



## Study of the development of beach ecotourism based on sustainable local wisdom

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### ABSTRACT

Based on the results of research conducted related to the Study of The Development of Beach Ecotourism Based on Sustainable Local Wisdom in Central Tapanuli Regency in 2023. The research method used in this study is combined (Mixed Methodology) using quantitative and qualitative explanatory approaches. The data collection in this study was to use primary data and secondary data, where the determination of the number of respondents was able to represent the area of the study location. as many as 45 people. It is concluded based on the results of research that the locus of study is very worthy of being used as a tourism place because there are many supporting elements and has enormous economic potential.

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## INTRODUCTION

Indonesia is known as the country with the most extensive sea, this can be called the outward wealth given by the universe which is certainly of high selling value if managed with all its capabilities, it is no stranger if the beauty of the Indonesian sea can be used as a means of travel that can present the beauty of nature. One of the promising economic potentials is beach ecotourism, which is currently a significant source of economic support and provides a positive multiplier effect for an area. Of course, beach ecotourism activities are not only supported by some parties, the support of the local government as a motor of national development is needed, where the government plays an important role as a regulation for the implementation of this ecotourism activity. Ecotourism is defined as a tourism concept that reflects environmental awareness and follows guidelines between balance and environmental sustainability (Ihsan, et al, 2015). The purpose of ecotourism itself is certainly to build mental or public awareness about an environmental benefit, where it is certain that tourist attractions are free from dangers, and environmental pollution, then If the point is met, it means that the tourist attraction gets respect and is upheld by the residents of the region. According to Tambunan (2018), ecotourism is defined as a concept of sustainable tourism development that aims to support efforts to preserve the environment (nature and culture) and increase community participation in management, to provide economic benefits to local communities such as increasing income, job opportunities, and business opportunities, in addition to added value from the economic

side, ecotourism development also provides added value in the form of knowledge. and experiences for the community to better protect or appreciate the environment from being damaged.

Marine ecotourism is the concept of sustainable use of coastal resources with an environmental service system that prioritizes coastal natural resources as objects of service. The most important thing in the concept of utilizing ecotourism resources is the suitability of resources and carrying capacity that can support marine tourism activities (Bugis et al., 2021). Of course, the existence of ecotourism can increase economic value, for example by utilizing human resources, and the available natural resources are more appropriate, and of use value. Because with the life of Ecotourism, there are many living economic elements, both from the Transportation Sector, Development Sector, MSME Sector, and Tourism, which of course increases the economy and national income. Ecotourism is also useful for reducing the scarcity of fauna due to poaching, and so on, so it is not wrong to say that ecotourism is an activity to utilize biodiversity services without disturbing biodiversity itself (Muntasib, 2007). One of the provinces in Indonesia that has many locations for eco-tourism beaches in North Sumatra. Central Tapanuli Regency is on the western edge of North Sumatra Province, where its geographical position mostly intersects directly with the sea part of the Indian Ocean. This condition makes Central Tapanuli Regency has extraordinary natural wealth potential. Central Tapanuli Regency has a variety of beach tourist locations, one of which is Binasi Beach.

## RESEARCH METHOD

### Population and Sample

According to Sugiyono (2018: 117) Population is a generalized area consisting of objects or subjects that have certain qualities and characteristics set by researchers to study and then draw conclusions. The population in this study was 45 people, consisting of policymakers, local communities, local entrepreneurs, and tourists.

### Data Collection Techniques

Data collection techniques are techniques or methods used to collect data to be studied. That is, data collection techniques require strategic and systematic steps to obtain valid data and following reality.

According to Sugiyono (2013: 219) "Data collection techniques as the most strategic step in research because the main purpose of the research is to obtain data, data collection techniques consist of the following: (a) Structured interviews, in structured interviews, researchers have known exactly what information to extract from the interviewees. In this condition, researchers usually already make a list of questions systematically. Researchers can also use various research instruments such as recorders, cameras for photos, and other instruments. (b) Unstructured interviews, an unstructured interview is a free interview. Researchers do not use interview guidelines that contain specific questions, but only contain key points of the problem that respondents want to explore. (b) Observation. Observation is a complex method of data collection because it involves various factors in its implementation. The method of collecting observational data not only measures the attitudes of respondents but can also be used to record various phenomena that occur. Observational data collection techniques are suitable for research that aims to study human behavior, work processes, and natural symptoms.

### Data Analysis Techniques

(a) Score, with this method, researchers get an overview and use research as a tool to more quickly figure out the problems that researchers may be discussing. To get the tendency of respondents' answers to each variable, based on the average score value (index) which is categorized into vulnerable scores of 1-5. (b) Tabulation, Grouping the answer data correctly and thoroughly, then calculating and summing up in the tangible structure. Considering the aftereffects of the table, the

outcomes are agreed to create table information to obtain relationships or other influences between existing variables.

### Data Quality Test

(a) Validity Test, Validity is a measure that shows the accuracy of the data collected by the researcher is how closely the data collected matches what occurs on the object. (Sugiyono, 2018: 125). To find out if an object is valid, we look at how well it correlates with other objects, but if the correlation value is below 0.3 ( $< 0.3$ ) then the item is declared invalid and must be corrected (Sugiyono, 2017:134). (b) Reliability Test, to test the reliability of a measuring instrument, scientists measure how consistent the results are when different people measure the same thing using the same method. The reliability Only questions that have been tested and proven to be correct can be used in the test. So, there is no need to keep testing reliability. Reliability concerns the degree of consistency or accuracy of data in certain time intervals (Sugiyono 2018: 126).

## RESULTS AND DISCUSSIONS

### Validity Test

Respondents In this study as many as 45 people consisted of aspects of local communities, tourist business actors, and tourists. The following is validity and reliability test data, based on the data below, all questionnaire items are confirmed to be valid because they meet the validity testing standards, namely  $> 0,3$ . Based on the data below, all questionnaire items are confirmed to be valid because they have met the validity testing standard of  $> 0.3$ .

**Table 1.** Validity Tests

|          | Item Statistics |                |    |
|----------|-----------------|----------------|----|
|          | Mean            | Std. Deviation | N  |
| VAR00001 | 4.1556          | .85162         | 45 |
| VAR00002 | 4.5556          | .58603         | 45 |
| VAR00003 | 4.1556          | .56228         | 45 |
| VAR00004 | 4.2000          | .84208         | 45 |
| VAR00005 | 4.6000          | .53936         | 45 |
| VAR00006 | 4.2889          | .69486         | 45 |
| VAR00007 | 4.2667          | .75076         | 45 |
| VAR00008 | 4.3778          | .68387         | 45 |
| VAR00009 | 4.4889          | .62603         | 45 |
| VAR00010 | 4.5333          | .50452         | 45 |
| VAR00011 | 4.2000          | .58775         | 45 |
| VAR00012 | 4.3333          | .67420         | 45 |
| VAR00013 | 4.1556          | .85162         | 45 |
| VAR00014 | 4.5556          | .58603         | 45 |
| VAR00015 | 4.3778          | .61381         | 45 |

**Table 2.** Test the Validity of Aspects of Business Actors

|          | Item-Total Statistics |                |    |
|----------|-----------------------|----------------|----|
|          | Mean                  | Std. Deviation | N  |
| VAR00001 | 61.5111               | .842           | 45 |
| VAR00002 | 61.6889               | .831           | 45 |
| VAR00003 | 61.6889               | .840           | 45 |
| VAR00004 | 61.2444               | .836           | 45 |
| VAR00005 | 61.2222               | .830           | 45 |
| VAR00006 | 61.9111               | .847           | 45 |
| VAR00007 | 61.2222               | .830           | 45 |
| VAR00008 | 61.8444               | .833           | 45 |

|          | Mean    | Std. Deviation | N  |
|----------|---------|----------------|----|
| VAR00009 | 62.0000 | .843           | 45 |
| VAR00010 | 61.7778 | .829           | 45 |
| VAR00011 | 61.6667 | .839           | 45 |
| VAR00012 | 61.2000 | .833           | 45 |
| VAR00013 | 61.8222 | .835           | 45 |
| VAR00014 | 61.6222 | .844           | 45 |
| VAR00015 | 61.2667 | .830           | 45 |

### Reliability Test

According to Ghozali (2018:45), reliability is a tool for measuring a questionnaire which is an indicator of a variable or constructs. A questionnaire is said to be reliable or reliable if a person's answer to a statement is consistent or stable over time, for the data below it is said to be reliable because the data shows a result of  $> 0.5$ .

**Table 3.** Reliability Tests

| Aspects         | Cronbach's Alpha | N of Items |
|-----------------|------------------|------------|
| Tourist         | .859             | 15         |
| Business Actors | .979             | 15         |

### Swot Analysis

According to Rangkuti, (2019: 20) SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. SWOT analysis compares external opportunities and threats with internal strengths, and weaknesses. (a) Strength Strategy-Opportunity (SO), The locus of study has the attraction of natural beauty that is still maintained in its naturalness, such as white sand, rows of sea cypress trees, and the presence of several river estuaries that have beautiful scenery, becoming the strength of the region itself. The hospitality of the community and the historical value of the three research loci are part of the strength of Central Tapanuli Regency because the comfort and safety of tourists are related to the local community while the historical value they have also adds to the attractiveness of tourists. (b) Weakness- Opportunity (WO) Strategy, the lack of information and promotions obtained by tourists is a very important weakness to be corrected and inadequate accessibility and facilities are also factors in the lack of interest of tourists to visit the research locus. If the development of beach ecotourism potential, the construction of facilities and road infrastructure is adequate, promotional activities can be carried out to attract national and international tourists. Tourism promotion can be achieved through the internet social media, and print media and can be through the installation of banners about beach ecotourism at the locus of study at strategic points such as the city center. (c) Strength-Threat (ST) Strategy, the threat contained in the locus of study is the occurrence of environmental changes and competition with other regions. The support of local communities is very necessary because the community is directly involved in the management of marine ecotourism in order to always protect the environment from negative impacts. The impact of management that involves the community is the creation of jobs for the local community and can also reduce poverty, where the community can act as a provider of transportation, lodging, selling souvenirs, and as a tour guide. (d) Weakness-Threat (WT) Strategy, Internal weaknesses at the locus of study need to be minimized to avoid external threats that come through the establishment of a Weakness-Threat (WT) strategy. Counseling on marine ecotourism needs to be carried out because ecotourism can have a positive impact on the preservation of the environment and local indigenous culture which in the end is expected to be able to grow identity and a sense of pride among residents who grow due to the increase in ecotourism activities.

**Table 4.** SWOT Analysis

|  |  |   |  |
|--|--|---|--|
| <b>External</b>  | <b>Internal</b>  | <b>Strength (S)</b><br>1. Potential attractions of natural attractions and beaches<br>2. Local hospitality<br>3. The naturalness of the beach<br>4. Historical value  | <b>Weakness (W)</b><br>1. Lack of information and promotions<br>2. Accessibility is inadequate.<br>3. Inadequate facilities  |
|  | <b>Opportunity (O)</b><br>1. The existence of a policy of the Central Tapanuli Regency government to develop tourism.<br>2. Improving the welfare of local communities<br>3. Increase tourist interest in ecotourism   | <b>Strategy (SO)</b><br>1. Development of marine tourism with the concept of ecotourism (S1, S2, S3, S4, O1, O2, O3)<br>2. Creating jobs and preserving nature (S1, S2, S3, S4, O2)   | <b>Strategy (WO)</b><br>1. Increase tourism promotion on a national and international scale (W1, O1, O2, O3)<br>2. Construction of facilities, and road infrastructure in support of ecotourism (W2, W2, O1, O2, O3) |
| <b>Threat (T)</b><br>1. The occurrence of environmental changes<br>2. Competition with other regions | <b>Strategy (ST)</b><br>1. Involving the community in the supervision and management of marine ecotourism activities (S1, S2, S3, S4, T1, T2)<br>2. Utilization of natural resources does not exceed the carrying capacity of the environment (S1, S3, S4, T1) | <b>Strategy (WT)</b><br>1. Counseling on marine ecotourism and environmental conservation (W2, W3, T1)<br>2. Improving the quality of human resources, improving promotion, improving road infrastructure and facility arrangements so that it can compete with other regional attractions (W1, W2, W3, T1, T2) |  |

**WTA & WTP Measurement**

WTA and WTP Data Measurements, Willingness to Accept (WTA) is obtained by the Contingent Valuation Method (CVM) method. This method is one of the survey-based methods to measure how much an individual assesses goods or services and convenience. The CVM method is widely used to estimate the value of something that is not or has not been traded in the market (Patunru, 2004). WTA and Willingness to Pay (WTP) measurements are carried out during surveys identifying and inventorying potential objects and marine ecotourism activities at the explanatory and confrontation stages.

**Table 3.** WTA & WTP value measurements

| No | District     | WTA (Rp) | WTP (Rp) | ECONOMIC POTENTIAL |
|----|--------------|----------|----------|--------------------|
| 1  | Binasi Beach | 189.552  | 392.385  | Rp. 115.364.130    |

$$\begin{aligned}
 \text{Economic Potential (Binasi Beach)} &= \text{WTP rerata} \times W \\
 &= \text{Rp. } 392.395 \times 294 \\
 &= \text{Rp. } 115.364.130
 \end{aligned}$$

**Table 4.** Ecotourism Development Strategy

| No | Components of the Proposal           | Binasi Beach |
|----|--------------------------------------|--------------|
| 1  | Establishment of tourist ambassadors | ✓            |
| 2  | Formation of Pokdarwis               |              |

| No | Components of the Proposal   | Binasi Beach |
|----|--|--------------|
| 3  | Maximization of BUMDES   |              |
| 4  | Professional Tour Guide  | ✓            |
| 5  | Turtle Conservation  |              |
| 6  | Location Map   | ✓            |
| 7  | Water Facilities   | ✓            |
| 8  | Improved facilities for tourist activities (canoeing, snorkeling, flying fox, swimming, banana boating, beach volleyball, beach takraw, beach football). |              |
| 9  | Parking  | ✓            |
| 10 | Hotel or Inn   | ✓            |

## CONCLUSION

Important notes and results of sustainable Creative Economy Development Potential at the locus of studies that can be made and carried out and this also refers to the results of statistical calculations that have been tested by researchers, where some of them have the lowest total item value. The records and results of statistical calculations that have been carried out, namely: (a) Strict and selective permit arrangements for business openings that in the short and long term will change the tourist destination zone. (b) Establishment of a "tour guide" under the village/Neighborhood authority in all loci, where integrated services are implemented among all loci. (c) Fostering handicraft businesses cultivated by local communities that have high sustainability (ornamental woven fabrics in Pasar Sorkam Village. (d) Price and tariff arrangements (entrance fee, parking, tourist services, food prices, game prices) to maintain certainty and comfort in the long term for tourists. (e) Activation and utilization of the existence and role of the National Crafts Council (Dekranasda) of Central Tapanuli Regency in the introduction and future marketing of typical products of Central Tapanuli Regency which can be a superior support for beach ecotourism in the three loci of research carried out as well as beach ecotourism in Central Tapanuli Regency in general. The existence of screen-printing t-shirt sellers with the name of the beach written on it, and culinary business actors of marine catches, as well as business actors in making miniature ships is a great opportunity for Dekranasda to be involved in increasing local income for Central Tapanuli Regency.

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