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BUSINESS MODEL FOR SUSTAINABLE ECOTOURISM SYSTEMS IN KANIUNGAN BESAR ISLAND AREA, INDONESIA

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ABSTRACT

This research aims to develop a sustainable ecotourism management business model in Kaniungan Besar Island, Berau Regency - East Kalimantan. The analysis carried out is the analysis of the Resource Management Strategy (SWOT and QSPM Analysis) and the Osterwalder Business Model for Sustainable Ecotourism Management. The results of compiling a business model for sustainable ecotourism management in Kaniungan Besar Island, Berau Regency - East Kalimantan have been achieved when viewed through the concept of the canvas business model. Kaniungan Island's value is based on a partnership that accommodates ecological principles and socio-cultural norms of the community while providing an impressive travel experience for tourists. The potential tourism value of Kaniungan Besar Island is Rp. 11,411,237,787/year (around \$811242,01/year) and outside the tourist area of Rp. 9,372,304,592/year (around \$666291,19/year). It is suggested that the priority of sustainable ecotourism management strategies in Kaniungan Besar Island is to improve accessibility and facilities and infrastructures, facilitation of stakeholder partnership forums; investment forum facilitation; preparation of a business plan.

KEY WORDS

Business model, SWOT, QSPM, ecotourism, Kaniungan Island.

In a broad sense, tourism is a recreational activity outside the domicile to escape from routine work or find another atmosphere. As an activity, tourism has become a basic need of developed communities and a small proportion of developing communities. Tourism is increasingly developing along with social, cultural, economic, technological, and political changes. The more even distribution of economic resources, advances in transportation technology, and increased leisure time driven by reduced working hours have accelerated human mobility between regions, countries, and even continents related to tourism activities (Damanik and Weber, 2006).

The blueprint for the development of the Tourism Destination Region of East Kalimantan formulates a development pattern to accelerate and spread tourism development in areas with potential tourism resources but are still not managed optimally, equitably, and sustainably. In line with the national tourism program, the Provincial Government of East Kalimantan, with one of its missions, manages cultural and historical wealth and develops tourism potential as a foreign exchange source.

Kaniungan Besar Island is one of the islands with views of white sand beaches combined with towering coconut trees. This island is located on the South Coast of Berau, Biduk-Biduk District, Berau Regency, East Kalimantan Province. Kaniungan Besar Island, located in Berau Regency, is one of the marine tourism attractions with excellent potential if well developed. One of the efforts to support the development of these tourist destinations and promote them both within the region and outside the region is the need for a study on the development plan for the management of the ecotourism area of Kaniungan Besar Island, Berau Regency.

There are increased tourist visits in the Kaniungan Besar Island area, Biduk - Biduk District, Berau Regency. If not followed by good management, such as public facilities, handling waste, and maintaining the optimal limits of tourist visit activities (overuse), it can result in physical pressure on nature and the environment. Degradation of environmental quality will result in disturbed ecosystem balance. The impacts range from ecological



damage, a decrease in the number of visitors to a decrease in an area's income and economic value.

In connection with this, the parameters of ecological, economic / business, and social sustainability of a resource management concept are fundamental. Increasing the social and economic / business benefit value of ecotourism resources is created if environmental sustainability can be maintained. Proper management must be carried out so that the Kaniungan Besar Island Area's sustainability as a recreational tourism object can continue to be utilized while maintaining its ecological function in the future. The concept of integrated ecotourism management is packaged in the form of a business model that guides sustainable ecotourism management for all interested parties.

In general, this research activity aims to develop a business model for sustainable ecotourism management in Kaniungan Besar Island, Berau Regency - East Kalimantan. Based on the description above, this research activity's specific objectives are to analyze the suitability of land in the Kaniungan Besar Island Area for sustainable ecotourism management and to design management strategies and business models for ecotourism activities in the Kaniungan Besar Island Area in a sustainable manner.

METHODS OF RESEARCH

Research on the Sustainable Ecotourism Business Model in the Kaniungan Besar Island Region was carried out using a spatial, ecological, socio-economic, and policy analysis approach linkages between sectors in carrying out sustainable and equitable resource management. The analysis carried out was the Analysis of Resource Management Strategies (SWOT Analysis), Analysis of Quantitative Strategies Planning Matrix (QSPM), and Osterwalder Business Model for Sustainable Ecotourism Management.

The types of data and information needed are data on natural resources, area carrying capacity, land suitability, human resources, and the general condition of the location in the Kaniungan Besar Island area. The type of data used is *text data* and *image* (Fauzi, 2001). The data collection method used in this study was a survey method. Determination of the sample in this study using purposive sampling method, namely purposive sampling by the objectives of the study and accidental sampling. The sampling method was selecting who is found at the research location who wants to recreation and enjoy the scenery in the Kaniungan Besar Island Ecotourism Area. Data collection was carried out using in-depth interviews, observation, and questionnaires as the primary data.

RESULTS AND DISCUSSION

Strategy for Sustainable Ecotourism Management on Kaniungan Besar Island. The strategy for managing Kaniungan Besar Island's tourist area is carried out by identifying the strengths, weaknesses, opportunities, and threats of management problems. Two approaches are used to determine the management strategy, namely the SWOT approach using a matrix of strengths, weaknesses, opportunities, threats, and the Quantitative Strategic Planning Matrix (QSPM) approach. Combining the two approaches will produce the best alternative strategy and formulate alternative recommendations for policymakers in tourism management in Kaniungan Besar Island.

The formulation of alternative strategies uses three stages, including the input stage as the first stage, then the matching stage, and the decision stage. The input stage consists of grouping the identification results and conclusions from necessary information in strategy formulation through the Internal Factor Evaluation (IFE) matrix and External Factor Evaluation (EFE). The second stage includes developing a strategy by combining a SWOT analysis and an Internal-External (IE) matrix. The final stage is to determine alternative strategic priorities as a conclusion of all stages using QSPM analysis.

Identification of Internal Strategic Factors. Strengths; Strength factors in tourism management of Kaniungan Besar Island include:



1. There are natural resources in the form of a small island ecosystem that is beautiful, unique, interesting, and has biodiversity to be managed as a marine ecotourism attraction;
2. The allocation of spatial and resource use has not exceeded the ecological carrying capacity / is still possible to be managed as an ecotourism activity space;
3. Determination of Kaniungan Island's status as a marine conservation area with a limited use zone suitable for the development of marine ecotourism and sustainable fisheries;
4. There is support from local communities, business actors, and local governments to collaboratively and sustainably develop a marine ecotourism management system;
5. Publications and marketing information about Kaniungan ecotourism through digital social media has been widely disseminated.

Weakness; Weakness factors in tourism management of Kaniungan Besar Island include:

1. Accessibility to reach tourist destinations and supporting tourism activities is inadequate in terms of comfort and safety;
2. The vulnerability of ecosystems in other small islands might changes that occur due to human activities;
3. The community, business actors, and government institutions' human resource capacity are inadequate in sustainably managing ecotourism activities;
4. Limited access to learning to increase business management mastery and appropriate applied technology to achieve added value in ecotourism businesses and other creative economies;
5. Multiple interpretations of landowners among the parties who have been working for a living on Kaniungan Island.

Identification of external strategic factors. Opportunities; Opportunity factors in tourism management of Kaniungan Besar Island include:

1. The direction of development policies that place the marine ecotourism sector as a priority program for regional development in East Kalimantan;
2. Potential and a supportive investment climate in the tourism sector and its supporting sectors;
3. The trend of visits from ecotourism activities at the global, national and regional levels continues to increase;
4. There is other natural tourism as support around Kaniungan Island which management can be integrated to strengthen ecotourism's attractiveness in one tourist area;
5. There is support for building synergistic collaborative networks with professional associations, academics/researchers, and NGOs to build a sustainable and equitable ecotourism management model.

Threats; Threat factors in tourism management of Kaniungan Besar Island include:

1. There are destructive fishing practices that destroy the sustainability and beauty of natural resources as a tourist attraction;
2. There are impacts of climate change on small islands' ecological structures that are vulnerable (abrasion, marine hydrodynamics, extreme rainfall);
3. There is a social impact from the arrival of tourists, which influences the value system and different behavior patterns that may clash with the local community's culture;
4. Business competition from other tourist destinations and attractions in the East Kalimantan region;
5. There is a potential for safety disturbance due to the consequences of the seabed's topographic characteristics and the potential for tectonic earthquake disasters from the active fault of Palu and Tarakan.

Internal factor evaluation. Results from identifying internal strategic factors in the form of strengths and weaknesses that affect the tourism management of Kaniungan Besar Island. The evaluation of internal factors based on answers from stakeholders as



respondents were obtained scores from the multiplication of weights and ratings on each of the strengths and weaknesses (Table 1.)

Table 1 – Evaluation Results of Internal Factors in Tourism Management of Kaniungan Besar Island

No	Strategic Factors Internal	Weight	Rating	Score
Strength				1.75
1	There are natural resources in the form of a small island ecosystem that is beautiful, unique, interesting, has biodiversity to be managed as a marine ecotourism attraction	0.13	4	0.50
2	The allocation of space and resource use has not exceeded ecological carrying capacity / is still possible to manage as an ecotourism activity space	0.10	3	0.30
3	Determination of the status of Kaniungan Island as a marine conservation area with a limited use zone suitable for the development of marine ecotourism and sustainable fisheries	0.10	4	0.40
4	There is support from local communities, business actors, and local governments to develop management systems Processed collaborative and sustainable marine ecotourism	0.03	4	0.10
5	Publication and marketing information about Kaniungan ecotourism through digital social media has been widely disseminated	0.15	3	0.45
Weaknesses				0.73
6	The accessibility to reach tourist destinations and supporting tourism activities is inadequate in terms of comfort and safety	0.20	1	0.20
7	The vulnerability of ecosystems in small islands to changes that occur due to human activities	0.08	2	0.15
8	Human resource capacity of the community, business actors, and institutions the government is not yet adequate in managing ecotourism activities in a sustainable manner	0.08	2	0.15
9	Limited access to learning to increase mastery of business management and appropriate applied technology to achieve added value in ecotourism businesses and other creative economies	0.08	2	0.15
10	Multiple interpretations of land tenure status among stakeholders' parties who have been making a living on Kaniungan Island	0.08	1	0.08
Total		1.00	-	2.48

Source: Primary data processed, 2020.

The total value obtained for the internal factor was 2.48, consisting of a strength value of 1.75 and a weakness value of 0.73, indicating a value below the average value of 2.50. This value gives the sense that policymakers in managing Kaniungan Besar Island tourism have not optimized their strengths and overcome their weaknesses. Policymakers have not taken advantage of the strengths of natural resource beauty as ecotourism attractions; suitability of area status for ecotourism development; carrying capacity of space and SDA can still be utilized; support from the community, business actors, and government; and publications and marketing on Berau ecotourism have been widely published. The main weaknesses are inadequate accessibility and resources to support the ecotourism business; vulnerability of small island ecosystems; limited human resource capacity, government institutions, and business actors; limited learning resources for capacity building; and the status of land tenure with multiple interpretations cannot be resolved.



External factor evaluation. Evaluation of external factors results from identifying internal strategic factors in the form of opportunities and threats that affect the tourism management of Kaniungan Besar Island. The evaluation of external factors is obtained from the scores on the multiplication of weights and ratings on each of the opportunity and threat factors. More details can be seen in Table 2.

Table 2 – Evaluation of External Factors in the Management of Ecotourism, Kaniungan Pulau Besar

No	Factor External Strategic	Weight	Rating	Score
Opportunity				1.80
1	The policy for the marine ecotourism sector that puts a priority program of regional development in East Kalimantan	0.13	3	0.38
2	The potential and supportive investment climate in the tourism sector and its supporting sectors	0.05	4	0.20
3	The trend of visits from ecotourism activities at the global, national and regional levels continues to increase	0.15	4	0.60
4	There is other natural tourism as support around Kaniungan Island which management can be integrated to strengthen the attractiveness of ecotourism in one area tourism	0.08	3	0.23
5	There is support for building a synergic collaboration network with professional associations, academics/researchers, and NGOs to build a sustainable and equitable ecotourism management model	0.10	4	0.40
Threat				0.65
6	There are practices <i>destructive fishing</i> that damage the sustainability and beauty of natural resources as a tourist attraction	0.03	2	0.0500
7	There is an impact of climate change on the ecological structure of small islands that are vulnerable (abrasion, marine hydrodynamics, extreme bulk rain)	0.15	1	0.1500
8	There is a social impact from tourist arrivals that influence value systems and different behavior patterns that may conflict with local culture	0.13	2	0.2500
9	Business competition from other tourist destinations and attractions in the East Kalimantan region	0.10	1	0.1000
10	There is a potential for safety disturbance due to the consequences of topographic, characteristics of the seabed, and the potential for tectonic earthquake disasters from the active fault of Palu and Tarakan	0.10	1	0.1000
Total		1.00		2.4500

Source: Processed primary data, 2020.

The evaluation of external factors gave a total score of 2.45, consisting of an opportunity value of 1.80 and a threat value of 0.65. This value is below the average value of 2.50, thus providing an interpretation that policymakers in managing Kaniungan Besar Island tourism have not been able to take advantage of significant opportunities such as ecotourism as a priority sector for development in East Kalimantan; the potential for a large and growing ecotourism market; potential and a supportive investment climate; integrating other ecotourism attractions in the surrounding area, and stakeholder collaboration network support. Also, threats in the form of destructive fishing practices still occur; impacts of climate change on the ecological structure of small islands; the socio-cultural impact of tourism activities;



business competition from other tourist destinations; and the potential for natural earthquake disasters from active faults in the vicinity cannot be overcome.

Strategy Profile in Kaniungan Besar Island Ecotourism Management. The strategic alternatives profile in Kaniungan Besar Island tourism management is obtained from the evaluation value of internal and external factors. The X-axis (internal factor) value is obtained from the difference between the strengths and weaknesses values in the internal factor evaluation matrix. In contrast, the Y-axis value (external factors) is derived from the difference between the opportunities and threats values in the external matrix evaluation matrix. The analysis results show that policymakers in managing Kaniungan Besar Island tourism are in an aggressive quadrant, where policymakers are in an excellent position to use their internal strengths to take advantage of current opportunities and overcome internal weaknesses and overcome various external threats. More details can be seen in Figure 2.

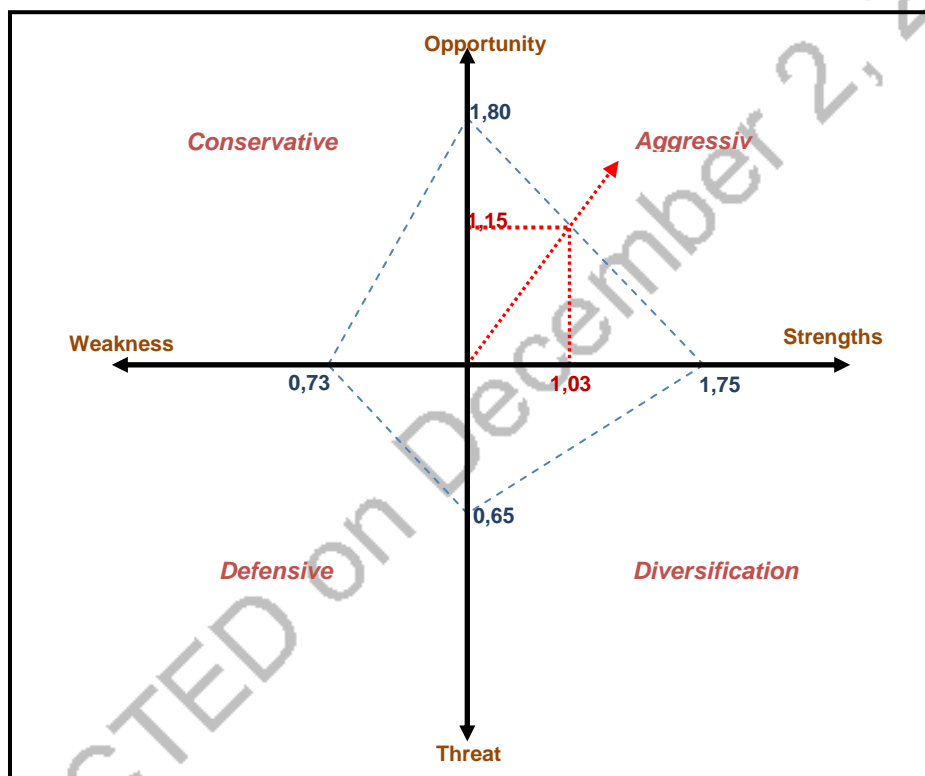


Figure 1 – Strategy profile in ecotourism management of Kaniungan Besar Island

SWOT Matrix (Strength, Weakness, Opportunity, Threat). After the evaluation of internal and external factors is analyzed by matching internal factors in the form of strengths and weaknesses with external factors in the form of opportunities and threats, determining alternative tourism management strategies for Kaniungan Besar Island is carried out by using a SWOT analysis approach. The results of matching internal and external factors resulted in the formulation of an alternative strategy consisting of strength-opportunity (SO), weakness-opportunity strategy (WO); force-threat strategy (ST); and weakness-threat (WT) strategy. The SWOT matrix can be seen in Table 3.

Based on the results of the SWOT analysis, ten alternative strategies obtained were that can be used in the management of Kaniungan Besar Island ecotourism.

The SO strategy is a strategy that uses strength to take advantage of opportunities in the management of Kaniungan Besar Island tourism. This strategy produces three alternative strategies, including:

- It facilitates collaborative forums/partnerships for stakeholders (Joint Business Group/community KUB, local government, business / private sector, universities, and NGOs) to prepare and implement sustainable and equitable ecotourism business plans;



- It facilitates investment forums to accelerate and increase ecotourism business financing by user preferences (customized financial system);
- Publication network facilitation and marketing communication through hybrid communication models (conventional and digital media).

Table 3 – The SWOT matrix in the tourism management of Kaniungan Besar Island

Internal factors	Strength	Weakness
Opportunity <ul style="list-style-type: none"> • <i>Ecotourism as a priority sector for development in East Kalimantan</i> • <i>Large and increasing potential for ecotourism market</i> • <i>The potential and supportive investment climate</i> • <i>Integration of other ecotourism attractions in the surrounding area</i> • <i>Stakeholder collaboration network support</i> 	<ul style="list-style-type: none"> • They facilitate collaborative forums/partnerships for stakeholders (community KUB, local government, business actors, universities, and NGOs) to prepare and implement sustainable and equitable ecotourism business plans. • It facilitates investment forums to accelerate and increase ecotourism business financing following user preferences (<i>customized financial system</i>). • They are facilitating publication networks and marketing communications through a hybrid model (conventional and digital media). 	<ul style="list-style-type: none"> • They are improving accessibility and infrastructure to support ecotourism businesses. • They are facilitating access to vocational education programs to increase the capacity of human resources and business institutions.
Threats <ul style="list-style-type: none"> • <i>The destructive fishing practice still occurs.</i> • <i>Impact of climate change on small island ecological structure</i> • <i>Socio-cultural impact of tourism activities</i> • <i>Business competition from other tourist destinations</i> • <i>Potential for natural earthquake disasters from active faults in the vicinity</i> 	<ul style="list-style-type: none"> • Formulation of a sustainable and equitable ecotourism management business plan • Law enforcement against practices <i>destructive fishing</i>. • Development of disaster warning and mitigation systems in ecotourism areas. 	<ul style="list-style-type: none"> • Develop travel behavior guidelines that accommodate the ecological principles and socio-cultural norms of the local community and provide a memorable travel experience for tourists. • It is strengthening the legal umbrella at the regional and community levels related to spatial planning and land use aspects.

WO strategy is a strategy that overcomes weaknesses by taking advantage of existing opportunities in Kaniungan Besar Island tourism management. This strategy produces two alternative strategies, including:

- Improvement of accessibility and facilities and infrastructures to support ecotourism business;
- They are facilitating access to vocational education programs to increase the capacity of human resources and business institutions.



ST strategy uses strength to avoid threats that exist in the tourism management of Kaniungan Besar Island. This combination produces an alternative strategy including three alternatives:

- Formulation of a sustainable and equitable ecotourism management business plan;
- Law enforcement against destructive fishing practices;
- Development of disaster warning and mitigation systems in ecotourism areas.

The WT strategy is a defensive strategy aimed at minimizing weaknesses and avoiding threats in the management of Kaniungan Besar Island tourism. 2 alternative strategies include:

- It developed travel behavior guidelines that accommodate the local community's ecological principles and socio-cultural norms while providing a memorable travel experience for tourists;
- It is strengthening the legal umbrella at the regional and community levels related to spatial planning and land use aspects.

Quantitative strategic planning matrix (QSPM). After identifying alternative strategies using the SWOT analysis approach, the next step is to formulate a priority strategy through the QSPM matrix approach. The QSPM matrix is a decision-making stage used to prioritize strategies according to internal and external conditions in Kaniungan Besar Island tourism management. QSPM analysis provides an Attractive Score (AS) for each internal and external factor. The strategy that has the highest total relative attractiveness value is the strategic priority. The determination of strategic priorities can be seen in Table 4.

Table 4 – Matrix QSPM in Kaniungan Island Besar travel management

Priorities	Code	Alternate Strategy	TAS Value
1	W-O1	Accessibilities improvement and supporters of ecotourism	7:55
2	S-O1	Facilitating collaborative forum/partnership of stakeholders for Business Group (KUB) communities, government regional, business / private actors, universities, and NGOs for the preparation and implementation of sustainable and equitable ecotourism business plans	7.45
3	S-O2	Facilitate investment forums to accelerate and increase ecotourism business financing according to user preferences.	7.38
4	S- T1	Formulation of business <i>plan</i> a sustainable and equitable ecotourism management.	7.30
5	W-T2	It is strengthening the legal umbrella at the regional and community levels related to spatial planning and land use aspects.	7.28
6	W-O2	They are facilitating access to vocational education programs to increase human resource capacity and business institutions.	7.23
7	W-T1	It is developing Guidelines for traveling behavior that accommodates the local community's ecological principles and socio-cultural norms while providing memorable travel experiences.	7.20
8	S-O3	Facilitate publication networks and marketing communications through digital media platforms.	7.13
9	S-T3	Development of disaster warning and mitigation systems in the region ecotourism.	7.05
10	S-T2	Law enforcement against destructive fishing practices.	7.03

The Kaniungan Island Ecotourism Business Model Canvas. The Business Model Canvas is a tool for describing, analyzing, and designing a business model (Osterwalder and Pigneur, 2015). The business model canvas turns a complex business concept into a simple



one in a single canvas sheet containing nine key integrated elements. The nine key elements in the Business Model Canvas include customer segments, value propositions, channels, customer relationships, revenue streams, essential resources, key activities, key partnerships, and cost structures.

Table 5 – Canvas Business Model

Key Partners Partnership/management with pure investment schemes or BOT (schemes <i>Building, Operate, Transfer</i>) between Local Government, Community, Private, Universities and Non-Governmental Organizations	Key Activities 1. Ecotourism Governance: Improved accessibility and water supply; Facilitating stakeholder partnership forums; investment forum facilitation; Preparation of a business plan (<i>business plan</i>) 2. Ecotourism Business: Beach & snorkeling tours; resort; restaurant; <i>bicycle track, mini-golf; playground; outbound; agrotourism; turtle conservation; camping ground</i>	Value Proposition for Small Island Ecotourism based on partnership/management that accommodates ecological principles and socio-cultural norms of the community while providing an impressive travel experience for tourists	Customer Relationships A hybrid service model that provides services based on personal client needs and is combined with the convenience of a digital communication platform	Customer Segments Family; Community / Organization, Company; Government agencies
	Key Resources 1. Natural resources for coastal conservation areas and small islands 2. Supporting infrastructure for ecotourism business (<i>existing and projective</i>)		Channels Oral (service offices, exhibition outlets, Tourism Information Center); Conventional media (newspapers, magazines, television, radio); digital media/internet (website; microblogging; social media)	
Cost Structure <ul style="list-style-type: none"> Cost for ecotourism services actual (beach & snorkeling tours, resorts, restaurants) = Rp. 3,070,360,000 Cost for ecotourism services projective (beach & snorkeling; resort; restaurant; <i>bicycle track, mini golf; play ground; outbound; agrotourism; turtle conservation; camping ground</i>) = Rp. 33,953,100,000 		Revenue Streams The economic value that rotates in the tourist area of Kaniungan Besar Island is Rp. 11,411,237,787 / year, and outside the tourist area of Rp. 9,372,304,592/year. Revenues are projected to increase in line with the increase in the quantity and quality of ecotourism services that will be developed. Revenue is obtained through the sale of resort accommodation, tourist attraction tickets; food and drink, souvenirs.		

Source: Processed primary data, 2020.

CONCLUSION

The results of compiling a business model for sustainable ecotourism management in Kaniungan Besar Island, Berau Regency - East Kalimantan have been achieved when viewed through the concept of the canvas business model. The value offered by Kaniungan Island is based on partnership or management that accommodates ecological principles and socio-cultural norms of the community and provides an impressive travel experience for tourists. The potential tourism value of Kaniungan Besar Island is Rp. 11,411,237,787 / year and outside the tourist area of Rp. 9,372,304,592/year. Revenue is projected to increase in line with the increase in the quantity and quality of ecotourism services that will be developed. Therefore, it is suggested that the priority strategies for sustainable ecotourism management in Kaniungan Besar Island are: Improvement of accessibility and water supply; Facilitating stakeholder partnership forums; Investment forum facilitation; Preparation of a business plan.

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