



Turn-Around Strategy to Develop Community-Based Ecotourism on The Maratua Island, Indonesia

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Abstract

This paper aims to find out the most appropriate strategy to develop community-based ecotourism on the Island of Maratua, East Kalimantan, Indonesia. This paper employs a descriptive research method with qualitative analysis techniques. Data was collected through observations, interviews, Focus Group Discussions (FGDs), and documentation studies. The data were further analyzed using the SWOT Analysis, which compares internal factor analysis system (IFAS) and external factor analysis system (EFAS). The results show that Maratua is in Quadrant III in the SWOT diagram. It means that community-based ecotourism on Maratua has an opportunity to develop despite internal weaknesses. It is suggested that in the future Maratua should be developed through a turn-around strategy, i.e., weakness–opportunity (WO) strategy, a redesign of the island, a strengthening of community capacity, a make-up of supporting facilities, and an improvement of social institutions.

Key words : *Maratua Island; Ecotourism; Community-based Tourism; SWOT Analysis; Development Strategy.*

INTRODUCTION

Provide an adequate background, context of the problems based on the literature review, theories and conceptual. State the objectives of the work and emphasize the originality (state of the art). It should be written in paragraphs.

Tourism plays a pivotal role in increasing Indonesia's foreign exchange (Purnomo et al., 2020; Rosa, 2017). The country benefits from natural wealth and cultural diversity (see Ministry of Tourism and Creative Economy, 2011). There are 92 small and outermost islands located at the border of the neighboring countries (Baihaqi, 2016), which have an abundance of natural resources such as mangroves, seagrass beds, coral reefs, and fisheries.

Maratua Island (from here onwards: "Maratua")—located in the Berau Regency, East Kalimantan (see Picture 1)—is one of the country's National Strategic Areas (NSA, *Kawasan Strategis Nasional* or *KSM*). NSA, in turn, is an area where spatial planning is prioritized, for it has an important influence on national defense and security, economy, social, culture, and environment, including areas stated as world heritage. Maratua is also one of the Outermost Small Islands (OIS, *Pulau-pulau Kecil Terluar* or PPKT), located in the maritime border with Malaysia and the Philippines. Therefore, the island should be managed and protected to support the aspects of defense and security, community welfare, and environmental preservation.

Figure 1. Maratua Island in the East-North of East Kalimantan



Source: Google map

The diversity and uniqueness of natural resources on Maratua make it a top priority as a place of tourism for the Berau District Government. It is namely stated in the Long-term Development Plan of Berau District of 2006–2026 that Berau will become "an industry center and a leading agriculture and marine-based ecotourism area in Eastern Indonesia in 2026."

Maratua is a small island that has a different character from its main island counterpart. Ratter (2017) states that small islands have a prominent biophysical character, namely limited water catchment so that freshwater reserves are limited. They are also more sensitive to external pressures and influences due to natural processes and human activities, and have a number of unique endemic organisms. Thus, a solution is needed so that Maratua is not harmed, and the local community continues to survive by prioritizing the principle of ecotourism. Hill and Gale (2009), for example, emphasize that ecotourism should minimize negative impacts on environment and local communities.

The Directorate General of Marine, Coastal, and Outermost Small Islands (DJKP3KT) (2012) notes that fishing productivity in Maratua has decreased up to 60

percent in the past 10 years (including shrimp, reef fish, tuna, and sharks). This is caused by destructive fishing using bombs. Hence, the development of ecotourism is an alternative to managing the area, in which community is involved and environmental impact is reduced. In this context, the main question seems to be: in what strategy? This research, therefore, has a mostly practical significance. It namely attempts at influencing the government on how to manage tourism on Maratua in an environmentally friendly manner. The conclusion suggests that the strategies formulated in this research are helpful when formulating future policy alternatives.

Tourism is a highly profitable industry at a relatively low cost. However, tourism destination management without any restrictions, which often causes environmental damage and negatively impacts the cultural value of the community (see, for instance, Weaver, 2006). In effect, there are four aspects in tourism that should not be separated from each other: (i) economic, (ii) social, (iii) cultural, and (iv) environmental (Jenkins and Lickorish, 2002). The concept of ecotourism, in turn, has grown in tandem with concerns over environmental, economic, cultural, and social aspects, with the aim to alter tourism industry, which, on its part, is only oriented to seek profit (see, for example, Reimer and Walter, 2013). Ecotourism conserves the nature (Anup, 2017; Choi, Kim, Sawitri, & Lee, 2020; Kiper, 2013) so that it is called responsible tourism (Demartoto, 2009). Fennel (2003) defines ecotourism as:

"Sustainable form of natural resource-based tourism that focuses primarily on experiencing and learning about nature, and which is ethically managed to be low-impact, non-consumptive, and locally

oriented (control, benefits, and scale). It typically occurs in natural areas and should contribute to the conservation or preservation of such areas."

Following from this, Damanik and Weber (2006) go to define ecotourism in three perspectives: (i) products: all attractions are based on natural resources; (ii) market: a journey directed at efforts to conserve nature; and (iii) development: utilization and management of tourism resources in an environmentally friendly manner. In short, tourism activities that are responsible for the welfare of local communities and environmental conservation are the hallmarks of ecotourism.

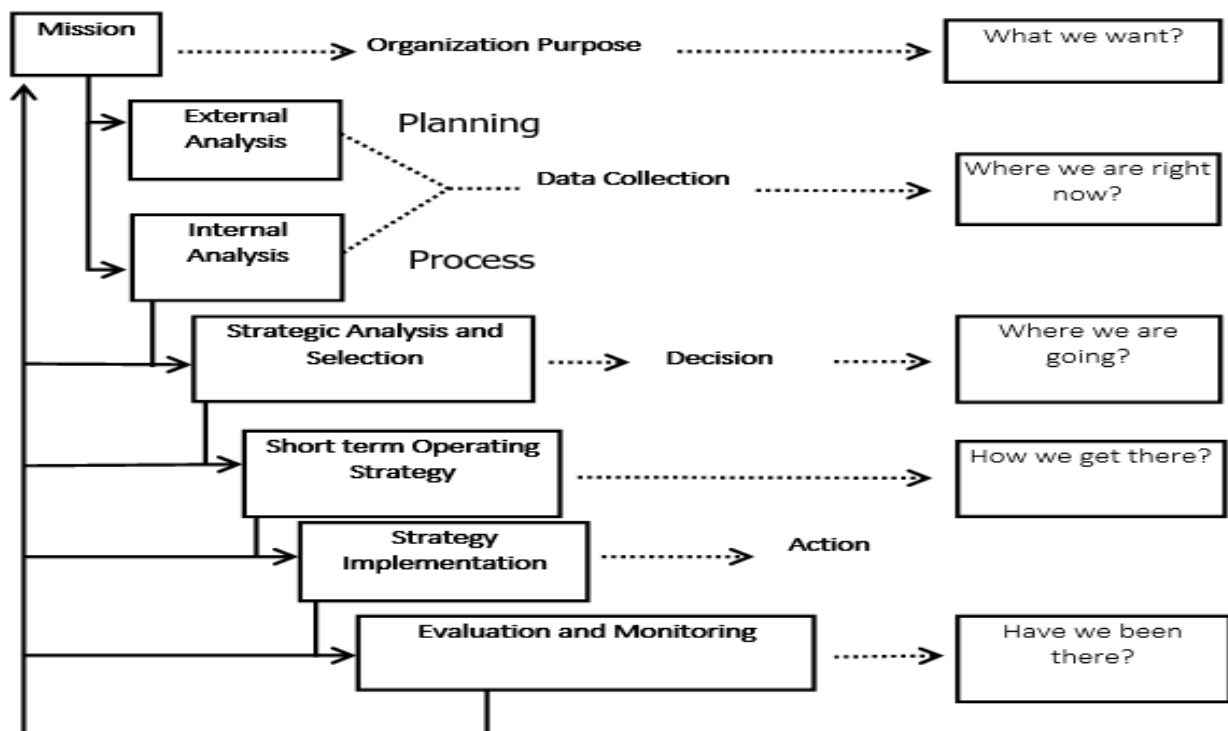
In the same context, Lindberg and Hawkins (1993) mention four characteristics of ecotourism: (i) environmentally friendly: the impact of development is not destructive, encourages sustainable economic development, protection of natural landscapes and ecosystems; (ii) community-based: providing job opportunities and trying to build the local community economy; (iii) sensitive to culture: integrated with local culture; and (iv) viable economically: provide financial benefits for managers and local communities.

Community-based ecotourism is therefore centered on ecotourism business that emphasizes the active role of local people, i.e., those who have the knowledge of nature and culture as attractions. Community-based ecotourism can maintain the sustainable use of natural resources and land, for the concept includes conservation (for a more detailed analysis, see Fiorello and Bo, 2012). Teshome (2018) and Kiss (2004) argue further that community-based ecotourism is a segment of sustainable tourism in that it promotes environmental protection, economic growth, and community involvement.

Meanwhile, a strategy has been combined, which broadens and integrates plans

that link the strategic advantage of an organization with environmental challenges, and which is designed to ascertain the main goals of the organization (Jauch and Glueck, 2000). The process of making strategy is described in Figure 2. Campbell (in Vellas and Bécherel, 1999), for instance, highlights that mission is the basic aspect of any organization. Here, the mission is to interpret targets, such as objectives, values, strategies, and standards of behavior.

Figure 2. Mc. Donald's Strategic Planning Process



Source: Vellas and Bécherel, 1999

After stating the mission, it is essential to analyze the internal and external environments. On the one hand, Internal Analysis (or situation inventory) is to identify the strengths and weaknesses of the organization, to evaluate our capacity to respond to problems and opportunities around us. External Analysis (or environmental scan), on the other hand, is to identify opportunities and threats that exist in current situation of the environment, and to anticipate its future potential changes (see, above all, Gaspersz 2004). After the analysis, we then make a decision regarding the strategy of the organization. SWOT Analysis is therefore

an important technique to provide a framework for systematic identification by connecting the external environment and the problems and opportunities that are currently there (Vellas and Bécherel, 1999). The positive strengths and opportunities could also be called as "supporting factors." The various weaknesses and threats, in turn, could be called as "inhibiting factors."

The identified strengths, weaknesses, opportunities, and threats, are then written in a SWOT matrix.

Figure 3. SWOT Analysis Matrix

Internal External	<i>STRENGTH (S)</i> Determine 5–10 Internal Strength Factors	<i>WEAKNESS (W)</i> Determine 5–10 Internal Weaknesses Factors
<i>OPPORTUNITIES (O)</i> Determine 5–10 Internal Opportunities Factors	<i>S-O STRATEGY</i> Create strategies that use strengths to take advantage of opportunities	<i>W-O STRATEGY</i> Create strategies that minimize weaknesses to take advantage of opportunities
<i>THREAT (T)</i> Determine 5–10 Internal Threats Factors	<i>S-T STRATEGY</i> Create strategies that use strengths to overcome threats	<i>W-T STRATEGY</i> Create strategies that minimize weaknesses to overcome threats

Source: Gaspersz, 2004

The SWOT matrix provides four possible alternative strategies: (i) SO strategy, to use existing strengths to take advantage of opportunities; (ii) WO strategy, to improve weaknesses by taking advantage of opportunities; (iii) ST strategy, to use strengths to avoid threats; and finally (iv) WT strategy, to minimize weaknesses and avoid threats (see Figure 3). After having been formulated, the strategic plan is then implemented, monitored, and evaluated. During implementation, the fluctuation of environmental conditions is considered, and the need for several adjustments is also taken into consideration.

RESEARCH METHODS

This research was conducted in 2015. It uses the qualitative-descriptive approach (see Singarimbun and Effendi, 2008; Arikunto, 1990). Data on possibly strengths,

weaknesses, threats, and opportunities (SWOT) regarding the development of ecotourism on Maratua was collected through observations, in-depth interviews, and Focus Group Discussions (FGDs). Informants were purposely selected, for

they are the ones who have the authority to manage tourism in the Berau Regency (especially on Derawan), and to influence community leaders and local tourists. There were 12 participants in the FGDs including government representatives, academics, and tourists. The participants were asked to write ten problems regarding Maratua in reference to ecotourism, and then they discussed them, weighing and rating different issues. After having analyzed the data, a strategy to develop community-based ecotourism in Maratua was formulated.

RESULTS AND DISCUSSION

Maratua is a small island (2,282.46 ha) and part of the Derawan Archipelago (from here onwards: “Derawan”). It has a large diversity of natural resources with unique characteristics. The mainland area of Maratua is dominated by natural environment (1,895 ha, or circa 80% of the total land), consisting of 62% natural forest,

16% mangrove forest, and 2% lakes. The built or the cultivated area consists of 16% gardens or fields, and only 3% (76 ha) settlements, and 1% (25 ha) is currently being prepared for an airport (DJKP3KT, 2012).

Maratua is home to up to 444 *hermatypic* coral species (second largest after Raja Ampat), nine seagrass species, 872 reef fishes, and nine *cetaceans* (DJKP3KT (2012). In addition, the Berau marine area is also a feeding and laying habitat for green and hawksbill turtle. This area is filled with eight types of seagrass beds, 26 types of mangroves, 347 species of coral, and 222 species of mollusks. Rare marine life can also be found here, such as dugong, Napoleon fish, clam shells, and walnut crab. Seagrass in Maratua (and Kakaban Island) is the largest seagrass bed in the Berau waters area with an area of 114.29 ha. This makes Maratua the largest habitat of green turtles (“turtle point”) in Southeast Asia. Eagle stingray and dolphins also live here. Sperm whales (*Physeter Macrocephalus*) cross frequently waters here. Stingless jellyfish, which is endemic to Kakaban Island, is only found on Maratua. Maratua is therefore called as “the Big City of Fish.” Furthermore, there are in total 41 bird species, forest orchids, and long-tailed macaque that can only be found on the Island (see especially Chua, et al., 2015).

Maratua has many potential tourist attractions. Besides those that have been mentioned above, the culture of the community, starting from food, traditional rituals, and daily activities of the Bajau people, are also interesting attributes for different attractions (see details in fig 1).

Table 1. Maratua Island Tourist Attractions

Type of Attractions	Attractions
Natural	Underwater tours

Tourism	Cave tours
	<i>Cenote</i> tours
	Beach tours
	Lake tours
	Laguna
	<i>Gunung Putih</i>
	Kakaban Island
	<i>Mandi Tolak Bala</i>
	Traditional dances
	Culinary tours of the Bajau tribe
Cultural Tourism	The traditional life of fishermen (rod and net fishing, spear fishing)

Source: Processed based on data, 2015

Tourist activities in Maratua are interrelated with other tourist destinations on Derawan, and they have great potential to develop further. Yet, tourism should also consider its implications on environmental sustainability, including giving more attention to local community and its needs. As mentioned above, the principles of community-based ecotourism are conservation, economy, education, and participation. After conducting the interviews and FGDs, we conducted SWOT Analysis as described below.

Strengths

Maratua has its strengths in many unique landscapes and endemic flora and fauna as follows:

A. Underwater and underground exoticism

The underwater and underground, both cave and *cenote*, on Maratua are unique. The underwater charm of Maratua keeps the exoticism of coral reefs and other marine animals. In addition, there are underwater caves

that have several types of rare relief. Meanwhile, cenotes are only found on Maratua.

B. Unique endemic fauna

There is a unique blend of endemic fauna that is spread over the mainland and sea, such as species of stingless jellyfish that inhabit Lake Haji Buang, rare mammals (e.g., manta rays, sharks, and dolphins in the sea around the island), and green turtles that inhabit the Payung-Payung Village.

C. The traditional rituals of the Bajau tribe

The Bajau tribe has many traditional rituals, among of them a ritual called *mandi tolak bala*, which is similar to the sea alms ritual. The difference is that in practice the ritual is carried out on a sand island in the middle of the Maratua Lagoon, and it sometimes lasts more than a day, so that people have to bring tents and food supplies to stay there overnight.

D. Culinary and diverse marine product

Maratua's marine catches are very productive and have good quality, and include reef fish, shellfish, and sea cucumbers. Fishermen provide for restaurants that serve special menus of local seafood and produce. The processing of seafood can increase the selling value of local products and become an important attraction for tourists in the future.

E. Untouched natural forest and wetland area

Nearly 62% of Maratua's land consists of natural forest and 16% is mangrove wetlands. Therefore, air quality on Maratua is good. This, for instance, supports tracking activities or hiking in general as a form of tourist activity.

F. Daily life of Bajau tribe

The daily life of the Bajau tribe is not far from the sea. It includes fishing either by rod fishing or spear fishing, sailing using small boats, and many other activities, which all form a part of the identity of the Bajau community as a whole. Obviously, it has become a capital for developing ecotourism that present indigenous identity from local tribe to tourist. Tourists can be involved in many activities of the local community while sustaining their local culture at the same time.

G. Availability of regular transportation from the Berau Regency

Until today, Maratua has had a regular transportation network that connects the Island to the Berau Regency. There is also an airport that serves regular flights from other destinations. Beside a fixed schedule, relatively low prices are also an attractive factor for tourists to visit Maratua.

H. Security unit with special abilities

Tourist attractions on Maratua are dominated by natural tourism with the need for licenses, such as diving activities. The higher risk of fatality from such activities requires a specific safety force. TNI-AL that operates on Maratua has many units from experienced special force. Security is one of the most essential aspects of tourism.

Weaknesses

Weaknesses are internal conditions that inhibit the development of ecotourism. From the interview date and FGD results, it seems that most of the issues concern the environment and tourist support facilities:

A. There is still no zoning

Zoning is an aspect of ecotourism, which aims to share the management of the area. The importance of zoning is to divide the areas that can be used and the areas that must be

protected. Maratua is included in the Berau KKLD. The core zone on Maratua is located in Karang Muara, an area in the southern part of the Island. Nevertheless, the Maratua area is not categorized, although the area and its character meet the zoning criteria. The community wants a conservation model that still provides space for people to do different activities. They are reflected on the case of Sangalaki Island preservation, which resulted in the community not being allowed to take any results there. Thus, in developing tourism, a middle way is urgently needed for its preservation and utilization in the form of zoning.

B. Poor waste management

Maratua experiences some problems regarding its waste management and societal behavior. The public awareness of garbage disposal remains rather low. Usually, the locals dump their trash into the sea or swamps. The community believes that the unavailability of good waste management facilities and system as such are the reasons why they keep littering inappropriately.

C. Homestay is not yet feasible

Some homestay accommodation can be found in Kampung Bohe Silian, albeit in poor conditions, characterized by a lack of fresh water and electricity. High cost of electricity and water that is collected from the rain make the stays not attractive or feasible for tourism.

D. No souvenirs

Nobody sells souvenirs on Maratua, although people have the ability to craft them. Local crafts are not different from the crafts found on Derawan, which are made from coconut shells, clam shells, and turtle scale. The use of turtle scale for souvenirs is a prohibited activity, for the turtle population

is decreasing and protected by a conservation law for endangered species.

E. Limited number of tour operators

Tour operators on Maratua are dominated by resorts. Meanwhile, the community has a diving center from Dakkayu Akkal, albeit with limited equipment. In addition, the existing guide is still licensed in "advance", even though it is necessary to have a dive master license to build a dive center. So, it is necessary to increase the quality and quantity of the dive centers. Until today the, operators from Derawan have used many places on Maratua as tourist attractions. Meanwhile, tourist who visit Maratua usually travel without tour guides.

F. The absence of regulations on vehicle rental prices and affordable public transportation

The villages on Maratua are connected by land for long-distance travel. The majority of residents usually use motorbikes, because regular transportation is not available. This opens up opportunities for residents to provide motorcycle taxi services and rent vehicles to tourists. Tourists, in turn, argue that there is no standard price for motorbikes and vehicle rentals. Some of the tourists that were interviewed expressed that the tariffs were too high. Likewise, they further complained that motorbike rentals do not match the rental rates with the condition of these motorbikes.

G. Bad internet connection

Everyone agrees that internet access on Maratua is fairly bad. On Maratua, there is an internet café located in the Teluk Harapan Village, which is supported by 2G network from one of the phone operators. However, when the weather is bad, internet access completely shuts down. In normal weather conditions, the internet speed is also rather slow. This, in its part, hinders promotional efforts that are made via social media.

H. Lack of bank and exchange facilities

Bank and exchange facilities are not found on Maratua. Therefore, local and foreign tourists need to bring sufficient cash funds when visiting the Island. This makes it difficult for tourists to explore more tourist attractions due to high transportation costs.

I. Disputes of territorial boundaries among villages

Village borders are an issue that has been raised by the community. There is still a disagreement regarding borders and village areas. According to informants, this has had an impact on tourist developments and management of ODTW locations.

Opportunities

Opportunities are external factors that positively support the creation of community-based ecotourism, such as environment, social and cultural aspects, regional economy, government policies, technology, and competition.

A. Kinship within the Bajau tribe on Derawan

The Bajau, in some places, have brotherly relationships. Many residents on Maratua have husbands and wives from Derawan, so their brotherly ties have remained rather strong. This is an opportunity for co-operation.

B. Rise in Derawan's popularity

In 2010, data from BPS (2014) concluded that 15,024 tourists visited Derawan. In 2011, the number increased to 20,953, and in 2012 to 61,195. The public and the government interpret this phenomenon as a vital opportunity to generate income for the region in terms of economic activities.

C. Derawan's over-capacity during holiday seasons

At the peak of the holiday season, almost every homestay or hotel on Derawan is full. Some tourists are forced to sleep in mosques or on boats. This is an important opportunity to increase tourism on Maratua.

D. One of Outermost Small Islands (PPKT)

Maratua is one of the 92 Outermost Small Islands (PPKT) in PP. 78 of 2005. This status is an opportunity to develop ecotourism, for there are policies for the development of facilities and infrastructure in place that have been a problem on the island.

E. Included in Berau Regional Marine Conservation Area (KKLD)

The Berau Regional Marine Protected Area (KKLD) is an area of ecological importance, which in turn is based on the Berau Regent Regulation No. 31 of 2005. The aim is to protect marine diversity, as well as ensure the sustainable use of fisheries and marine tourism.

F. Social media to promote tourism

The ease of disseminating information via social media can be used to promote tourism in the area. This is an opportunity that can be used for the sake of promoting Maratua.

Threats

A. Environmental impact of changing land use

Land use change from natural forest and mangrove forest to residential areas and other facilities has had an impact on the environment due to the limited land conditions of Maratua and the character of karst which is prone to water pollution.

B. Garbage swept from Malaysia and the Philippines during seasons

The north wind season occurs between December and February. During these months,

the wind blows strong from north to south and brings heavy rain. The most pronounced impact on Maratua is that a lot of rubbish from Malaysia and the Philippines is carried by the current to litter the coast.

C. Land selling

The community sells land along the coast. Land sales that occur continuously threaten the sustainability of the environment and the existence of the community itself, especially since there are no rules for zone division of the area.

D. Unfair competition among the operators of Derawan

The popularity of Derawan has been well known for some time, and tourist activities on the island are already underway. However, this is not balanced with planning that considers sustainability, which has resulted in excess capacity. According to the people of Maratua, tour guides from Derawan are often reluctant to explain the accommodation available on Maratua and they even provide false information and a bad image of the Island.

E. Big waves at monsoons

The location of Maratua, which is far from the mainland and directly adjacent to the Sulawesi Sea, means that the impact of the southern and northern monsoons are significant.

F. Different perceptions between central and local governments on ecotourism development models

In the development of ecotourism on Maratua, there are differences between the central and local governments. The local government encourages resort development to increase ecotourism by providing investment flexibility to outsiders. Meanwhile, the central government, through the

Derawan's DMO program, encourages ecotourism on Maratua to be fully held by the community. The central government further argues that when tourist management is left to outsiders, in the future Maratua people will only become spectators, i.e., not players, in tourism management.

From all the strength factors, exotic underwater and underground aspects, and unique endemic fauna, formed the highest score. They can be interpreted as being the main asset that becomes the strength for developing ecotourism on Maratua. In addition, the availability of regular transportation from central of Berau Regency scored high. This is considered by various parties as a great strength. Not only does regular transportation have benefits for the development of ecotourism as such, but also, it greatly benefits other activities in the area.

From all the weakness factors, waste management and the incapacity of homes to provide accommodation were seen as serious problems, i.e., they received the highest score. In addition, the absence of bank facilities and currency exchanges were considered as a weakness. The absence of banks not only hinders the development of ecotourism, but also, it hinders other economic activities in the area. Therefore, in order to make bank transactions, Maratua residents have to travel to Tanjung Batu. Meanwhile, the problem of village boundaries, which is a continuous issue (unlikely to be resolved in the near future) there, was considered not a significant obstacle in the development of ecotourism, i.e., it received a low score. From the table above, the total score between the total strength factor plus the total weakness factor ($2 + (-2.13) = -0.13$) was taken. As a summary, having taken all these factors into consideration, it can be concluded that, internally, the weaknesses in Maratua were greater than the strengths.

The over-capacity that occurred on Derawan, and the rampant promotion of tourism via social media, both received high scores. This implies that these two factors have great potential in supporting the development of ecotourism on the Island. Derawan as a tourist destination has gained popularity in recent years. One side of the capacity of the island itself cannot accommodate tourists who come,

IFAS and EFAS Analysis

Table 2. Result of IFAS Analysis

No.	Internal Strategy Factors	Value (a)	Rating (b)	Score (c=axb)
Strength (+)				
1	Underwater and underground exoticism	0.072	5.00	0.36
2	Unique endemic fauna	0.071	4.92	0.35
3	Traditional rituals of the Bajau tribe	0.053	3.42	0.18
4	Culinary and diverse marine product	0.063	4.08	0.26
5	Untouched natural forest and wetland area	0.044	3.25	0.14
6	Daily life of Bajau tribe	0.053	3.75	0.20
7	Availability of the regular transportation from central of Berau Regency	0.071	4.75	0.34
8	Security unit with special abilities	0.053	3.50	0.18
Subtotal of strengths		0.48		2.00
Weakness (-)				
1	No zone division yet	0.053	-3.42	-0.18
2	Poor waste management	0.072	-5.00	-0.36
3	Inn that does not feasible	0.072	-5.00	-0.36
4	No unique souvenirs	0.050	-3.25	-0.16
5	Limited number of tour operators	0.063	-4.08	-0.26
6	The absence of regulations on vehicle rental prices and affordable public transportation such as ojek (motorcycle taxi)	0.050	-3.50	-0.17
7	Bad internet connection	0.053	-3.33	-0.18
8	No bank and money changer facility	0.071	-5.00	-0.35
9	Disputes between villages over territorial boundaries	0.041	-2.67	-0.11
Subtotal of weaknesses		0.52		-2.13
Total		1.00		-0.13

general development of Maratua. On the other hand, there exists the big threat from garbage coming from Malaysia and the Philippines, especially during the north wind season. The garbage comes in large quantities, making it difficult to clean, and it further disturbs the tranquility of the beach.

Furthermore, the activity of selling land on Maratua is also being considered as a threat. It scored high, meaning that the threat has become quite substantial. Land is sold to foreign investors who plan to build resorts on Maratua. Obviously, this threatens to develop

especially at the peak of the holiday season. This phenomenon was considered a great opportunity and could be used for the

ecotourism by putting the community as the main actor. From the table above, the total score between the total opportunity factor plus

the total threat factor $(2.18 + (-1.89)) = 0.28$ was taken. In sum, it can be concluded that, externally, the opportunities that exist in Maratua were greater than the threats.

Table 3. Result of EFAS Analysis

No.	External Strategy Factor	Value (a)	Rating (b)	Score (c=axb)
Opportunity (+)				
1	Kinship within the Bajau tribe in the Derawan Island	0.059	3.00	0.18
2	Uprising of Derawan Island popularity	0.098	4.33	0.43
3	Derawan Island experiences over-capacity during the holiday season	0.110	4.92	0.54
4	Included in the category of Outmost Small Islands (PPKT)	0.068	3.17	0.22
5	Included in the category of The Berau Regional	0.077	3.58	0.28
6	Marine Conservation Area (KKLD) Tourism promotion from social media	0.110	4.92	0.54
Subtotal of Opportunities		0.52		2.18
Threat (-)				
1	Environmental impact from change in forest land	0.094	-4.33	-0.41

2	use Garbage swept from Malaysia and the Philippines which comes every north wind season	0.112	-4.92	-0.55
3	Land-selling activity Unfair competition is carried out by the operators of Derawan Island	0.096	-4.50	-0.43
4	Big waves at the peak of the monsoons	0.073	-3.42	-0.25
5	The different models of ecotourism development between the central and local government	0.037	-1.83	-0.07
6		0.066	-2.83	-0.19
Subtotal of threats		0.48		-1.89
Total		1.00		0.28

Source: Processed based on data by researchers, 2015

The over-capacity that occurred on Derawan, and the rampant promotion of tourism via social media, both received high scores. This implies that these two factors have great potential in supporting the development of ecotourism on the Island. Derawan as a tourist destination has gained popularity in recent years. One side of the capacity of the island itself cannot accommodate tourists who come, especially at the peak of the holiday season. This phenomenon was considered a great opportunity and could be used for the general development of Maratua. On the other hand, there exists the big threat from garbage coming from Malaysia and the Philippines, especially

during the north wind season. The garbage comes in large quantities, making it difficult to clean, and it further disturbs the tranquility of the beach.

Furthermore, the activity of selling land on Maratua is also being considered as a threat. It scored high, meaning that the threat has become quite substantial. Land is sold to foreign investors who plan to build resorts on Maratua. Obviously, this threatens to develop ecotourism by putting the community as the main actor. From the table above, the total score between the total opportunity factor plus the total threat factor $(2.18 + (-1.89)) = 0.28$ was taken. In sum, it can be concluded that, externally, the opportunities that exist in Maratua were greater than the threats.

SWOT Analysis

1. S-O (Strength-Opportunity)

Strategy

- a. Information center regarding Maratua located on Derawan

Maratua has the strength that it is next to tourist sites, including natural and cultural attractions. Transportation to the island is also available. On the other hand, there is an opportunity in the increasing popularity of Derawan, yet it is not balanced with setting the capacity of the place so that there is over-capacity. In addition, the Bajau tribe on Derawan is quite closely related to the people of Maratua. By taking advantage of this opportunity, creating an information center featuring Maratua on Derawan could be a strategy to further market Maratua as a tourist destination.

- b. Tour packages with natural and cultural tourist attractions

Maratua also offers cultural attractions. Fishing activities can be an interesting tourist attraction to offer, yet thus far, local culture has not been used as a tourist attraction.

This aspect could be employed as a tour package by utilizing social media in its promotion, so that local culture with tourist activities can be preserved and utilized.

2. S-T (Strength-Threat) Strategy

- a. Partnership between private land/resort-owners and community

The partnership is a strategy that takes advantage of the existing strengths and attempts to overcome threats in the form of unfair competition from Derawan, and the consignments of waste coming from Malaysia and the Philippines. With this partnership, it is endeavored for the community to have a bargaining position with the private sector. The public and the private sectors are required to hold discussions to face these threats. The partnership is also a way to get around the threat of selling land. With a potential partnership between the community and private sector, the impact of land change could be reduced. Communities can make a memorandum of understanding with the landowners to create a resort that minimizes the impact of land change.

- b. Establishment of coordinating body for the security of tourism and marine transportation

One of the strengths of Maratua lies in the presence of a security apparatus with special abilities, namely the Indonesian Navy with special forces personnel. On the other hand, there is a threat in the form of large waves at the peak of the wind season that can threaten sea transportation and marine tourist activities. Therefore, it is necessary to propose the involvement of security forces in these activities by forming coordinating bodies that includes various parties.

3. W-O (Weakness-Opportunity) Strategy

- a. Spatial planning of Maratua

In general, the sea area of Berau Regency has been made zoning which is contained in the Regional Marine Conservation Area (KKLD) of

Berau Regency. Within the scope of sub-districts, Maratua has an area that is a KKLD, namely Karang Muara. Meanwhile, Maratua does not have zone divisions and restrictions on area management. The need for zone division is to maintain sustainability and implement one of the principles of ecotourism.

- a. Strengthening community capacity, supporting facilities, and tourism institutions

The opportunity for tourists to visit Maratua is getting bigger, which has witnessed Derawan increasing in popularity resulting in insufficient capacity for accommodation during holiday seasons. Strengthening community capacity, supporting facilities, and tourism institutions is a strategy to deal with the arrival of tourists, yet at the same time, seeing that there are still internal weaknesses in the form of amenities, support facilities, and community institutions. Obviously, development must take place in tandem with the different aspects of environmental sustainability.

4. W-T (Weakness-Opportunity) Strategy

We propose only one strategy in this dimension, namely: creating common perceptions among private, central, regional, and village governments which all center on tourism management. The existence of disputes between villages regarding territorial boundaries is a weakness of Maratua which is yet to be resolved. The impact of this problem is that Maratua is not included in the zoning distribution for the Berau KKLD. Then, the difference in perceptions of ecotourism development between the central and regional governments is a threat that allows for inconsistency in the development of the community. The central government through the DMO on Derawan employs a community-

based ecotourism approach, while the local government encourages investment by facilitating resort development permits. The existence of an understanding between all the stakeholders is the main requirement to make sure that the development of ecotourism on Maratua does not overlap.

Figure 4. SWOT Analysis Matrix of Ecotourism Development on Maratua Island

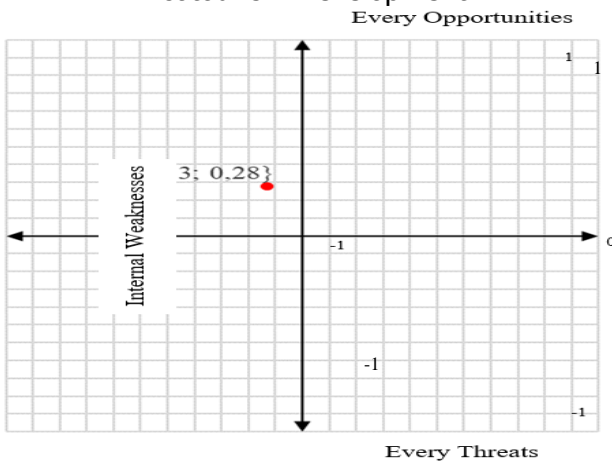
<p style="text-align: center;">Internal</p> <p style="text-align: center;">External</p>	<p style="text-align: center;">STRENGTH (S)</p> <ol style="list-style-type: none"> 1. Underwater and underground exoticism 2. Unique endemic fauna 3. The traditional rituals of the Bajau tribe 4. Culinary and diverse marine product 5. Untouched natural forest and wetland area 6. Daily life of Bajau tribe 7. Availability of the regular transportation from central of Berau Regency 8. Security unit with special abilities 	<p style="text-align: center;">WEAKNESS (W)</p> <ol style="list-style-type: none"> 1. No zone division yet 2. Poor waste management 3. Inn that does not feasible 4. No unique souvenirs 5. Limited number of tour operators 6. The absence of regulations on vehicle rental prices and affordable public transportation such as ojek (motorcycle taxi) 7. Bad internet connection 8. No bank and money changer facility 9. Disputes between villages over territorial boundaries
<p style="text-align: center;">Opportunity (O)</p> <ol style="list-style-type: none"> 1. Kinship within the Bajau tribe in the Derawan Island 2. Uprising of Derawan Island popularity 3. Derawan Island experiences over-capacity during the holiday season 4. Included in the category of Outmost Small Islands (PPKT) 5. Included in the category of The Berau Regional 6. Marine Conservation Area (KKLD) 7. Tourism promotion from social media 	<p style="text-align: center;">S-O Strategy</p> <ol style="list-style-type: none"> 1. Information center that displays information about Maratua Island with the location of the information center on Derawan Island. 2. Tour packages with natural and cultural tourist attractions. 	<p style="text-align: center;">W-O Strategy</p> <ol style="list-style-type: none"> 1. Spatial planning of Maratua Island area. 2. Strengthening community capacity, supporting facilities, and tourism institutions.
<p style="text-align: center;">Threat (T)</p> <ol style="list-style-type: none"> 1. Environmental impact from change in forest land use 2. Garbage swept from 	<p style="text-align: center;">S-T Strategy</p> <ol style="list-style-type: none"> 1. Partnership between (private) landowners who build the resort and community for 	<p style="text-align: center;">W-T Strategy</p> <ol style="list-style-type: none"> 1. Conducting common perceptions from the central, regional, village, and private governments in managing

<p>Malaysia and the Philippines which comes every north wind season</p> <ol style="list-style-type: none"> 3. Land-selling activity 4. Unfair competition is carried out by the operators of Derawan Island 5. Big waves at the peak of the monsoons 6. The different models of ecotourism development between the central and local government 	<p>ecotourism development.</p> <ol style="list-style-type: none"> 2. Propose the establishment of a coordinating body for the security of tourism activities and marine transportation. 	<p>tourism.</p>
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Strategy

After having identified strategic factors and conducted SWOT Analysis, a strategy of community-based ecotourism development on Maratua could be formulated. From the identification of strategic factors, it was found that internal factors had a total score of -0.13 and external factors had a total score of 0.28 (see Figure 5). The diagram shows the location of the coordinates in Quadrant III, which means that they have a great opportunity, yet also have internal constraints or weaknesses. Therefore, the right strategy for these conditions seems a WO strategy or a strategy that minimizes internal problems, the aim being an increase in market opportunities. It can be described as follows:

Figure 5. Position of Maratua Island Ecotourism Development



1. Spatial planning of Maratua

Spatial planning is a pivotal factor in the preparation of an ecotourism area. According to Regulation of the Minister of Culture and Tourism No. KM.67 / UM.001 / MKP / 2004, the development of small island tourist areas can be divided into two types: (i) an island which is as a whole used as tourist area or (ii) an island which is only partially used as a tourist area. For the first one, it is necessary to establish a protected area to preserve ecosystem from tourist activities, i.e., their impact.

Meanwhile, zoning in tourism development on a small island is further divided into three zones: (i) intensive, (ii) extensive, and (iii) protection (conservation) zones. Besides this, other zones are also needed for non-tourist activities, such as fisheries. In the preparation and determination of zoning, all parties must be included, including the community and businessmen. Zone planning is a collaborative resource and ecological assessment by various parties must be made. Not only is zoning planning sensitive to environmental protection issues, but also, it impacts directly economic, social, and cultural aspects. Its implementation should therefore be enforced by a strong governmental institution.

2. Strengthening community capacity, supporting facilities, and tourism institutions

To realize community-based ecotourism on Maratua, the community must be equipped with hospitality skills, English language skills, and tour guide abilities, regarding both: on water and on land tourist attractions. In addition, openness to visitors is important. There are still unfixed prices of motorbike rentals or taxis due to low trust of locals vis-à-vis tourists.

Furthermore, supporting facilities should be improved. It includes medical personnel, electricity, internet access, and amenity aspects (such as travel agencies), home stays, restaurants, and other types of accommodation. So, far, restaurants have been located in the Teluk Harapan Village, serving fresh fish. What can be added to this is the traditional food of the Bajau, which in turn could be employed to preserve culture. There are already many home stays available on Maratua that contain traditional elements of the Bajau houses, but electricity and water facilities need to be urgently improved.

To realize the two aspects above, a good tourism institution is needed. It is necessary to form groups that are aware of the different aspects and impact of tourism—Pokdarwis, Kelompok Sadar Wisata—which function as a driving force. In this sense, Pokdarwis can be a strategy to overcome internal problems by enhancing the position and role of the community as an important subject/actor of tourism. In the same context, Pokdarwis could also function as a driving force for the implementation of Sapta Pesona principles (such as safety, order, cleanliness), which are all in line with the concept of community-based ecotourism.

CONCLUSION

This study concludes that the direction for community-based ecotourism development

on Maratua is classified on Quadrant III in the SWOT diagram. This means that Maratua has a large enough opportunity to be marketed, yet this has not been optimally utilized. For this reason, the development of community-based ecotourism on the island should be conducted in line with an effective strategy that minimizes weaknesses and takes advantage of opportunities (WO strategy). We suggest two strategies here: (i) spatial planning of the Maratua area, and (ii) the strengthening of community capacity, supporting facilities, and tourism institutions.

In order to carry out these strategies, several competent facilitators should work directly and intensively in the location to facilitate the development of ecotourism on Maratua by involving the communities optimally. Maratua is an area that has great potential for ecotourism, and this is an important national asset that should not be underutilized. Therefore, the central and local governments should work closer together to manage the island properly.

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