

WAKATOBI DEVELOPMENT PRIORITIES AS A SUSTAINABLE TOURISM DESTINATION USING THE ANALYTICAL HIERARCHY PROCESS METHOD

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ABSTRACT

37 Wakatobi is one of the tourist destinations renowned for its underwater beauty, holding great potential to be developed as a sustainable tourism destination. This research aims to determine the priorities for sustainable tourism development in Wakatobi using the Analytical Hierarchy Process (AHP) method. The AHP method is employed to identify and prioritize various criteria and sub-criteria contributing to sustainable tourism development. Based on the research findings, infrastructure and facilities were found to be the highest priorities, with a focus on improving transportation infrastructure and public facilities. These findings indicate that the development of transportation infrastructure and public facilities is crucial to support the sustainability of tourism in Wakatobi.

Keywords: Sustainable Tourism, Wakatobi, Analytical Hierarchy Process (AHP), Infrastructure, Facilities

1. INTRODUCTION

10 Tourism is one of the economic sectors that has great potential in improving people's welfare and driving regional economic growth. Wakatobi Regency, located in Southeast Sulawesi Province, Indonesia, is famous for its underwater nature with its extraordinary beauty, making it a prime destination for tourists, especially diving enthusiasts from all over the world.

Unmanaged tourism growth can lead to various environmental and social problems, such as damage to marine ecosystems, pollution, and economic imbalance. Therefore, sustainable tourism development is very important to ensure that the economic benefits obtained can go hand in hand with environmental conservation and improving the welfare of local communities.

6 This study aims to determine the priority of sustainable tourism development in Wakatobi using the Analytical Hierarchy Process (AHP) method. The AHP method is a method in decision support developed by Thomas L. Saaty. This decision support model can describe a complex multi-criteria problem into a hierarchy. Hierarchy is a representation of a complex problem in a multi-level structure where the first level is *Goals*, which is continued with the level of criteria, sub-criteria, and so on until the final stage is the recommended alternative (T. L. Saaty & Vargas, 2012). The AHP method allows decision makers to evaluate various complex factors and relevant criteria in tourism development, including economic, environmental, cultural, and social aspects.

This study focuses on the application of AHP in determining the priority of Wakatobi development as a sustainable tourism destination. By using AHP, this study identifies the most important criteria in

sustainable tourism development in Wakatobi, and determines the relative weight of each criterion. The results of this study can be expected to provide guidance for local governments, stakeholders, and local communities in planning and managing tourism development in Wakatobi to comply with the principles of sustainable tourism.

2. RESEARCH METHODS

2.1 Place and Time of Research

The location of this research is in Wangi-wangi District, Wakatobi Regency, Southeast Sulawesi. The research was conducted for 2 months, namely from February to March 2024.

2.2 Data Types and Sources

This study relies on primary data collection to gain in-depth insights into the priorities for developing Wakatobi as a sustainable tourism destination using the Analytical Hierarchy Process (AHP) method. The primary data collected includes interviews with various stakeholders who have relevant knowledge and experience, including local government officials, tourism entrepreneurs, academics, local communities, tourists, and a number of other key actors. Through structured interviews and surveys, the authors seek to understand their views on important criteria for sustainable tourism development in Wakatobi, as well as their preferences for possible alternatives. This primary data is a key aspect in understanding the perspectives and interests of the various parties involved in determining the priorities for developing sustainable tourism destinations in Wakatobi.

2.3 Respondent Sampling Techniques

The respondent sampling technique in this study used a purposive sampling approach, where respondents were deliberately selected to cover various groups of relevant stakeholders in the context of sustainable tourism development in Wakatobi. Key groups identified included local government officials, tourism entrepreneurs, academics, local communities, tourists, and others. This approach allows for a good representation of the perspectives of the various parties involved, taking into account geographical diversity, gender, and level of involvement in the tourism industry. The number of respondents is not the main factor in determining the weight, but rather the knowledge or quality of respondents related to the problems studied. For this reason, respondent sampling was carried out by dividing respondents as follows:

1. The expert respondents are parties from
 - a. Government tourism office
 - b. Government officials and their ranks
 - c. Tourism village managers, tourism awareness groups and other tourism activist organizations.
2. Active respondents are people who are actively involved and directly impacted by the tourism sector.
3. Passive respondents are people who are only affected but do not participate in the tourism sector.

2.4 Stages and Data Analysis

The data analysis method used in the research on Wakatobi development priorities as a sustainable tourism destination uses the Analytical Hierarchy Process (AHP) method. The following are the general steps in the AHP data analysis method:

1. Defining a problem and determining the desired solution. At this stage, trying to determine a problem to be solved in detail, clearly, and easily understood. From the problem, an attempt is made to determine a solution that might be suitable for the problem. The solution to the problem may be more than one. Later, the solution can be further developed in the next stage.
2. Next, create a hierarchical structure that begins with the main objective. After compiling the main objective as the top level, the hierarchy level below it will be compiled, namely the criteria that are suitable for considering or assessing the alternatives we provide and determining the alternatives. Each criterion has a different intensity. The hierarchy is continued with sub-criteria

and continued with alternatives. The criteria, sub-criteria and alternatives that will be used in this study are:

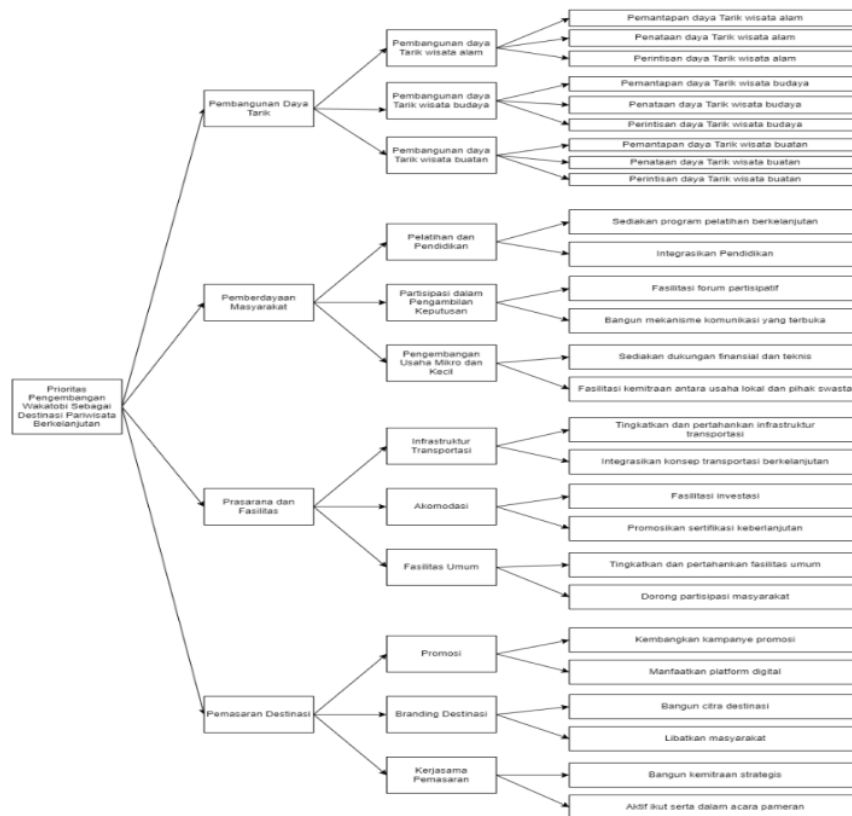
1. Development of Tourist Attractions
 - a. Development of natural tourist attractions
 - Strengthening the natural tourist attraction
 - Arrangement of natural tourist attractions
 - Pioneering natural tourist attractions
 - b. Development of cultural tourism attractions
 - Strengthening the attractiveness of cultural tourism
 - Arrangement of cultural tourism attractions
 - Pioneering cultural tourism attractions
 - c. Development of artificial tourist attractions
 - Strengthening of artificial tourist attractions
 - Arrangement of artificial tourist attractions
 - Pioneering of artificial tourist attractions
2. Community empowerment
 - a. Training and Education
 - Provide ongoing training programs
 - Integrate Education
 - b. Participation in Decision Making
 - Facilitation of participatory forums
 - Build open communication mechanisms
 - c. Micro and Small Business Development
 - Provide financial and technical support
 - Facilitate partnerships between local businesses and the private sector
3. Infrastructure and Facilities
 - a. Transportation Infrastructure
 - Improve and maintain transportation infrastructure
 - Integrate sustainable transportation concepts
 - b. Accommodation
 - Investment facilitation
 - Promote sustainability certification
 - c. Public facilities
 - Improve and maintain public facilities
 - Encourage community participation
4. Tourism Destination Marketing
 - a. Promotion
 - Develop promotional campaigns
 - Leveraging digital platforms
 - b. Destination Branding
 - Build destination image
 - Engage the community
 - c. Marketing Cooperation
 - Build strategic partnerships
 - Actively participate in exhibition events

3. Create a pairwise comparison matrix that describes the relative contribution or influence of each element to the objective or criterion at the next level above it.
4. Calculate the normalization of each pairwise comparison matrix and test its consistency. If inconsistent, the data collection is repeated. Where a_{ij} is the comparison scale value between the i -th and j -th criteria. Then calculate the eigenvalue of each pairwise comparison matrix. The eigenvalue is the weight of each element.
5. Calculating the eigenvalues of the vectors and testing their consistency, The eigenvalues of the vectors in question are the maximum eigenvalues of the vectors obtained.
6. Checking the consistency of the hierarchy. What is measured in AHP is the consistency ratio by looking at the consistency index. If the consistency ratio (CR) value is <0.1 (10%) then it can be said to be consistent, but conversely if the consistency ratio (CR) value is >0.1 (10%) then re-examination must be carried out.

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(RI) Value Table

| | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|
| <i>n</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| <i>RI</i> | 0.00 | 0.00 | 0.52 | 0.89 | 1.11 | 1.25 | 1.35 | 1.40 | 1.45 | 1.49 |

Source.(T. L. Saaty & Vargas, 2012)



3. RESULTS AND DISCUSSION

3.1 Identify Priorities and Hierarchy

Based on PP no. 50 of 2011 concerning RIPPARNAS which refers to Law no. 10 of 2009 concerning tourism, tourism is all activities related to tourism and is multidimensional and multidisciplinary in nature which emerges as a manifestation of the needs of each person and country and the interaction between tourists and the local community, fellow tourists, the Government, Regional Government, and entrepreneurs.

Based on Wakatobi Regency Regulation no. 4 of 2017 concerning RIPPARDA and the results of discussions between researchers and lecturers and several parties, especially the Wakatobi Tourism Office as the decision maker by considering all aspects of internal tourism in Wakatobi Regency. The criteria, sub-criteria, and alternatives obtained are as follows:

3.2 Design of Priority Weight Calculation System and Consistency Test

The design of a decision support system to find priority indicators for sustainable tourism development in Wakatobi Regency was carried out using the Analytical Hierarchy Process (AHP) method using Microsoft Excel.

Implementation and calculation of AHP in Microsoft Excel involves several procedures and specific steps. Here are the steps to implement and perform calculations using the AHP method in Microsoft Excel.

3.2.1 Weight Calculation and Criteria Consistency Test

Data for determining the priority weight of the importance of the criteria in selecting sustainable tourism development priorities were obtained from the results of a questionnaire distributed to 15 respondents. Shown in Table 1.

Table 1 Pairwise Comparison Matrix of Criteria

| Kriteria | Pembangunan Daya Tarik Wisata | Pembangunan Masyarakat | Persarana dan Fasilitas | Pemasaran Destinasi pariwisata |
|--------------------------------|-------------------------------|------------------------|-------------------------|--------------------------------|
| Pembangunan Daya Tarik Wisata | 1,00 | 0,599 | 0,024 | 0,004 |
| Pembangunan Masyarakat | 1,668 | 1,00 | 1,411 | 0,003 |
| Persarana dan Fasilitas | 1,214 | 0,708 | 1,00 | 2,309 |
| Pemasaran Destinasi pariwisata | 1,66 | 1,246 | 0,493 | 1,00 |
| Jumlah | 5,98 | 3,54 | 3,668 | 4,715 |

Source: Data processed with Microsoft Excel

Next, matrix normalization is performed on the pairwise comparison matrix and calculating the eigenvector entries. The eigenvector entries for each criterion are presented in Table 2.

| | | | |
|-----------------------------------------|------------------------------------|-----------------------------------------|--------------------------------------|
| Pembangunan Daya Tarik Wisata | Pembangunan daya Tarik wisata alam | Pembangunan daya Tarik wisata budaya | Pembangunan daya Tarik wisata buatan |
| Pembangunan daya Tarik wisata alam | 1,00 | 1,25 | 4,95 |
| Pembangunan daya Tarik wisata budaya | 0,755 | 1,00 | 3,86 |
| Pembangunan daya Tarik wisata buatan | 0,243 | 0,216 | 1,00 |
| Jumlah | 1,998 | 2,51 | 9,79 |
| Pembangunan Masyarakat | Pelatihan dan Pendidikan | Partisipasi dalam Pengambilan Keputusan | Pengembangan Usaha Mikro dan Kecil |
| Pelatihan dan Pendidikan | 1,00 | 2,267 | 0,835 |
| Partisipasi dalam Pengambilan Keputusan | 0,441 | 1,00 | 0,527 |
| Pengembangan Usaha Mikro dan Kecil | 1,198 | 1,897 | 1,00 |
| Jumlah | 2,639 | 5,164 | 2,362 |
| Persarana dan Fasilitas | Infrastruktur Transportasi | Akomodasi | Fasilitas Umum |
| Infrastruktur Transportasi | 1,00 | 3,762 | 1,391 |
| Akomodasi | 0,266 | 1,00 | 0,467 |
| Fasilitas Umum | 0,719 | 2,140 | 1,00 |
| Jumlah | 1,985 | 6,902 | 2,859 |
| Pemasaran Destinasi pariwisata | Promosi | Branding Destinasi | Kejasama Pemasaran |
| Promosi | 1,00 | 0,345 | 1,236 |
| Branding Destinasi | 2,903 | 1,00 | 1,285 |
| Kejasama Pemasaran | 0,699 | 0,778 | 1,00 |
| Jumlah | 4,601 | 2,123 | 3,521 |

Table 2. Criterion Eigenvector Entries

| 1 | Kriteria | Pembangunan Daya Tarik Wisata | Pemberdayaan Masyarakat | Prasarana dan Fasilitas | Pemasaran Destinasi pariwisata | nilai eige |
|---|--------------------------------|-------------------------------|-------------------------|-------------------------|--------------------------------|------------|
| | Pembangunan Daya Tarik Wisata | 0,08 | 0,08 | 0,25 | 0,08 | 0,75 |
| | Pemberdayaan Masyarakat | 0,08 | 0,20 | 0,06 | 0,07 | 0,04 |
| | Prasarana dan Fasilitas | 0,25 | 0,19 | 0,73 | 0,80 | 0,25 |
| | Pemasaran Destinasi pariwisata | 0,08 | 0,07 | 0,18 | 0,21 | 0,46 |
| | Jumlah | 1,00 | 1,00 | 1,00 | 1,00 | 1,00 |

Source: Data processed with *Microsoft Excel*

After obtaining the importance weight for each criterion, the next step is to conduct a consistency test. The initial step to conduct a consistency test is to calculate the maximum eigenvalue (λ_{max}). First, a pairwise comparison matrix multiplication is performed for the criterion level in Table 1 against the eigenvector entries of the criteria as follows :

$$\begin{bmatrix} 1,000 & 0,599 & 0,824 & 0,604 \\ 1,668 & 1,000 & 1,411 & 0,803 \\ 1,214 & 0,708 & 1,000 & 2,309 \\ 1,656 & 1,246 & 0,433 & 1,000 \end{bmatrix} \begin{bmatrix} 0,175 \\ 0,284 \\ 0,295 \\ 0,245 \end{bmatrix} = \begin{bmatrix} 0,737 \\ 1,190 \\ 1,275 \\ 1,018 \end{bmatrix}$$

Next, calculate the value λ_{max} as follows :

$$\lambda_{max} = \frac{1}{4} \left(\frac{0,737}{0,175} + \frac{1,190}{0,284} + \frac{1,275}{0,295} + \frac{1,018}{0,245} \right) = 4,215$$

Next, calculate the consistency index (CI) value as follows:

$$CI = \frac{\lambda_{max} - n}{n - 1} = \frac{4,215 - 4}{4 - 1} = 0,072$$

After getting the CI value, continue by calculating the Consistency Ratio (CR) value. For $n = 4$ then $RI = 0,90$. So the CR value is:

$$CR = \frac{CI}{RI} = \frac{0,072}{0,90} = 0,080$$

Based on the calculation above, the CR value is obtained <0.1 . then this study can be said to be consistent. After obtaining the consistency value at the criteria level, the next step is to calculate the consistency value at the sub-criteria level.

3.2.2 Weight Calculation and Subcriteria Consistency Test

The assessment of 15 respondents was then averaged using the *geometric mean* to produce a pairwise comparison matrix of sub-criteria levels shown in Table 3.

Table 3 Pairwise Comparison Matrix for Subcriteria Levels

Source: Data processed with *Microsoft Excel*

Next, matrix normalization is performed on the subcriteria pairwise comparison matrix and calculating the eigenvector entries. The eigenvector entries for each subcriteria are presented in Table 4.

Table 4. Results of Eigenvector Calculation for Each Sub-Criteria Indicator

| Pembangunan Daya Tarik Wisata (0,175) | | Prasarana dan Fasilitas (0,295) | |
|-----------------------------------------|-------|----------------------------------------|-------|
| Pembangunan daya Tarik wisata alam | 0,089 | Infrastruktur Transportasi | 0,151 |
| Pembangunan daya Tarik wisata budaya | 0,068 | Akomodasi | 0,044 |
| Pembangunan daya Tarik wisata buatan | 0,018 | Fasilitas Umum | 0,101 |
| Pemberdayaan Masyarakat (0,284) | | Pemasaran Destinasi pariwisata (0,245) | |
| Pelatihan dan Pendidikan | 0,111 | Promosi | 0,060 |
| Partisipasi dalam Pengambilan Keputusan | 0,055 | Branding Destinasi | 0,120 |
| Pengembangan Usaha Mikro dan Kecil | 0,118 | Kerjasama Pemasaran | 0,066 |

Source: Data processed with *Microsoft Excel*

After obtaining the sub-criteria eigenvectors for each criterion, the next step is to conduct a consistency test. The initial step in conducting a consistency test is to calculate the maximum eigenvalue (λ_{max}). The following are the values λ_{max} from each sub-criteria indicator:

Table 5 Values λ_{max} Each Subcriteria Indicator

| subcriteria | λ_{max} |
|-------------|-----------------|
|-------------|-----------------|

| | |
|------------------------------------|-------|
| Development of Tourist Attractions | 3,013 |
| Community empowerment | 3,014 |
| Infrastructure and Facilities | 3,006 |
| Tourism Destination Marketing | 3,086 |

Source: Data processed with *Microsoft Excel*

After getting the maximum eigenvalue, continue by finding the CI value. The following are the CI values of each sub-criteria indicator:

Table 6. CI Values for Each Sub-Criteria Indicator

| subcriteria | <i>Konsistensi Indeks (CI)</i> |
|------------------------------------|----------------------------------|
| Development of Tourist Attractions | 0.006 |
| Community empowerment | 0.007 |
| Infrastructure and Facilities | 0.003 |
| Tourism Destination Marketing | 0.043 |

Source: Data processed with *Microsoft Excel*

After getting the CI value, continue by calculating the Consistency Ratio (CR) value for each sub-criteria indicator. For $n = 3$ that $RI = 0,58$, the CR value for each sub-criteria indicator is obtained as follows:

Table 7. CR Value for Each Sub-Criteria Indicator

| subcriteria | <i>Konsistensi Rasio (CR)</i> |
|------------------------------------|---------------------------------|
| Development of Tourist Attractions | 0.011 |
| Community empowerment | 0.012 |
| Infrastructure and Facilities | 0.005 |
| Tourism Destination Marketing | 0.074 |

Source: Data processed with *Microsoft Excel*

Based on the calculations above, a CR value of <0.1 was obtained for each sub-criteria indicator. then this research can be said to be consistent. After getting the consistency value at the subcriteria level, then calculate the consistency value at the alternative level.

3.2.3 Alternative Weight Calculation and Consistency Test

The assessments of 15 respondents were then averaged using *the geometric mean* to produce an alternative pairwise comparison matrix shown in Table 8.

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Tabel 8 Matriks Perbandingan Berpasangan Untuk Tingkat Alternatif

| | | | |
|----------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------|
| Peningkatan Daya Tarik Wisata Alam | Pemantauan daya Tarik wisata alam | Pemantauan daya Tarik wisata alam | Perkiraan daya Tarik wisata alam |
| Pemantauan daya Tarik wisata alam | 1000 | 0,088 | 2,616 |
| Pemantauan daya Tarik wisata alam | 1,654 | 1000 | 3,287 |
| Perkiraan daya Tarik wisata alam | 0,362 | 0,314 | 1000 |
| Jumlah | 2,857 | 2,001 | 6,803 |
| Peningkatan Daya Tarik Wisata Budaya | Pemantauan daya Tarik wisata budaya | Pemantauan daya Tarik wisata budaya | Perkiraan daya Tarik wisata budaya |
| Pemantauan daya Tarik wisata budaya | 1000 | 0,995 | 1,905 |
| Pemantauan daya Tarik wisata budaya | 1,005 | 1000 | 1,754 |
| Perkiraan daya Tarik wisata budaya | 0,525 | 0,577 | 1000 |
| Jumlah | 2,530 | 2,572 | 4,659 |
| Peningkatan Daya Tarik Wisata Binaan | Pemantauan daya Tarik wisata binaan | Pemantauan daya Tarik wisata binaan | Perkiraan daya Tarik wisata binaan |
| Pemantauan daya Tarik wisata binaan | 1000 | 0,649 | 1,209 |
| Pemantauan daya Tarik wisata binaan | 2,229 | 1000 | 1,552 |
| Perkiraan daya Tarik wisata binaan | 0,227 | 0,644 | 1000 |
| Jumlah | 4,057 | 2,093 | 3,760 |
| Pekaitan dan Pendidikan | Sedukan program pelatihan berkelanjutan | Integrasi dan Pendidikan | |
| Sedukan program pelatihan berkelanjutan | 1000 | 2,703 | |
| Integrasi dan Pendidikan | 0,570 | 1000 | |
| Jumlah | 1,570 | 3,703 | |
| Partisipasi dalam Pengambilan Keputusan | Facilitasi forum partisipatif | Rangkul mekanisme komunikasi yang terbuka | |
| Facilitasi forum partisipatif | 1000 | 1,098 | |
| Rangkul mekanisme komunikasi yang terbuka | 0,911 | 1000 | |
| Jumlah | 1,911 | 2,098 | |
| Pengembangan Usaha Mikro dan Kecil | Sedukan dukungan finansial dari ekuitas | Facilitasi kemitraan antara usaha lokal dan pihak swasta | |
| Sedukan dukungan finansial dari ekuitas | 1000 | 0,642 | |
| Facilitasi kemitraan antara usaha lokal dan pihak swasta | 1,559 | 1000 | |
| Jumlah | 2,559 | 1,642 | |
| Infrastruktur Transpor | Tingkatkan dan pertahankan infrastruktur transportasi | Integrasi dan konektivitas berkelanjutan | |
| Tingkatkan dan pertahankan infrastruktur transportasi | 1000 | 0,983 | |
| Integrasi dan konektivitas berkelanjutan | 1,017 | 1000 | |
| Jumlah | 2,017 | 1,983 | |
| Akomodasi | Facilitasi investasi | Promosi dan sertifikasi berkelanjutan | |
| Facilitasi investasi | 1000 | 0,526 | |
| Promosi dan sertifikasi berkelanjutan | 1,902 | 1000 | |
| Jumlah | 2,902 | 1,526 | |
| Produk Usman | Tingkatkan dan pertahankan fasilitas usman | Dorong partisipasi masyarakat | |
| Tingkatkan dan pertahankan fasilitas usman | 1000 | 0,563 | |
| Dorong partisipasi masyarakat | 1,776 | 1000 | |
| Jumlah | 2,776 | 1,563 | |
| Promosi | Kembangkan kampanye promosi | Memorifikasi platform digital | |
| Kembangkan kampanye promosi | 1000 | 0,252 | |
| Memorifikasi platform digital | 3,971 | 1000 | |
| Jumlah | 4,971 | 1,252 | |
| Branding Destinasi | Rangkul citra destinasi | Lakukan pemasaran | |
| Rangkul citra destinasi | 1000 | 0,650 | |
| Lakukan pemasaran | 1,538 | 1000 | |
| Jumlah | 2,538 | 1,650 | |
| Kejasama Pemukiman | Rangkul kemitraan strategis | Akifitas serta dalam acara pameran | |
| Rangkul kemitraan strategis | 1000 | 1,715 | |
| Akifitas serta dalam acara pameran | 0,983 | 1000 | |
| Jumlah | 1,983 | 2,715 | |

Sumber : Data diolah dengan *Microsoft Excel*

Next, matrix normalization is performed on the alternative pairwise comparison matrix and calculating the eigenvector entries. The eigenvector entries for each alternative are presented in Table 9.

Table 9. Results of Eigenvector Calculation for Each Alternative Indicator

| | | |
|----------------------------------------------------------|-------------------------------------------------------|----------------|
| Pembangunan Daya Tarik Wisata | Pembangunan Daya Tarik Wisata Alam | |
| | Pemantapan daya Tarik wisata alam | 0,340 |
| | Penataan daya Tarik wisata alam | 0,494 |
| | Peritisan daya Tarik wisata alam | 0,146 |
| | Pembangunan Daya Tarik Wisata Budaya | |
| | Pemantapan daya Tarik wisata budaya | 0,398 |
| | Penataan daya Tarik wisata budaya | 0,387 |
| | Peritisan daya Tarik wisata budaya | 0,216 |
| | Pembangunan Daya Tarik Wisata buatan | |
| | Pemantapan daya Tarik wisata buatan | 0,261 |
| | Penataan daya Tarik wisata buatan | 0,480 |
| | Peritisan daya Tarik wisata buatan | 0,259 |
| Pembudayaan Masyarakat | Pelatihan dan Pendidikan | |
| | Sediakan program pelatihan berkelanjutan | 0,730 |
| | Integrasikan Pendidikan | 0,270 |
| | Partisipasi dalam Pengambilan Keputusan | |
| | Fasilitasi forum partisipatif | 0,523 |
| | Bangun mekanisme komunikasi yang terbuka | 0,477 |
| | Pengembangan Usaha Mikro dan Kecil | |
| | Sediakan dukungan finansial dan teknis | 0,391 |
| Fasilitasi kemitraan antara usaha lokal dan pihak swasta | 0,609 | |
| Prasarana dan Fasilitas | Infrastruktur Transportasi | |
| | Tingkatkan dan pertahankan infrastruktur transportasi | 0,496 |
| | Integrasikan konsep transportasi berkelanjutan | 0,504 |
| | Akomodasi | |
| | Fasilitasi investasi | 0,345 |
| | Promosikan sertifikasi keberlanjutan | 0,655 |
| | Fasilitas Umum | |
| | Tingkatkan dan pertahankan fasilitas umum | 0,340 |
| | Dorong partisipasi masyarakat | 0,640 |
| | Pemasaran Destinasi pariwisata | Promosi |
| Kembangkan kampanye promosi | | 0,201 |
| Memfaatkan platform digital | | 0,799 |
| Branding Destinasi | | |
| Bangun citra destinasi | | 0,394 |
| Libatkan masyarakat | | 0,606 |
| Kerjasama Pemasaran | | |
| Bangun kemitraan strategis | | 0,632 |
| Aktif ikut serta dalam acara pameran | 0,368 | |

Source: Data processed with *Microsoft Excel*

After obtaining alternative eigenvectors for each subcriteria, the next step is to perform a consistency test. The initial step in performing a consistency test is to calculate the maximum eigenvalue (λ_{max}). The following are the values λ_{max} from each alternative indicator:

Table 10. Value of λ_{max} Each Alternative Indicator

Source: Data processed with *Microsoft Excel*

After getting the maximum eigenvalue, continue by finding the CI value. The following are the CI values of each alternative indicator:

Table 11. CI Value for Each Alternative Indicator

| Alternative | CI |
|-----------------------------------------------|-------|
| Development of Natural Tourism Attractions | 0,002 |
| Development of Cultural Tourism Attractions | 0,001 |
| Development of Artificial Tourist Attractions | 0,017 |
| Training and Education | 0,000 |
| Participation in Decision Making | 0,000 |
| Micro and Small Business Development | 0,000 |
| Transportation Infrastructure | 0,000 |
| Accommodation | 0,000 |
| Public facilities | 0,000 |
| Promotion | 0,000 |
| Destination Branding | 0,000 |
| Marketing Cooperation | 0,000 |

| Alternative | λ_{max} |
|-----------------------------------------------|-----------------|
| Development of Natural Tourism Attractions | 3,003 |
| Development of Cultural Tourism Attractions | 3,001 |
| Development of Artificial Tourist Attractions | 3,034 |
| Training and Education | 2,000 |
| Participation in Decision Making | 2,000 |
| Micro and Small Business Development | 2,000 |
| Transportation Infrastructure | 2,000 |
| Accommodation | 2,000 |
| Public facilities | 2,000 |
| Promotion | 2,000 |
| Destination Branding | 2,000 |
| Marketing Cooperation | 2,000 |

Source: Data processed with *Microsoft Excel*

Because the CI value for each alternative is zero and some are greater than zero, then for the CI value that is zero it can be said to be consistent while the CI value that is greater than zero is continued by finding the CR (Consistency Ratio) value to determine the level of consistency. For $n = 3$ then $RI = 0,58$. so that the CR value is obtained for each alternative indicator as follows:

Table 12. CR Value of Each Alternative Indicator

| Alternative | CR |
|-----------------------------------------------|-------|
| Strengthening the natural tourist attraction | 0,003 |
| Development of Cultural Tourism Attractions | 0,001 |
| Development of Artificial Tourist Attractions | 0,029 |

Because the CR value for each alternative is less than 0.1, this study can be said to be consistent.

3.3 Research result

Based on the results of data processing in table 4.35, the order of priority percentages at the criteria and indicator levels at each level of the hierarchy is obtained, including:

- 1) Infrastructure and Facilities 29.5% with indicators:
 - a) Transportation Infrastructure 15.1% with indicators:
 - i) Improve and maintain transportation infrastructure 7.5%
 - ii) Integrate sustainable transportation concepts 7.6%
 - b) Accommodation 4.4% with indicators:
 - i) Investment facilitation 1.5%
 - ii) Promote sustainability certification 2.9%
 - c) Public Facilities 10.1% with indicators:
 - i) Improve and maintain public facilities 3.6%

- ii) Encourage community participation 6.4%
- 2) Community Empowerment 28.4% with indicators:
 - a) Training and Education 11.1% with indicators:
 - i) Provide ongoing training programs 8.1%
 - ii) Integrate Education 3%
 - b) Participation in Decision Making 5.5% with indicators:
 - i) Facilitation of participatory forums 2.9%
 - ii) Build open communication mechanisms 2.6%
 - c) Micro and Small Business Development 11.8% with indicators:
 - i) Provide financial and technical support 4.6%
 - ii) Facilitating partnerships between local businesses and the private sector 7.2%
- 3) Tourism Destination Marketing 24.5% with indicators:
 - a) 6% promotion with indicators:
 - i) Develop promotional campaigns 1.2%
 - ii) Leveraging digital platforms 4.8%
 - b) Destination Branding 12% with indicators:
 - i) Building destination image 4.7%
 - ii) Involve the community 7.3%
 - c) Marketing Cooperation 6.6% with indicators:
 - i) Build strategic partnerships 4.1%
 - ii) Actively participate in exhibition events 2.4%
- 4) Development of Tourist Attractions 17.5% with indicators:
 - a) Development of natural tourist attractions 8.9% with indicators:
 - i) Strengthening the attractiveness of natural tourism 3.2%
 - ii) Arrangement of natural tourist attractions 4.4%
 - iii) Pioneering of natural tourist attractions 1.3%
 - b) Development of cultural tourism attractions 6.8% with indicators:
 - i) Strengthening the attractiveness of cultural tourism 2.7%
 - ii) Arrangement of cultural tourism attractions 2.6%
 - iii) Pioneering of cultural tourism attractions 1.5%
 - c) Development of artificial tourist attractions 1.8% with the following indicators:
 - i) Strengthening of artificial tourist attractions 0.5%
 - ii) Arrangement of artificial tourist attractions 0.9%
 - iii) Pioneering of artificial tourist attractions 0.5%

Overall, the top priority was placed on infrastructure and facilities (29.5%), followed by community empowerment (28.4%), tourism destination marketing (24.5%), and development of tourist attractions (17.5%).

4. CONCLUSION

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Based on the research results and discussions that have been described previously, the following conclusions can be drawn:

1. Infrastructure and facilities are the most priority sector with a figure of 29.5%, which is almost the same as the community empowerment sector at 28.4%. Furthermore, the tourism destination marketing sector has a priority of 24.5%, while the tourism attraction development sector has the lowest priority at 17.5%.
2. The transportation infrastructure indicator with a priority figure of 15.1% is the highest sub-criteria with the highest alternative indicator, namely integrating the concept of sustainable transportation at 7.6%.

Based on this conclusion, the priority of developing Wakatobi as a sustainable tourism destination is to focus efforts on improving infrastructure and facilities (especially transportation infrastructure and public facilities), community empowerment (through ongoing training and business partnerships), and tourism destination marketing (with a focus on branding and community participation). With this approach, it is expected to increase the attractiveness and sustainability of Wakatobi as an attractive and sustainable tourism destination.

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