Pathways toward the Transformation of Sustainable Rural Tourism Management in Central Java, Indonesia

Nafiah Ariyani 1,* and Akhmad Fauzi 2

1 Department of Management, Faculty of Economics and Business, Sahid University, Jakarta 12870, Indonesia
2 Department of Resources and Environmental Economics, Faculty of Economics and Management, IPB University, Bogor 16680, Indonesia
* Correspondence: arienafiah@gmail.com

Abstract: Managing sustainable rural tourism requires a strategic transformation adapted to local conditions, the complexity of rural institutions, and the dynamics of future changes. In addition, it must be inclusive. This paper presents transformation pathways toward sustainable rural tourism management in developing countries. The general objective is to develop sustainable development strategies in the context of rural tourism. The specific objectives are to develop policy pathways and the best scenarios in this context. The study was conducted in the Kedung Ombo area in Central Java, Indonesia: a representative area involving several districts and other public organizations as stakeholders. Data analysis was performed using the MULTIPOL method. The results show that an integrated development policy that considers the interests of all stakeholders, the potential of rural resources, the infrastructure, and human resources capacity would be the optimal policy. Priority programs to be implemented are infrastructure development, strengthening private investment, strengthening governance, developing amenities, and developing information and communication technology. Furthermore, the “flight of the flamingos” and “leapfrogging” scenarios can be considered to achieve future tourism growth goals and objectives. This study is an essential resource for authorities in determining rural tourism development policies in the research location and can be applied in other areas with similar characteristics.

Keywords: transformation pathways; sustainable rural development; sustainable rural tourism strategies; multi policies (MULTIPOL method); multicriteria analysis; tourism planning

1. Introduction

Rural tourism has shown significant growth in recent decades [1], and has been recognized as an essential means of economic development in rural areas [2,3]. It has been recognized both directly and indirectly as a catalyst for development in rural areas [4], and is capable of becoming a strategic lever in revitalizing the economy of rural regions and of supporting the alleviation of poverty [5,6]. Although the development of rural tourism sometimes triggers conflicts between various parties, its perceived social and economic benefits have encouraged the development of rural tourism in multiple countries [7]. Rural tourism exists as a vector of sustainable development capable of generating employment and income, combating rural exodus, and facilitating socio-economic networking, and it is capable of becoming a vehicle for processing and enhancing cultural and natural heritage and improving the quality of life for local residents [8–10]. For example, during the COVID-19 pandemic in China, rural tourism became the main driving force for rural revival and the fight against poverty [11].

Rural tourism is an embodiment of community-based tourism, which is believed to counteract the negative impacts of mass tourism related to social equality, environmental degradation, and saving the community’s culture [12]. It is an endogenous alternative to developing tourism in less-developed areas, as it allows local people to increase their income...
through new economic activities without replacing the dominant traditional activities [13]. Rural tourism is a form of sustainable tourism that aims to meet the needs of current residents and tourists without compromising the needs of future generations [14–16]. According to Gao and Wu [17], rural tourism should not be understood as solely a type of tourism, but also as a tool for conserving and regenerating rural society and culture.

Indonesia is endowed with rich material and cultural capital that could be developed for tourism activities. In addition, the tourism sector plays a paramount role in the Indonesian economy [18]. In Indonesia, rural tourism is manifested in the form of developing tourist villages. Since 2021, this has been determined by the Coordinating Ministry for Economic Affairs to be the direction of tourism development in rural areas. The goal is to increase economic growth and people’s welfare; eradicate poverty; overcome unemployment; preserve nature, the environment, and natural resources; and promote culture. The development of tourist villages is expected to accelerate village development in an integrated manner to encourage the villages’ social, cultural, and economic transformation [19]. Even though some studies, such as Chin [20], have found that rural related factors are not contributing factors for rural development from tourism, most studies [21–23] have shown that the success of the tourism village will become a lever for both the village and the regional economy: ultimately driving national economic growth.

According to the Central Bureau of Statistics, in 2021, tourism villages in Indonesia totaled 1831. However, only 2.73% of these have become advanced tourist villages, which is indicated by the increasing variety of occupations of the population, the development of public facilities and infrastructure, and the improving social conditions in the community economy. This number is tiny compared with the number of tourist villages, which continues to increase yearly. In Indonesia, tourist villages are categorized as pilot, developing, developed, and independent villages [24]. Many factors contribute to the low number of developed tourism villages, including a lack of understanding on the part of policymakers at the village and regional government levels regarding the comprehensive development of tourism villages, the absence of planning involving stakeholders, overlapping policies, and planning that emphasizes technical aspects.

As a complex system, tourism development requires careful planning that is supported by all stakeholders [25–29] and it should be based on a strategic approach that is goal-oriented and comprehensive [30]. The absence of proper planning will generate a form of tourism that tends to have a detrimental effect on social and natural conditions [31]. According to An and Alarcón [32], tourism development requires a planning and management process that brings together the interests and concerns of various stakeholder groups sustainably and strategically, and it must be based on the potential of an area [33]. Therefore, the success of tourism development is highly dependent on the integration of policies, planning, and management tools [19]. However, sustainable rural tourism development cannot be achieved instantly because it involves complex institutional arrangements and coordinated actions and policies. A different policy pathway might be needed for another type of action and under different scenarios. Therefore, a framework of analysis that provides such a pathway needs to be developed.

The general objective of this paper is to develop sustainable tourism strategies in the context of rural tourism by developing transformation pathways toward the sustainable management of rural tourism in an institutional context in the Kedung Ombo reservoir area, Central Java Province, Indonesia. This objective can be broken down into three specific objectives based on three research questions:

1. What strategies can be used to promote sustainable rural tourism in the nature-based Central Java area?
2. What policies can be implemented to support transformation toward sustainable rural tourism development?
3. What are the potentials and best scenarios for sustainable rural tourism development?

Developing sustainable tourism is very important in the context of rural tourism, as stated by Lane [34], as sustainable strategies can reconcile conflicting demand, avoid
wasteful investment and efforts, and identify niche markets where tourism success can be achieved. Finding the best policies and scenarios could also be useful vehicles for tourism recovery in the case of disturbances experienced by rural tourism [22]. This study extends the line of research in rural development strategies by enhancing strategic options through the development of pathways for policies and actions toward sustainable rural tourism.

The Kedung Ombo area represents the complexity of the problem of developing Indonesia’s tourism potential, as the parties involved in tourism in the area (the local government, forest area managers, dam managers, and the community) have weak coordination and synergy. As a result of this, conflicts often arise, especially concerning land use rights and the division of authority.

In the Kedung Ombo reservoir area, there are eight (8) tourist villages: Boyolayar, Agro Wisata Sejahtera Mandiri, Batu Putih, Asoka, Kedung Grujug, Wana Wisata, Bulu Serang, and Wonosari. However, tourism development in this area, which started in 1999, has not shown significant progress. As a result, according to the criteria for improving tourism villages from the Ministry of Tourism and Creative Economy, the tourism villages in the Kedung Ombo area have been categorized as developing tourism villages [19].

So far, the approach to developing tourism villages in the Kedung Ombo area has been based more on conventional methods, through several strategic analyses focused on the in-situ characteristics of tourist villages. However, the absence of development planning and policy directions, as well as weak coordination among stakeholders, has resulted in the development process being slow and almost unsustainable [19], and impacts on people’s welfare have not been realized [35]. This condition requires strategic management to recognize tourism villages in this region as advanced tourism villages that can benefit all parties economically, socially, and environmentally.

This study provides alternative directions for the development of policy strategies that have been not only implemented in the Kedung Ombo case but have become bridges that can be scaled up at a broader level, especially tourist villages in developing countries that share similar characteristics. The study is also the first to create a comprehensive policy strategy that considers the interests of various stakeholders and possible scenarios that can be developed through multiple combinations of scenarios, policies, and programs according to the desired target criteria.

2. Literature Review

As a natural resource-based economic sector, rural tourism is highly dependent on the goods and services generated from natural capital. Therefore, one crucial aspect of managing natural capital-based tourism is the sustainability of the tourism sector itself.

Sustainable tourism is defined as all forms of tourism management and development activities that maintain natural, economic, and social integrity and ensure the maintenance of natural and cultural resources [36]. Tourism development is sustainable only if it is planned strategically to reach goals whose effects are manifest in the long term [37]. Sustainable tourism is a model of tourism development in which human resources and the environment are unified and well-coordinated with economic, social, resource, and environmental aspects, and where there is a coordination of balanced relationships between various stakeholders that emphasizes fairness of development opportunities between generations [38]. Sustainable tourism development will impact job creation, protect the local culture, and promote local products [39].

The success of sustainable tourism development is highly dependent on an appropriate [40] and comprehensive [30] policy framework, supported by all stakeholders [41], as well as ensuring a harmonious symbiosis between the environment and social life [42]. Successful tourism development requires an in-depth study of systems; their performance, budget constraints, and implications for the economy; and their impact on the local environment, cultural heritage, social acceptability, and local blessings [43]. Furthermore, sustainable tourism requires a sustainable development process supported by the coordination of all parties concerned in regional tourism development [36].
In this context, the policy environment becomes a strategic element for maintaining the integration of stakeholders’ motives, interests, and objectives in realizing a sustainable tourism future [26]. Tourism policy is a set of discourses, decisions, and practices driven by the government to achieve various objectives in collaboration with private or social actors [44]. Effective tourism planning is a prerequisite for sustainable resource management and inclusive decision-making [33]. Sustainable rural tourism aims to increase sustainability regarding the long-term improvement of living standards by maintaining a balance between protecting the environment, promoting economic benefits, establishing social justice, and preserving cultural integrity [45].

There is no single definition of rural tourism [46]. Researchers from various countries have developed their descriptions based on the unique experiences or contexts they have encountered [47]. The World Tourism Organization (WTO) defines rural tourism as that which gives visitors personal contact and experiences with the physical environment and rural life and enables them to participate in the activities, traditions, and lifestyles of the local community [14]. Most authors define rural tourism as tourist activities in rural areas such as agriculture-based tourism, nature tourism, adventure tourism, health tourism, spiritual tourism, nostalgia tourism, heritage tourism, cultural tourism, agro-tourism, and ecotourism [48,49]. Rural tourism is a new development model combining modern tourism with traditional agricultural culture [50]. The three main attributes of rural tourism are culture, nature, and history [51].

There has been much debate about the definition of a tourist village in the literature, but it has yet to reach a firm consensus [52]. The diversity of literature and the different meanings of the terminology involved in defining rural tourism make the definition of a tourism village complex [53]. In Greece, the product of country tourism is often based on bed and breakfasts with accommodation in traditionally furnished rooms and traditional breakfasts based on homemade products. In Finland, rural tourism usually involves the rental of cottages. In Netherlands, the product of rural tourism means camping on farms and engaging in bonded activities such as walking, cycling, or horseback riding. In Hungary, the tourist village has a special meaning: it refers to tourism in villages and presents village life plus traditions with the active participation of visitors [51]. In Indonesia the tourism village was defined as a form of integration between attractions, accommodations, and supporting facilities presented in a structure of community life integrated with prevailing procedures and traditions [54].

From the various definitions, a tourist village can be interpreted as a rural area with particular characteristics that make it a tourist destination and the local community’s physical uniqueness, social life, and culture serving as attractions. The crucial factors of sustainable rural tourism are: (1) that it takes place in rural areas and is functionally rural; (2) that the purpose of visiting tourists is to study, be actively involved, experience, or enjoy the attractions; (3) that tourism attributes in the form of culture, nature, history, and unique rural activities are offered as attractions; (4) that it requires the collaboration and involvement of key stakeholders (i.e., tourists, rural communities, businesses, and government agencies); and (5) that sustainability, in both social and economic development and in environmental preservation, is emphasized [41]. In addition, the development of tourist villages can provide benefits by (1) increasing the rural collective economy, (2) beautifying the appearance of the countryside, (3) strengthening the construction of rural civilization, (4) increasing people’s income, (5) changing livelihood activities and communities’ traditional lifestyles, (6) reducing urban-to-village disparities, and (7) building a harmonious society [55].

There are various methods for analyzing the potential for the sustainability of rural tourism [50]. For example, a qualitative approach, such as the Delphi technique, can be used to determine the priority ranking for rural tourism development in Russia. In Hungary, Trukhachev [56] used an event-based approach to integrate rural tourism. Furthermore, in several studies related to the impact of rural tourism in rural areas, surveys were used to obtain public perceptions of rural tourism [57]. Meanwhile, Kumar et al. [58] used an
interpretative structural modeling (ISM) approach to develop a strategy for developing rural tourism in India.

Apart from the several approaches listed above, one method commonly used in developing sustainability strategies is the SWOT approach and its variations, such as AWOT (the combination of AHP and SWOT) and TOWS. Such an approach was used in the case of rural tourism in Iran [58]. This study focuses on the reassessment of rural sustainability tourism after COVID-19 by emphasizing the need to strengthen the role and capacity of the community. A similar approach was taken by Vipriyanti et al. [59] in the case of rural ecotourism in the Bali region of Indonesia.

Recently, machine learning-based approaches have also been widely applied in cases of developing rural tourism. For example, recent studies [19] have used a machine learning approach to forecast the sustainability and development of rural tourism in Indonesia. Likewise, Xie and He [60] used artificial intelligence (machine learning) to develop a marketing strategy: one of rural tourism’s sustainability strategies.

This study uses the prospective method, which has rarely been used in rural tourism, to develop future strategies for rural tourism. It is the first to use prospective analysis for rural tourism in Indonesia. Nevertheless, this method can be scaled up and applied to other contexts of rural tourism in different spatial and temporal dimensions.

3. Materials and Methods

This research is designed as a prospective study to explain the current situation in the Kedung Ombo area and to develop a basis for future research. The Kedung Ombo reservoir is the largest in southeast Asia, with an area of 6576 hectares consisting of 2830 hectares of water and 3746 hectares of plains. The dam’s location crosses three districts: Grobogan regency, Sragen regency, and Boyolali regency (Figure 1). From the aspect of accessibility, this area is easily accessible. However, the condition of the infrastructure still needs improvement in terms of the quality and structure of roads, lighting, and communication networks. Most of the population work as farmers and fishermen, and a few are self-employed.

![Figure 1. Map of the Kedung Ombo area.](image-url)

Kedung Ombo is a hilly, forested area. In addition to the dam landscape, with beautiful and natural panoramas, there are various tourist attractions in this area: water tourism, nature tourism, culinary tourism, and cultural tourism. Since its inauguration in 1991, several community groups, forest managers, the local government, and the private sector...
have developed tourist attractions (tourism sites) around the reservoir. Some of these have been designated by the local government as tourist villages.

This study aims to propose a method for selecting strategic policies in developing tourism villages in Indonesia by exemplifying the case of the Kedung Ombo area to achieve sustainable development across the region. To strengthen this goal, the multicriteria and policy (MULTIPOL) prospective analysis technique is used to identify and evaluate alternative actions, criteria, and policies that can be applied to a scenario to encourage structured changes in decision-making in an effective tourism village development system.

The research data are processed with the MULTIPOL computer program software developed by the LIPSOR organization. The goal is to identify which actions and policies should be implemented to achieve the most likely scenario to increase the success of the development of tourism villages and achieve progress and sustainability. MULTIPOL is a multi-criteria analysis method to support effective evaluation and decision-making by determining scenarios, strategic or policy directions, and choices of actions or programs in an institutional context. It facilitates the evaluation of alternative actions, policies, programs, and scenarios against success criteria based on expert (specialist) consensus. Experts assign weights to each policy based on criteria that may involve different value systems for decision-makers, strategic options, multiple scenarios, and evaluations. For each policy, MULTIPOL helps establish an average score for the action, which allows the creation of a classification profile table for comparison between the action and the policy. MULTIPOL uses mixed methods, especially in determining the weight of alternative policies, analyzing results, and interpreting future trends to strengthen the understanding of causal relationships.

Data collection was carried out in a participatory manner using focus group discussion (FGD) and workshop methods. The FGD comprised twenty people consisting of three district government officials, two forest management representatives, two dam management representatives, two academic representatives, eight tourism village managers, and three tourism village observers. The expert group was selected in such a way as to make it possible to present the opinions of each stakeholder equally. MULTIPOL combines two different types of evaluation: (1) the program evaluation of policies to determine which programs are most appropriate and to prioritize specific policies; and (2) the evaluation of policies against scenarios to determine the most appropriate policies to become priority policies for specific scenarios.

The MULTIPOL method has been developed to address three problems in decision making:

- Selecting the best actions
- Classifying the actions into subgroup (sorting)
- Ranking the actions

This allows a comparative evaluation to be made about the actions while taking into account different contexts of policies and scenarios. In MULTIPOL, a comparative evaluation can be made in a simple way even as it encompasses the complexity of decision problems. The advantages of the MULTIPOL method therefore lies in its simplicity and flexibility of utilization. Another advantage of MULTIPOL is that it is a feature that integrates a participatory approach into multicriteria analysis through the involvement of experts and other stakeholders on the case being studied. In addition, it also accommodates uncertainty and enables a testing of the effectiveness of different policies and actions in different scenarios.

The structure of the MULTIPOL method consists of four elements:

1. The evaluation criteria describe the fundamental aspects for assessing the measurable success of a decision. In this case, the evaluation criteria form the basis of any evaluation process in determining the performance of alternative scenarios, programs, and policy measures. The evaluation criteria for the successful development of rural tourism in the Kedung Ombo area defined in the FGD forum include economic, social, environmental, and institutional aspects (Table 1).
Table 1. Criteria for the success of Kedung Ombo rural tourism development.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Aspect</th>
<th>Weight</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community income</td>
<td>Economy</td>
<td>6</td>
<td>Increase people’s income</td>
</tr>
<tr>
<td>Regional income</td>
<td>Economy</td>
<td>6</td>
<td>Increase regional income</td>
</tr>
<tr>
<td>Investment</td>
<td>Economy</td>
<td>6</td>
<td>Increase investment in the area</td>
</tr>
<tr>
<td>Employment</td>
<td>Social</td>
<td>6</td>
<td>Increase job opportunities</td>
</tr>
<tr>
<td>Conflict</td>
<td>Social</td>
<td>5</td>
<td>Reduce conflict</td>
</tr>
<tr>
<td>Community competency</td>
<td>Social</td>
<td>4</td>
<td>Improving community competence</td>
</tr>
<tr>
<td>Pollution</td>
<td>Environment</td>
<td>4</td>
<td>Reduce pollution</td>
</tr>
<tr>
<td>Environment degradation</td>
<td>Environment</td>
<td>6</td>
<td>Reducing environmental damage</td>
</tr>
<tr>
<td>Compliance</td>
<td>Institution</td>
<td>5</td>
<td>Increase obedience</td>
</tr>
<tr>
<td>Transparency</td>
<td>Institution</td>
<td>4</td>
<td>Increase transparency</td>
</tr>
<tr>
<td>Accountability</td>
<td>Institution</td>
<td>4</td>
<td>Increase accountability</td>
</tr>
</tbody>
</table>

Source: Focus group discussion results.

2. Scenarios show a structured picture of the future in which the goals and objectives will be achieved. In this case, scenarios are ways that can achieve successful rural tourism development in the Kedung Ombo area. The FGD decided on four alternative scenarios to be evaluated (Table 2): (1) the leapfrogging scenario, (2) the evolutionary scenario, (3) the resilience scenario, and (4) the flight of the flamingos scenario.

Table 2. Alternative scenarios for Kedung Ombo rural tourism development.

<table>
<thead>
<tr>
<th>Scenario Alternatives</th>
<th>Weight</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leapfrogging</td>
<td>5</td>
<td>The way to achieve the success criteria for tourism development is fast and unpatterned, skipping several stages of the traditional development process to go straight to new development, and it has no link with previous development strategies [69].</td>
</tr>
<tr>
<td>Evolutionary</td>
<td>4</td>
<td>The way to achieve the success criteria for tourism development is slow and gradual, focusing on how tourism changes through a less dynamic process over time [70].</td>
</tr>
<tr>
<td>Resilience</td>
<td>3</td>
<td>The way to success in tourism development focuses on efforts to survive internal and external shocks through increased adaptability, innovation, and transformation [71].</td>
</tr>
<tr>
<td>Flight of the flamingos</td>
<td>6</td>
<td>The comprehensive way to achieve the goals of tourism development success criteria includes social reconstruction, broad participation, good government, and sustainable economic growth [72].</td>
</tr>
</tbody>
</table>

Source: Focus group discussion results.

3. Policy describes strategies for achieving goals and objectives related to the political, social, economic, and physical contexts. In this case, tourism policy is defined as a set of regulations that guide the direction and objectives of development strategies, as well as a framework for collective and individual decisions that directly affect long-term tourism development and the daily activities of a tourist destination [73]. This study proposes four alternative policies (Table 3): (1) an agro-based policy; (2) a nature-based policy; (3) a culture-based policy; and (4) an integrated policy.

Table 3. Alternative Kedung Ombo rural tourism development policies.

<table>
<thead>
<tr>
<th>Policy Alternatives</th>
<th>Weight</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agro-based policy</td>
<td>5</td>
<td>The tourism development policies are based on agricultural and plantation products. The Kedung Ombo area is suitable for developing tropical fruits, including longan, tailings, guava, mango, “matoa,” and durian, and for fishing.</td>
</tr>
<tr>
<td>Nature-based policy</td>
<td>5</td>
<td>Tourism development policies are based on natural potential. Many natural potentials in the Kedung Ombo area can be developed as tourist attractions, including the panorama of the vast surface of the reservoir, sunset views, jogging tracks, hills between forests, and camping areas.</td>
</tr>
</tbody>
</table>
Table 3. Cont.

<table>
<thead>
<tr>
<th>Policy Alternatives</th>
<th>Weight</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture-based policy</td>
<td>4</td>
<td>Tourism development policies are based on cultural potential. In this area, there are several regional arts that have the potential to be developed as tourist attractions. Some of these are “reog,” a traditional dance performed in an open arena with magical elements in which the main dancer is a lion-headed person adorned with peacock feathers, and “campursari,” a musical performance featuring a cross between several genres of contemporary Indonesian music.</td>
</tr>
<tr>
<td>Integrated policy</td>
<td>6</td>
<td>Policies that combine various tourism potentials, resources, and plans from all stakeholders and allow all tourist attractions to be connected.</td>
</tr>
</tbody>
</table>

Source: Focus group discussion results.

4. Actions or programs are a series of actions to be carried out and potential interventions to support policy implementation. Several development programs are proposed to develop rural tourism in the Kedung Ombo area, as presented in Table 4.

Table 4. Alternative programs for Kedung Ombo rural tourism development.

<table>
<thead>
<tr>
<th>Program Alternative</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure strengthening</td>
<td>Integrated tourism infrastructure development includes area planning, roads, lighting, raw and clean water supply, waste management, sanitation, and residential repairs.</td>
</tr>
<tr>
<td>Amenities strengthening</td>
<td>Repair and develop tourism facilities such as clinics, halfway houses, places of worship, parking lots, and internet networks.</td>
</tr>
<tr>
<td>Private investment strengthening</td>
<td>Strengthening involvement and the role of the private sector in developing infrastructure and managing higher-quality tourist destinations.</td>
</tr>
<tr>
<td>Governance strengthening</td>
<td>Governance strengthening, including coordination, communication, and cooperation between various institutions.</td>
</tr>
<tr>
<td>Information communication technology (ICT) strengthening</td>
<td>Strengthening technical equipment to process and convey various important information.</td>
</tr>
<tr>
<td>Capacity building</td>
<td>Development of the skills and capabilities, such as leadership, management, finance and fundraising, marketing, programs, and evaluation, of a community so that the development is effective and sustainable.</td>
</tr>
<tr>
<td>Entrepreneurship development</td>
<td>Increase entrepreneurial knowledge and skills in the community through structured training programs related to entrepreneurial behavior, dynamics, and tourism business development.</td>
</tr>
<tr>
<td>Network development</td>
<td>Increase network and cooperation between tourism village managers, communities, educational institutions, and other institutions in various aspects that can support more successful development.</td>
</tr>
<tr>
<td>Local financial development</td>
<td>Generate financial sources and community financial institutions to establish tourism village self-sufficiency and its development and avoid dependence on government subsidies and other institutions.</td>
</tr>
<tr>
<td>Maintenance of natural resources</td>
<td>Maintain potential natural resources. Resources included in this category include forests and fisheries.</td>
</tr>
</tbody>
</table>

Source: Focus group discussion results.

Next, the programs, policies, and alternative scenarios were evaluated for their performance according to the stages of the MULTIPOL method (Figure 2). This process produces tables and graphs showing the relationship between programs and policies, and between policies and scenarios, their compatibility, and their probability of success.
Local financial development
Generate financial sources and community financial institutions to establish tourism village self-sufficiency and its development and avoid dependence on government subsidies and other institutions.

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Figure 2. Stages of determining the best strategy based on the MULTIPOL method.

4. Results

This section presents the results of the evaluation of the suitability between criteria, programs, policies, and scenarios. The results are shown in pictures and graphs. Three matrices for evaluating policies, actions (programs), and scenarios against each measurement criterion were presented through brainstorming and final consensus among specialists at the FGD forum. The specialists were asked to jointly rate, by consensus, each measure against each criterion using a simple notated scale (0–20).

4.1. Conformity Analysis between Programs and Policies

The results of the MULTIPOL analysis for the scores for each program related to the policy and the average score, as well as the standard deviation obtained, are shown in Table 5. The higher the position number, the better the program's performance in relation to development policies. The mean and standard deviation values obtained for each program show the impact of its implementation on policy. Programs with low standard deviations and high mean values perform well for more than one policy. Conversely, programs with high standard deviations are only appropriate for specific policies, depending on the average value [67]. The three programs ranked in the highest position were strengthening infrastructure, strengthening amenities, and strengthening private investment.

Table 5. Evaluation of program performance related to policies.

<table>
<thead>
<tr>
<th>Program/Policy</th>
<th>Agrotourism</th>
<th>Natural Tourism</th>
<th>Culture Tourism</th>
<th>Integrated Tourism</th>
<th>Mean</th>
<th>Deviation Standard</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure strengthening</td>
<td>12.4</td>
<td>12.2</td>
<td>10.2</td>
<td>11.9</td>
<td>11.8</td>
<td>0.8</td>
<td>10</td>
</tr>
<tr>
<td>Amenities strengthening</td>
<td>10.6</td>
<td>10.1</td>
<td>9.9</td>
<td>11.5</td>
<td>10.6</td>
<td>0.6</td>
<td>6</td>
</tr>
<tr>
<td>Private investment strengthening</td>
<td>9.5</td>
<td>8.3</td>
<td>8.8</td>
<td>11.2</td>
<td>9.6</td>
<td>1.1</td>
<td>4</td>
</tr>
<tr>
<td>Governance strengthening</td>
<td>10.4</td>
<td>11.4</td>
<td>12.1</td>
<td>12.1</td>
<td>11.5</td>
<td>0.7</td>
<td>9</td>
</tr>
<tr>
<td>ICT strengthening</td>
<td>8.2</td>
<td>8.6</td>
<td>8.9</td>
<td>8.3</td>
<td>8.5</td>
<td>0.3</td>
<td>2</td>
</tr>
<tr>
<td>Capacity building</td>
<td>11.5</td>
<td>9.8</td>
<td>10.7</td>
<td>11.9</td>
<td>11.1</td>
<td>0.8</td>
<td>7</td>
</tr>
</tbody>
</table>
Table 5. Cont.

<table>
<thead>
<tr>
<th>Program/Policy</th>
<th>Agrotourism</th>
<th>Natural Tourism</th>
<th>Culture Tourism</th>
<th>Integrated Tourism</th>
<th>Mean</th>
<th>Deviation Standard</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship development</td>
<td>11.8</td>
<td>10.2</td>
<td>10.5</td>
<td>12.1</td>
<td>11.2</td>
<td>0.8</td>
<td>8</td>
</tr>
<tr>
<td>Network development</td>
<td>9.1</td>
<td>7.5</td>
<td>8.2</td>
<td>10.5</td>
<td>8.9</td>
<td>1.1</td>
<td>3</td>
</tr>
<tr>
<td>Local financial development</td>
<td>9.1</td>
<td>5.2</td>
<td>8.2</td>
<td>7.4</td>
<td>6.3</td>
<td>1.6</td>
<td>1</td>
</tr>
<tr>
<td>Maintenance of natural resources</td>
<td>9.9</td>
<td>10.3</td>
<td>9.7</td>
<td>9.6</td>
<td>9.9</td>
<td>0.2</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: MULTIPOL analysis results.

From the results of the evaluation of programs and policies, a graph called a profile map was obtained from MULTIPOL. This graph presents the behavior of the relationship between programs and policies to show programs that are more closely related to specific policies (Figure 3). MULTIPOL also provides a graph known as a sensitivity classification map, which represents the probability of program success based on the effectiveness of its implementation (Figure 4). Again, the upper left quadrant is programmed with the most significant likelihood of success, while projects with high significance are elevated the most on the graph.

As shown in Figure 4, natural resource-based development programs, amenities strengthening programs, and governance strengthening programs have the highest probability of success and are programs with the most significant relevance to supporting the fulfillment of sustainable development policies. The most effective program is a governance strengthening program. Meanwhile, programs to strengthen infrastructure, strengthen capacity, strengthen networks, strengthen entrepreneurs, and strengthen the private sector can be managed so as to achieve the best development results.

Figure 5 presents the results of MULTIPOL in a map of proximity or closeness between programs (actions) and policies (policies) obtained from correspondence analysis. Correspondence analysis on the matrix is evaluated from the actions related to the policy, with the action score on the X-axis and the standard deviation on the Y-axis. The closer the distance of a program to a policy, the more appropriate and effective the program.
is in terms of supporting the success of the policy. Figure 5 shows that the governance development program and the ICT strengthening program are appropriate programs for culture-based tourism policies. Meanwhile, programs to strengthen infrastructure and programs to strengthen the maintenance of natural resources are the most appropriate programs for policies to develop nature-based tourism policies. Capacity building, amenities strengthening, and entrepreneurial development are the most suitable programs for developing agro-based tourism policies. Meanwhile, local financial development, private investment strengthening, and networking development are programs that are the most compatible with the integrated tourism development policy.

Figure 4. Program sensitivity classification map (Source: MULTIPOL analysis results).

Figure 5. Map of the program’s closeness to policy.
4.2. Conformity Analysis between Policy and Scenario

Next, the results of the evaluation of the relationship between policies, scenarios and performance ratings are presented (Table 6). Table 6 shows that an integrated policy is the best, while a culture-based policy is the least effective. An integrated policy is a policy that combines various tourism potentials, resources and plans from all stakeholders. The results of this study follow [74], which states that integrated policies are standard policies on sustainable development in the agricultural, cultural, and tourism industries.

Table 6. Policy performance related to scenarios.

<table>
<thead>
<tr>
<th>Policies/Scenario</th>
<th>Leapfrogging</th>
<th>Evolution</th>
<th>Resilience</th>
<th>Flamingos</th>
<th>Mean</th>
<th>Deviation</th>
<th>Standard</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agro-based</td>
<td>9.6</td>
<td>9.6</td>
<td>10.1</td>
<td>10.2</td>
<td>9.9</td>
<td>0.3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Nature-based</td>
<td>8.6</td>
<td>9.4</td>
<td>9.3</td>
<td>8.6</td>
<td>8.9</td>
<td>0.4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Culture-based</td>
<td>8.2</td>
<td>9</td>
<td>8.8</td>
<td>7.8</td>
<td>8.4</td>
<td>0.4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Integrated</td>
<td>11.1</td>
<td>9.3</td>
<td>9.8</td>
<td>11.6</td>
<td>10.6</td>
<td>0.9</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Source: MULTIPOL analysis results.

Integrated tourism policies that consider the use of various resources (cultural, social, environmental, economic) and the roles of related stakeholders are part of a tourism development strategy that is considered capable of creating successful tourism destinations [75]. Integrated tourism policies are intended to develop integrated tourism destinations explicitly linked to localities where tourism occurs and have clear links with local resources, activities, products, production and service industries, and participatory local communities [73]. Furthermore, integrated tourism policies refer to the development of alternatives that emphasize a bottom-up approach, centrally involve local stakeholders in their implementation, and are based on local physical, economic, social, and cultural resources [75].

The fundamental objective of integrated tourism is to promote environmental, economic, and socio-cultural sustainability, to empower local communities and to thereby contribute to the sustainability of the wider region’s development system. Specifically, integrated tourism destinations cover two aspects: (1) a bringing together of various interests, requirements, and needs in a unified strategic tourism plan; and (2) a unification of tourism with the social and economic life of an area and its community [73].

Thus, integrated policies supported by local financial development programs, private investment strengthening programs and networking development programs are best when viewed as a policy package. The strengthening of private investment is a breakthrough for increasing personal involvement in development through mutually beneficial creative financing schemes. One such scheme is a public–private partnership (PPP), which is an effective financing solution. The implementation of PPP has a positive impact in the form of cost savings for local governments, accelerated service level improvements, and the emergence of a multiplier effect in the form of broader economic benefits such as job creation and increased income for the population.

The networking development program is intended to develop reciprocal relationships between all stakeholders based on mutual trust. This program is needed in the Kedung Ombo area because it is geographically located in a different district. Networking will thus encourage all parties to optimize resource use, reduce conflicts, and take advantage of opportunities.

The local financial development program is intended to encourage the growth of community financial institutions driven by the mission of creating economic opportunities for individuals and small businesses in rural communities, which are not reached by the services of formal financial institutions. Unlike traditional banks, community finance institutions specialize in providing loans to individuals, organizations, and businesses in under-resourced communities. They offer financial education, business training, and low-interest loans to clients to increase their economic potential and to help build wealth.

Figure 6 presents the behavior of the relationship between policies and scenarios. All policies and each scenario are assessed with criteria by experts with a weight-per-
interaction line of 100. The MULTIPOL application allows for the presentation of a graphical interpretation of the policies associated with the scenario matrix profile map in Figure 6. This presents the calculation of the set of policy evaluation matrix weights related to scenario matrix criteria. Figure 6 shows that integrated policies are the best policies in two scenarios: the leapfrogging scenario and the flight of the flamingos scenario. In contrast, agro-based policies are the best policies in the evolutionary scenario and culture-based policies are the best in the resilience scenario.

![Policy profile map](image)

**Figure 6.** Policy profile map.

As in the analysis of the relationship between programs and policies, in the behavior of the relationship between policies and scenarios, MULTIPOL produces policies that have the most probability of success and are the most effective policies to be implemented. Figure 7 shows that agro-based policies have the highest probability of success, while integrated policies are the most effective.

![Policy sensitivity classification map](image)

**Figure 7.** Policy sensitivity classification map.

Based on the evaluation of the relationship between the policy and the scenario, it can be seen that the integrated development policy is effective for the leapfrogging and
flamingo scenarios. On the other hand, agro-based policies and nature-based policies are the best policies in the resilience scenario. Meanwhile, culture-based policies are the best for evolutionary scenarios (Figure 8).

From the results of the overall evaluation of performance and the relationship between programs, policies, and scenarios, a strategic framework for developing rural tourism in the Kedung Ombo area can be described (Figure 9). This strategic framework shows the development strategy policy packages and their priority programs in each alternative scenario.

As previously explained, the integration policy is the best for developing rural tourism in the Kedung Ombo area. The policy will be effective if it is supported by priority programs...
that include strengthening private investment, developing networking, and developing local finance. Meanwhile, related to question of how to achieve successful development, policymakers can implement this through the flight of the flamingos or leapfrogging scenarios. However, the risks of the leapfrogging scenario are worth considering, given the particular limitations of governance, as it requires speed and is often patternless. Thus, the flight of the flamingos scenario is the most appropriate scenario to apply in the area, as it involves social reconstruction (more social investment, decrease in violence), broad participation, good government (clear and consistent policy that is efficient and not corrupt), and sustainable economic growth [66].

5. Conclusions and Future Research Direction

5.1. Conclusions

Rural tourism plays a crucial role in rural development, especially in developing countries. Lack of capacity, a complex institutional setting, and poor planning might hinder the effectiveness of rural tourism as a leverage and a catalyst for rural development. A strategic transformation toward the sustainable management of rural tourism is one of the strategies that could be delivered. By providing different pathways toward sustainable management, strategic transformation could reduce some obstacles associated with the complexity of rural tourism management. Such findings are supported by various studies on rural tourism, such as [21,22], whereby the strategic planning of rural tourism could be a catalyst for tourism recovery and an improvement in the resilience of the local economy.

The study also acknowledges that transformation toward sustainable rural tourism cannot be achieved without stakeholder engagement. The best transformation scenario (the flight of the flamingos) requires strong stakeholder engagement. Just as was experienced in South Africa during the transformation toward a democratic country, the flight of the flamingos scenario is characterized by slow transformation, then flying high and flying together. In the case of rural tourism, sustainable transformation also needs to be taken slowly and involve all stakeholders. It is also recognized that the transformation might not run smoothly, therefore adjustments might be needed along the way once the decision toward sustainable transformation is reached.

The results of the analysis show that an integrated development policy that facilitates cross-regional cooperation and that has the support or participation of all stakeholders is the best policy option for sustainable transformation. An integrated policy calls for comprehensive planning for rural tourism development. All resource potentials, both natural and cultural, could be developed using an agro-cultural based policy by combining natural-based agricultural tourism with cultural assets owned by rural communities. This conclusion is supported by other studies, such as that of Curčić et al. [23], whereby the diversification of natural and cultural assets could enhance the sustainability of rural tourism. Such a policy needs strong support from private investment as well as from local financial sources. The effectiveness of the policy will also depend on strong network development, an appropriate entrepreneur development program, and strong capacity building in the communities. This is in line with other findings, such as those of Khartishvili et al. [10], wherein the rural tourism entrepreneur is one of the main drivers for sustainable rural tourism. In addition, a lack of awareness and capacity on the part of the local community could be obstacles for transformation toward sustainable tourism [34].

The results of this study may become a model for institutional-based rural tourism development in other regions, which often encounters problems related to coordination due to the many parties involved. Finally, the results of this study as a whole can serve as a road map for policy makers in various regions in the development of integrated nature-based rural tourism by considering the availability of resources, the risks, and possible levels of success.
5.2. Future Research Direction

The contributions of this study could lead to a new line of inquiry in the area of rural tourism, especially in developing countries. Some research topics are suggested that relate to the findings of this study and are relevant to rural tourism transformation. First, future research could investigate the dynamic of transformation pathways for sustainable rural tourism for each policy scenario. In our study, each transformation pathway is assumed to be independent, yet the pathways might interconnect in space and time. Such a study, therefore, could provide a deeper insight into how policies and actions change over time and how they adapt to the dynamic of the rural institutional setting.

Secondly, further research that considers the risk and uncertainty that is related to the transformation toward sustainable tourism is needed due to the fact that stakeholders in rural areas might be risk-averse and avoid any structural changes in tourism management that they consider costly. Further examination of the risk and uncertainty associated with transformation toward sustainable tourism could enrich our knowledge regarding the overall benefits and costs of managing rural tourism.

Thirdly, this study employs mixed qualitative and quantitative information to design the appropriate strategies for sustainable rural tourism transformation. Even though careful examination was carried out to filter the interests of different stakeholders, it is reasonable to expect that some policies, criteria, or actions were overlooked. Further examination of such factors could provide more robust strategies for the transformation toward sustainable rural tourism.

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