onyshchenko, 2023).

Sustainable tourism growth requires a comprehensive approach focusing on short-term economic gains, environmental conservation, social sustainability, and empowerment of local communities. In this context, ecotourism and sustainable development principles can be integrated into a holistic development strategy. This study aims to analyze the potential and challenges of tourism development in Kabui Bay, focusing on identifying strategies that can support sustainable tourism development. This research is essential because it will provide recommendations based on empirical data that can be used by policymakers, destination managers, and local communities to optimize the benefits of tourism while minimizing its negative environmental and social impacts.

2. Methods

This research utilized qualitative and quantitative approaches to understand various aspects of sustainable tourism development in Kabui Bay. The methods were designed to collect comprehensive data regarding the potential, challenges, and practical strategies for responsible tourism development. The research was conducted in Kabui Bay, South Waigeo District, Raja Ampat Regency. The study lasted six months, allowing sufficient time for data collection and analysis. The research was conducted in the area of Kabui Bay, South Waigeo District, Raja Ampat Regency, as shown in the following map Fig. 1.

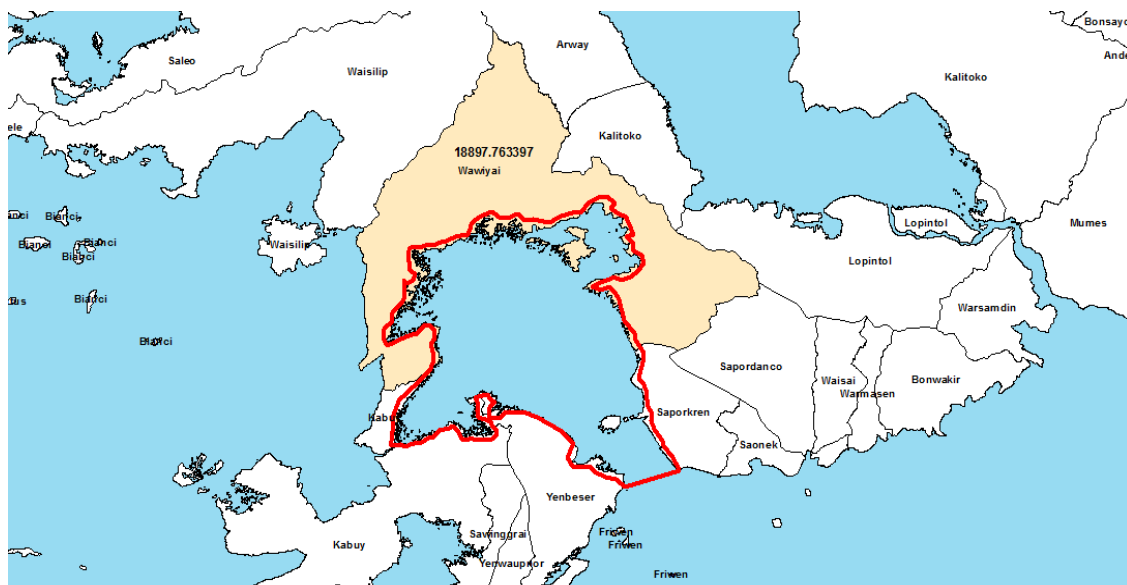


Fig.1. Waters of Kabui Bay, South Waigeo District, Raja Ampat Regency

This study was conducted over three months, beginning in January 2023 and ending in March 2023, which allowed for sufficient time to gather and analyze comprehensive field data. In-depth interviews, quantitative surveys, and field observations are the methodological approaches for data collection. Twenty key stakeholders, including tourism entrepreneurs, government officials from the Raja Ampat Tourism Office, and representatives of the local community, were interviewed to gain an understanding of their perspectives on tourism management, the primary challenges that are encountered, and the strategies that have been proposed to improve the sustainability of tourism in Kabui Bay. Additionally, surveys were carried out with several visitors and local inhabitants to collect quantitative data on the levels of satisfaction, experiences, and expectations regarding the

tourism facilities and services available in Teluk Kabui. The respondents were selected through purposive sampling, and the visitors who took part in the survey were those who had visited Teluk Kabui for a minimum of one day.

Data from interviews and observations were analyzed using a thematic analysis approach to identify the main issues and patterns that emerged in tourism management in Kabui Bay. Survey data were processed with descriptive statistics to measure tourist and local communities' trends, preferences, and behavior patterns. To ensure the accuracy of the results, this study applied data triangulation, comparing findings from various methods and sources of information. In addition, validation was carried out through a stakeholder review, which assessed relevance and strengthened the recommendations made.

Processing and Analysis Data from interviews and observations were analyzed using thematic analysis to identify key themes and emerging patterns. Meanwhile, data from the survey was analyzed using descriptive statistics to measure trends, preferences, and behavior patterns of tourists and local communities. Furthermore, data triangulation combined results from multiple sources and methods to validate findings and strengthen research recommendations. Data validation was based on stakeholder reviews to ensure the accuracy and relevance of findings and recommendations.

Among tourism development indicators is the Standard of Eligibility to Become a Tourist Destination, Smooth tourism facilities, and infrastructure. Infrastructure is defined as a seamless process of procuring and upgrading hotels, restaurants, entertainment venues, and so on, as well as road and transport infrastructure that is smooth and affordable for tourists.

Table 1. Standard eligibility criteria for tourism destinations

No.	Criteria	Minimum Standard
1.	Object	There is one of the natural, social, or cultural elements
2.	Access	Existence of roads, accessible routes, parking lots, and affordable parking prices
3.	Accommodation	The existence of lodging services (hotels, guesthouses, inns, etc.)
4.	Facilities	Shopping agencies, information centers, salons, health facilities, fire brigades, hydrants, TIC (Tourism Information Center), and Guiding (tour guides). Information signs, officers checking for entry and exit of travelers
5.	Transportation	The existence of convenient, varied local transportation that connects entry access
6.	Catering Service	Food and beverage services (restaurants and eateries, rice stalls, etc.).
7.	Recreational activities	There is something to do at the tourist site, such as skydiving, sunbathing, surfing, sightseeing, etc.
8.	Shopping	Purchase points for general merchandise
9.	Communication	Presence of television, public telephone, radio, cell phone signal, voucher seller (cell phone top-up), and internet access)
10.	Banking system	The existence of Banks (several numbers and types of banks and ATMs and their distribution.
11.	Health Polyclinic	General clinic/assurance of service availability, which is suitable for illnesses that travelers may suffer from
12.	Security	Security guarantees (special security officers, tourist police, beach supervisors, attention signs, directions to tourists)
13.	Hygiene	Trash bins and warning signs about cleanliness
14.	Means of worship	There is one of the worship facilities for tourists
15.	Educational facilities	There is one of the formal education facilities
16.	Sports facilities	There are tools and equipment for exercise

(Lothar A.Kreck in Agus Bushro, 2014)

The eligibility standards for tourist destinations, as conceptualized by Lothar A. Kreck, can be synthesized from the insights provided across the various research contexts; by integrating the core principles and findings from this study, we can outline a comprehensive

understanding of what constitutes eligibility criteria for tourist destinations as outlined in Table 1.

3. Results and Discussion

3.1. Description of research location

Kabui Bay is located in the South Waigeo region, one of the four major islands in the Raja Ampat Islands of West Papua, Indonesia. The bay geographically offers relatively easy access from the district capital, making it a strategic location for tourism development. The region has calm waters, spectacular karst panoramas, and a stretch of small islands forming a mesmerizing natural landscape. Kabui Bay is a bay that is part of Waigeo Island, the largest of the 4 main islands in the Raja Ampat Islands. Kabui Bay is more accessible to reach Waisai by sea for approximately 30 minutes than by land, as the available land route must go through the forest. The waters of Kabui Bay have a depth that varies between 18 to 53 meters from the mean sea level. The average depth in the central part of the area is 35 meters deep. The entire water area of Kabui Bay is included in the administrative area of Wawiyai village (purple color bordered by a red line in Fig. 2). However, in addition to the water area, Wawiyai village has a relatively large land area still in the form of a forest (in Fig. 2, shaded light brown color).



a. Pencil stone Geosite



b. Batu Wajah

Fig. 2. (a) Pencil stone geosite, and (b) Face stone

Kabui Bay is recognized for the natural beauty that it has managed to maintain, which includes magnificent karst rock formations, verdant mangrove forests, and rich marine fauna. A stunning environment is created by these geological features, which have been molded throughout thousands of years. This scenery contributes to the region's attraction to people interested in nature and exploring new places. The clean waters of Kabui Bay, which are alive with a wide array of coral reefs and marine life, make it an ideal location for snorkeling and diving. Visitors can explore vibrant underwater ecosystems that are home to various fish species, sea turtles, and other marine critters.

In addition to its maritime charms, Kabui Bay also provides a wealth of chances for ecotourism, drawing in visitors interested in ecotourism activities like bird watching, cave exploring, and trekking. Several endemic bird species may be found in the bay, such as Wilson's bird-of-paradise (*Cicinnurus ResPublica*) and the Red bird-of-paradise (*Paradisaea rubra*), which attract ornithologists and wildlife photographers from all over the world. The spectacular cliffs, secret caverns, and natural rock archways all contribute to creating a mystical atmosphere, enticing tourists looking for an immersive experience in nature that has not been altered. Some of these caverns, old rock art, and cultural remnants look into the early civilizations that may have previously occupied the area.

Significant cultural and historical importance can be found at Kabui Bay, in addition to its natural beauty. Visitors can engage in a unique cultural exchange thanks to the indigenous populations residing in the nearby villages. These people have retained ancient

fishing skills, storytelling traditions, and local craftsmanship. Travelers can obtain insights into sustainable ways of life, traditional boat-making techniques, and local culinary practices passed down from generation to generation when they establish relationships with local populations.

Taking everything into consideration, Kabui Bay is a perfect location for those concerned about the environment since it offers a balanced combination of natural beauty, adventure, and cultural richness. Kabui Bay is home to several attractions that prove to be among the most captivating.

3.1.1 Attractions of pencil stone geosite

Pencil stone Geosite is located in the middle of Kabui Bay and is a pointed karst rock approximately 12 meters high, shaped like the tip of a pencil. Almost all Raja Ampat trip groups stop by Batu Pensil when exploring Kabui Bay. Since 2017, a platform has been built under Batu Pensil so that speedboats can dock, and since then, the Kabui Bay area, especially Batu Pensil, has become paid per speedboat Rp 300,000. There is no need to approach the Retribution Post, which is not far from Batu Pensil, because the officer will approach with his speedboat once he sees a speedboat docked so that payment can be made directly to the officer. Pencil Stone Geosite is the most recognized tourist attraction compared to other tourist attractions in Kabui Bay (Fig. 2).

3.1.2 Attractions of stone face tourism

Kars rocks shaped like the faces of two people with sharp noses looking from the side are located opposite the Pencil Rock Geosite and are referred to by the community as Face Rock. The community and tourists say so because the shape of the stone is similar to a piece of a human head seen from the side, which looks like a human face, as if two people are facing each other. The face stone platform becomes one location with the pencil stone platform. Through this platform, tourists can take pictures of the Pencil Stone Geosite freely. If the group of tourists or tourists bring lunch, lunch can be enjoyed on the platform while relaxing and admiring the beauty of the scenery around the Pencil Stone and Face Stone Geosite.

3.1.3 Potential tourism attraction of batu gendong

Not far from the pencil stone and carrying stone, there is a karst shaped like a person carrying something on the shoulder. Batu Gendong, when viewed from the side and close distance, is also similar to the Sitting Buddha Statue (Fig. 3).



a. Batu Gendong



b. View

Fig. 3. Batu Gendong (a) and (b) view from the top of Kabui Bay (Manyaifun) in Kabui Bay, 2022.

3.1.4 Kabui peak (manyaifun) tourism attraction

The view of the expanse of karst islands is no less exciting and beautiful. To reach Kabui Peak, you can climb neatly arranged wooden stairs and small rock paths. Climbing to Kabui

Peak takes only 5 minutes. The view from the top of Kabui Peak is not as beautiful as that of Wayag Island or Piyainemo, but it still has its beauty with a stretch of karst islands lined up with the characteristics of the Raja Ampat tourist area.

3.1.5 Tourist attractions of marindal peak

Puncak Marindal is a new tourist attraction developed in 2017 by the customary owner, A.M. (Fig. 4), which is a trek to the top of a karst. Tourists must pass several steps to reach the top, around 230. At the top of the kars are two viewing platforms with views to the west of Kabui Bay in the form of calm waters with many kars. At several stops along the way up the stairs, there are views towards Wawiyai village. Tourists can rest and have lunch on the spacious, comfortable jetty where the boat or speed is docked. At certain times, if requested, local arts played by the children of Wawiyai village can be performed.



Fig. 4. Marindal Peak, Kabui Bay

3.1.6 Potential attractions of cave tourism

Several caves are found in the rock cliffs along Kabui Bay on the Waigeo Island side, one of which is the signposted Wawiyai Cave, which smells of bat droppings. The condition of the cave is unique because the existence of the cave mouth is very dependent on the ebb and flow of seawater. If tourists like cave tours, it is exciting to try to stop at the Wawiyai cave because it can be an alternative spot that can be visited. However, the Wawiyai Cave spot generally looks less attractive to tourists (Fig. 5).



Fig. 5. Wawiyai Cave, Skull Cave

Another cave is a cave with many human bones and ancient items. Where this cave was thought to be a grave before humans recognized graves for the dead. In Kabui Bay, there is also Kelamin Cave, a cave with rocks in the shape of male genitalia and stalactites and stalagmites. Kabui Bay also has various murals, but the murals that are easiest to see and have quite a lot of motivation are the murals of Waiganyom and Gaman. Various ancient drawings are found on the karst walls (Fig. 6).



Fig. 6. Sex cave and mural of Waiganyom and Gaman

3.1.7 *Tourism potential of giant karst maze.*

Kabui Bay is extensive, from its entrance on the East side near Yenbeser Village on Gam Island until it ends before entering the narrow strait between Waigeo Island and Gam Island). Along this area, there are so many small karst islands of various shapes that it becomes a unique attraction for tourists in Kabui Bay that will confuse tourists in the middle of the collection of karsts.



Fig. 6. A cluster of karsts that form a giant maze

3.1.8 *Potential tourist attraction: beautiful sunset at Kabui Bay*

The best time to enjoy Kabui Bay's beauty is in the afternoon when the sun is setting. The orange sky, the blue sea water, and the twilight sun rising and falling between the karst islands make for an unbeatable combination (Fig. 7).

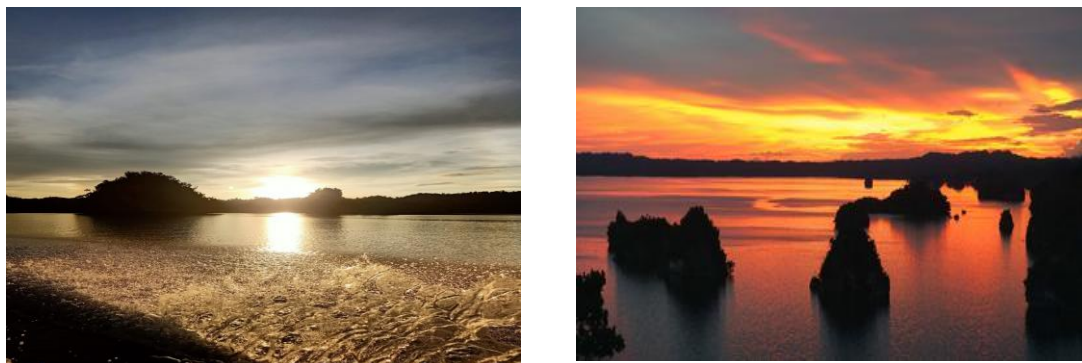


Fig. 7. Sunset view at Kabui Bay

3.1.9 *Potential dolphin tourism attraction*

In the morning, between 09.00 and 10.00 WIT, tourists often find a group of dolphins jumping cheerfully in the middle of the waters of Kabui Bay as if they want to warm up. The dolphins play around the tourists' boats (Fig. 8).



Fig. 8. A pod of dolphins in Kabui Bay.

3.1.10 Potential bird-watching attractions in Kabui Bay

The Bird of paradise observation site at Kabui Bay features an attraction of 5 to 7 birds of paradise at the same time playing on the trees that are not too high. Tourists need to trek in the morning (6-7 am) into a less dense forest as far as 300 meters to reach the tree where the birds of paradise usually play. The species of bird of paradise is the Red Cenderawasih (*Paradisaea rubra*) (Fig. 9).



Fig. 9. Flock of Birds of Paradise playing in a tree at Kabui Bay.

3.1.11 Potential cultural attraction of the king's house

A fascinating cultural or historical tourist attraction is Kali Raja in Wawiyai Village, South Waigeo District. Kali Raja is a small river with clear, calm, and cold water. It is flanked by two hills overgrown with green trees and a little reflection of white kars. When walking along the river, there is a different feeling than usual, where there is fear, anxiety, and curiosity that is even greater if you have read the history of Raja Ampat (A.M.). To be able to visit this place, you must ask permission from the Arfan clan, descendants of Raja Arfan, the owner of the Kali Raja historical site. According to the community, if there are guests who enter this place without asking for blessings, they will get disaster; besides that, every guest must have clean intentions and hearts because if anyone has bad intentions, they will get disaster (Interview A.M.).

Some people may feel afraid and anxious when visiting this place because of the cold and quiet atmosphere that adds to the impression of Kali Raja being haunted and mystical. Visitors who want to take pictures must ask permission and are expected not to enter the small house; visitors stand in front of the door where the king's egg has been seen. Visitors can rest in the house's yard, where the king's egg is. Activities that can be done are taking photos with the background of green scenery and blue river water. In addition, visitors can swim and feel the cool and fresh water of Kali Raja (Fig. 10).



Fig. 10. King egg house at Kali Raja, Kabui Bay

3.1.12 Potential tourism attractions of wawiyai village community life

Wawiyai Village is the only village in Kabui Bay; the villagers still live their daily lives in a traditional way. The main livelihood of the population is fishermen who still use traditional tools to catch fish or other marine products. Some sea products are processed into shrimp paste and salted fish, known as superior salted fish because they come from clean waters and are processed very cleanly. The boats used are mostly unmotorized or still use oars (Fig.11).



Fig. 11. Traditional life of wawiyai village community

Local communities in Kabui Bay and its surroundings are generally involved in traditional fishing activities and small-scale tourism. The rich local culture and traditions are integral to the tourist appeal, with communities still maintaining their traditional way of life amidst modern changes. Currently, Kabui Bay faces several challenges in infrastructure and tourism facilities. While accessibility by sea is relatively good, supporting infrastructure such as lodging, restaurants, and entertainment facilities are still very limited. This provides opportunities and challenges in developing the region as a sustainable tourism destination. With tremendous natural potential and cultural richness, Kabui Bay has all the elements needed to become a premium tourist destination. However, to achieve this, there needs to be a coordinated effort between the government, local communities, and investors to develop sustainable infrastructure, promote ecotourism activities, and protect its natural and cultural heritage.

3.2 Analysis of tourism destination development

There is a strong correlation between the number of tourists that visit a place each year and the development of the infrastructure in that destination. According to the most recent data, a large increase in the number of tourists has been observed in Raja Ampat Regency over the past several years. According to information provided by the Central Statistics Agency (BPS) of the Raja Ampat Regency, the total number of tourists in 2022 reached 5,725 individuals. This figure includes 4,973 tourists from other countries and 752 from within the country. A significant increase in the number of visitors occurred in 2023, reaching

19,839, with 16,153 tourists from other countries and 3,696 tourists from inside the country (BPS Raja Ampat Regency, 2023).

In the meantime, information obtained from the Raja Ampat Tourism Office reveals that the number of visitors in 2020 decreased to 4,214 individuals but then grew to 4,339 individuals in 2021 and then to 5,725 individuals in 2022. The number of tourists is expected to continue to rise until July 2023, when there will be 12,048 visitors. The number of visitors reached 33,277 in 2024, a 60 percent rise compared to the previous year (RRI, 2024).

The need to enhance tourism infrastructure in Kabui Bay is significantly impacted by the number of visitors visiting the area. Even though sea accessibility is adequate at the moment, very few supporting services are still available, such as places to stay, restaurants, and information centers for tourists. According to Mak et al. (2017), a rise in the number of visitors without appropriate infrastructure preparation might impede the expansion of the tourism sector and diminish the quality of the tourist experience.

Developing sufficient tourism infrastructure is a major obstacle to accommodating the growing number of visitors to Kabui Bay. Despite the reasonable ease of access by water, there is a severe lack of ancillary services, including lodging, dining, and visitor centers. This is in keeping with research that shows how a surge of visitors without sufficient infrastructure may slow down the tourism industry and ruin visitors' experiences. Thus, real measures must be implemented to enhance the area's tourist infrastructure and services.

Increasing the capacity of accommodations must be prioritized. New housing facilities such as homestays, hotels, and eco-lodges should be built to handle the increase in travelers. Atmojo et al. (2024) and Nurhasanah & Broeck (2022) cite research that suggests sustainable lodging development may boost local economies and make locations more appealing. To further ease travel for tourists, it is essential to improve the networks of marine transport and inter-island connections. According to recent studies (Ibănescu et al., 2022; Santana et al., 2022), destinations that are easy for tourists to reach have a leg up in the competition.

The quality and quantity of tourist services need to be drastically improved. If the services offered are to live up to the expectations of tourists, it is crucial to teach and empower the local workers to become more competent. According to studies (Benjamin et al., 2021; Renyaan, 2023), local workforces can benefit from training programs that boost their knowledge and abilities, leading to better tourist services. To mitigate the negative effects on the environment caused by the influx of visitors, it is essential that sustainable tourism policies be quickly put into place. The preservation of local cultural and environmental heritage and the equitable distribution of tourism's economic advantages are two essential tenets of such plans (Chen et al., 2024).

Kabui Bay displays tremendous potential for tourism attraction through its pristine natural beauty, such as karst formations, biodiversity, and cultural sites. This uniqueness attracts tourists who seek authentic experiences and adventures in preserved natural beauty. An analysis of infrastructure conditions shows that, while there is relatively good accessibility by sea, supporting facilities such as lodging, restaurants, and recreational facilities are lacking. These shortcomings limit the capacity of the region to receive more significant numbers of tourists and provide adequate experiences. The results indicate that while local communities have begun to engage in tourism, their participation is still limited to minor roles and does not necessarily provide sustainable economic benefits. A more structured approach is needed to engage them as more active and empowered stakeholders.

The results of observations on the fulfillment of standard criteria for the feasibility of Kabui Bay as a tourist destination are presented in Table 3. According to Table 3. Feasibility Standard Analysis of Kabui Bay's Potential as a Tourist Destination for the Year 2023, it can be determined that Kabui Bay possesses significant potential to emerge as a premier tourist destination, with diverse natural, cultural, and social attractions. This site has fulfilled several primary criteria for tourist viability, particularly regarding attractions, accessibility, transportation, security, and the availability of essential services such as places of worship,

educational institutions, and sports amenities. Access to Kabui Bay is favorable due to established maritime channels and local transit options, including speedboats and longboats, facilitating visitor movement. The local people's pristine natural beauty and cultural authenticity enhance ecotourism's growth.

Table 3. Feasibility Standard Analysis of Becoming a Tourist Destination for Kabui Bay, year 2023.

No.	Criteria	Minimum Standard	Conditions in Kabui Bay	Fulfilled Not fulfilled
1.	Objects/attractions	There is one of the natural, social, or cultural elements	There are various natural, social, and cultural elements	Fulfilled
2.	Access	Existence of roads, accessible routes, parking lots, and affordable parking prices	There are accessible sea travel routes, boat berths, and affordable boat rental and entrance fees.	Fulfilled
3.	Accommodation	The existence of lodging services (hotels, guesthouses, inns, etc.)	There are no lodging services (homestay, resort) or other accommodations.	Not Fulfilled
4.	Facilities	Shopping agents, information centers, salons, health facilities, fire brigades, hydrants, TIC (<i>Tourism Information Center</i>), and guiding. Information signs, tourist entry, and exit checkers	No shopping center, fire department, hydrants, TIC, or tourist entry and exit officers exist. There are health facilities (Pustu), tour guides, and information signs, and there are officers at several attraction locations.	Partially Fulfilled
5.	Transportation	The existence of convenient, varied local transportation that connects entry access	There is adequate transportation to travel inside Kabui Bay (there are speedboats, there are longboats)	Fulfilled
6.	Catering Service	Food and beverage services (restaurants and eateries, rice stalls, etc.).	No food and beverage services (restaurants and eateries, rice stalls, etc.)	Not fulfilled
7.	Recreational activities	There is something to do at the tourist site, such as skydiving, sunbathing, surfing, sightseeing, etc.	There are various activities that tourists can do at Kabui Bay tourist destination.	Fulfilled
8.	Shopping	Purchase points for general merchandise	There are no kiosks where general goods can be purchased in Wawiyai Village.	Not fulfilled
9.	Communication	Presence of television, public telephone, radio, cell phone signal, voucher seller (cell phone top-up), and internet access)	There are televisions, cell phones, radios, cell phone signals, and voucher sellers in Wawiyai village, but not at the tourist attraction sites.	Partially fulfilled
10.	Banking system	Existence of Banks (several numbers and types of banks and ATMs and their distribution).	There is no banking system in Kabui Bay.	Not Fulfilled
11.	Health Polyclinic	General clinic/assurance of service availability, which is suitable for illnesses that travelers may suffer from	There is no guarantee of good services for illnesses that tourists may suffer.	Not fulfilled

No.	Criteria	Minimum Standard	Conditions in Kabui Bay	Fulfilled Not fulfilled
12.	Security	The existence of security guarantees (special security officers, tourist police, beach supervisors, attention signs, directions to tourists)	There are some security guarantees (specialized security officers, police) in Wawiyai village.	Fulfilled
13.	Hygiene	Trash bins and warning signs about cleanliness	Trash bins and signs are warning about cleanliness at only two tourist destinations.	Fulfilled
14.	Means of worship	There is one of the worship facilities for tourists	There is one worship facility for tourists in Wawiyai village.	Fulfilled
15.	Educational facilities	There is one of the formal education facilities	There is one formal education facility in Wawiyai village.	Fulfilled
16.	Sports facilities	There are tools and equipment for exercise	There are tools and equipment for sports in Wawiyai village.	Fulfilled

This research indicates that Kabui Bay encounters significant infrastructure and tourism services challenges, which may impede the destination's ideal development. A significant difficulty is the scarcity of accommodations, whether hotels, homestays, or resorts, necessitating travelers to seek lodging in alternative locations. The lack of restaurants or culinary services hinders travelers seeking a more enjoyable experience. The absence of financial facilities, ATMs, and retail establishments necessitates improvement, as travelers are now required to carry cash from external sources. The lack of clinics or healthcare facilities poses a significant danger for tourists requiring medical assistance, particularly given that several recreational activities in Kabui Bay are conducted outside and engage with the marine habitat.

Certain elements remain largely addressed but require enhancement, including public amenities, tourist information centers, and communication access. Despite communication and internet signals in Wawiyai Village, the network coverage is not uniformly spread over the tourist region, necessitating expansion to enhance visitor comfort. Moreover, their quantity remains insufficient despite hygienic facilities like garbage receptacles and cautionary signage at certain locations.

A plan for enhanced infrastructure development is required to address these difficulties, emphasizing many critical factors. Promoting community-based housing options, such as homestays or eco-lodges, is essential to augment lodging capacity for visitors. The establishment of local culinary establishments and restaurants can economically benefit the community while improving the visitor experience. Third, the availability of banking services and digital payment systems would enhance travelers' convenience in executing financial transactions. Establishing clinics or tourist health posts is crucial for managing emergencies involving visitors. Furthermore, the enhancement of internet and communication accessibility, together with environmental sustainability management, are critical variables to be regarded for preserving Kabui Bay's long-term allure.

Tourism destination eligibility standards are essential to ensure the sustainability and success of tourism in an area. Various studies have highlighted the importance of implementing standards and guidelines to improve the quality of tourist facilities and services in tourist destinations (Syaputra, 2019). These standards often include interpreting media for tourist sites, food hygiene and sanitation training for culinary providers, and implementing green tourism practices to minimize negative environmental impacts (Tanius et al., 2022; Hasan, 2021). Economic growth generated by tourist arrivals

in Tourism Destination Areas (DTWs) has been shown to contribute significantly to the prosperity and well-being of residents (Sopacua & Primandaru, 2020). Evaluation of the suitability of ecotourism areas has shown that certain areas, such as the Cibadak Karst, have great potential for ecotourism development (Hasibuan & Cita, 2020). In addition, the ecological feasibility of developing natural tourist attractions, such as Seblat Nature Park, has been assessed to ensure environmental sustainability while attracting visitors (Senoaji, 2023).

The development and assessment of tourist villages, such as Kampung Cina, involves detailed analysis of investment feasibility, market needs, and spatial requirements to improve visitor appeal and the overall tourism experience (Kandi et al., 2020). Evaluation of land suitability for tourism activities, such as the Gumbang Ganang Baths Tourism Area, is essential to optimize the utilization of natural attractions and ensure visitor satisfaction (Nurlaely et al., 2022). In addition, studies on the feasibility of transportation systems, such as tourist transportation in the Dieng Tourism Area, aim to improve accessibility and sustainability in tourism development (Maya, 2022).

Tourism destination feasibility standards cover many factors, including infrastructure development, environmental conservation, economic benefits, and visitor satisfaction. By adhering to established standards and conducting a thorough assessment of various aspects of tourism development, destinations can increase their attractiveness, promote sustainable practices, and ensure a positive tourist experience while benefiting local communities. There is a growing awareness of the importance of sustainability in tourism development, but implementing sustainable practices is still in its infancy. This includes aspects of waste management, ecosystem conservation, and preservation of local culture, all of which require more concrete frameworks and policies. Existing marketing strategies have not been fully effective in attracting tourists widely. There is an excellent opportunity to utilize digital technology and social media to promote Kabui Bay as a globally attractive sustainable tourism destination. Based on these findings, recommendations have been made to improve infrastructure, support more substantial local community participation, strengthen sustainability principles, and optimize marketing strategies. These efforts are expected to position Kabui Bay as a sustainable tourism destination that can provide economic, social, and environmental benefits in harmony.

4. Conclusions

There are nine potential tourist attractions that can be developed in Kabui Bay. Some were once known as tourist attractions but are no longer visited by tourists. Three tourist attractions are often visited by tourists, namely Geosati Batu Pinsil, Batu Wajah, and Puncak Marindal. The elements of tourism development in Kabui Bay are in an incomplete condition; although there are quite a lot of exciting tourist attractions to visit and are easily accessible from the city of Waisai by sea, there are no lodging facilities, restaurants in Kabui Bay and there are also no facilities that make it easier for tourists to enjoy enjoying tourist attractions. Bridge facilities are only found at the location of tourist attractions that are already known, while at the location of potential tourist attractions, there are no facilities.

The development of Kabui Bay into a tourist destination is carried out by completing various facilities that are not yet available, and in this effort, the principles of social sustainability, environmental sustainability, and cultural sustainability will be the main factors considered. Kabui Bay has significant natural and cultural wealth, promising great advantages as a tourism destination. Key attractions include karst formations, biological diversity, and authentic local culture, all of which have the potential to attract national and international tourists. Although Kabui Bay enjoys good accessibility by sea, supporting infrastructure such as lodging, restaurants, and entertainment facilities are still inadequate. Investment in this infrastructure is essential to support tourism growth and enhance the tourist experience. Local communities have shown increasing levels of participation in tourism activities, but efforts are still needed to optimize their economic benefits. Capacity

building and tourism education can help local communities participate more actively in the tourism industry.

There is an urgent need to integrate sustainability principles in all aspects of tourism development in Kabui Bay. This includes protecting the natural environment, preserving local culture, and ensuring tourism development brings long-term benefits to local communities. Effective marketing strategies have not been fully implemented. Implementing digital marketing approaches and targeted promotions could increase the visibility and attractiveness of Kabui Bay as a sustainable tourism destination.

Acknowledgment

The authors would like to express our deepest gratitude to all the individuals and institutions that supported this research. Our special appreciation goes to the Raja Ampat Regency Tourism Office for providing invaluable permits and logistical support. We are also grateful to the local community of Kabui Bay for their willingness to share their rich knowledge and experience, which became an essential foundation for this research. The support from all these parties not only enriched our research but also helped in realize impactful research.

Author Contribution

Konseptualisasi, R.E.M. dan D.M.; Metodologi, R.E.M.; Perangkat Lunak, R.N.W; Validasi, D.M.; Analisis Formal, R.E.M. dan R.N.W.; Investigasi, R.E.M.; Sumber Daya, D.M.; Kurasi Data, R.E.M.; Penulisan - Persiapan Draf Awal, R.E.M. dan D.M.; Penulisan - Peninjauan & Penyuntingan, R.N.W.; Visualisasi, R.E.M.; Pengawasan, R.N.W.; Administrasi Proyek, D.M.; dan Perolehan Pendanaan, R.E.M.

Funding

This research received no external funding.

Informed Consent Statement

This research has received permission and recommendations from the Raja Ampat Regency Tourism Office and the local community.

Data Availability Statement

Research data can be accessed at the Reading Room of the Faculty of Fisheries and Marine Sciences, University of Papua.

Conflicts of Interest

There is no conflict of interest in the research activities carried out in Paniai Regency because this research is purely to obtain recommendations for tourism development in Paniai Regency.

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