Ecotourism Village Recognition Strategy Using Tourism Production Function Development Model And 5W+1H Approach

[1]Brahmastya Artanto, [2]Roni Zakaria Raung, [3]Fakhrina Fahma
[1]Undergraduate Student of Industrial Engineering, Faculty of Engineering
[2,3]Staff of Industrial Engineering, Faculty of Engineering
Sebelas Maret University Surakarta, Indonesia
brahmastya.artanto@student.uns.ac.id, ronizakaria@staff.uns.ac.id,
fakhrinafahma@staff.uns.ac.id

Abstract

The development of a tourist village is one of the solutions to drive the regional economy and a realization of the Master Plan for Tourism Development. This has prompted the government to target as many as 244 tourist villages by 2024. One strategy in this development is through a potential assessment related to the level of readiness of the tourist village. In this regard, this research focuses on designing an assessment measuring instrument from Wonorejo Village, which has a lot of natural potentials, but its development has not been directed and runs effectively. The novelty of this research is to design an assessment measuring instrument using the criteria in the Director General of Forest Protection and Nature Conservation Guidelines of 2003 related to the assessment of natural tourism potential and Central Java Governor Regulation No. 53 of 2019 regarding the guidelines for assessing tourist villages. The two guidelines are then merged into a tourism model according to the principle of the tourism production function from Smith (1994), which views tourism as a product so that all supporting elements such as resources and facilities can be considered explicitly and outputs in the form of services and experiences are obtained in a structured manner. The input for this assessment is based on a survey of the relevant stakeholders. Based on the results of the assessment, a total value of 59% was obtained, which indicates that Wonorejo Village is included in a developing tourism village. Then the variables were selected cumulatively based on the lowest achievement which is intermediate output included 10 sub-variables which became the basis for developing strategy recommendations.

Keywords
Tourism Village, Nature Tourism, Potential, Assesment Criteria, dan Strategy.

1. Introduction
Tourism plays a crucial role in driving the economy of a country. According to survey results, Indonesia is ranked as the top tourist destination in the world. Therefore, the government plays a vital role in formulating tourism development policies to ensure that both the local community and tourists adhere to the established regulations and policies. The government's role is outlined in various regulations, both at the national level with the vision of Indonesia becoming a world-class tourist destination that is competitive, sustainable, and capable of driving regional development and the welfare of the people. This vision is reinforced by local regulations that are in line with the national objectives.

Based on the background of the problem, this study aims to design a measurement tool for assessing the natural tourism village, with a specific focus on the case study of Wonorejo Village in Jatiyoso Subdistrict, Karanganyar Regency. The measurement tool is expected to serve as a basis for evaluating the potential of realizing the government's master plan for developing tourism potential through the concept of a tourism village, taking into consideration the natural tourism potential of Wonorejo Village, which is located in a protected forest area. Additionally, based on observations, Wonorejo Village already offers several tourism packages, accommodations, and developing infrastructure.
The assessment process related to the readiness of the natural tourism village will be designed by developing a model that is validated with relevant regulations. Thus, the novelty of this research lies in developing the Smith model (1994)

and adapting it to the applicable guidelines within the studied context. This involves incorporating additional variables that have not been mapped in the tourism production function, such as the population by province, tourism demand, and average annual humidity. The importance of this research lies in determining the readiness level of Wonorejo Village as a natural tourism village, which can provide recommendations to the government regarding tourism development strategies in Wonorejo Village and support the government's target of establishing 244 tourism villages by 2024.

1.1 Objectives

Based on the background mentioned, the problem addressed in this study can be formulated as how to design a measurement tool to assess the level of readiness of Wonorejo Village as a natural tourist village. From the formulation of this problem, the objectives of this research are to design a measurement tool to assess the level of readiness of a natural tourist village, to determine the level of readiness of Wonorejo Village as a natural tourist village, and to formulate recommendations for the proposed development of a natural tourist village.

2. Literature Review

Fadeli (2001) as cited in Fidiana (2018) describes a tourist village as a rural area that offers an overall atmosphere reflecting the authenticity of the village in terms of social and cultural life, customs and traditions, daily activities, architectural structures, village organization, as well as potential that can be developed as tourist attractions, such as attractions, food and beverages, souvenirs, accommodations, and other tourism needs. Nuryanti (1992) defines a tourist village as a form of integration between attractions, accommodations, and supporting facilities presented within a community's way of life that is intertwined with prevailing customs and traditions. It is emphasized that the most important components of a tourist village are (1) accommodations, which are partly the local residents' dwellings and/or units developed according to the residents' dwellings, and (2) attractions, which encompass the daily lives of local residents along with the physical backdrop of the village location that enables the integration of tourists as active participants, such as dance courses, language courses, painting, and other specific activities. The development of tourism requires a solid partnership among three main entities: the government, private sector, and the community, with the local community being the stakeholders in such collaboration.

According to the Governor Regulation of Central Java No. 53 of 2019, the designation of a tourist village is carried out through stages of launching, assessment, and designation. The classification of tourist villages itself is divided into three types, which are as follows: (1) Pioneer Tourist Village, with a score range of 24-48, (2) Developing Tourist Village, with a score range of 49-73, and (3) Advanced Tourist Village, with a score range of 74-96.

Suwantoro (1997) as cited in Utami (2017), states that nature tourism is a form of tourism activity that utilizes the potential of natural resources and the environment. Nature tourism relies on resources that come directly from nature. According to Ridwan (2012), natural tourist attractions are anything that possesses uniqueness, beauty, and value in the form of diverse natural wealth, culture, and human-made creations that serve as the essence or destination for tourist visits.

Herdiana (2019) states that a tourist village is a distinct typology where villages are classified based on their potential and patterns of tourism development. Based on the existing tourist villages in Indonesia, at least three types of tourist villages can be classified: cultural or traditional tourist villages, natural or nature conservation tourist villages, and creative economy tourist villages. Therefore, it can be concluded that a natural/nature conservation tourist village is a type of tourist village where the foundation of its tourism potential and development lies in the natural beauty, such as mountainous landscapes, waterfalls, and so on.

Smith (1994) established the tourism production function model, which demonstrates how tourism production requires active consumer involvement in the production process. Smith argues that tourism is not an 'industry' in the conventional sense because there is no single production process, no homogeneous product, and no limited location-based market involved. This model is formed by four distinct elements: primary input (resource exploitation); intermediate input (facilities to transform resources into products); intermediate output (services to commercialize products); and final output (tourist experiences resulting from product engagement activities). Each stage incorporates aspects that can be transferred from the physical plant, service, hospitality, freedom of choice, and involvement. Smith (1994) positions tourism itself as part of the production process, which differs from other ideas and theories.

3. Methods

The research was conducted in 6 stages, namely object definition, model identification, model development, data collection, calculation and mapping of results, and analysis, conclusions, and recommendations. Each stage of the research is explained in the following subsections and is illustrated in Figure 1 below.

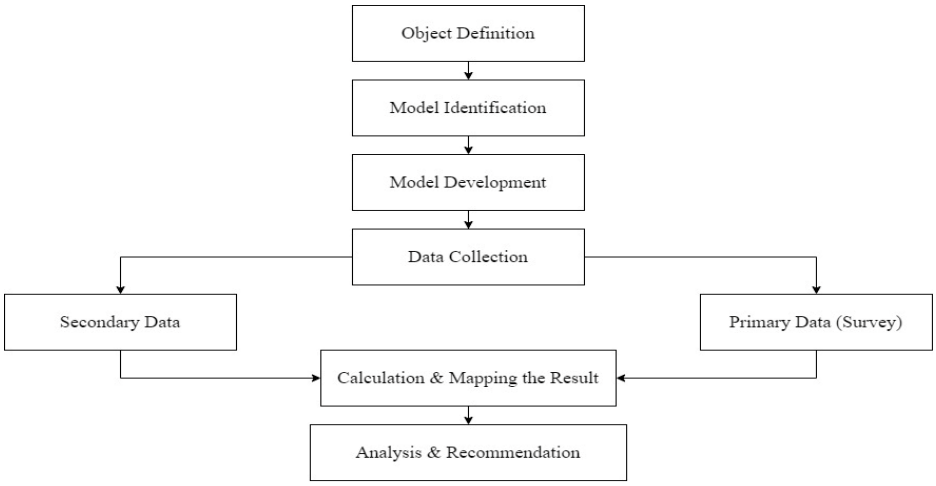

Figure 1. Research Methodology

3.1 Object Definition

This stage is conducted to obtain the real characteristics of the research object, providing an initial overview of the object under study. Preliminary observations are made through interviews with the Village Head and community leaders of Wonorejo Village, Jatiyoso District, Karanganyar Regency. Additionally, a literature review is conducted to reference scientific journals and government regulations related to tourism. Subsequently, problem identification and formulation are carried out, resulting in the research problem formulation, which is to map the readiness of Wonorejo Village in becoming a tourist village, along with recommendations and suggestions for the local government. The process then continues with setting research objectives and identifying its benefits.

3.2 Model Identification

The model identification is carried out by identifying the requirements for registering a tourist village, as well as identifying variables for assessing the tourist village and variables for assessing the potential of natural tourism. The variables for assessing the tourist village refer to the Annex of Central Java Governor Regulation Number 53 of 2019. Meanwhile, the variables for assessing the potential of natural tourism refer to the Annex II of the Guidelines for Analysis of Operational Areas for Natural Tourism Objects and Attractions in 2003 by the Directorate of Nature Tourism and Utilization of Environmental Services. Additionally, the identification of additional variables for model development is conducted based on relevant literature studies related to tourist villages.

3.3 Model Development

The model development is carried out by mapping the identified variables into the Tourism Production Function model (Smith, 1994). The mapping of variables is done by matching the existing variables with the Central Java Governor Regulation Number 53 of 2019 regarding the Guidelines for the Implementation of Central Java Provincial Regulation Number 2 of and the Guidelines for Regional Analysis of Natural Tourism Attractions in 2003 by the Ministry of Forestry with the variables in the model. Furthermore, there are several developments, such as the inclusion of the Market variable (Kotler, 2012) as a new functional entity, Forest (Wulandari, 2018), and Climate (Keschyan, 2014) as new variables in the primary input, and Demand (Kropinova, 2015) in the market.

3.4 Data Collection

Data collection is conducted to gather assessments from each respondent. The collected data consists of primary data and secondary data. The data is then transformed into assessments according to the evaluation criteria of Central Java

Governor Regulation Number 53 of 2019 and the Guidelines for Analysis of Operational Areas for Natural Tourism Objects and Attractions in 2003 by the Directorate of Nature Tourism and Utilization of Environmental Services.

3.5 Calculation & Mapping the Results

Once the assessment is recapitulated, it is then mapped using percentages for each sub-variable and variable. Additionally, the mapping is represented in a radar diagram. The total score is then matched with the classification of tourist villages as stated in Central Java Governor Regulation Number 53 of 2019, which is described in Table 1 as follows:

Table 1. Classification of Village Tourism

No	Assessment	Classification
1	< 25%	Doesn't pass the classification
2	25% - 50%	Pilot Tourism Village
3	51% - 75%	Developing Tourism Village
4	76% - 100%	Developed Tourism Village

Finally, the lowest variables are selected based on the radar diagram to identify which sub-variables can be developed to fulfill the readiness of the nature tourism village.

3.6 Analysis & Recommendation

In the stage of analysis and interpretation of the results, an analysis is conducted on the readiness measurement tool, the tourism profile of Wonorejo Village, the level of fulfillment of requirements, and the readiness map along with the necessary recommendation strategies. The recommendations are formulated based on the 5W+1H method. After data processing and analysis, conclusions can be drawn to answer the initial research objectives, along with suggestions for further research.

4. Data Collection

The data collection and processing process begins with the identification of the requirements for village tourism regis tration, which is done through the applicable government regulation, namely Central Java Governor Regulation Number 53 of 2019. Then, the identification of variables for assessing the tourism village and natural tourism potential is carried out. After the identification of assessment variables, discussions with relevant stakeholders are conducted, including a Focus Group Discussion (FGD) held online on September 23, 2021, and a direct discussion on December 20, 2021. The next stage is model development, starting with model identification and then mapping the identified variables into the model. Finally, the variables that are eliminated, added, or merged are recapitulated along with the reasons. The model used is the Tourism Production Function (Smith, 1994), depicted in Figure 2.

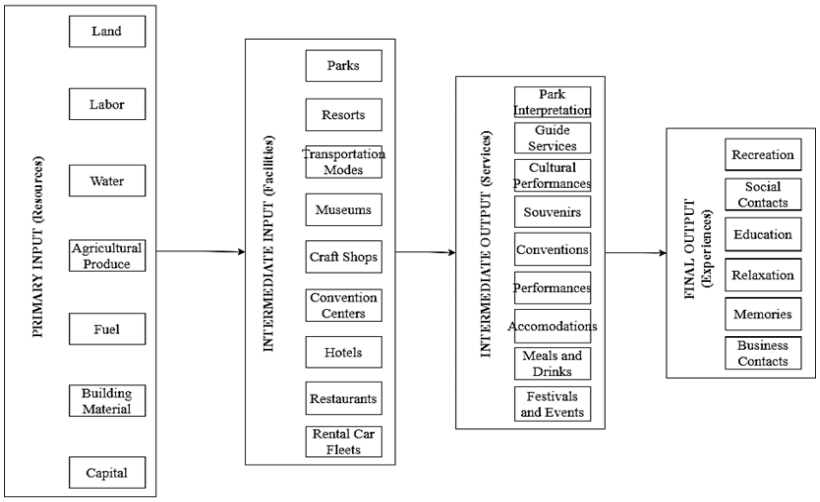

Figure 2. Tourism Production Function Model

After mapping the assessment variables for the nature tourism village into the Tourism Production Function model (Smith, 1994), it was found that some variables were not yet included in the model. Therefore, three new variables were developed in the model, namely Forest, Climate, and Market and Demand. Once the variables from the two regulations used were mapped, it was known which variables from the Tourism Production Function were utilized, as shown in Figure 3. Once the assessment variables were defined, a questionnaire was designed based on the identified variables. The questionnaire was divided into two parts: the first part focused on the fulfillment of requirements, and the second part focused on the assessment of the nature tourism village. The questionnaire was distributed to various stakeholders as respondents, including Surakarta City Perhutani (R1), Karanganyar Youth and Sports Tourism Office(R2), South Lawu KPH (R3), Village-Owned Enterprises of Wonorejo Village (R4), Jatiyoso District (R5), Lawu Ecotourism Management Association (R6), and students from UNS (R7).

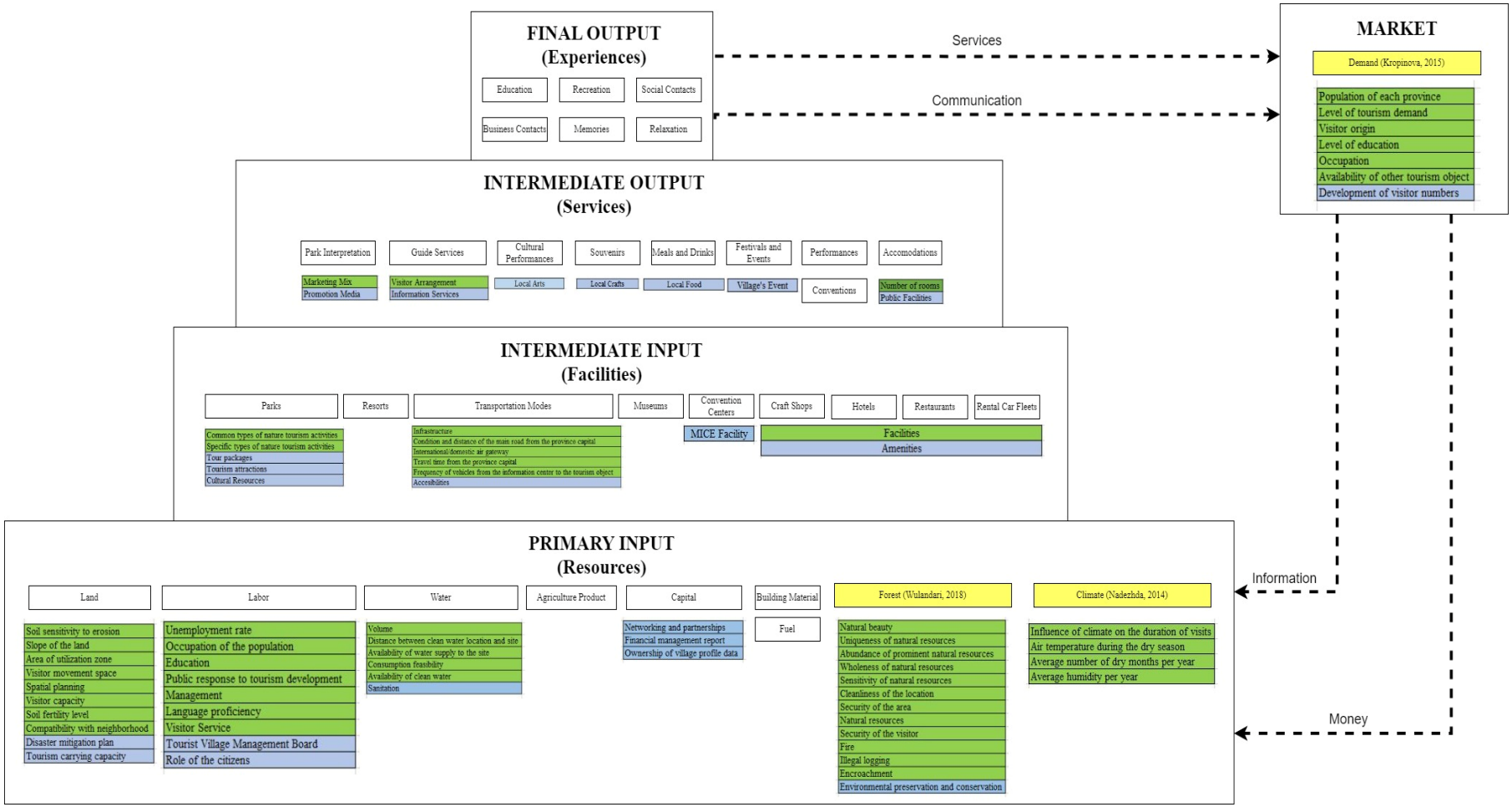

Figure 3. Modified Tourism Function Model

5. Results and Discussion

The questionnaire processing is done by summarizing the checklist of tourist village initiation requirements. The level of requirement fulfillment is converted into a Guttman scale of 0-1. A value of 0 is given for requirements that have not been met, and a value of 1 is given for requirements that have been fulfilled. As for the assessment of a natural tourist village, the predetermined scale specified in the Governor Regulation of Central Java No. 53 of 2019 and the Guidelines for Analysis of Natural Tourist Object and Attraction Operational Areas in 2003 are used.

5.1 Numerical Results

From the data processing that has been conducted, it can be seen that the primary input has a value of 64%, intermediate input 55%, intermediate output 51%, final output 0%, and market 68%. Meanwhile, the overall value of the natural tourism village is 59%. With this value, Wonorejo Village can be classified as a developing tourism village. The recapitulation of the questionnaire results for assessing the natural tourism village is presented in the following Table 2.

Table 2. Percentage Assessment of Nature Tourism Village

Process	Variable	Sub Variable	Sub Variable Results	Process Results
Primary Input	Land	Soil sensitivity to erosion (WA L2)	50%	64%
		Slope of the land (WA L3)	50%	
		Area of utilization zone (WA L5)	100%	
		Visitor movement space (WA D4)	100%	
		Visitor capacity (WA L1)	17%	
		Compatibility with neighbourhood (DW I1)	50%	
		Disaster mitigation plan (DW L1)	39%	
		Tourism carrying capacity (DW B2)	86%	
		Soil fertility level (WA D6)	52%	
	Labor	Unemployment rate (WA D2)	50%	
		Occupation of the population (WA D3)	67%	
		Education (WA D5)	67%	
		Public response to tourism development (WA D8)	86%	
		Management (WA E1)	71%	
		Language proficiency (WA E2)	45%	
		Visitor Service (WA E3)	52%	
		Tourism Village Management Board (DW F1)	75%	
		Role of the citizens (DW C2)	75%	
	Water	Volume (WA I1)	98%	

Table 2. Percentage Assessment of Nature Tourism Village

Process	Variable	Sub Variable	Sub Variable Results	Process Results
		Distance between clean water location and site (WA I2)	90%	
		Availability of water supply to the site (WA I3)	93%	
		Consumption feasibility (WA I4)	93%	
		Availability of clean water (WA I5)	100%	
		Sanitation (DW D3)	64%	
	Forest	Natural beauty (WA A1)	43%	
		Uniqueness of natural resources (WA A2)	50%	
		Abundance of prominent natural resources (WA A3)	43%	
		Wholeness of natural resources (WA A4)	45%	
		Sensitivity of natural resources (WA A5)	43%	
		Cleanliness of the location (WA A7)	79%	
		Security of the area (WA A8)	45%	
		Natural resources (WA D7)	48%	
		Security of the visitor (WA K1)	67%	
		Fire (WA K2)	76%	
		Illegal logging (WA K3)	88%	
		Encroachment (WA K4)	60%	
		Environmental preservation and conservation (DW H1)	50%	
	Climate	Influence of climate on the duration of visits (WA F1)	71%	
		Air temperature during the dry season (WA F2)	67%	
		Average number of dry months per year (WA F3)	33%	
		Average humidity per year (WA F4)	100%	
	Capital	Networking and partnership (DW K1)	36%	
		Financial management report (DW G1)	57%	
		Ownership of village profile data (DW B1)	57%	
Intermediate Input	Parks	Tour packages (DW A1)	29%	55%
		Tourism attractions (DW A4)	50%	
		Cultural Resources (DW C1)	61%	
	Transportation Modes	Infrastructure (WA H2)	86%	
		Condition and distance of the main road from the province capital (WA C1)	33%	
		International / domestic air gateway (WA C2)	63%	

Table 2. Percentage Assessment of Nature Tourism Village

Process	Variable	Sub Variable	Sub Variable Results	Process Results
		Travel time from the province capital (WA C3)	67%	
		Frequency of vehicles from the information center to the tourism object (WA C4)	60%	
		Accessibilities (DW D1)	61%	
	Amenities (Crafts Shop, Hotels, Restaurants, Rental Car)	Amenities (DW D5)	43%	
	Convention Centre	MICE Facilities (DW D6)	50%	
Intermediate Output	Park Interpretation	Marketing Mix (WA N1)	43%	51%
		Promotion Media (DW J1)	54%	
	Guide Services	Visitor Arrangement (WA M1)	48%	
		Information Services (DW D4)	57%	
	Cultural Performances	Local Arts (DW A6)	43%	
	Souvenirs	Local Crafts (DW A3)	54%	
	Accomodations	Number of Rooms (WA G1)	38%	
		Public Facilities (DW D2)	64%	
	Meals and Drinks	Local Food (DW A2)	79%	
	Festival and Events	Village's Events (DW A5)	29%	
Market	Demand	Population of each province (WA B1)	100%	68%
		Level of tourism demand (WA B2)	45%	
		Visitor origin (WA O1)	67%	
		Level of education (WA O2)	100%	
		Occupation (WA O3)	83%	
		Availability of other tourism object (WA J1)	25%	
		Development of visitor numbers (DW E1)	54%	

5.2 Graphical Results

The assessment mapping of the natural tourism village is processed using percentages and depicted in a radar diagram. The radar diagram is then drawn to represent the achievement of values for the natural tourism village in Wonorejo Village and analyze which process receives the lowest score. The results of the assessment mapping for the natural tourism village are depicted in the radar diagram as shown in Figure 4 below:

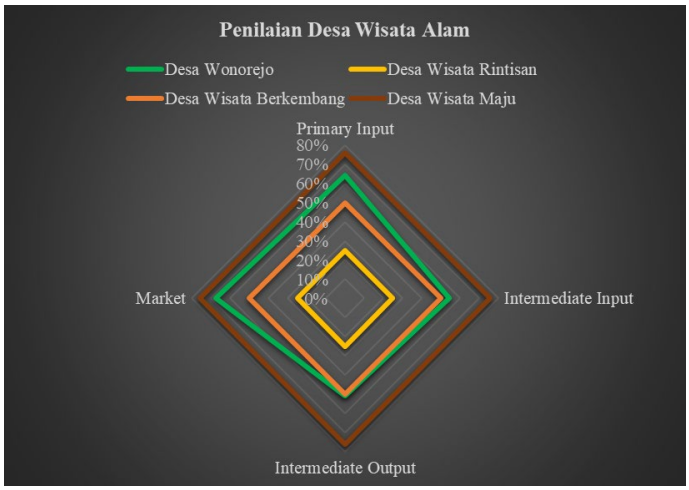

Figure 4. Radar Diagram of Assessment for Nature Tourism Village

From the results, we can obtain the percentage achievements for each process: primary input at 64%, intermediate input, intermediate output at 51%, and market at 68%. Among all these processes, it is found that the market process has the highest achievement, while the intermediate output has the lowest. The overall achievement or total achievement is found to be 59%. It can be stated that the assessment of Wonorejo Village for the establishment of a natural tourism village, compared to the categories of tourism villages according to Central Java Governor Regulation No. 53 of 2019, with a score of 59% falls between 50% to 76%, which means it is a developing tourism village. Although this is already quite good, there is still room for further development to increase the assessment of Wonorejo Village to above 76% and be classified as an advanced tourism village. This would not only improve the image of Wonorejo Village but also increase the budget allocation received.

5.3 Proposed Improvements

Based on the radar diagram above, it is evident that the market process has the highest value at 68%, indicating a significant opportunity for tourism development in Wonorejo Village. On the other hand, the Intermediate Output process has the lowest value at 51%. Additionally, from the diagram, it can be observed that it is close to the boundary line of the achievement for a pilot tourism village, which is 50%. Based on this analysis, the researcher has decided to propose suggestions for improving the achievement in the Intermediate Output process. Then, for improvement proposals, considerations are made based on the 5W+1H from each sub-variable, as shown in the following Table 3:

Table 3. Evaluation Results dan Recommendation

Sub Variable	Current Achievement		Recommendation
	Existing Condition	Ideal Condition	How
Marketing Mix	• Having diverse tourism products • Having promotional strategies	• Setting tariffs based on willingness to pay studies • Having diverse tourism products • Having information dissemination facilities • Having promotional strategies	1. Conduct a willingness to pay study in determining the tariff for the nature tourist village. 2. Establish a team for the website, Instagram, YouTube, and TikTok as means of disseminating information about the natural tourist village. 3. Conduct research on promotional strategies from other villages.

Sub Variable	Current Achievement		Recommendation
	Existing Condition	**Ideal Condition**	**How**
Promotion Media	• Having direct sales • Having public relations	• Having promotional advertisements • Having sales personnel • Having sales promotion • Having direct sales • Having public relations	1. Employing sales personnel. 2. Assigning sales personnel with responsibilities for promotion, sales, etc. 3. Expanding the network of relationships with tourists.
Visitor Arrangement	There are visitor restrictions	• Implementation of visitor restrictions • Distribution of visitors to ensure even distribution • Concentration of visitor activities in specific areas • Determination of maximum duration of visitor stay • Establishment of specific visitation seasons	1. Assessing the carrying capacity and tourist capacity for each tourist attraction. 2. Developing plans to distribute visitor activities evenly and avoid concentration in specific areas. 3. Implementing time and seasonal visitation management.
Information Services	Having a contact person	• Having a tourist village information center • Having brochures • Having a contact person • Having online media	1. Creating a special tourism website for Wonorejo Village. 2. Establishing a special information centre for the tourist village at the Village Office.
Local Arts	Having the potential for two local art forms, namely dance and "jaranan"	Having the potential for more than four local art forms or cultural performances.	1. Conducting an inventory of artistic potentials in the village. 2. Establishing an art studio in Wonorejo Village. 3. Forming an artistic organization as a platform for human resource development.
Local Crafts	Having two types of local crafts	Having more than four types of local crafts ready for marketing.	1. Providing training to young people and women in crafting skills. 2. Providing a platform for selling crafts (e.g., Jokolangan Coffee). 3. Organizing village-level craft creation competitions. 4. Establishing supported micro, small, and medium enterprises (UMKM).
Number of Rooms	Having fewer than 30 rooms.	Having more than 100 rooms, including those from residents' houses, homestays, lodges, villas, motels, hotels, etc., used for accommodating tourists.	1. Collaborating with residents to encourage them to offer their homes as homestays. 2. Building simple accommodations. 3. Seeking investors to develop accommodations in the Tourist Village.
Public Facilities	• Availability of toilets • Availability of parking spaces • Availability of a prayer room	• Availability of toilets • Availability of parking spaces • Availability of a prayer room	1. Conducting a study to identify which tourist attractions can be equipped with facilities for people with disabilities. 2. Constructing guiding blocks at tourist attractions.

Sub Variable	Current Achievement		Recommendation
	Existing Condition	**Ideal Condition**	**How**
		• Availability of facilities for people with disabilities	
Local Food	There are three types of local food, but they have not been marketed yet.	Having four or more types of local food ready to be marketed.	1. Collecting data on successful individuals who have commercialized local food. 2. Establishing supported micro, small, and medium enterprises (UMKM).
Village Events	Having district-level events	Having regular national-scale events.	1. Collecting data on traditional ceremonies in the village. 2. Organizing regular events at the district and regency levels as initial steps. 3. Allocating resources for organizing events, especially targeting the youth. 4. Expanding networks and partnerships with various stakeholders at the national level. 5. Creating events with a cultural theme or music concerts in the midst of nature, such as the Forest Festival in Yogyakarta's Pine Forest.

6. Conclusion

The measurement tool is designed using research variables that include the assessment variables for tourism villages based on Central Java Governor Regulation No. 53 of 2019 and the Guidelines for ADO-ODTWA (Tourism Destination Area-Natural Resource Conservation Area) issued by the Directorate General of Conservation of Natural Resources in 2003. The framework or model used to map these regulations is the Tourism Production Function, as proposed by Smith in 1994.The assessment value for the readiness of Wonorejo Village to become a natural tourism village is 60%, while the assessment value as a natural tourism village itself is 59%. This means that if Wonorejo Village applies and is accepted by the Karanganyar Regency Government, it will be classified as a developing tourism village.

The proposal is made to increase the readiness level of Wonorejo Village for registration as a natural tourism village and to elevate its tourism village category to an advanced level. The proposal to enhance the readiness level for registration involves creating technical documents that have not been fulfilled, such as tourism potential documents and a Disaster Management Plan (RPB). Meanwhile, the proposal to upgrade the category from a developing tourism village to an advanced tourism village can be achieved by improving the achievement values of the sub-variables in the assessment. Based on the percentage achievements represented by the radar diagram, the lowest value is found in the Intermediate Output process. Within this process, there are a total of 10 sub-variables that require improvement. This proposal is analyzed using the 5W+1H method to facilitate stakeholders in making decisions.

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Biography (12 font)

Brahmastya Artanto is an undergraduate student of the Industrial Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta, Indonesia.

Roni Zakaria Raung is a lecturer at Department of Industrial Engineering, Faculty of Engineering, Universitas Sebelas Maret since 2000. He earned his Bachelor and Master Degree in Industrial Engineering from Institut Teknologi Bandung. His research interests are business management, strategic management and organizational behavior. He published some papers in journals and proceedings his research area. He is a member of PII (Indonesian Professional Engineer Association) and IEOM (Industrial Engineering and Operations Management).

Fakhrina Fahma is an associate professor and teaching staff at the Department of Industrial Engineering, Faculty of Engineering, Universitas Sebelas Maret. She obtained her Bachelor of Science degree in Agricultural Industry Technology from Institut Pertanian Bogor in 1997. In 2001, she successfully completed her master study from Institut Teknologi Sepuluh November Surabaya in the field of Industrial Engineering. She is a Head of Quality System Laboratory in Industrial Engineering Department and her research interests include service engineering and service management, technology standardization, and quality and reliability