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THE STRATEGY FOR MARITIME ATTRACTION DEVELOPMENT IN BAWEAN ISLANDS, INDONESIA

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Abstract: *The research shows that the maritime attractions in the Bawean islands have the great potential to be the islands' main attraction since the panorama of beach and sea meets the 3S criteria (sun, sea, sand), and they have good quality of marine ecosystem. Noko island becomes the first priority over other tourist destinations in Bawean island. Moreover, diving and beach are the main attractions that need to be improved. This study also determines that Strengths Opportunities (SO) strategy is the most appropriate one employed to support the development of some tourist attractions in the Bawean islands since it uses Bawean people's open character toward the maritime attractions and their religious values. They are engaged in the process of the maritime attraction development from planning, execution, until evaluation. There are also other points of the strategy which are optimizing the airport in Tanjung Ori Bawean for the main transportation to Bawean Island, making the beach area, especially the area of coral reef ecosystems, a Marine Protected Area, and increasing the facilities and infrastructures of the maritime attraction like road, clean water, hotel, restaurant, and water sport/game by cooperating with some investors.*

Keywords: strategy, maritime attraction, AHP, SWOT, Bawean islands

INTRODUCTION

Bawean Island is a small island located approximately 150 km north of Java island in the Java Sea. The island which is administered by Gresik Regency of East Java Province is approximately 10 km in diameter, and the road circumnavigated it is 30 lane-km which can be reached in one to two hours. Since it has some small islands (*gili*), this island is also called the Bawean islands. The Bawean islands have some beautiful tourist spots like Lake Kastoba located in the middle of the island and the beaches (Zainollah, 2009). Due to some good aspects supporting the tourist industry there, the Bawean islands becomes the potential tourist destination for people in Java island especially in Surabaya and surroundings which are not too far from it (Chen, Ruijs, & Wesseler, 2005).

The focal points of the maritime attraction development policy are (1) the improvement on public infrastructure; (2) the enhancement of the quality and capacity of human resources in managing the maritime attraction; (3) the development of complete information and data processing system to make the tourists access any information fast, easily, and cheaply; (4) the improvement on the economic activity of non tourism industry like the craft industry, fishery, restaurant, and sea transport; (5) the development of security system and assurance for the tourists; (6) the creation of investment climate conducive to the investors; and (7) the environmentally sustainable development of the maritime attraction (Sheng-Hshiung, Linb, & Lin, 2006). The tourist attraction in the coastal area can be improved by considering the conservancy, which are *ecotourism* (the act of maintaining resources according to the environment, education and people's understanding and giving a long-term benefit) and preserve the *Marine Protected Areas* (Amanah, & Utami, 2006).

The biggest challenge of handling the maritime attraction is the poor quality of human resources in the Bawean islands causing the low ability to plan and implement the policy of coast and sea resource management, especially the maritime attraction one. Based on the experience of some countries that have developed their maritime attractions, formulating a detailed plan for the development of the maritime attraction is compulsarily needed (Evanthie, Jeremy, & Paul, 2009). Unfortunately, the potency of the resources of the small islands is not

managed excellently yet for the maritime attraction improvement. The analysis of how to develop and manage the area into ecotourism through the scientifically management model without neglecting residents' needs and the dinamic reality is needed to improve the ecotourism in those small islands. Besides, it is necessary to formulate a startegy to manage and make the area of small islands in the Bawean islands an ecorecreation continuosly (Baksir, Yulianda, Lumbatu, & Rahardjo, 2009).

Ecorecreation itself depends on the environment preservation and the harmony of the tourism and the local socio-economical values to be accepted in terms of both economical and social aspects (Burns, & Howard, 2003). The integration of two biophysics component, including environment and infrastructure aspects and socio-economy, any issues related to local attitude, perception and the change of life quality due to the impact of the tourism activity, is needed. Both of them have the limit on the ecotourism activity; if the limit is exceeded through the poor plan of construction, the tourism will lead to the environmental degradation and social conflict (Wong, 1998).

The effort of using the resources of the coast and sea of the Bawean islands based on the supportive aspects for the tourism consists of three features:

1. the characteristics of the tourist maritime attraction in the Bawean islands,
2. the places and types of the maritime destination that become the priority of the development of the maritime attraction using environmental conception in the Bawean islands, and
3. the strategy for developing the maritime attraction in the Bawean islands into the one using environmental conception.

THEORITICAL FRAMEWORK

Coastal area and ocean of Bawean Islands is a region with a rich potential by which gives big support for tourism. However, it also tends to give negative impacts in terms of influence and change because of natural change and human activity (Robertico, 2004). Several facts of coastal ecosystem can be as following: (a) it is a very complex, dynamic, and vulnerable ecosystem; (b) it is a rich area of natural resources which tends to be multiple use for certain parties, even potentially causes a conflict; (c) understanding of open access regime for coastal area utilization implicates the domination of 'powerful' parties and limiting people in utilizing the natural resources of coastal area (Garin-Munoz, 2006).

Thus, in utilizing the big potencies of Bawean coastal natural resources and Archipelago Ocean, especially for marine tourism, an integrated management is obviously needed. So far, the utilization of maritime tourism programmed by sector. Cooperation between stake holder (government, investor, people) still has a less power and tends to go by sector. This cause the small number of visitors coming to this Island (Velde, Green, Vanclooster, & Clothier, 2007).

One of the approaches used to encounter the problems of coastal area for maritime tourism program is by implementing the concept of Integrated Coastal Management or by now it's more popular with Integrated Coastal Management by involving all the stakeholder's role (Fabinyi, 2008). This concept certainly considers all the criteria aspects such as: environmental, economy, social-culture, institutional and technological aspect by using hierarchical approach and Strength-Weakness-Opportunity-Threat (SWOT) analysis. This strategic planning concept was conducted by finding actual issue, analyzing data, and providing information accurately relating to maritime tourism development in Bawean Islands of East Java (Baum, & Calabresse, 2000).

METHODS

The research was carried out in the Bawean islands, Gresik Regency of East Java on December 2012 by taking the primary and secondary data in the research location and some institutions related to the Gresik Regency government and others to support the study.

There are four research locations:

a. Sangkapura Port, Sangkapura Subdistrict. The researchers chose it since the panorama of the sea and its quay meet the criteria for tourist destination, and it has more appealing culinary delights than others'.
b. Noko Island in Sangkapura Subdistrict. It has more varieties of fish and better coral reef than other places.

c. Mayangkara Beach in Kepuhteluk village, Tambak Subdistrict. It has different environment characteristics to others'. This tourist spot is supported by the big wave and wind.

d. Pasir Putih Beach in Sukaoneng village. This place has different natural potency to others' which is that it has high quality white sand and water.

The data collection through some interview was performed by giving some questionnaires about the characteristics of the tourists and the conditions of the maritime attraction resources in the Bawean islands (Fortuny, Catalina, & Sa´nchez, 2008). The researchers used purposive sampling method allowing the researchers to determine the sample taken by themselves due to certain consideration. It was hoped that the criteria for the sample match the research that will be done by using this kind of sampling method (Esteban, & Pauline, 2008). There are 60 respondents, who are the stakeholders like the local government, investors, residents, and visitors, for the Analytic Hierarchy Process (AHP) and Strength-Weakness-Opportunity-Threat (SWOT) analysis.

There are two analysis method used in this study. The first method is Analytic Hierarchy Process (AHP) and Strength-Weakness-Opportunity-Threat (SWOT) analysis. In AHP, its mathematical formula basically uses a matrix done by assuming the paired components which are judged based on the level of importance. The judgement components consist of numbers C_1, C_2, ...,C_n which are paired (Saaty, 1993). The components of C_i and C_j are made then into a matrix A(n x n) like this:

$A = (a_{ij})$ (ij = 1,2,3,...,n)

The requisites for the determined value a_{ij} are:

1.if $a_{ij} = \alpha$, then $a_{ji} = 1/\alpha$, $\alpha \neq 0$,

2.if C_i is the same level of importance as C_j, then $a_{ij} = a_{ji} = 1$, and

3.the particular thing, $a_{ii} = 1$ for all i.

The data processing and analysis in this AHP use Expert Choice Windows Version software.

Then, the second one is SWOT analysis. SWOT analysis is the systematic identification of many kinds of factors used to formulate a strategy. This matrix can clearly describe how the opportunities and external threats faced by the stakeholder can be befitted his/her strengths and weaknesses. The SWOT matrix is an important matching tool to help the managers develop four types of strategy (Hunger, & Thomas, 2003).

There are four sets of the viable alternatives resulting from the SWOT analysis matrix:

1. Strengths Opportunities (SO) Strategy

   This strategy uses the internal strengths of the institution or company to gain the opprtunities outside the institution or company.

2. Weaknesses Opportunities (WO) Strategy

   It is a strategy that intends to minimize the internal weknesses by taking advantage of the external opportunities.

3. Strengths Threats (ST) Strategy

   It is a strategy that uses the strengths of the institution or company to overcome any threats.

4. Weaknesses Threats (WT) Strategy

   This strategy is based on the defensive action done by minimazing the weaknesses and avoiding the threats (Hampton, & Christensen, 2007).

Like the other matrixes before that need critical success factors, the SWOT matrix also need them. In this matrix, the most difficult thing is determining the critical success factors for the internal and external domain so that the good judgement is necessarily needed although there is no single matching tool that can be considered the best. The SWOT matrix itself consists of nine cells. There are four cells for critical success factors, four cells for SO, WO, ST, and WT strategy developed through the critical success factors in the cell labelled S,W,O, and T (Rodriguez, Lopez, & Estevez, 2008).

RESULTS AND DISCUSSION

Analytic Hierarchy Process (AHP)

The data used in AHP of four maritime attractions in the Bawean islands (Sangkapura Port, Noko Island, Mayangkara Beach, and Pasir Putih Beach) are the answers of the questionnaires from the 60 respondents. Those respondents are the stakeholders, from the local government, investors, residents, until the visitors. The result of the AHP data processing shows that the stakeholders think that Noko Island (43.3%) is the most important spot needed to develop, then it is followed by Pasir Putih (24.9%), Sangkapura Port (19.9%), and Mayangkara Beach (11.9%). The priority levels of the maritime attraction development in the Bawean islands can be seen in Figure 1.

The analysis also shows that the quay maritime attraction in Sangkapura Port becomes the main priority to develop(22.1%), which is followed by diving (19.3%), the beach (16%), yacht (15.2%), surfing (14.1%), and fishing (13.43%). In addition, as the main priority, the quay maritime attraction in Sangkapura Port must be supported by good infrastructures and services. The involvement of all stakeholders in managing the maritime attraction is also needed (Bagliani, Galli, Niccolucci, & Marchettini, 2006).

Meanwhile, in Noko Island, diving becomes the first priority to be improved (23.8%), the beach (24.6%), yacht (14.6%), the quay maritime attraction (11.8%), fishing (10.5%), and surfing (10.2%) is the last one. The priority levels of the development of tourism types in Noko Island are also showed in Figure 1. The coral reef, the clear water and the varieties of fish are the main factors supporting diving to be the top priority in Noko Island. Those aspects can entice the visitors to come to the Bawean islands, especially Noko Island. The beach can be the trigger for them to visit this island too because of the good quantity and quality of its white sand.

Then, diving also becomes the top priority to develop (24.2%) in Mayangkara Beach. The beach (23.7%), yacht (16.5%), fishing (13.2%), surfing (12.9%), and the quay maritime attraction (9.6%) are following. The priority levels of the development of tourism types in Mayangkara Beach are presented in Figure 1. Lastly, the beach is the primacy of Pasir Putih Beach to be developed (25.1%). It is followed by diving (20.8%), yacht (17.3%), surfing (13.9%), fishing (13.8%), and the quay maritime attraction (9.2%). The priority levels of the ones in Pasir Putih Beach are presented also in Figure 1. As the primacy of Pasir Putih Beach, the beach has some assets that can be improved and used to attract the visitors like the panorama of the beach itself, the white sand, the mangrove swamp, and the marine ecosystems (Goosling, 2001).

Parenthetically, the six types of maritime attraction in the Bawean islands (the quay, diving, yacht, surfing, fishing, and beach) have different ecological attractiveness. In the stakeholders' views, surfing has four ecological fascinations which each of them has the dissimilar levels of priority to be developed. The first one is the wave height (38%), then the wind rapidity (28.6%), the flow of the water (22.7%), and the water quality (10.8%). The levels of priority of the surfing fascinations can be seen in Figure 1. Meanwhile, the ones of yacht fascinations are the wave height (34%), the wind rapidity (32.2%), the flow of the water (22.8%), and the water quality (10%).

Next, the levels of priority of diving fascinations are coral reef cover (36%), the water quality (23.3%), the clearness of the water area (21.5%), and the amount of fish species varieties (19.2%). Besides, the ones of fishing are the carrying capacity of fishery technology (54.5%) and the potency of fish resources (45.5%). Moreover, there are three quay maritime fascinations which priority levels are culinary centrality (47.5%), the tide (37.2%), and the air temperature (15.3%). Last, the ones of the beach are the white sand volume and quality (28%), the water area quality (20.2%), the length of the beach (19.3%), the inclined beach (16.6%), and the mangrove ecosystems (16%). These priority levels of the beach fascinations can be seen in Figure 1.

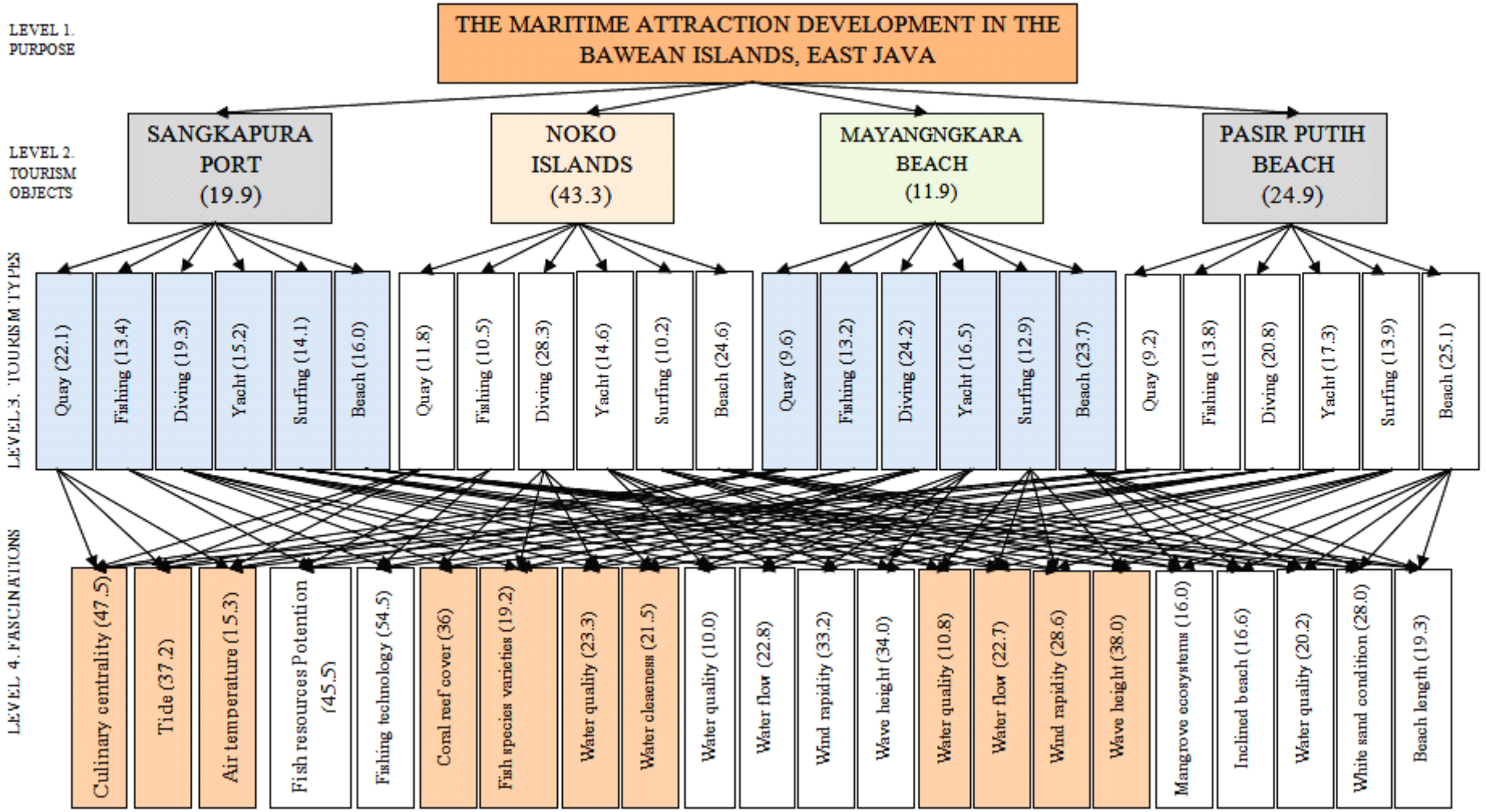

Figure 1: The Priority of the Maritime Attraction Development in the Bawean Islands, Indonesia

SWOT Analysis

The weight, rating, and score of each SWOT factor and variable can be seen through the data processing. The findings of SWOT analysis of the maritime attractions in the Bawean islands are presented in Table 1.

Table 1: The Assessment of SWOT Variables in the Maritime Attraction Development in the Bawean Islands

No	Internal Variables (STRENGTH)	Weight	Rating	Score
1	Residents' open character toward maritime attractions	0.07	5	0.33
2	Residents' high religious values	0.07	6	0.43
3	Panorama of the beach and sea (sunrise, sunset, wave, water flow, wind meet the 3S criteria (sun, sea, sand))	0.07	5	0.34
4	Cover and a rich variety of coral reefs	0.06	5	0.32
5	High clearness level of the water area	0.07	5	0.33
6	A variety of sea and fish biotas with the high preservation potency	0.07	5	0.33
7	Good water quality	0.06	5	0.31
8	Good white sand resources	0.06	4	0.22
9	Natural mangrove resources	0.06	5	0.31

No	Internal Variables (WEAKNESSES)	Weight	Rating	Score
1	Poor quality of human resources on tourism	0.05	4	0.20
2	Zero residents' involvement in the maritime attraction development	0.05	4	0.21
3	Lack of attraction arrangement	0.05	4	0.22
4	Lack of recreation products and fascinations and even almost no improvement	0.05	4	0.21
5	Zero cooperation between travel agency and those running the tourist destination	0.05	4	0.20
6	Insufficient public transportation to the Bawean islands and the tourist attractions	0.04	3	0.12
7	Insufficient hotel	0.04	3	0.11
8	Residents' low ability of innovation adopting	0.04	3	0.13
9	Incomplete data of coast and sea resources	0.04	3	0.12

No	External Variables (OPPORTUNITIES)	Weight	Rating	Score
1	High preservation potency of living resources	0.08	5	0.40
2	Implementation of some policies and programs on coast and sea management	0.07	5	0.35
3	The strategic location which is near Surabaya, the second largest city in Indonesia	0.07	5	0.37
4	The availability of an airport in Bawean Island	0.08	5	0.39
5	More openings due to the increase in the investors	0.07	5	0.33
6	East Java government policy toward the Bawean islands	0.06	4	0.26
7	Government program to preserve coral reefs and sea biota	0.06	4	0.23
8	Research and improvement on the Bawean islands potencies	0.07	5	0.35

No	External Variables (THREATS)	Weight	Rating	Score
1	Decrease of local regulation, sense of belonging, and proudness toward local culture	0.06	4	0.25
2	Conflict of interest	0.05	4	0.21
3	Decrease of many kinds of environment components and sea resources	0.07	5	0.33
4	Wrong spatial planning and utilization	0.06	4	0.25
5	The act of taking and damaging coral reefs	0.05	4	0.21
6	Unecofriendly fishery technology	0.05	4	0.22
7	Weak law enforcement	0.04	3	0.13
8	Recreation and domestic waste	0.05	3	0.15

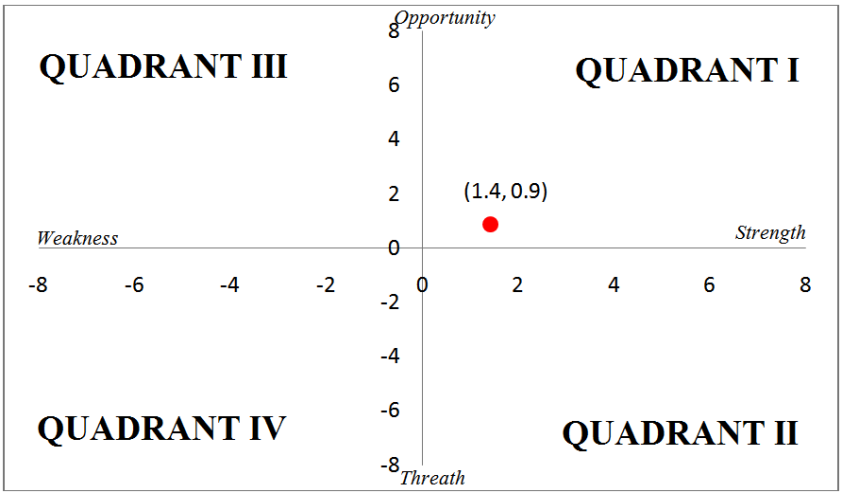

Figure 2: The Position of The Maritime Attraction Development Strategy in the Bawean Islands

Besides, the SWOT analysis shows a suitable strategy to support the maritime attraction development in the Bawean islands. Based on Figure 2, the strategy that must be implemented is SO strategy since the period position is in Quadrant I (1.4, 0.9). SO strategy is a strategy that uses the internal strengths of the institution or company to gain the opprtunities outside the institution or company. This strategy can be elucidated in the five points below:

1. taking advantage of Bawean residents' open character toward maritime attraction and the religious values to preserve the environment quality consciously through social-religious approachment,
2. optimizing the residents' involvement in developing the maritime attractions in the Bawean islands from the planning, implementation, until evaluation,
3. optimizing the airport in Tanjung Ori Bawean for the main transportation to Bawean Island (Cejas, & Sa´nchez, 2010),
4. making the beach area, especially the area of coral reef ecosystems, a Marine Protected Area, and
5. increasing the facilities and infrastructures of the maritime attraction like road, clean water, hotel, restaurant, and water sport/game by cooperating with some investors.

Maritime tourism development should be conceived within the frame work of national, regional, and local sosioeconomic development plans wich assure proper integration of environmental objectives in development strategies. In particular, maritime tourism development should be approached within a national strategy for maritime area development and management, with will identify the zone most suitable for tourism (Rodríguez, Lopez, & Estevez, 2007). Maritime areas reserved for tourism development should be covered by zoning plans wich take into account the natural geographic and sosioeconomic condition of the area. To achieve optimal exploitation of tourist resources, an inventory should first be conducted in the region of the proposed site to include the physical environment; the man-made environment; the sosioculture environment.

CONCLUSION

1. The Bawean islands have high natural carrying capacity and potency to be the tourist destination, especially the maritime attraction.
2. Noko Island is the tourist destination that becomes the first priority for the maritime attraction development in Bawean islands which its diving and beach are primarily needed to be improved.
3. Strengths Opportunities (SO) strategy is the suitable strategy to support the maritime attraction development in Bawean islands. Strategy is the power of Bawean community local wisdom utilization to

optimize every natural resource potential and performance of Bawean island marine tourism objects in supporting the development of marine tourism.

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