Corrigendum: Development of Marine Ecotourism in Indonesia: Case of Maligi Nature Reserve, Province of West Sumatra (2021 IOP Conf. Ser.: Earth Environ. Sci. 695 012029)

L. Zamzami1*, Azwar2, Ermayanti1, Hendrawati1
1Department of Anthropology, FISIP, Universitas Andalas, Padang, West Sumatra, Indonesia.
2Department of Sociology, FISIP, Universitas Andalas, Padang, West Sumatra, Indonesia.
*Corresponding email: luckyzamzami@soc.unand.ac.id

Page 1:
In the Abstract section, the following text appears:

“Arafura Sea is rich in its resources, e.g. shrimp, pelagic fish, demersal fish, and coral reef fish. Coral reef fish commonly found in Arafura waters are among others brown-marbled grouper, slender grouper, leopard coral grouper, humpback grouper, etc. One of the groupers that has a higher selling price than the other groupers is slender grouper (Angyperodon leucogrammicus). The high demand for the fish is in line with the increase in the catch and the exploitation status. Therefore, a study is necessary to analyze the exploitation status of the slender grouper in Arafura Sea. This study was carried out from March to November 2017 by sampling the grouper at its landing site in Dobo, Aru Islands, from the fishing grounds in Arafura Sea, Maluku. The size of the slender grouper was 15–120 cm TL, and its growth pattern was allometric negative. Its growth rate (K) was 0.34 per year and its fishing mortality (F) was higher than the natural mortality (M). The exploitation rate (E) of the fish was 0.52%, meaning the fish was already moderately exploited. Therefore, precautionary managements are necessary to maintain the sustainability of the slender grouper resources in Arafura Sea.

This should read:

“Maligi nature reserve is the turtle's conservation area on the west coast in Indonesia, has a high potential for biodiversity for ecotourism development in the Province of West Sumatra. The possibility of natural reserves has an excellent opportunity to sell in the Indonesia ecotourism exchange. This study examines the development of the Maligi nature reserve marine ecotourism. The research method is a survey with questionnaires and description, using primary data, which was collected through interview techniques for fifty selected respondents by purposive sampling. Analysis data tools are scoring method based on a standard assessment of natural attraction and nature conservation MMA 2006, SWOT Analysis and analytical hierarchy process. The results of the study show: (a) the potential of high-ranking Maligi nature reserve saw from the aspect of strength and opportunity (b) the strategy for the development of Maligi nature reserve is a defensive strategy.”
Development of Marine Ecotourism in Indonesia: Case of Maligi Nature Reserve, Province of West Sumatra

L. Zamzami\textsuperscript{1*}, Azwar\textsuperscript{2}, Ermayanti\textsuperscript{1}, Hendrawati\textsuperscript{1}

\textsuperscript{1}Department of Anthropology, FISIP, Universitas Andalas, Padang, West Sumatra, Indonesia.
\textsuperscript{2}Department of Sociology, FISIP, Universitas Andalas, Padang, West Sumatra, Indonesia.
*Corresponding email: luckyzamzami@soc.unand.ac.id

Abstract. Arafura Sea is rich in its resources, e.g. shrimp, pelagic fish, demersal fish, and coral reef fish. Coral reef fish commonly found in Arafura waters are among others brown-marbled grouper, slender grouper, leopard coral grouper, humpback grouper, etc. One of the groupers that has a higher selling price than the other groupers is slender grouper (\textit{Anyperodon leucogrammicus}). The high demand for the fish is in line with the increase in the catch and the exploitation status. Therefore, a study is necessary to analyze the exploitation status of the slender grouper in Arafura Sea. This study was carried out from March to November 2017 by sampling the grouper at its landing site in Dobo, Aru Islands, from the fishing grounds in Arafura Sea, Maluku. The size of the slender grouper was 15–120 cm TL, and its growth pattern was allometric negative. Its growth rate (K) was 0.34 per year and its fishing mortality (F) was higher than the natural mortality (M). The exploitation rate (E) of the fish was 0.52%, meaning the fish was already moderately exploited. Therefore, precautionary managements are necessary to maintain the sustainability of the slender grouper resources in Arafura Sea.

1. Introduction
Along with the growth of international tourism since the 1990s, the trends of tourism from mass tourism to individual tourism or small community tourism have changed [1]. Tourism trends or small group tours that highlight the urge of visitors to know more and new experiences and to make their lives more meaningful as they inspire and enable them to raise their consciousness. The tourist patterns requested by tourists are relatively different, which depends on each tourist's interest [2, 3]. Groups of tourists emphasize the environmental and socio-cultural nature of the local community such that the searched-for tourist items are individual distinctions such as natural and local cultural attractions and facilities [4].

Ecotourism, as a tourist industry, has characteristics as a multi-product service business in addition to providing economic benefits [5]. Such financial gains reflect an increase in revenue and the well-being of individuals directly or indirectly involved and in the natural system globally. Nowadays, visitors can raise regional income by protecting natural areas for natural tourism's sustainability [6, 7]. The Maligi nature reserve, which has a unique, beautiful climate, is the center of tourist development that, in effect, gives the community economic advantages in the form of tourist expenses. Therefore, tourist spending depends on the production of tourism goods, their environmental uniqueness, and their tourist residence.

In addition to the positive effects of tourist areas, the amount of tourist visits that use tourism potential beyond a tourist's capacity is also negative [2]. That a tourist destination can have a significant adverse effect on the natural, economic, and socio-cultural aspects [5], unregulated growth of a tourist area can also harm the climate, including loss of natural resources such as degradation of water and soil, excessive pollution, and physical effects, including deforestation to open up new land. Regarding the tourism industry, ecotourism and cultural growth can play a crucial role in developing economies, in particular for countries...
with natural and environmental potential and high cultural diversity [8]. Ecotourism growth will create a range of ecological sustainability tourism strategies, as well as various tourism strategies that can promote the ecotourism idea to tourists who visit to protect the tourist area [9].

The style of tourism focused on ecological and social sustainability, or ecotourism is now increasingly well-known and continues to be a profit-oriented commercial attraction in the protection of the beach [10]. The ecotourism is a type of operation within the Maligi nature reserve. In addition to being an area of decline, ecotourism programs in the national park also promote regional and local economic development to boost the community's well-being. Nevertheless, the protection of natural resources and biodiversity are now becoming tourist attractions. Ecotourism promotes the beauty and uniqueness of artifacts of natural resources such as flora, fauna, ecosystems, and local social and cultural societies [11].

The ecotourism growth of the protected area of the nature reserve can offer conceptual advantages in three dimensions: ecological advantages, economic benefits, and social benefits [12]. Ecotourism plays an empirical role in four conservation indices, such as funding, education, ethics, and protection of natural resources [13]. Economically speaking, ecotourism may also contribute to growing local collectivity employment, the number of working people, infrastructure development, and involvement [1, 2, 6]. Ecotourism is an important instrument used to help conserve the natural environment and offers a solution to the widespread poverty issue in underdeveloped areas.

The ecotourism is going to concentrate on three areas: a). Quality – positive visitor experience and enhanced host community quality of life through cultural identity, poverty reduction, and environmental sustainability; b). Continuity production at an optimal degree enabling natural resources to be retained and regenerated; c). The needs of the tourism industry, the environment, and communities through a fair distribution of benefits among stakeholders must balance [7]. The capacity of fishers in economic, financial, cultural, environmental, and physical circumstances is strong for sustainable development [14]. Across many aspects, sustainable development establishes, but in our shared future, also called the Brundtland Report, the most widely cited definition is: sustainable development is a development that addresses the needs of the present without undermining the capacity of future generations to meet their own needs. The description of needs, in particular, the basic needs of the poor in the world, which should be prioritized [5]. The concept of limits on the capacity for the community to meet present and future needs raised by the state of technology and social organization Tourism evolves in an environmentally friendly, ecological, and cultural way with optimum economic gains. Empowering the local community is a hot issue in some studies. Well-planned and managed ecotourism has proven to be one of the most efficient tools for travelers to be environmentally responsible, and sustainable tourism needs informed participation by all stakeholders involved. Several studies discuss ecotourism in the region, protection of vital habitats and ecosystems, and the progress of integrated tourism [15].

The establishment in an area or region of a tourism object cannot distinguish from the potential of the environment, just like West Sumatra Province, which has a good Ecotourism potential, which is not matched by the number of tourists who visit Maligi's ecotourism reserves. As the current Ecotourism potential as an attractive tourist attraction has not been optimized, created, or packaged, the level of tourist visits remains low; in various tourist attractions and tourist attractions, there is still a lack of tourism support infrastructure. It notes that the Maligi nature reserves have become a major national attraction in the past twelve years, and have developed an average of 16.6 percent annually [16].

The growth of Western Sumatra ecotourism seen from the aspect of multiple visits, length of stay and expenses of tourists, shows that the ecotourism of West Sumatra still lags behind the evolution of west coast ecotourism as seen from the perspective of the cost traveler in many of the visits and with the province of West Sumatra [17]. The low performance of West Sumatra's ecotourism, demonstrated by the limited number of tourist
visits, the short-stay period of tourists in the region and the low tourist spending, explain the relatively weak Western Sumatra ecotourism Index. Also, the 2007 Ministry of Culture and Ecotourism report states that the West Sumatra province's ecotourism competitiveness index indicated by Maligi nature reserves ranks 28 among Indonesia's 33 significant destinations. This low location is inversely proportional to the capacity of natural capital, biodiversity, variety in natural attractions, and the unique existence of the nature reserves in the Maligi.

West Sumatra's low competitiveness in ecotourism influences various factors such as the availability of minimum transport facilities, packaging of maximized tourism attractions, and the Padang not yet developed as a point of entry for tourists to West Sumatra from outside Europe [18]. This empirical proof uses to determine how much potential the nature reserves of Maligi have and how the approach choses to grow this area becomes an ecotourism-based, sustainable tourism destination.

Besides, it produces a structure utility for the economic development and political progress of the local population, providing a resource for the training of the visitors and preservation. The legal basis for the establishment of Marine Protected Area (KKLD) of West Pasaman is West Pasaman Head Regent Decree No. 188.45/325/BUP-PASBAR/2007 (SK Bupati Pasaman Barat No. 188.45/325/BUPPASBAR/2007) issued on June 7, 2007. The Marine Protected Area was under the protection of marine species diversity, the integrity of germ-plasm, leatherback turtle (penyu belimbing, *Dermochelys coriacea*), coral reefs and ecosystem balance. Establishment of Marine Protected Area is also declared for Brackish Water Conservation Area in Maligi, West Pasaman, by the legal basis of West Pasaman Head Regent Decree No. 188.45/326/ BUP-PASBAR/2007 (SK Bupati Pasaman Barat No. 188.45/326/ BUPPASBAR/2007) issued on June 7, 2007 [16]. The establishment was under Brackish Water Protection Area, comprehensive management of Germplasm, balance, and maintenance of regional ecosystems in brackish waters of Maligi nature reserves, Sasak Village, Sasak Ranah district.

This research aims to analyze the potential and development strategy of Maligi nature reserves ecotourism, which expect to be the basis for the development of the tourism industry in the Province of West Sumatra. Besides, the resulting strategic recommendations can use as a reference for the development of the competitiveness of the West Sumatra tourism industry.

2. Method

2.1 Study Location

This research was conducted in Maligi nature reserves ecotourism, Pasaman Barat Regency, Province of West Sumatra in Juni until July 2020, using survey and description methods. Maligi nature reserves ecotourism locates at the geographical position of 00°14'08"-00°08'47" East Longitude dan 99°09'58" North Latitude–99°44′49" South latitude is covering an area of within the Telur Island regional conservation area and brackish water conservation area in Sasak village (Figure 1). The Westside of West Pasaman is bordered with the Indian Ocean, while the Northside border with Mandailing Natal Regency of North Sumatra Province, and in the East and Southside, the regency border with Agam Regency. Livelihoods of communities around the West Pasaman are mostly working in the field of fisheries. However, fishing activities still carry out traditionally, because most of the fishermen, about 57.43% are again using boats without motor, 12.47% are using outboard motors, and as much as 42.57% are using motorboats measuring up to the 30 GT. Mostly, fishing gear is used for coastal fishing gear as much as about 84.72 percent.

2.2 Survey and Description

The data used are primary and secondary. Primary data are the results of field observations and interviews of selected respondents, such as fishermen, local stakeholders, and domestic tourists. Respondents select by purposive sampling tailored to the research objectives [19, 20, 21] the number of respondents as 50 samples, 25 correlation studies. The number of
samples in this study was as many as 50 respondents, with details of the fishermen is 25, local stakeholder groups are ten respondents, and domestic tourists as many as 15 respondents.

Figure 1. Maligi nature reserves ecotourism, Pasaman Barat Regency Province of West Sumatra

This study also uses secondary data that has been published by related institutions, as supporting data specifically related to this study. Data analysis methods for analyzing the potential of Maligi nature reserves ecotourism objects use as Guidelines for Analysis of Areas of Marine Management Area (MMA) of the Directorate of Aquatic and Marine Resources Conservation CORE MAP II in 2006. Parameters/criteria assessed include aspects: Attractiveness, Attractions, Accessibility, Accommodation, Availability of Clean Water, Facilities, and Infrastructure. Then all six criteria are determined by the value of each standard by using the formula:

\[ C = B \times A \]

Information:
- C = Score or value of a criterion
- B = the number of elements in the criteria
- A = value weight

For each criterion for assessing the potential of tourism objects, the following criteria compile based on the rules and sub-criteria of each parameter for each of the tourism objects studied, as set out in Table 1 in the appendix. Also, the results of the evaluation of each item tourism element average only in the sense that the final assessment. The results for the creation of the tourism industry obtain, and the classification of developmental factors based on weight value compares as defined in the table below:
Table 1. Classification of Development Elements Based on Weight Value (COREMAP II, 2006)

| No. | Cost Total | Evaluation of the potential element | Category |
|-----|------------|-------------------------------------|----------|
| 1   | 500-549    | Opportunities for growth             | A        |
| 2   | 250-499    | Established eventually               | B        |
| 3   | 101-249    | Not established actually             | C        |

Source: DAMRC CORE MAP II in 2006

The SWOT analysis uses to analyze Maligi's ecotourism development strategy for nature reserves. SWOT analyzes bases on the concept of optimizing strength and potential while simultaneously reducing vulnerability and hazard (treatment). SWOT analysis can use to establish ecotourism-based tourism approaches. [22] said to evaluate the degree of strengths and weaknesses and opportunities and challenges to tourism in Pasaman Barat Regency; each dimension assesses using a questionnaire. It interprets by descriptive analysis:

Highest score (xt) : 5  
Lowest score (xr) : 1  
Range of formula : R = xt - xr  
R = 5 - 1  
P = 4/4 = 1.00

The following parameters can define by using 1.00 class length and the lowest score 1:

Table 2. The Criteria of Strength, Weakness, Opportunities, and Threat

| No. | Intervals       | Strength and Opportunities | Weakness and Threat |
|-----|----------------|-----------------------------|---------------------|
| 1   | 4,01-5,00      | Very high                   | Very high           |
| 2   | 3,01-4,00      | High                        | High                |
| 3   | 2,01-3,00      | Low                         | Low                 |
| 4   | 1,00-2,00      | Very low                    | Very low            |

Also, the position diagram for the development of ecotourism offers an overview of quadrants provided by SW vector lines and OT Vector Lines, and each quadrant has its essential strategy formula.

3. Result

Results of the measurement of every item and sub-element of the assessment of the potential for ecotourism in Maligi nature reserves collected by the 50 respondents by referring to the 2006 Natural Objects Assessment Guideline for Aquatic and Marine Conservation Directorate of CORE MAP II from the six elements of the potential indicators such as:

Table 3. Result of Assessment Criteria Potential Analysis of Maligi Nature reserves Ecotourism

| No. | Element/sub-element          | Score | %  |
|-----|------------------------------|-------|----|
| 1   | Attractiveness               | 150   | 33.3|
| 2   | Attraction                   | 100   | 22.2|
| 3   | Accomodation                 | 60    | 13.3|
| 4   | Accessibility and Security   | 30    | 6.7 |
| 5   | Clean Water Availability     | 30    | 6.7 |
| 6   | Supporting facilities and Infrastructure | 80   | 17.8|
|     | Total                        | 450   | 100 |

Source: Primary Data, 2020
Table 4 above shows that the attraction component has the highest value (150) of six criteria, especially the natural resources uniqueness in the ecotourism area of the Maligi nature reserves. All in all, the elements and sub-elements are known to be 450 in all. So the weight of the ecotourism attraction criterion is multiplied by the weight of 5. The attractiveness of the Maligi Natural Reserves offers a total of 450 x 5 = 2,250 ecotourism areas. Specific criteria assessment metrics defined in Table 4 below as attractions for visitors, accessibility, accommodation, availability of clean water and support facilities, and the requirements of infrastructure.

| No. | Element/sub-element | Score | Cost Total | Assessment of Potential Element | Category |
|-----|---------------------|-------|------------|---------------------------------|----------|
| 1   | Attractiveness      | 2.250 | 500-549    | Opportunities for growth         | A        |
|     |                     |       | 250-499    |                                 |          |
|     |                     |       | 101-249    |                                 |          |
| 2   | Attraction          | 1.800 | 500-549    | Opportunities for growth         | A        |
|     |                     |       | 250-499    |                                 |          |
|     |                     |       | 101-249    |                                 |          |
| 3   | Accomodation        | 1.350 | 500-549    | Opportunities for growth         | A        |
|     |                     |       | 250-499    |                                 |          |
|     |                     |       | 101-249    |                                 |          |
| 4   | Accesibility and Security | 1.350 | 500-549 | Opportunities for growth | A |
|     |                     |       | 250-499    |                                 |          |
|     |                     |       | 101-249    |                                 |          |
| 5   | Water Available     | 900   | 500-549    | Opportunities for growth         | A        |
|     |                     |       | 250-499    |                                 |          |
|     |                     |       | 101-249    |                                 |          |
| 6   | Support Infrastructure | 1.800 | 500-549 | Opportunities for growth | A |
|     |                     |       | 250-499    |                                 |          |
|     |                     |       | 101-249    |                                 |          |

Source: Primary Data, 2020

The results of the potential analyzes consider listed above in Table 5. We can conclude that the ecotourism region of the Maligi nature reserves has excellent potential for ecotourism growth as all elements of the criteria consider to include category A. The highest value (2,250) demonstrates by the ecotourism draw of the Maligi nature reserves to orangutans who have become a brand name among international tourists and national tourists. The opportunity is the variety of attractions (1800) that visitors visiting the ecotourism in Maligi will enjoy. In the Maligi ecotourism region, the availability of tourism and infrastructure support facilities is also a supporting factor for the high tourism potential of Maligi's natural reserves.

The Ampiang Parak Nature reserves have an immense potential for ecotourism development as it has a strategic ability and numerous tourist attractions [17]. The Tourist Destinations Design Model can apply by concentrating on the attraction, accessibility, services, lodging and other facilities. Together with the study results, interest and interest factors will drive tourism in the region of nature reserves. Similarly, the tourism potential of different resources owned by the town can be turned into tourist attractions and used to serve economic interests while taking other aspects into account. In this case, that the ability of natural resources that are held by an individual user to provide environmental services such as natural tourism requires the dedication of all stakeholders to keep the area continuously so that the area can manage sustainably [23]. The ecotourism region as a region of Maligi
nature reserves applies conservation principles with a security and utilization approach, with the results of studies that indicate a high potential for growth as a natural tourism area.

4. Discussion
SWOT analyzes systematically define various factors to establish an ecotourism growth plan in Maligi's nature reserves. SWOT is an abbreviation of the internal climate, strengths, and limitations and the external context of the business world's opportunities and challenges. The analysis bases on the principle which maximizes strengths and opportunities, but at the same time reduce weaknesses and threats.

Table 5. Result SWOT Value Data Analysis

| No. | Factor   | Minimum Value | Maximum Value | Average | Information |
|-----|----------|---------------|---------------|---------|-------------|
| 1   | Strength | 3.22          | 4.10          | 3.45    | High        |
| 2   | Weakness | 1.00          | 4.55          | 3.74    | Low         |
| 3   | Opportunities | 3.24      | 4.05          | 3.45    | High        |
| 4   | Threats  | 3.28          | 4.25          | 3.56    | Low         |

Source: Primary Data, 2020

Maligi is a strategic location that developed to be the ecological reserve ecotourism because it is a tropical tourism swamp conservation area; it has great beauty and biodiversity; it has a unique peatland ecosystem. It has a western tourist destination planned for tourism development; government policies contain specific guidelines, as average Score is 3.45 high categories. The shortcomings of the Maligi nature reserves ecotourism can sees from the not ideally accessible tourist facilities and infrastructure: basic ecotourism development projects, not adequate ecotourism marketing, inadequate knowledge on tourism attractions, lack of human resources, insufficiency in tourism growth and public awareness to keep the environment terrible. The value of ecotourism as a whole in Maligi's nature reserves is low (3.74) in the capacity for ecotourism growth.

The overall study of opportunities factors for ecotourism in Maligi's nature reserves averages to 3.45, which is high. It shows that ecotourism opportunities in Maligi are substantial. The ecotourism tourist destination object of Maligi nature reserves (CORE MAP II) in West Sumatra has the potential to be built and exploited for nine opportunities, as it offers a multiplier impact for the economy through high-value business opportunities for local communities. This argument that communities involved in tourism growth in ecotourism areas have a positive effect on the region by poverty reduction. Other positive economic impacts not only improve economic opportunities but also minimize unemployment in the field of ecotourism. Biodiversity and nature uniqueness as a significant tourism development opportunity, the object of Maligi's ecotourism nature reserves offers the surrounding community business opportunities, open facilities, and accessibility can generate job opportunities, ecotourism can promote the occasion of the current Maligi Nature reserves and increase tourism interest.

The danger of Maligi's ecotourism nature reserves lies in the still high forest precipitation activities around Sasak Village, which are vulnerable to forest and land fires, the creation of touristic areas elsewhere, the creation of palm oil plantations around Maligi's eco-touristic nature reserves and the prevalence of protected birds for hunter and capture [24]. The danger factor of Maligi's ecotourism is the still high/rampant forest-penetrating activity in the village of Sasak, prone to forest and land fires, development elsewhere of tourist areas, growth of palm oil plantations in the Maligi nature reserves, ecological reserves, and the prevalence of protected birds for hunting and capturing. Item 9 is a threat to the life of the ecotourism reserves of Maligi and is, on average, 3.56 in the low band. The SWOT analysis matrix produces SO, WO, ST, and WT strategies. Strategies are as follows:
a) **SO Strategy (Strength-Opportunity), a strategy that combines strength and opportunity.**
   1. Increased ecotourism potential for Maligi’s nature reserves through the creation of tourism products to explore all possible attractions in Maligi’s ecotourism nature reserves.
   2. Seek the creation and use of ecotourism resources and motivate society.
   3. Biodiversity and the special existence of the ecotourism nature reserves of Maligi must be protected.

b) **WO (Weakness-Opportunity) strategies: a strategies that minimize weaknesses and take advantage of opportunities.**
   1. Increased connectivity to ecotourism areas of Maligi’s nature reserves by improving infrastructure (roads).
   2. The use of social media and the web to allow ads and public awareness.

c) **ST (Strength-Threats) Strategy: a strategy that uses strength and overcomes threats.**
   1. The government and the community also protect the ecotourism region in the Maligi Nature reserve against the dangers of sea and land fires.
   2. Increased public awareness of the value of protecting the environment by reducing illegal logging and hunting activities and capture of endangered birds.
   3. The government should introduce policies to prevent the development of oil palm plantations in the ecotourism reserve of Maligi.

d) **WT Strategy (Weakness-Threats): a strategy that minimizes weaknesses and avoids threats.**
   1. Take precautions against damaging environmental behavior.
   2. Pursue the new community legislation to take action against the perpetrators of sea abrasion or invasion in the region of Maligi Nature reserves ecotourism.

Also, the degree of tourists' actions and motives to visit Maligi's ecotourism nature reserves is to equate the AHP approach to one with another indicator, and then rate the results of each index evaluated as defined in the following table:

**Table 6. Indicator of assessment of the reasons why tourists visit the Maligi Nature reserves**

| No. | Options                  | Value | %   | Rank |
|-----|--------------------------|-------|-----|------|
| 1   | Attractiveness           | 0.455 | 50.6| 1    |
| 2   | Water Available          | 0.397 | 27.3| 2    |
| 3   | Accomodation             | 0.050 | 10.3| 3    |
| 4   | Accesibility and Security| 0.045 | 5.4 | 4    |
| 5   | Distance                 | 0.030 | 3.4 | 5    |
| 6   | Support Infrastructure   | 0.023 | 2.3 | 6    |
|     | **Total**                | **1.00** | **100** |      |

*Source: Primary Data, 2020*

Table 6 above show that indicates that most (50.6 percent) visitors showed that their key reason for visiting and learning more about the life and special nature reserves Maligi ecotourism was the appeal of Maligi's ecotourism reserves.

The outcomes of the analytical hierarchy (AHP) analysis, which set out in the WT strategy as a key strategy, include the effect of the research:
1. Ecotourism will use the strengths and opportunities of Maligi's nature reserves, such as a highly strategic place to grow and use the following established characteristics.
2. With its beauty and high biodiversity and a unique tourism environment, West Sumatra is a tourist destination planned as a tourist growth destination.

3. The government policies have a specific tourism development vision (the goal), government policies are easy to adapt to tourism potentials, and government policies include tourism development strategies. The approach used in this context is that of promoting aggressive policies (crowd-oriented approach) and the creation of biodiversity through conservation and natural character, to draw visitors to visit by improving the local community's socioeconomic conditions.

5. Conclusion
Based on the results from the debate and discussion in the previous section, the following conclusions can reach: (1) Maligi's nature reserves ecotourism have a great potential to be established from the point of view of supply as an ecotourism region through their strengths.

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