

Identifying Priorities for Marine Tourism Development at Tanggamus Regency, Lampung

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Abstract

This research aims to determine priorities for the development of marine tourism in Tanggamus Regency. To obtain recommendation for priority for marine tourism development, this research focuses on three marine tourism destinations that managed by Tourism Awareness Group (Pokdarwis) together with Tanggamus Government, namely Kiluan Bay, Karang Putih Beach, and Muara Indah Tourism Park. Focus Group Discussions (FGD) as well as questionnaire were conducted with informants from Tourism, Culture, Youth and Sports Agency of Tanggamus Regency, and Pokdarwis representatives from management of the research location. This research uses Analytical Hierarchy Process (AHP) method, and the priority preferences for the development of marine tourism are assessed from the aspects of connectivity (C1), governments program support (C2), potential problems (C3), and potential value-added locations (C4). The results show indicators in each data cluster prioritize Kiluan Bay as the first priority to be developed. The results also recommend to increase tourism promotions in the airport area and optimizing the constructions of access roads (C1), synchronizing tourism development plans in the Regional Spatial Plan to the Lampung Province Medium-Long Term Development Plan and facilitating investors in the tourism sectors (C2), educating the public regarded the potential dangers of disasters (C3), supporting for accommodations, local communities attractions and culinary centers (C4).

Keywords: Analytical Hierarchy Process, Marine Tourism, Priorities of Development.

A. Introduction

Lampung is one of the regencies with a wide and coastal area specifically in Tanggamus Regency. According to data obtained from the Tourism Potential Report of Tanggamus Regency (2020), there are thirty-one (31) marine tourism objects in Tanggamus Regency. However, this study focuses on three beaches in the area: Karang Putih Beach, Muara Indah Tourism Park, and Kiluan Bay.

Those beaches are selected since they are managed by Tourism, Culture, Youth and Sports Agency of Tanggamus Regency and Tourism Awareness Group (Pokdarwis).

Table 1. Number of Domestic and Foreign Visitors in Tanggamus Regency, 2017-2019

| No | Year | Visitor | | |
|----|------|----------|---------|--------|
| | | Domestic | Foreign | Total |
| 1 | 2017 | 430581 | 5878 | 436459 |
| 2 | 2018 | 451068 | 6349 | 457417 |
| 3 | 2019 | 597786 | 2105 | 597786 |

Source: BPS- Statistics of Tanggamus Regency (2020)

It can be seen from the table above, BPS- Statistics of Tanggamus Regency (2020), reported the increasing number of both domestic and foreign tourists visit to the area. An increase in the number of tourist visits must accompanied by the development of connectivity and facilities on tourists' destinations.

The crucial roles of marine tourism has made a great topic research. Pattaray (2015) reported the potential of the Gili Balu area as an existing conservation area small island ecosystem, coastal panta, underwater environment and the culture of the Poto Tano people West Sumbawa. Development of marine ecotourism-based tourism in the Gili Balu area done to prevent conservation-based environmental damage, resulting in development tourism in the Gili Balu area can be carries out in a sustainable manner with minimal impact to the natural environment and society. In this study, several strategies were applied, namely: tourism product development strategies, strategies to increase security and strengthen identity of Gili Trawangan Island as a marine ecotourism destination, a strategy for developing facilities and tourism infrastructure, institutional and human resource development strategies, strategies market penetration and promotion of tourist attractions, as well as planning and development strategies sustainable tourism.

In addition, Abdillah (2016) conducted a research about development of marine tourism. This study uses a SWOT analysis (*Strength, Weakness, Opportunity, Threat*) to assess internal (strengths, weaknesses) and external (opportunity, threats) that exist in the tourist destination. The results obtained from this study are:

1. Ease of achieving tourist destinations is also a determining factor interest of tourists to come on tours and repeat it in a later date.

2. Perception of tourists on marine tourism in the coast Teluk Lampung Beach, which is to increase amenities to support tourism activities such as hotels, lodging, financial services, health services.
3. It is necessary to have a hotel or *homestay* located within its territory so as to make it easier for tourists who want to stay long
4. Price tourists feel that staying at hotels in the city of Bandar Lampung is still quite expensive.
5. Quality of human resources as actors in the management of tourist destination management still not enough.
6. The balance of prices or costs incurred to enjoy tours marine in the Lampung Bay area is considered quite balanced and tends to be cheap like the price entrance tickets and ground transportation costs.
7. Marine tourism development strategies in Coastal Lampung Bay Beach is to diversify tourist attractions and activities with maintaining the preservation of natural resources to respond to the high demand for attractions and tourism activity as a result of the rapid development of the tourism sector.

Razak (2017), also conducted a research on Malalayang Beach, Manado City, North Sulawesi. This research conducted with the aim of formulating a tourism development strategy Maritime Malalayang Beach, Manado City. This research uses a descriptive method where data were collected, analyzed and described using a qualitative approach. The qualitative approach describes the respondent's response to marine tourism based on the questionnaire given. Data collection through field observations, interviews and studies literature. The results of this study indicate that the coastal marine tourism development strategy Malalayang lies in the quadrant I position or lies between external opportunities and strengths internal. The strategy for developing marine tourism at Malalayang Beach in Manado City is to maintain and preserving the surrounding environment, it is necessary to develop facilities and infrastructure tourism objects, restructuring "Sabua Bulu" as a culinary place and the need for management from the government and the private sector in order to be more focused and run well and both parties agreed to cooperate to develop the Malalayang Beach tourism object sustainable.

The difference between this study and this research is that most of the previous studies focused on marine tourism development strategies with different methods, while this study focuses on tourist destinations with the Analytical Hierarchy Process to determine priorities for marine tourism development. This is because the AHP method has advantages in terms of the decision-making process and accommodation for both quantitative and qualitative attributes. Apart from that, AHP is also able to provide more consistent results compared to other methods. The purpose of this study is to determine the priority of marine tourism development in Tanggamus Regency. From this introduction, it is hoped that marine tourism in Tanggamus Regency can continue to increase the number of tourist visits both domestic and foreign.

B. Literature Review

Marine Tourism

Marine tourism covers a wide range of activities taking place in the deep oceans, the most predominant of which are cruising and sailing (Tegar, 2018). Papageorgiou (2016) said that marine tourism, while the vast majority of activities take place in the sea, their supporting facilities and infrastructure are usually found on land. Such facilities may vary between ports and marinas (serving cruises, yachts, etc.), to one- person operations (e.g. guides, instructors, etc.), moderate-sized private companies, or even large corporation (cruise-ship companies, etc.). Marine tourism utilises the potential of maritime nature as a tourist attraction and also contains tourism activities done on the surface of the sea that cannot be separated from the existence of its ecosystem rich in the diversity of marine biota (Bahar and Rahmadi, 2011).

Coastal Tourism

Attri (2018), said that the concept of coastal tourism includes a range of tourism, leisure, and recreationally oriented activities that occur in the coastal zone and immediate offshore coastal waters. These include tourism-related development (accommodation, restaurants and food services, attractions, and second homes), and the infrastructure supporting coastal and marine tourism development (e.g., retail businesses, transport hubs, marinas, and activity suppliers). Also included are tourism activities such as recreational boating, coast- and marine-based ecotourism, cruises, swimming, recreational fishing, snorkeling, and diving (Hall, 2014, cited in Attri, 2018).

Ways to Identify Marine Tourism Priorities

1. SWOT Analysis

Ege (2017), said that SWOT Analysis is a tool used for strategic planning and strategic management in organizations. It can be used effectively to build organizational strategy and competitive strategy. In accordance with the System Approach, organizations are wholes that are in interaction with their environments and consist of various sub-systems. In this sense, an organization exists in two environments, one being in itself and the other being outside. It is a necessity to analyse these environments for strategic management practices. This process of examining the organization and its environment is termed SWOT Analysis. Furthermore, Ege (2017) added In SWOT Analysis, strong and weak aspects of an organization are identified by examining the elements in its environment while environmental opportunities and threats are determined by examining the elements outside its environment. In this sense SWOT Analysis is a strategic planning tool used to evaluate the strengths, weaknesses, opportunities and threats of an organization. It provides information that is helpful in matching the organization's resources and capabilities to the competitive environment in which it operates. Strengths and opportunities are helpful to achieve the

organizational objectives. They are favorable for organizations. Weaknesses and threats are harmful to achieving the organizational objectives. They are unfavorable for organizations. Therefore, underlying any successful selection of strategies is an analysis of the organization's internal strengths and weaknesses that are posed by internal environment and the opportunities and threats that are posed by the external environment.

2. Importance-Performance Analysis (IPA)

IPA is actually a graphic method which is showed in a two-dimensional coordinate system, the average values of importance and performance of different services/products elements, which are calculated in relation to one another, mainly in the area divided into four quadrants (Feng et al., 2014). "Performance" represents the user's perception of the quality of services delivered by the organization, while the "importance" refers to the assessment of the importance of those services by users (Yildiz, 2011). Depending on in which quadrant a certain service is located, managers can decide which services are the top and low priorities for improvement. Quadrant 1 (high importance/high performance) is called "keep up the good work" and represents the strong side and competitive advantage of companies, which task is to continue to maintain the quality of those elements contained in it. Quadrant 2 (high importance/low performance) is called "concentrate here" and includes elements that require immediate corrective action. If the element is located in quadrant 3 (low importance/low performance), which is called "low priority", this element does not represent any threat to the organization, but the manager could rather think about the option of transferring resources from these elements to those requiring urgent action. Quadrant 4 (low importance/high performance) is called "possible overkill" and includes elements whose high qualities have no impact on the total customer satisfaction, so managers with these elements can also think about the allocation of resources (Ormanovic et al, 2017).

3. Analytical Hierarchy Process (AHP)

According to Saaty in Kurniawan (2017), hierarchy defined as a representation of a complex problem in a structure multilevel, where the first level is the goal, followed by the level of factors, criteria, sub criteria and so on, down to the last level of the alternatives. This is an Eigen value approach to the pair-wise comparisons. The scale ranges from 1/9 for least valued than, to 1 for equal, and to 9 for absolutely more important than covering the entire spectrum of the comparison. The steps of AHP method are(Kurniawan, 2017):

- a. Determine the assessment factors or criteria in making decisions for setting priorities for the development of marine tourism.
- b. Arrangement of the importance hierarchy of the assessing factors according to grouping factors in question. The assessment criteria used refer to the components of the development of Marine Tourism, after that it will be translate into an analytic hierarchy consisting of several levels/sub-criteria.

- c. Scorings of the assessed factors is the calculation of the priority score of each factors in hierarchy using pairwise comparisons as a deep basic calculation of priority score.
- d. Calculating the value of the importance of the assessment factors based on value comparisons that putted forward by informants, using the AHP method and Super Decisions program assistance.
- e. The results of this scoring are then tested consistency at the tolerance limit <0.1 or the value of CR (Consistency Ratio) <0.1 (10%). If the Consistency Ratio is less than 0.1 (10%) the assessment data can used. But, if the consistency ratio is more than 0.1 (10%) then the assessment data can't be used and the grading or scoring process must be repeated.
- f. Measuring the value of marine tourism based on three predefined decision criteria set.
- g. As a final step, a priority scale for marine tourism development is established conversion of relative qualitative quantities into priority scale quantities.

C. Research Methodology

To answer the research problems in this study, the AHP (Analytical Hierarchy Process) method is used to determine priorities development of Marine Tourism in Tanggamus Regency. According to Saaty in Kurniawan (2017), hierarchy defined as a representation of a complex problem in a structure multilevel, where the first level is the goal, followed by the level of factors, criteria, sub criteria and so on, down to the last level of the alternatives. There were eight (8) research informants who attended the FGD, consists of officials from Tanggamus Culture and Tourism Office, representatives from Tourism Awareness Group (Pokdarwis) as a management of Kiluan Bay, Karang Putih Beach, and Muara Indah Tourism Park. The steps of AHP method are (Kurniawan, 2017):

1. Determine the assessment factors or criteria in making decisions for setting priorities for the development of marine tourism.
2. Arrangement of the importance hierarchy of the assessing factors according to grouping factors in question. The assessment criteria used refer to the components of the development of Marine Tourism, after that it will be translate into an analytic hierarchy consisting of several levels/sub-criteria.
3. Scorings of the assessed factors is the calculation of the priority score of each factors in hierarchy using pairwise comparisons as a deep basic calculation of priority score.
4. Calculating the value of the importance of the assessment factors based on value comparisons that putted forward by informants, using the AHP method and Super Decisions program assistance.
5. The results of this scoring are then tested consistency at the tolerance limit <0.1 or the value of CR (Consistency Ratio) <0.1 (10%). If the Consistency Ratio is less than 0.1 (10%) the assessment data can used. But, if the consistency ratio is

more than 0.1 (10%) then the assessment data can't be used and the grading or scoring process must be repeated.

6. Measuring the value of marine tourism based on three predefined decision criteria set.
7. As a final step, a priority scale for marine tourism development is established conversion of relative qualitative quantities into priority scale quantities.

D. Results

Kiluan Bay

Teluk Kiluan is like a hidden paradise at the end of Tanggamus Regency, which is a popular tourist attraction in Lampung. Kiluan Bay offers a hilly topography and a very suitable valley to explore. Apart from presenting a beautiful landscape, Kiluan Bay is inhabited by hundreds of bottle nose dolphins (*tursiops truncatus*) and long-beaked snipper dolphins (*stenella longirostris*) with a smaller body than the bottle nose species. Although these dolphins could be found every day, they usually come out in the morning, so try to get to the middle of the sea at 06.00 WIB.

During the trip for about an hour, tourists will be presented with clear sea water and green hills, and will be accompanied by dolphins who jump cheerfully and beautifully. The group of dolphins will usually swim on the right and left of the boat, they are quite familiar with humans approaching ships. In addition to enjoying dolphin attractions, tourists who visit this destination, will see a beach view with greenish blue gradations equipped with clear water and coral reefs and ornamental fish that we can see clearly.

Tourists can enjoy Kelapa Island or Kiluan Island. White sand, clear sea water, enchanting underwater beauty, to the beauty of the Gayau lagoon on the beach we can see and bathe in this natural pool. Another feature of Teluk Kiluan is Laguna Gayau. Gayau Lagoon is a lagoon that lies behind the Kiluan hill and is located adjacent to the beautiful Gayau beach. That natural swimming pool which is located behind the Bukit Kiluan Bay, must be visited Laguna Gayau also. Although it is often used as a second priority visit destination, this destination is no less interesting.

In fact, it is even more challenging and exotic. A giant blue "swimming pool", which is formed by the natural contours of the rocks and water in the sea. In addition, on this island tourists can also spend time and stay in cottages that are lined up. An unspoiled village. Far from frenetic. Houses are lined up along the beach. In Kiluan Negeri, it has a kind of public open space in front of the mosque, like the square in a city. A place to play, gather, or hold ceremonial events. In some spots there are already selling souvenirs to take home. Kiluan Bay is also managed by a Tourism Awareness Group (Pokdarwis) called Gigi Hiu. Pokdarwis not only manages Kiluan Bay, but also several homestays located around the Kiluan Bay.

Karang Putih Beach

A beach with very fine sand and very clear sea water. The white sand is still clean from trash, as well as the water, which is clear as glass. Marine life is also very

clear from sea level, the clearness of the water here makes the underwater scenery clear even though you not dive it. Access to its remote and difficult location makes this beach very rarely touched by tourists, so that its condition is still virgin. Playing sand and bathing in clear seas water will be very enjoyable. In addition, there are lot of coconut trees on the edge of this beach that will add coolness.

This location is also very suitable for tourists looking for a beach with a soothing quiet atmosphere. Away from the hustle and bustle of villages, cities and others, this beach feels very comfortable. Relaxing under a coconut tree while looking at the beach with a very exotic panorama will certainly make anyone feel at home and want to linger here. The most special thing on this beach is the existence of very photogenic rocks. The white stone towering high on the coast is an object that cannot be easily founding in other locations.

This stone is so unique, for photography and selfie lovers. This rock can be approached at low tide, and then visitors can take pictures under it or near it with a beautiful rock backgrounded that emits white light. This white coral beach is managed by Tourism Awareness Group (Pokdarwis) Karang Bolong, therefore this beach is also known as Karang Bolong Beach.

Muara Indah Tourism Park

Located in Semaka Bay, Muara Indah Tourism Park is suitable as a vacation location with family. On the beach with the waves that are not too high, you can play and chat with your family. This beach has a garden that has been use as a green open space (RTH) so that the location is neatly arrange and equip with several facilities. Visiting this location, visitors will get two treats, namely a beautiful garden and a beautiful beach.

This beach is located in Baros Village, Kota Agung District, Tanggamus Regency. It is located in the city, so this location is often crowded with visitors. Can also be see using google maps. It was easy enough to find this beach location. The benchmark is the Kota Agung red light. From the red light, turn left until the T-junction before the fish market, take the right direction and arrive. From the traffic light of Kota Agung, it only takes about five minutes. If from Bandar Lampung, visitors can take it via Jalan Lintas Barat Sumatra. The distance is about 97 km with a travel time of about two to three hours. The route is Bandar Lampung - Gedong Tataan - Pringsewu - Kota Agung - Muara Indah Beach.

Visitors who come will be greet with a beautiful garden. In addition, there are writings that can be use as photos because they are quite iconic. The words "Taman Wisata Muara Indah" in red with its back to the sea will provide a sea view when taking pictures in front of it. The uniqueness of this beach is the existence of small rocks on the edge of the sea that are scattered along the shoreline. Small black stones combine with black sand on this beach. Visitors can bathe and play water on the beach. The waves here are quite safe because they are not too high. In some spot there are large stones. This stone will look photogenic when used for photo objects.

Not only presenting sea views, on this beach there is also a view that is no less beautiful than Sawmil Beach in Wonosobo Tanggamus.

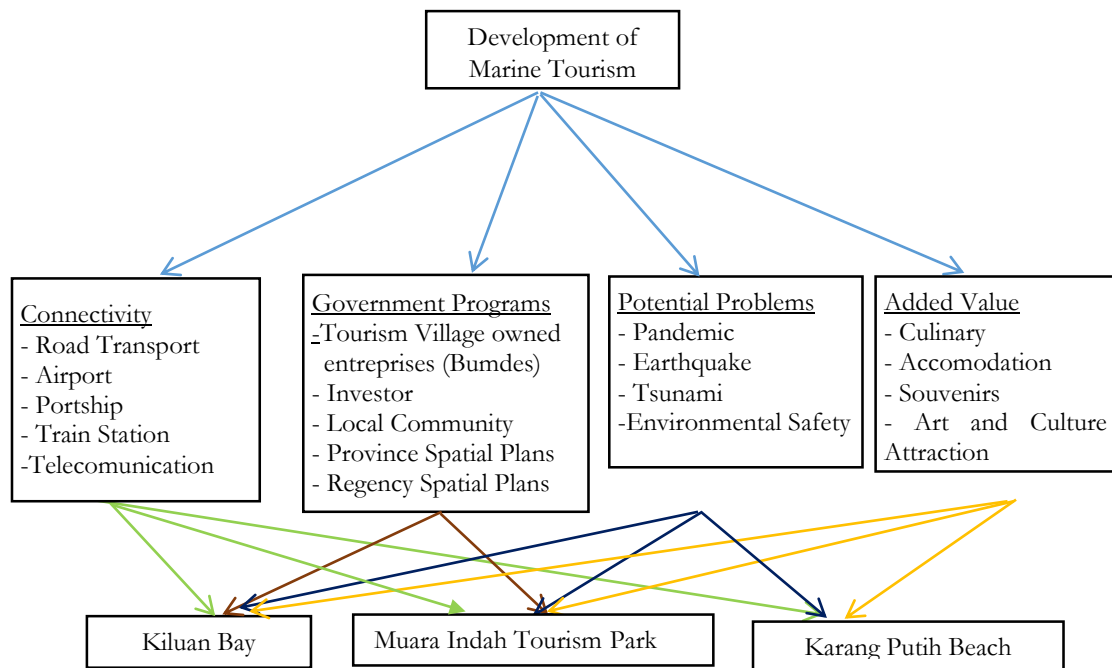
There are views of Mount Tanggamus and the hills and mountains of the Bukit Barisan Selatan National Park (TNBBS). This 2,100 MDPL mounts can be see clearly from this beach, the green of the BBSNP mounts make visitors' eyes even more pampered. Not far from Muara Indah Tourism Park there is also a Fish Auction Place Pasar Madang Kota Agung. Visitors can also wear fish while traveling. The beaches and parks here are suitable for traveling with family. Apart from the beautiful panorama and comfort of the garden, visitors will take to a comfortable atmosphere away from the hustle and bustle. Muara Indah Tourism Park is managed by Tourism, Culture, Youth and Sports Agency of Tanggamus Regency together with Tourism Awareness Group (Pokdarwis) Muara Indah.

Research Hierarchy Scheme

Primary data collection was using a questionnaire-based instrument designed to collect data related to the preferences of informants to assess indicators that influence the development of tourist objects. The process of collecting primary data in the form of informants opinions is carried out in two stages, namely Focus Group Discussion (FGD) which is followed by filling out a questionnaire. The FGD section not only to obtain an overview of tourism and potential tourism objects but also input on the variables in the study, so that a deeper understanding of the indicators to be assessed can be obtained.

The results of the FGD in the form of an overview of the research locations have been describe in the previous section. Another discussion is brainstorming initial questionnaire agreed on a revision of the indicator items in the connectivity cluster where the terminal indicator items were changing to road transportation, and the addition of new indicators, namely telecommunications.

Primary data of informants' opinions of priority development of tourist objects based on preferences for research variables were filling in by the main respondent in this case the Head of Tourism, Culture, Youth and Sports Agency of Tanggamus Regency by taking into account the opinions of other stakeholders. In this process, research team does not have the authority to justify the answers from the consolidated informants but in the process of filling out the questionnaire it can provide general explanations regarding the indicators in the questionnaire, so it's cannot be affecting the consistency of the preferences or scoring they have agreed on. Based on the results of FGD section, the research hierarchy scheme at the figure below:

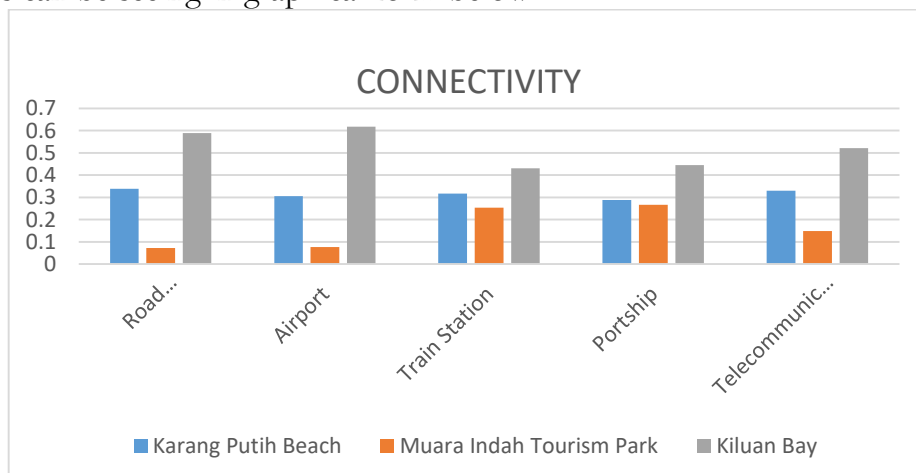


Source: Researcher’s Data, 2020

Figure 1. Research Hierarchy Scheme

Determining Priorities of Marine Tourism Development Pairwise Comparison Connectivity Criteria

Informants’ opinion on the connectivity cluster is a preference based on the availability of connectivity and accessibility from the hinterland area to the 3 tourist attraction locations that will be prioritized. Informants’ opinions that have been interpreting quantitatively are analyzed using the paired matrix method that then produces an influence perspective on alternative tourist locations. The results of the analysis can be seen in graphical form below:



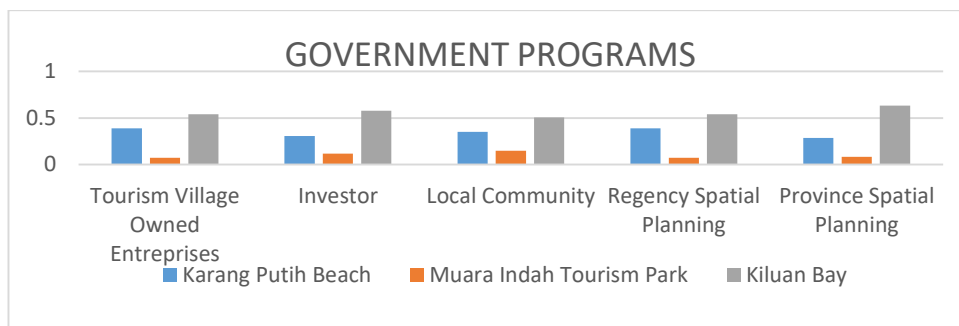
Source: Researcher’s Data, 2020

Figure 2. Connectivity Criteria

The consistency index value from the comparison of indicators internally in the connectivity cluster ranges from 0.054 to 0.0976 where this value meets the consistency's index correction factor that requires a value below 0.1. Based on the rating of each indicator, it can be concluded that the greatest preference for tourism object development is the availability of road transportation, airports and telecommunications. Based on the analysis in the final level hierarchy by comparing each indicator in the connectivity criteria of the alternative locations, the Kiluan Bay become a major preference for tourism development priority.

Pairwise Comparison Government Programs

The respondent's opinion on the government program cluster is a preference based on government support for tourism development in the form of programs and legal aspect support related to the 3 tourist attraction locations that will be prioritized. Informants' opinions that have been interpreting quantitatively are analyzed using the paired matrix method that then produces an influence perspective on alternative tourist locations. The results of the analysis can be seen in graphical form below:



Source: Researcher's Data, 2020

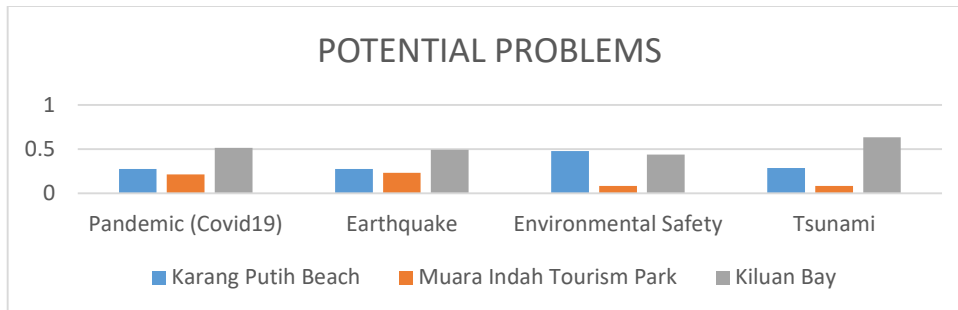
Figure 3. Government Programs Criteria

The consistency index value from the comparison of indicators internally in the government programs cluster ranges from 0.0837 to 0.0996 where this value meets the consistency's index correction factor that requires a value below 0.1. Based on the rating of each indicator, it is concluded that the greatest preference for the development of tourist objects is the availability of support for regional spatial planning, convenience for investors and support from business entities in the tourism sector. Based on the results of the analysis in the final level hierarchy by comparing each indicator in the government program criteria against alternative locations, Kiluan Bay is the main preference for tourism development priorities.

Pairwise Comparison Potential Problems

The respondent's opinion on the potential problem cluster is a preference based on negative aspects that can affect tourism development at the 3 tourist attraction locations that will be prioritized. Informants' opinions that have been interpreting quantitatively are analyzed using the paired matrix method that then

produces an influence perspective on alternative tourist locations. The results of the analysis can be seeing in graphical form below:



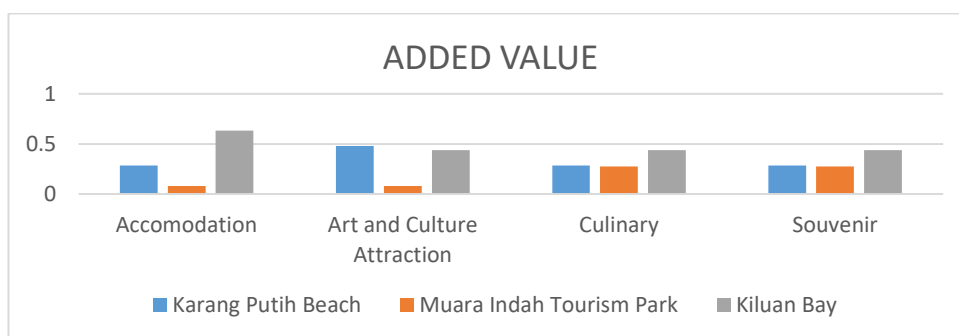
Source: Researcher's Data, 2020

Figure 4. Potential Problems Criteria

The consistency index value from the comparison of indicators internally in the potential problems cluster ranges from 0.085 to 0.099 where this value meets the consistency's index correction factor that requires a value below 0.1. Based on the rating of each indicator, it is conclude that the greatest preference for potential problems that can hinder tourism development is the potential for tsunamis or high waves and pandemic disease outbreaks (Covid-19). Based on the results of the analysis in the final level hierarchy by comparing each indicator in the criteria for potential problems against alternative locations, Kiluan Bay is the main preference for tourism development priorities

Pairwise Comparison Added Value

Informants' opinion on the potential value added cluster is a preference based on the availability of value added services that can be optimized to provide additional value economically to business actors and communities around the 3 tourist attraction locations that will be prioritized. informants' opinions that have been interpreting quantitatively are analyze using the paired matrix method that then produces an influence perspective on alternative tourist locations. The results of the analysis can seeing in graphical form as below:



Source: Researcher's Data, 2020

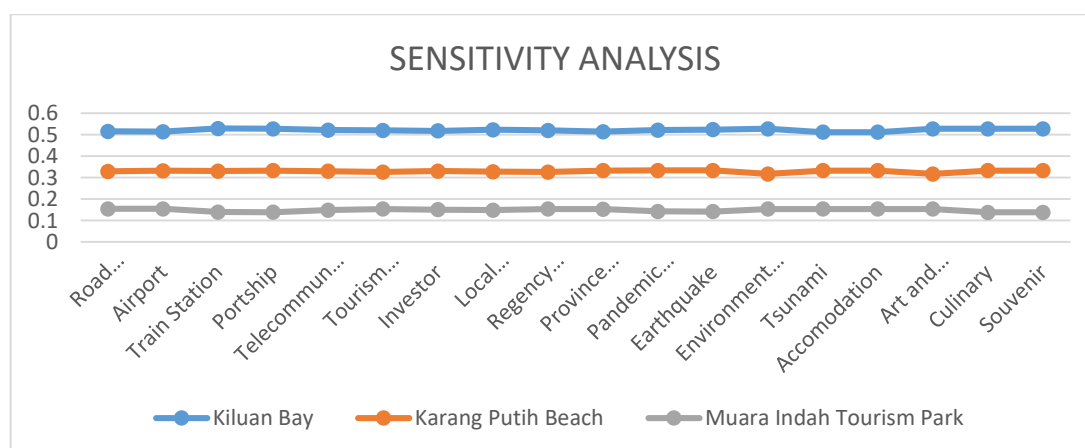
Figure 5. Added Value Criteria

The consistency index value from the comparison of indicators internally in the potential problems cluster ranges from 0.091 to 0.098 where this value meets the consistency's index correction factor that requires a value below 0.1. Based on the rating of each indicator, it is conclude that the greatest preference for added value that can optimizing for benefit of economics are accommodation, culinary, and souvenirs. Based on the results of the analysis in the final level hierarchy by comparing each indicator in the criteria for added value against alternative locations, Kiluan Bay is the main preference for tourism development priorities

Sensitivity Analysis

Sensitivity analysis is a process to see the status of investment decisions if the factors or parameters of calculations are changed. The decision can said to be sensitive if any change in the value of the parameter or calculation factor will change the investment decision. The real conditions often change so that it is necessary to anticipate any changes that occur. Therefore, it is necessary to identify sensitive parameters (parameters that change the optimal solution when the value changes). The results of the AHP sensitivity analysis based on each indicator with the lowest value of 0 and the highest value of 1 can be seen in the graphic below:

Based on the sensitivity analysis of each indicator that affects the preference for the choice of potential tourist objects to priorities for development, it can be seen that the Kiluan Bay tourism object has the highest average sensitivity value (0.521), while Karang Putih Beach has a value (0.329), and Muara Indah Tourism Park has the lowest average value (0.148).



Source: Researcher's Data, 2020

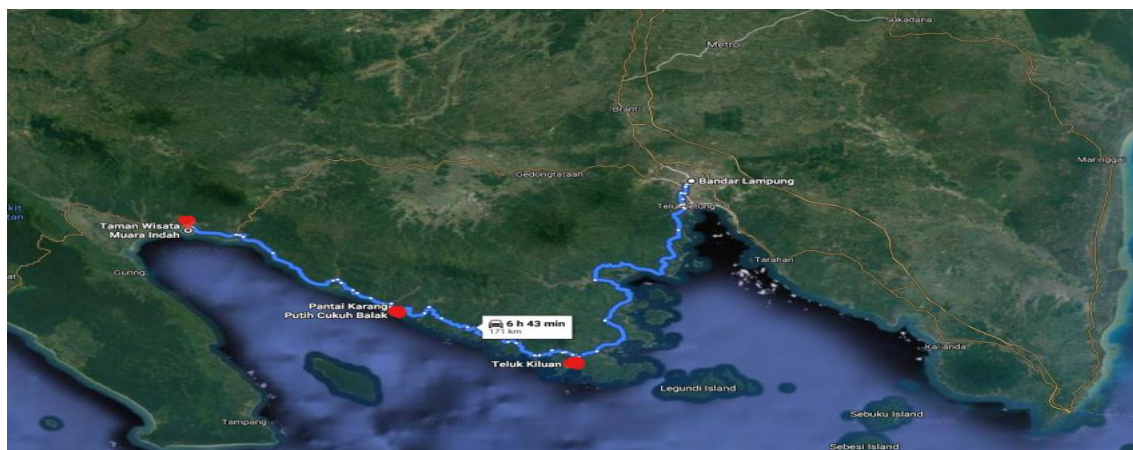
Figure 6. Sensitivity Analysis

E. Discussion

Connectivity Criteria

Based on pairwise comparisons in the matrix of connectivity criteria, from the scoring results obtained which indicate that for the Tanggamus Regency the

connectivity indicators that most influence consideration in priority decision making are road transportation, airports and telecommunications. In general, Tanggamus Regency, which is located in Lampung province, has good accessibility because it is traversed by the national cross-western Sumatra road. The city of Bandar Lampung as the main entry point for tourists has connections with complete transportation nodes, including class A terminals, train stations, airports, and ports (sea and crossings). The main access to these 3 potential tourist friends is still dependent on road (land) transportation, therefore good road connectivity with other modes of transportation is absolutely necessary. Road access to the leading tourist locations in Tanggamus Regency varies, getting to Muara Indah Tourism Park is easier because through direct access to the national road across west Sumatra to enter the city center of Tanggamus and then using the city road which is very close to Muara Indah Tourism Park. Highway access to the tourist attraction of Teluk Kiluan and Karang Putih beach is relatively further away because it follows the regency road that passes through the coastal area. Different road classes certainly have an effect on vehicle capacity and road conditions.



Source: Google Maps, 2020

Figure 6. Access to Tourism Objects

Government Program Criteria

Based on pairwise comparisons in the government program criteria matrix, weighting results are obtained which indicate that for the Tanggamus Regency area, government program indicators that most influence considerations in priority decision making are the Province Spatial Planning, Regency Spatial Planning, and investors. The development of tourism objects by local governments requires a legal basis and other policy support as the basis for proposing work programs, especially those requiring financial support from the APBN. The development of tourist objects in the form of physical development and guidance programs within the scope of the administrative area is a work program that also based on regional utilization so that one of the bases of reference is a regional spatial plan that applies hierarchically to the

administrative level of the government area. Lampung Province already has a Provincial Spatial Plans that is state in Regional Regulation Number 1 of 2010 concerning the Regional Spatial Plan of Lampung Province in 2010 to 2029. Tanggamus Regency has a Regency Spatial Plan that is stipulate in Regional Regulation Number 16 of 2011 concerning Spatial Planning Regional Spatial Planning (RTRW) of Tanggamus Regency in 2011 to 2031. In general, the two regulatory structures have accommodated tourism in development programs in the region.

Investors are one of the preferred indicators that have a high rating based on informants' opinions. Investors are consider as one of the stakeholders who have an important role in driving the economy in the tourism sector. Investors who have capital support can come from various backgrounds ranging from local to foreign entrepreneurs, the generals public to public figures. Ease of investing in the tourism sector must get support from the government because it will provide added value for the region itself, from local to national scope. The financial value spent by investors for the construction of physical facilities and tourism fostering activities is a process of economic circulation that can have a positive economic impact on other stakeholder. Investments that are issued directly will return to investors in the form of business profits, on the other hand the government receives income from levies and taxes, while for the people themselves can get direct or indirect benefits where directly can also be in the form of local levies, for indirect benefits. Obtained from regional development whose funds are source and manage from taxes paid by the investor.

Potential Problems Criteria

Based on pairwise comparisons in the matrix of potential problem criteria, scoring results obtained which indicate that for the Tanggamus Regency area indicators of potential problems that can have a negative impact on the tourism sector and most influence considerations in priority decision making are tsunami waves and pandemic diseases. Indonesia is an island nation surrounded by tectonic plates and volcanic areas known as the ring of fire. These factors can have a negative impact on the tourism sector because natural disasters that arise can cause physical damage and casualties. Tsunami waves can occur due to shifting of tectonic plates that cause earthquakes and can come from volcanic volcanic activity. The position of Lampung province, especially the coastal area that is the administrative area of Tanggamus Regency, is included in the red zone prone to the Sunda Strait disaster. Historically, tsunami events in the Sunda Strait area have been recording since 416 to 2018. The last tsunami event in 2018 which was caused by the volcanic activity of Mount Anak Krakatau had a direct impact on the coastal area of Tanggamus Regency, especially in the Kiluan Bay area which resulted in material losses due to damage to houses and public facilities and caused casualties, while in the area of Karang Putih Beach and Kota Agung it was not too bad. A pandemic disease outbreak is one indicator of a potential problem that could have a significant negative impact on the tourism sector. Covid 19 that occurred at the end of 2019 in Wuhan (China) quickly spread to a global

pandemic that is still exist until 2020 and predicted to need treatment for recovery for years to come.

The spread of the Covid 19 virus, which is vulnerable to the crowd, has caused a drastic decline in the tourism sector, which aims to attract as many people as possible to one tourist attraction. As a preventive measure to minimize the spread of this virus, it is mandatory to avoid crowds and implement social distancing including trips to visit tourist objects. This directly resulted in a decline in income from various business sectors, especially tourism, including their supporting services, which systematically occurred on a local and global scale leading to economic recession in various countries including Indonesia.

Added Value Criteria

Based on pairwise comparisons in the matrix of potential added value criteria, weighting results are obtained which indicate that for the Tanggamus Regency area, an indicator of potential added value from the tourism sector which can have a positive economic impact on the surrounding community and the most influencing consideration in making priority decisions is accommodation while indicators others get the same rating.

Accommodation as one of the supporting services for the tourism sector, in general, can found in the form of hotels. Many hotels owned by individual entrepreneurs or affiliated with world's class business networks. The existence of a tourist attraction in an area accompanied by the growth of the hotel business in the surrounding area. There are several factors become preferences by tourists in choosing hotel accommodation in a tourist area. The distance between a hotel and a tourist attraction is a consideration for tourists visiting an area, especially those that have more than one tourist attraction because it will determine their movement patterns during their tour of an area. The price of hotel room rental is also one of the financial considerations of prospective tourists who of course have different characteristics, for example, there are tourists who always choose hotels that classified as luxury while there are also backpackers who prefer the cheap hotels. Hotel management must always develop its operations so that hotel revenue from tourists also increases, which can be done by adding value added services at separate rates outside of lodging costs, for example by laundry services, restaurants, transportation, to add to the attraction of tourists to stay. Provide integrated tour packages in collaboration with local travel or travel agents so that it can make it easier for tourists, especially those who have just visited the area. Empowering the role of the public around tourist areas is one way so that there are direct benefits that can obtained by them by providing services for tourism activities, either in the form of individual or group contributions in certain businesses.

The cultural heritage possessed by each region has the potential to bring economic benefits if it properly optimized. Souvenirs are a product that can bring added value, the purchase of souvenirs by tourists is usually intended as an art object for collection. One of the characteristics of Indonesian cultural products is the ability

to make souvenirs with excellent artistic value, if applied to local conditions, is very possible considering that Lampung itself well known for its well-known cultural branding, including siger, filter, and elephant. The selection of souvenir objects featuring a typical icon from an area can bring several types of added value, for example increasing the purchase of local handicraft products to become an effective and efficient promotional tool. Other cultures that can promoted on a tourist attraction are culinary. The culinary attractiveness of a region has proven to be one of the potential sources of income from the tourism sector which seen by the number of restaurants scattered in an area or tourist attraction with a significant contribution of tax value, on the other hand the promotional value of a typical food. Empowering the role of the public around tourist areas is one way so that there are direct benefits that can obtained by them by providing services for tourism activities, either in the form of individual or group contributions in certain businesses. Some regions are often the main attraction in themselves because many tourists are willing to specified visit an area just because they want to enjoy culinary directly in the area of origin.

The development of the tourism sector should not only be focused on the core tourist objects in the region, but the existence of a tourist attraction in an area should also be able to provide added value to its supporting sectors. On a local scale, it hoped that there will value added services that can be optimized, especially by other stakeholders around the tourist area. Apart from being known as a country that has amazing natural beauty, it is also known as a country that has a diversity of cultural forms which later become the hallmark of each region and offers an alternative to global branding for national tourism in the eyes of the world.

F. Conclusion

From the Connectivity Criteria, obtained ranges from 0.054 to 0.0976 where this value meets the consistency's index correction factor that requires a value below 0.1. It can be concluded that the greatest preference for tourism object development is the availability of road transportation, airports and telecommunications, by comparing each indicator in the connectivity criteria of the alternative locations, the Kiluan Bay become a major preference for tourism development priority.

From the Government Program Criteria, obtained ranges from 0.0837 to 0.0996 where this value meets the consistency's index correction factor that requires a value below 0.1. It can be concluded that the greatest preference for the development of tourist objects is the availability of support for regional spatial planning, convenience for investors and support from business entities in the tourism sector, by comparing each indicator in the government program criteria against alternative locations, Kiluan Bay is the main preference for tourism development priorities.

From potential problems criteria, obtained ranges from 0.085 to 0.099 where this value meets the consistency's index correction factor that requires a value below 0.1. It can be concluded that the greatest preference for potential problems that can hinder tourism development is the potential for tsunamis or high waves and pandemic

disease outbreaks (Covid-19), by comparing each indicator in the criteria for potential problems against alternative locations, Kiluan Bay is the main preference for tourism development priorities.

From Added Value Criteria, obtained ranges from 0.091 to 0.098 where this value meets the consistency's index correction factor that requires a value below 0.1. It can be concluded that the greatest preference for added value that can optimizing for benefit of economics are accommodation, culinary, and souvenirs, and the last by comparing each indicator in the criteria for added value against alternative locations, Kiluan Bay is the main preference for tourism development priorities

Suggestion for future research is to conduct the research about Priorities Development, but using another data collecting, data analysis and criteria.

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