



Development of Community-Based Ecotourism Through Local Wisdom and Marketing Mix Approach in Kampung Kwau Tourism Village, Manokwari Regency, West Papua

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ABSTRACT

This study explores the development of a sustainable ecotourism model in Kampung Kwau, West Papua, based on local wisdom and community participation. Using a modified 4A (Attraction, Amenity, Accessibility, Ancillary) framework and SWOT analysis, the research assesses the feasibility and strategic potential of Kampung Kwau as a community-based tourism destination. The findings indicate that Kampung Kwau demonstrates strong cultural and ecological attractions supported by local customs such as Igya Ser Hanjob, traditional medicine, and endemic biodiversity. However, improvements are needed in infrastructure and visitor amenities. SWOT mapping reveals a strong internal-external synergy (SO strategy), suggesting that local strengths can be leveraged to seize tourism opportunities. A participatory, educational tourism model is proposed, enabling visitors to engage directly in Arfak traditions, conservation efforts, and cultural learning. This approach positions Kampung Kwau as a model of authentic and sustainable ecotourism in Indonesia

INTRODUCTION

Ecotourism Management involves four main dimensions: social, economic, environmental, and institutional. These four dimensions serve as key indicators of the success of tourism object management (Nazwin & Hidayat, 2022). The implication of the social dimension of ecotourism, which strongly influences the management domain, is community involvement and participation. The level of participation or involvement of local communities typically occurs over several phases of ecotourism development, from pioneering to independent management of an ecotourism destination (Kaharuddin et al., 2020; Siu et al., 2020). In terms of management effects, the social dimension of ecotourism addresses the relationship between ecotourism and the welfare level of local communities (Sausan et al., 2023).

Vebriane (2020) and Sukandar & Kinseng (2021) explain that local community participation has a positive impact on ecological sustainability through activities that maintain ecosystem balance, reduce negative impacts, and strengthen conservation practices. Community involvement can also help preserve local culture and traditions by sharing knowledge about the natural environment, history, and cultural values with visitors, thereby enriching tourism experiences. Economic sustainability can also occur through community engagement, enabling locals to earn income, create jobs, and improve their livelihoods. It is also explained that local communities can participate in the planning stages, often relying on facilitators or external parties. However, as the tourism object develops, the community can independently plan ecotourism activities. In the early stages, the implementation of ecotourism activities often involves local communities. As tourism advances, professionalism and expert involvement also become necessary. Community participation in leveraging job and business opportunities in ecotourism becomes increasingly important alongside tourism development. However, participation requires facilitation, as facilitators play a crucial role in enabling local community involvement. In addition, supportive regulations and policies for local community participation must be considered.

The achievement of ecotourism management goals is desired through the application of collaborative principles among local communities, governments, and stakeholders to create participatory ecotourism that positively impacts the ecological, economic, and social aspects of the community, while supporting sustainable development. The direct involvement of communities in ecotourism management is currently known as Community-Based Ecotourism (CBET). The implementation of CBET in Papua and surrounding areas has shown positive implications for sustainable development and conservation. In Biak Numfor Regency, ecotourism based on local wisdom has the potential to improve community economic conditions through various tourist attractions (Sanggrangbano & Firmansyah, 2020). Similarly, on Liki Island in Sarmi Regency, community involvement shows the potential of marine ecotourism to drive socio-economic growth and protect biodiversity (Sriwijaya et al., 2024).

Another example from Papua New Guinea demonstrates that the CBET approach with bottom-up principles has proven successful by contributing to community welfare, economic benefits, and positive conservation outcomes without harmful cultural impacts (Sakata & Prideaux, 2013). This initiative highlights the importance of the community's role and active participation (Sakata & Prideaux, 2013). Furthermore, the economic value generated by tourism in Papua New Guinea has fostered pro-environmental attitudes among locals, benefiting both the community and the environment (Sakata & Prideaux, 2014).

CBET initiatives in ecotourism management in the Manokwari area and its surroundings have not been widely implemented using clear success indicators. Some previous studies have described the positive effects of implementation, such as the Pasir Putih coastal ecotourism which has successfully increased the income of local food vendors (Tewernusa et al., 2018). In the Arfak Mountains region, community capacity building activities have been conducted through extension services, training, and improvements to ecotourism infrastructure (Sonbait et al., 2018). Other forms of community capacity building in Kwau include the introduction of orchid species and cultivation (Arobaya et al., 2021) and enhancing community capacity through extension services and health care (Kawulur et al., 2023).

According to Sapary et al. (2017), challenges faced in ecotourism management that supports environmental conservation include shifting cultivation, which has the potential to damage forests that serve as habitats for endemic flora and fauna, particularly with population growth. An increasing population leads to greater food demand, posing a threat to forests. Another challenge is the difficult access to tourist sites. The ecotourism management strategy in Mokwam Area that supports environmental conservation includes: promoting Mokwam Area's ecotourism potential to others; maintaining local wisdom such as Igya Ser Hanjob to protect forests that are habitats for endemic flora and fauna; improving access roads to Mokwam Area; conducting comparative studies with similar tourist sites; and collaborating with neighboring tourist sites.

Kampung Kwau is one of the natural tourism destinations within the Mokwam area, widely known for its birdwatching attractions. Additionally, Kampung Kwau is rich in local culture, traditions, and other natural attractions. Tourists can learn about the daily lives of local communities, witness traditional ceremonies, and participate in cultural activities such as dance, music, and handicrafts. Handicraft products such as weaving, wood carvings, and traditional textiles can be unique attractions for visiting tourists. Kampung Kwau is surrounded by pristine tropical forests, offering activities like trekking, birdwatching, and forest exploration for nature enthusiasts. Waterfalls around the village can also serve as interesting tourist destinations for swimming, picnicking, and nature photography.

Kampung Kwau could be an ideal location for developing a conservation center for flora and fauna, focusing on endemic species of Papua. Educational programs on environmental conservation and biodiversity could attract tourists

interested in ecotourism and conservation. Other potential activities include organizing workshops or classes to teach traditional skills such as handicrafts or traditional Papuan cooking, which can serve as additional attractions. Offering authentic and unique Papuan cuisine can become a distinct draw, allowing visitors to enjoy local dishes while experiencing the village atmosphere. The development of facilities such as trekking trails, picnic areas, and local tour guides can enhance tourist comfort and experiences.

These potentials can be further developed by involving local communities in tourism planning and management to ensure economic and social benefits for the community while preserving cultural and environmental sustainability. Although previous research has implicitly shown community participation in ecotourism management in Kampung Kwau, the extent of this involvement remains unclear. The Marketing Mix is one of the marketing approaches that can be used to promote tourism attractions in Kampung Kwau. This approach can integrate all ecotourism products, including various forms of natural and cultural attractions, into a single tourism package.

Problem Formulation

As a tourism village located within the Arfak Mountains Nature Reserve, Kwau possesses various attractive Tourism Objects (ODTW), including both natural and cultural tourism that can be offered to potential tourists. Although Kampung Kwau is already well-known for its birdwatching tourism, many other potential attractions are rarely promoted. This happens due to poorly managed marketing efforts. The current offerings of ODTW to potential visitors are still dominated by the birdwatching attraction. Additionally, limited and costly access is another challenge.

One marketing method that can be proposed to improve the marketing side of ODTW in Kwau is the 7P Marketing Mix. In the context of Kwau as a tourism village, the 7P approach consists of 1st, i.e. Product. Offering more than one or several attractions, such as multiple nature and cultural tourism experiences combined as educational tourism. It also includes providing facilities like homestays, dining places, and information centers. The 2nd, i.e. Price. Offering competitive package prices including accommodation, meals, and tours. Discounts and promotions can be offered for large groups or off-season visits. The 3rd, i.e. Place. Ensuring accessibility so that the Kwau tourism village can be easily reached by public transport or shuttle services. Strategic locations for information centers and key facilities that are easily accessible to tourists. The 4th, i.e. Promotion. Using social media to promote attractions and activities in the tourism village. Collaborating with travel agents to market tour packages. The 5th, i.e. People. Training local residents to become tour guides and involving the community in managing and promoting the Kwau tourism village. The 6th, i.e. Process. Implementing easy and fast booking systems, both online and offline. Setting service standards to ensure a consistent and quality tourist experience. The 7th, i.e. Physical Evidence. Developing good infrastructure such as roads, parking areas, and public facilities. Displaying certificates, awards, and positive reviews from previous tourists as proof of quality.

However, before preparing a local wisdom-based tourism package using the marketing mix principles, this study needs to answer the following research questions: what is the potential for local wisdom-based tourism attractions in Kampung Kwau? How feasible is the development of each local wisdom-based tourism attraction in Kampung Kwau? What are the perceptions and willingness of the community to be involved in the development of tourism attractions that will be included in a tourism package offered to potential tourists? This study aims to identify and analyze the potential for local wisdom-based tourism in Kampung Kwau. Identify and analyze the feasibility of developing each form of local wisdom-based tourism potential in Kampung Kwau. Assess the perceptions and willingness of the community to participate in the development of each form of local wisdom-based tourism potential in Kampung Kwau. Develop strategies for local wisdom-based ecotourism development in Kampung Kwau using a marketing mix approach. This research proposal is expected to provide data and information related to ecotourism potential in the Arfak Mountains and Kampung Kwau, which can serve as considerations for managing and developing Kampung Kwau into a better ecotourism area.

LITERATURE REVIEW

Definition and Concept of Ecotourism

According to the International Ecotourism Society (TIES), ecotourism is a type of travel that is professionally packaged, managed by trained personnel, and contains educational elements. It is an economic enterprise that takes into account cultural heritage, community participation and welfare, and efforts to preserve natural and environmental wealth (TIES, 2006). Ecotourism is also defined as a nature-based recreational activity in certain areas that focuses on education, understanding, and supporting conservation efforts of natural resources while enhancing local community income. Developing ecotourism means planning, utilizing, and controlling it. The government, local government, businesses, and tourism communities are the main actors of ecotourism.

The Indonesian State Ministry of Environment defines ecotourism as travel to relatively undisturbed or uncontaminated natural areas with the aim of studying, admiring, and enjoying the scenery along with its flora and fauna. The goals of such travel include all cultural manifestations present in the area, as well as the ecosystem's potential, natural phenomena, climate conditions, and the uniqueness of plant and wildlife species.

According to Pendit (1999), ecotourism is visiting relatively untouched natural places to observe, learn, and admire the beauty of nature, flora, fauna, and the existing cultural aspects, both past and present. The Directorate General of Destination Development, Ministry of Culture and Tourism, and WWF-Indonesia (2009) define ecotourism as travel by tourists to remote areas to enjoy and study the culture, nature, and history of those areas, with such tourism benefiting the local economy and supporting environmental conservation.

Weaver (2001) defines ecotourism as a type of tourism that fosters learning through experience and appreciation of the environment as a whole and as part of a relevant cultural context. Ecotourism strives to achieve environmental and

socio-cultural sustainability. Weaver (2001) explains that ecotourism consists of three key elements: learning, sustainability, and the natural environment. Since the 1980s, ecotourism has been blended with several other types of tourism:

1. Nature-Based Tourism: Tourism focused on the natural environment. Ecotourism has become an essential part of this form.
2. Cultural Tourism: Tourism emphasizing the culture and history of an area. In this context, ecotourism may be a subset but can overlap.
3. Adventure Tourism: Tourism emphasizing physically challenging and risky activities. Some ecotourism overlaps here, but adventure tourism does not always have a nature-based approach.
4. Alternative and Mass Tourism: Small-scale tourism models that offer alternatives to mass tourism.

Among these, alternative tourism and mass tourism are the most suitable to be combined with ecotourism to achieve sustainability. Sustainable tourism integrates environmental, social, cultural, and economic standards (Weaver, 2001). According to the Directorate General of Destination Development, Ministry of Culture and Tourism, and WWF-Indonesia (2009), ecotourism has the following principles:

1. Nature-Based: The tourism product and market are based on nature itself, making natural resources fundamental to the development and management of tourism.
2. Ecologically Sustainable: Ecological stability through sustainable area planning and management ensuring that all environmental functions (biological, physical, social) remain intact.
3. Environmentally Educative: Environmental education for both managers and visitors is central to ecotourism, creating meaningful, caring, and appreciative tourism experiences.
4. Beneficial to Local Communities: Benefits can be direct (involvement in tourism activities and services) or indirect (increased knowledge).
5. Visitor Satisfaction: Ensuring that visitor expectations are met in line with sustainable tourism concepts.

Ecotourism can be developed in various forest areas, including production forests, protected forests, and conservation forests. Since ecotourism sells knowledge and local philosophy rather than destinations, empowering local communities in ecotourism activities is essential to reduce pressure on forests (Sembiring et al., 2004).

Environmentally conscious ecotourism development better ensures sustainability by minimizing negative environmental and cultural impacts (Damanik et al., 2006). It focuses on utilizing natural services and community contributions to meet tourists' knowledge, physical, and psychological needs rather than exploiting nature (Fandeli, 2002). The concept of ecotourism development involves managing land use according to spatial principles while integrating various interests efficiently, effectively, equitably, and sustainably (Ministry of Forestry, 2007). The principles include conservation, education, community participation, economy, and recreation. According to the Ministry of Forestry (2007), ecotourism management includes:

1. Area Management: Managing area conditions, layout, and security.
2. Tourism Product Management: Product development, marketing, and information systems.
3. Visitor Management: Managing visitor flow, setting carrying capacities, and using interpretation programs to reduce negative impacts.
4. Impact Management: Addressing ecological, socio-cultural, and economic impacts with context-sensitive strategies.
5. Institutional Management: Managing organizations, human resources, profits, and infrastructure for community sustainability.

If local communities do not benefit from ecotourism, there is a risk of welfare disparity and environmental neglect (Butler & Boyd, 2000; Weaver, 2001). Sustainable outcomes are achievable through community-based management that fosters ownership while respecting cultural values (Weaver, 2000).

Community Participation

No sector of development can be separated from tourism. Additionally, development in tourism is interconnected with other sectors, such as education. The tourism sector faces challenges such as the quality of inputs, human resource issues, ineffective management, suboptimal learning outcomes, and the failure to enhance income.

Ecotourism is considered one of the alternative tourism strategies to improve rural communities' economic livelihoods by providing employment, business opportunities, and entrepreneurial skills (Scheyvens, 2000). Ecotourism is also viewed as a key asset that enables the sustainable use of natural resources in specific areas (Ashley & Roe, 1997). Ecotourism involves utilizing natural resources or culturally rich areas that are relatively undeveloped. It promotes nature conservation, minimizes environmental impact, and offers economic benefits to local communities (Ceballos-Lascurain, 1996).

In general, ecotourism involves empowering local communities. However, researchers have not given sufficient attention to how to empower local communities to enhance their socio-cultural and economic status, particularly in developing countries like Indonesia. According to Scheyvens (2000), the negative impacts of ecotourism and other alternative tourism forms, as well as the tourism opportunities themselves, remain minimal. Considering Indonesia's vast potential, ecotourism could generate numerous positive impacts for future community empowerment for the following reasons to ensure that policy decisions on future ecotourism development reflect the perspectives of tourism stakeholders, to ensure the sound management of Indonesia's ecotourism assets, particularly natural resources on which ecotourism depends, and to ensure that ecotourism yields economic, social, and cultural benefits for all stakeholders.

Zeppel (1999) defines ecotourism as tourism that relies on sustainable natural resources and incorporates social and cultural dynamics. Tourists interact with local communities in national parks and underdeveloped areas. However, Sri Agus (1999) notes that cultural tourism in Indonesia remains underdeveloped due to the lack of human resources needed to design cultural tourism packages. Many communities are unaware of tourism's negative

environmental impacts, complicating development further. Consequently, interactions between tourists and local communities can have both positive and negative socio-cultural impacts on individuals, families, and communities (Zeppel, 1999).

To date, discussions on empowering local communities in ecotourism have primarily focused on economic issues, even though ecotourism encompasses broader aspects. Ecotourism helps create jobs in remote areas that previously did not generate economic benefits for governments or communities. According to Lindberg (1999), ecotourism plays a critical role in generating economic benefits, even though the scale of these benefits varies. Research on ecotourism in Australia indicates that while ecotourism brings positive economic impacts, the level of profit differs widely by location. From an ecotourism perspective, it is important to consider both formal and informal sectors and the business opportunities they create, as tourism activities significantly affect local communities, especially during peak seasons. Income inequality between social classes can also lead to social anxiety (Wilkinson & Pratiwi, 1995).

Ecotourism is vital in promoting social empowerment, which occurs when the unity and integrity of a community group are strengthened (Scheyvens, 2000). By building community-based tourism, ecotourism can strongly influence the social dynamics of community groups, increasing their sense of involvement. Ecotourism improves access to essential services such as clean water, better roads, and healthcare – both direct and indirect evidence of social empowerment. From a cultural perspective, well-managed ecotourism can help preserve the indigenous culture of local populations (Zeppel, 1999). Sufficient social empowerment enables local communities to gain political power to develop public facilities or tourism sites.

METHODOLOGY

Time and Location

The research was done over a period of two months, from November to December 2024. The collection of primary data will take place in Kwau Village, Warmare District, Manokwari Regency, while secondary data will be gathered from several related institutions (Figure 1).



Figure 1. Research Location Map

Object, Tools, and Materials

The object of this study consists of all tourist attractions based on the local wisdom of the Arfak tribe and other attractions that support the development of ecotourism in Kwau Village. The tools used to support this research include voice recorders, cameras, and questionnaires. The materials used in this research include the location map of Kwau Village.

Observation Variables

The observation variables in this study are as follows:

1. Types of tourist attractions based on the local wisdom of the Arfak tribe in Kwau Village, both existing and potential ones. The indicators used are all attractions that evolve from the community's indigenous cultural roots in utilizing natural resources. These parameters are grouped into:
 - Arts,
 - Traditional food and beverages,
 - Traditional medicines,
 - Tools and utensils,
 - Building materials,
 - Traditional forest management systems.
2. Feasibility of each local wisdom-based tourism attraction of the Arfak tribe for further development. Feasibility parameters include:
 - Physical aspects of the tourism object,
 - Community readiness and willingness.
3. Other forms of tourism attractions that are not based on the local wisdom of the Arfak tribe.
4. Community perceptions and participation in the management of each tourism object.
5. Development strategy for community-based ecotourism using the Arfak tribe's local wisdom through a marketing mix approach.

Data Collection Techniques

Interviews

Interviews will be conducted directly in the field, guided by a list of questions (questionnaires). The number of key respondents will be determined based on the number of local wisdom-based tourism objects identified on-site. Other respondents will include the Village head, Religious leaders, Customary leaders, and Leaders of community-based social institutions. Each tourism attraction will be represented by one key person who plays a significant role in the management of the local wisdom-based tourism attraction. The same will apply to managers of tourism attractions that are not based on local wisdom.

Field Observation

Field observations will be conducted to assess the biophysical conditions of the areas where each local wisdom-based attraction is located. The required data observed and measured directly during the observation.

Research Procedure

The data collection for the research will be conducted in the following stages

1. Literature Review: Conducting a review of literature related to ecotourism based on the local wisdom of the Arfak tribe in Kwau Village from previous research.
2. Preparation: Preparing the research team, tools, and materials to be used in the field.
3. Field Data Collection
 - Arts. Interviews conducted with art maestros to gather information about the origin of dance movements, songs, their meanings, life philosophies embedded in each movement, costumes (colors and patterns), social and economic benefits, and their role in environmental conservation in Kwau Village, including attraction locations.
 - Food and Beverages. Information collected includes types of plants and animals used, tools and materials, preparation methods, presentation, life philosophies reflected in each stage of the process, as well as taboos and other significant matters.
 - Tools and Utensils. Information collected includes materials used, manufacturing processes, functions, life philosophies, and their roles in environmental conservation.
 - Traditional Medicines. Types of plants or animals used, preparation methods, presentation, taboos, and medicinal benefits.
 - Traditional Forest Management Techniques. Techniques used, how they are implemented, the benefits or effectiveness achieved for forest conservation.
 - Building Materials. Data collected includes building types, materials used, tools, techniques, and construction processes.
4. For all identified Tourist Attractions (ODTW), feasibility data will also be collected and used for conducting a SWOT analysis using the following instrument.

Feasibility and Analysis of Data Processing

Feasibility data processing of a tourist attraction uses the 4A approach, modified to fit the characteristics of attractions based on local wisdom. This approach includes: Attraction: Evaluates the uniqueness, beauty, and natural appeal of the tourist location. Amenity: Assesses the availability of supporting facilities such as accommodation, restaurants, and other public amenities. Accessibility: Assesses the ease of access to the tourist site, including road infrastructure and transportation. Ancillary: Evaluates additional services that enhance the tourist experience, such as tourist information, tour guides, and safety. The formula used to calculate the feasibility index value for tourism objects (Purnawadinata and Ambarwati, 2023). According to Karsudi and Kartodihardjo (2010), the feasibility index of an ecotourism area is categorized as follows: Feasibility level > 66.6%: feasible for development, Feasibility level 33.3% – 66.6%: not yet feasible for development, and Feasibility level < 33.3%: not feasible for development.

The coordinates for the combination of internal and external SWOT factors (x, y) are determined using the following formula: Coordinates (x, y) = ((S - W)/2), ((O - T)/2). Tour package development is carried out descriptively by referring to the following aspects: The selected attraction must be based on local wisdom and deemed feasible according to the feasibility assessment. Create a visit schedule that includes departure time, type of transportation used (boat, plane, bus, etc.), accommodation, and planned activities. Provide comfortable accommodations that match visitor preferences. Set competitive tour package prices appropriate to the facilities offered, including detailed explanations of what is included. Build partnerships with business actors such as hotels and restaurants to obtain better pricing and quality service. Promote and market the tour package using social media, websites, and other platforms with engaging content. All data analysis results will be presented in the form of charts and tables.

RESULTS AND DISCUSSION

Management Strategy for Tourist Attractions Based on Local Wisdom and Visitor Involvement

This strategy is designed to develop tourist attractions rooted in the local wisdom of the Arfak community in Kampung Kwau, using an experiential tourism approach—where tourism is based on direct, immersive experiences. Visitors are not merely spectators, but actively participate in cultural practices, agriculture, conservation, and local spirituality. This distinguishes tourism in Kwau from passive activities such as birdwatching, making it a model of authentic and in-depth participatory ecotourism (Table 1).

Table 1. Matrix of Local Wisdom-Based Management Strategies

Local Wisdom Potential	Interactive Tourism Activities	Educational & Cultural Value	Management Needs
Medicinal Plants (<i>Drymis sp.</i> , <i>Akwai</i>)	Herbal workshop, trekking	Ethnobotanical education	Medicinal garden, guide training
<i>Tumbuk Tanah</i> Dance	Dance practice with locals	Spirituality, recreation	Choreography, documentation
<i>Igya Ser Hanjob</i>	Customary expedition simulation	Customary law & spirituality	Zoning map, traditional leaders
Noken Making	Noken weaving workshop	Identity & traditional skills	Natural fibers, creative space
Coffee Ecotourism	Planting, harvesting, roasting	Agroecology, local farmers	Coffee gardens, traditional roasting
Orchid Conservation	Trekking, conservation	Endemic floriculture	Orchid garden, species identification

Customary Forest Symbols	Forbidden-sign workshop	Customary law & conservation	Bamboo, raffia, informational signage
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Management Model and Educational Strategy

To create sustainable ecotourism, management is carried out in a participatory and community-based manner. Every activity is designed to be educational and to encourage direct involvement of visitors (Figure 2).

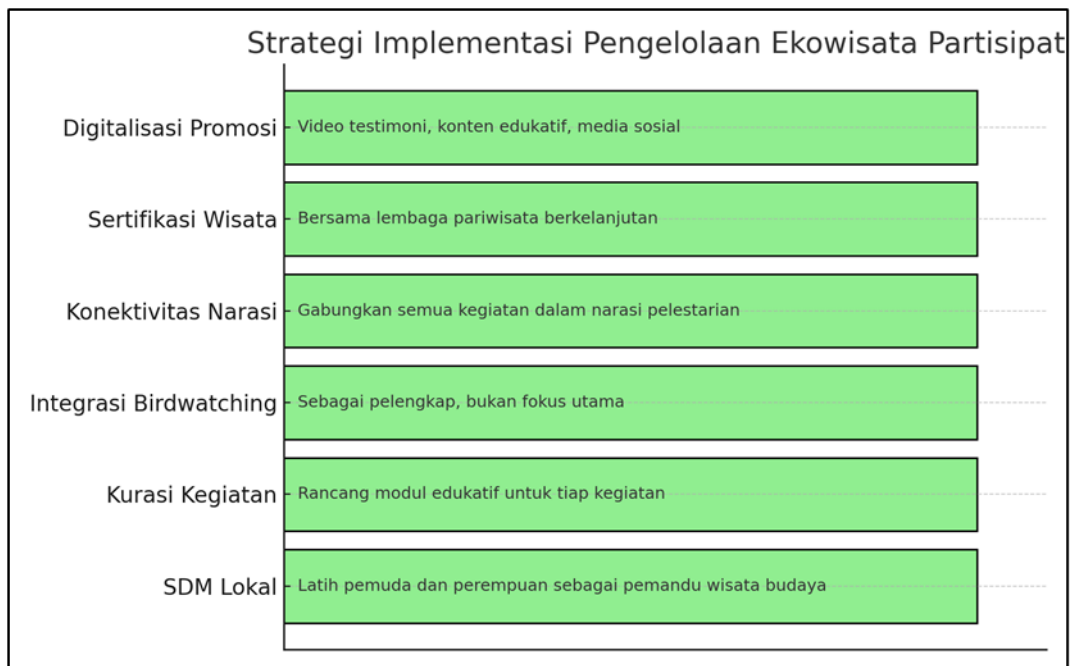


Figure 2. Branding dan Promotion

Arfak Cultural Immersion Experience with the tagline Living in Harmony with Nature in the Rhythm of Arfak. Promotional media used include short documentary videos, guest testimonials, travel blogger collaborations, and promotions through government and NGOs. Participatory ecotourism in Kampung Kwau offers a unique experience where tourists become part of the Arfak community, contributing to the care of nature and culture. Through collaborative management and an integrated strategy, Kwau can become a model of sustainable cultural tourism in West Papua.

Evaluation of Kampung Kwau Tour Packages Based on the 7P Marketing Mix

This evaluation aims to assess the extent to which the two Kampung Kwau tourism packages align with the 7P marketing mix principles, which are commonly used in service marketing, particularly in the tourism sector. The 7Ps – Product, Price, Place, Promotion, People, Process, and Physical Evidence – have all been addressed in the design of the Kampung Kwau tour packages. The tour packages include cultural activities (traditional dance, noken weaving, herbal rituals), nature tourism (birdwatching, trekking, orchid conservation), and educational experiences on ethnobotany, customary law, and coffee farming. These offerings are unique, authentic, and rooted in local wisdom. Pricing is implicit – while explicit prices are not yet listed, the packages already include

structured durations and facilities. This opens up the opportunity to implement value-based pricing strategies. Distribution channels include social media, travel bloggers, government networks, and NGOs.

Local access from Manokwari is also factored into the planning. Promotion strategies involve documentary videos, testimonials, influencers, and educational narratives, aligning well with content marketing approaches. The packages involve youth, women, and traditional leaders as guides. This strengthens community-based tourism by directly engaging local stakeholders. The visitor experience is structured into phases: observation → participation → reflection. This enhances visitor engagement and leaves a lasting impression. Tangible and visual elements are provided, including millipede-style homestays, cultural products (noken, coffee, customary symbols), and certificates of participation. Tourists also gain experiential knowledge that they can apply as guides in other destinations beyond Kwau.

Feasibility Analysis of Kampung Kwau Tourism Potential Using the 4A Approach

The feasibility analysis was conducted using a modified 4A approach to determine the viability of Kampung Kwau as a local wisdom-based ecotourism destination. This approach evaluates four main components: Attraction (tourism appeal), Amenity (supporting facilities), Accessibility (ease of access), and Ancillary (institutional and community support). The method was modified by adding local-specific variables derived from the culture and social structures of the Arfak people to ensure contextual relevance. According to Purnawadinata and Ambarwati (2023), a scoring method is used to assess tourism feasibility, with scores ranging from 1 (very poor) to 5 (very good) for each sub-aspect. The cumulative scores fall into the following categories: Feasible to develop: total score > 300, Feasible with improvement: score 200–300, and not feasible to develop: score < 200.

This approach provides a structured and culturally grounded framework for determining the development readiness of Kampung Kwau as an ecotourism destination rooted in indigenous knowledge and sustainable principles. Based on the analysis results shown in Table 4.10, the total feasibility score for the tourism potential of Kampung Kwau is 221 out of 300, placing it in the category of "Feasible to Develop with Improvements". This result indicates that Kampung Kwau possesses very strong potential in terms of its attractions and related supporting factors, but there are several aspects that need improvement to fully meet the standards of sustainable tourism development (Table 2).

Table 2. Evaluation of Tourism Feasibility Using the 4A Approach – Kampung Kwau

No	4A Aspect	Score Obtained	Maximum Score	Feasibility Percentage	Category
1	Attraction	66	75	88%	Very Feasible
2	Amenity	49	75	65%	Moderately Feasible
3	Accessibility	43	75	57%	Less Feasible

4	Ancillary	63	75	84%	Very Feasible
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This table reflects the results of the 4A-based feasibility evaluation for the development of the Kampung Kwau tourist attraction. The Attraction and Ancillary aspects score very high, showing strong cultural and institutional potential. However, Amenity and especially Accessibility require serious improvements to meet tourism development standards (Figure 3).

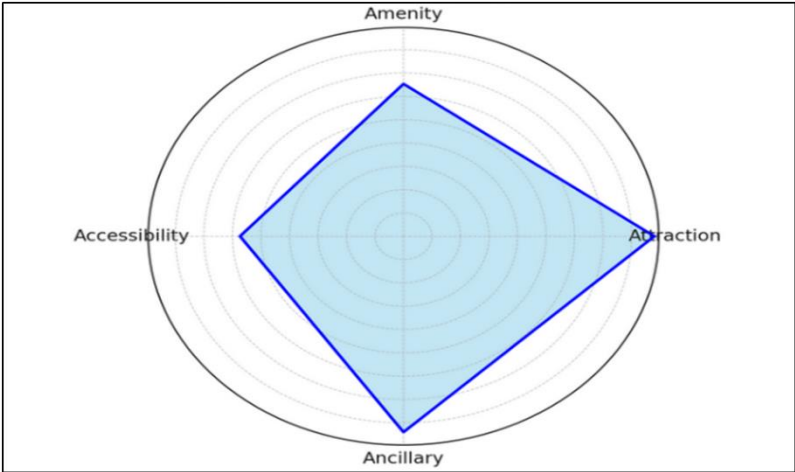


Figure 3. Radar Chart of the 4A Approach for the Kampung Kwau Tourist Attraction (ODTW)

The Attraction aspect is rated high due to the presence of unique local culture, customary-based conservation practices, and a pristine and authentic natural environment. For example, none of the ecotourism destinations in the Thousand Islands of Indonesia possess a system like Igya Ser Hanjob, which serves as a distinctive expression of local wisdom. Meanwhile, the Amenity and Accessibility aspects remain the main challenges. Supporting tourism facilities – including accommodations, sanitation, and educational infrastructure – do not meet comfort standards for tourists, including international visitors. This aligns with the findings of Satriawan et al., who emphasize that basic infrastructure is a critical factor in the effective utilization of community-based ecotourism.

On the other hand, the Ancillary aspect demonstrates strong performance, supported by the presence of traditional institutions that uphold local values and norms, as well as active collaboration with external parties such as NGOs and universities. The high level of local community support also provides a strong form of social capital for the development of community-based tourism (Krisantina et al., 2022).

Development Strategy for Local Wisdom-Based Ecotourism in Kampung Kwau

The development strategy for local wisdom-based ecotourism in Kampung Kwau can be formulated by integrating the results of the SWOT analysis. This analysis provides a clear overview of the strengths, weaknesses, opportunities, and threats faced in developing ecotourism in the area. The SWOT results are then utilized to design a strategic plan tailored to the specific conditions and potential of Kampung Kwau.

Based on field observations and interviews conducted with key stakeholders, both internal and external factors influencing the development of ecotourism have been identified, with the following results:

IFAS Matrix (Internal Factor Analysis Summary)

The IFAS matrix presents the results of the identification and evaluation of internal factors, consisting of Strengths and Weaknesses in the management of the Kampung Kwau tourist attraction (ODTW). Based on the assessment, the total weighted score for internal factors is 1.94, with a strength score of 1.24 and a weakness score of 0.70. This indicates that strengths exert a more dominant influence than weaknesses in the current management of the tourist destination.

EFAS Matrix (External Factor Analysis Summary)

The EFAS matrix evaluates the external factors influencing the tourist attraction (ODTW), consisting of Opportunities and Threats. The total weighted score for external factors is 1.91, composed of an opportunity score of 1.23 and a threat score of 0.68. This indicates that the external environment provides significant opportunities, although there are still challenges that must be anticipated and managed effectively. The next step is to detail the subtotal scores for each factor: Strengths = 1.24, Weaknesses = 0.70, Opportunities = 1.23, and Threats = 0.68.

Thus, the difference between the total scores of strengths and weaknesses is 0.54, while the difference between opportunities and threats is 0.55, as illustrated in the following Figure 4.

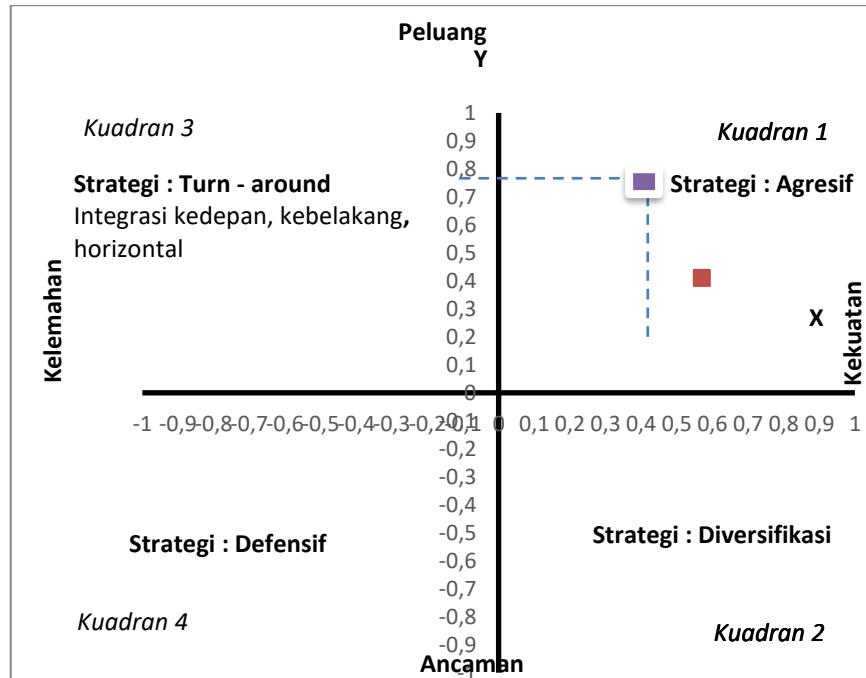


Figure 4. Cartesian Diagram

Based on the IFAS and EFAS matrices, the assigned weights and weighted scores indicate that Kampung Kwau possesses relatively stronger internal strengths and more prominent external opportunities. The total IFAS score of 1.94 and EFAS score of 1.91 place it in Quadrant I of the SWOT diagram—

representing an aggressive (SO) strategy. This implies that the tourist attraction (ODTW) exhibits both high internal strength and external opportunity. Therefore, the most appropriate development strategy is the S-O (Strengths-Opportunities) strategy, which leverages existing strengths to seize available opportunities.

Below are the detailed implementation strategies based on each SWOT combination (SO, ST, WO, WT) for the development of the Arfak community-based local wisdom tourist attraction in Kampung Kwau, using an experiential tourism approach.

S-O Strategy (Strengths-Opportunities)

Utilize strengths to seize opportunities

- Develop immersive cultural experiences (e.g., traditional dance, music, rituals) to attract nature-culture travelers.
- Promote endemic biodiversity (Arfak birds, orchids) through guided eco-tours with trained local youth.
- Establish strategic partnerships with travel agencies and online platforms to increase Kampung Kwau's visibility.

S-T Strategy (Strengths-Threats)

Use strengths to overcome external threats

- Standardize local guide training to ensure safety, minimize misinformation, and handle unpredictable tourist behavior.
- Strengthen community-based forest monitoring to reduce the risk of environmental degradation.
- Integrate traditional wisdom (Igya Ser Hanjob) in tourism activities to maintain cultural integrity amidst mass tourism risks.

W-O Strategy (Weaknesses-Opportunities)

Address weaknesses by leveraging opportunities

- Improve infrastructure (homestays, cultural centers) using tourism grants or community-based funding.
- Facilitate workshops to improve digital marketing and language skills among local youth.
- Develop inclusive tourism models to involve marginalized groups (e.g., women, elders) in craft production and storytelling.

W-T Strategy (Weaknesses-Threats)

Minimize weaknesses and avoid threats

- Create a local tourism management unit to coordinate, supervise, and sustain tourism services.
- Design flexible itineraries and indoor cultural activities as backup during adverse weather or low visitor seasons.
- Establish environmental and cultural codes of conduct for both tourists and service providers.

CONCLUSIONS AND RECOMMENDATIONS

The two tourism packages for Kampung Kwau have fulfilled the principles of the 7P marketing mix. These packages are not only culturally and ecologically unique but are also designed to be highly competitive, sustainable,

and empowering for the local community. With strengthened pricing strategies and continued promotion, this tourism initiative holds great potential.

Recommendation of these findings are Local government and other stakeholders should formulate and implement tourism policies that prioritize the preservation of local culture and the empowerment of the Arfak community as the main actors in tourism development. Training and education for the Arfak community, especially the younger generation, should be enhanced so they can effectively manage tourism activities, promote their culture, and safeguard environmental sustainability. The development of supporting tourism infrastructure—such as road access, homestay facilities, cultural information centers, and sanitation facilities—should be carried out while preserving traditional values and environmental integrity. Collaboration between government, NGOs, academia, and tourism entrepreneurs is essential to support the promotion of Arfak Tourism Village at national and international levels, with a compelling narrative about local wisdom and the unique Arfak culture. The implementation of ecotourism and sustainable tourism principles, while continuing to involve the community in decision-making, will help maintain a balance between economic benefits and cultural preservation.

FURTHER STUDY

This research still has limitations, so it is necessary to conduct further research related to the topic of Development of Community-Based Ecotourism Through Local Wisdom and Marketing Mix Approach in Kampung Kwau Tourism Village, Manokwari Regency, West Papua in order to perfect this research and increase insight for readers.

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