



## Building competitive ecotourism in Bulacan: A new business model

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### Abstract

**Aim:** This study assesses the features of ecotourism sites in the province of Bulacan using the criteria of the National Ecotourism Strategy 2013–2022 as a basis for developing a competitive ecotourism business model for the province.

**Methodology:** The study employed a sequential explanatory mixed-methods design. Data were collected through surveys and interviews using multi-stage sampling involving tourists, local residents, business owners, and local government unit representatives in selected ecotourism destinations in Doña Remedios Trinidad, San Miguel, and the City of San Jose del Monte.

**Results:** Findings reveal that ecotourism destinations in Bulacan demonstrate highly valued physical attributes, strong social preparedness, significant cultural features, and highly available ecotourism products and services. The sites also exhibit strong market appeal, accessibility, and institutional implementation. Respondents identified key benefits of ecotourism including income generation, employment opportunities, environmental conservation, and enhanced cultural awareness. However, challenges such as improper waste disposal, the proliferation of informal businesses, and incidents of vandalism were also reported. Local government units addressed these concerns through waste management initiatives, inter-agency collaboration, and cultural integration programs.

**Conclusion:** The results indicate that ecotourism destinations in Bulacan are generally aligned with the standards of the National Ecotourism Strategy and provide significant environmental, economic, and socio-cultural benefits. The proposed ecotourism business model offers strategic guidance for strengthening sustainable tourism management and enhancing destination competitiveness in the province.

**Keywords:** *Ecotourism, sustainable tourism, destination management, socio-cultural development, tourism business model*

### INTRODUCTION

As defined, ecotourism is a type of sustainable tourism that takes place in a natural or cultural heritage area. It encourages and pursues community participation, natural resource protection and management, indigenous knowledge and practices, environmental education and ethics, and economic benefits for host communities and visitors. It is also a concept that promotes a "win-win" situation, particularly in protected areas and natural areas that are vulnerable to human impact. Over the years, there has been considerable confusion about the idea that many locations are marketed as ecotourism destinations despite the fact that they do not adhere to or demonstrate sustainable standards. Understanding these concepts is essential for supporters of ecotourism-related ventures.

International ecotourism has undergone significant transformation since 2021 and is now a crucial component of worldwide strategies for sustainable development. Recent research indicates that sustainable tourism is increasingly recognized as an essential remedy for environmental degradation, climate change, and socioeconomic inequality. Slocum et al. (2022) conducted a thorough analysis of the sustainable tourism literature and highlighted major research topics, such as governance, environmental management, and community participation, as dominating themes defining modern ecotourism research.

One of the most prominent trends is the integration of sustainability into tourist regulations and planning. According to the Organization for Economic Cooperation and Development (OECD, 2024), sustainable tourism is now integrated into national and international tourist policies, notably in the aftermath of the COVID-19 pandemic.



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Governments are progressively incorporating sustainability metrics into tourist frameworks to ensure equitable economic, environmental, and social consequences.

Ecotourism in Asia is significantly influenced by global sustainability ideals, notably those relating to environmental conservation, community involvement, and low-impact tourism methods. According to recent literature, ecotourism is basically defined by three core elements: environmental conservation, cultural preservation, and providing socioeconomic advantages to local populations (Balasingam & Ma, 2022; Khan et al., 2021). These principles ensure that tourism development does not harm natural ecosystems while also promoting local livelihoods and cultural integrity.

International ecotourism is increasingly recognized as an important element of global sustainable development. Guided by UNWTO (United Nations World Tourism Organization) frameworks, the Sustainable Development Goals (SDGs), ESG reporting, and sustainability assessment tools, it is developing into an industry that emphasizes environmental protection, socio-cultural preservation, and long-term economic sustainability.

These accomplishments show that ecotourism is now a fundamental strategy that will influence future international tourism policy and practice rather than a specialized market.

Tourism is critical to the Philippines, as it contributes significantly to the country's economy. Traditional tourism, on the other hand, contributes only to a limited extent and may even contribute to some issues, such as environmental degradation and the eviction of indigenous cultures from tourist hotspots. Although green tourism cannot solve these issues completely, it can establish a healthy balance between economic prosperity and the problems mentioned. It also is undergoing rapid change as a result of direct guidance from the Department of Tourism (DOT), which prioritized ecotourism a few years ago. The DOT established a well-defined strategy for introducing, incorporating, and enforcing ecotourism in numerous destinations throughout the Philippines, as the government recognized two critical points: First, the Philippines' natural wonders are priceless assets, and restoring them will require an enormous amount of money, time, and manpower. The government enacts and enforces regulations governing nature reserves, the environment, and recycling, while also requiring that a portion of the profits generated by these areas be used to maintain them. There has been a noticeable improvement in the cleanliness and accessibility of natural attractions in the Philippines in recent years. Second, while tourism generates jobs, the poorer segments of society do not benefit nearly as much from this prosperity. In the Philippines, wealth inequality and social injustice are already a serious problem. While traditional tourism benefits the country and its people, it is typically the wealthy who benefit the most, while the poor are pushed aside. Green tourism channels profits to the lower end of the chain directly, thus minimizing the gap, while being mindful of the local culture.

The Department of Tourism recently pledged to help Bulacan revive tourism and recoup economic losses caused by the COVID-19 pandemic. Berna Romulo-Puyat, who will be Tourism Secretary in 2021, has pledged to help bring more tourists to Bulacan, citing her strong ties to the province. According to the department, it will provide technical assistance to ecotourism sites throughout the province to ensure their safe reopening to tourists. As part of the province's long-term recovery plans, the DOT intends to promote farm tourism in Calumpit, culinary tourism in Malolos and Marilao, and ecotourism sites in San Miguel, Doa Remedios Trinidad, San Rafael, and Norzagaray (DOT, 2021).

During the same time, the Department's Office of Product and Market Development (OPMD) approved the Bulacan Food Mapping project, which will include a series of capacity-building seminars and workshops, as well as food inventory and audits in various municipalities and cities across the province. As of May 26, 2021, Bulacan has 62 existing and newly accredited lodging establishments, 55 of which are now operational. Meanwhile, Region 3 (Central Luzon) has already received a sizable financial assistance totaling P296.53 million under the DOT and Department of Labor and Employment's (DOLE) cash assistance program for displaced tourism workers, including P83.78 million for the benefit of 16,756 workers in Bulacan (DOT, 2021).

In the study of Kirkpatrick (2025), it showed how collaboration among stakeholders, such as local communities and commercial businesses, may transform a destination into a model of sustainable ecotourism. The study emphasized the necessity of including environmental conservation, community engagement, and ethical tourism practices into destination development.

With that, this research aimed to create a business model that would define the competitive features of the industry like physical attributes, social preparedness, social, ecotourism services and products, market, accessibility and institutional aspects. In addition, the manuscript will also look into the beneficial effects to the environment, economic aspect, and socio-cultural aspects of the province. This feat was accomplished by assessing the features of ecotourism in the province, as well as the challenges and the strategies implemented by the local government unit.



This gap further extends to the limited exploration of ecotourism as a strategic tool for enhancing provincial competitiveness, highlighting the need for comprehensive models that combine sustainability principles, effective governance structures, and business innovation to strengthen long-term destination performance.

This research contributes to tourism management by providing an integrated framework that strengthens destination governance, enhances strategic planning, and promotes sustainable business practices tailored to provincial ecotourism development.

## Review of Related Literature and Studies

### National Ecotourism Strategy

Ecotourism is recognized as a tool for sustainable development in the Philippines. The National Ecotourism Strategy (NES) and Action Plan 2013–2022 maintains this recognition by sustaining the original ecotourism principles adopted by the first NES, namely: Sustainable management of natural and cultural resources; Empowerment of local communities to participate in and benefit from ecotourism; and Development of ecotourism products that satisfy visitors and position the Philippines as a global leader in ecotourism.

This vision of the National Ecotourism Strategy 2013–2022 as a globally competitive ecotourism destination with the requirement to conserve, enhance, sustain, and develop natural assets and ensure equitable sharing of benefits among its people was founded on the principles of sustainable development, and the NES was founded on the advocacy of mobilizing and fostering support for ecotourism development. The NES outlined the initial task of promoting ecotourism awareness and fostering cooperation, soliciting the participation of national government agencies, local government units, and other stakeholders in the Philippines' ecotourism growth.

The overarching objective of the NES is to create and manage globally competitive ecotourism destinations, goods, and markets that contribute to inclusive growth. This will be accomplished using the eight ways outlined below. Strategy (1) Creating and selling competitive, diverse ecotourism products. (2) Creating an atmosphere suitable to ecotourism investment. Maximizing the economic benefits for the host communities is strategy number three. Strategy four: promoting and fostering an ecotourism culture. Strengthening institutional capacity is the fifth strategy. Strategy number six: establishing and enhancing partnerships. Strategy 7: Establishing sustainable financial arrangements Strategy 8 involves the monitoring of outcomes and impacts.

### Features of Ecotourism

Research conducted in the Philippines shows that sustainability performance, visitor experience quality, and environmental management systems—rather than just visitor numbers or revenue—are increasingly defining destination competitiveness.

Destination characteristics, visitor happiness, and sustainability-driven development plans have a significant impact on ecotourism competitiveness in Region VI. In a similar vein, Fajardo et al. (2022) stressed that recognizing ecotourism sites' competitiveness and guaranteeing appropriate pricing systems that support conservation depend on their economic assessment.

Tuan (2021) discovered that ecotourism performance has a considerable impact on tourist happiness and environmental consciousness, demonstrating that sustainable tourism experiences are strongly influenced by both service quality and environmental interpretation initiatives.

These studies support the proposed research by highlighting the need for a new business model that integrates quality visitor experiences, sustainable planning, and strategic pricing mechanisms to enhance Bulacan's long-term ecotourism competitiveness.

### Impacts of Ecotourism in Community

Ecotourism is firmly rooted in sustainable ideals including environmental preservation, community involvement, and ethical tourism behavior, according to recent research conducted in the Philippines.

For instance, Tuan (2021) found that strong ecotourism performance enhances tourist satisfaction while also increasing environmental awareness, highlighting the dual role of ecotourism communities in delivering quality visitor experiences and promoting sustainability. This implies that improved management and sustainability practices can strengthen destination reputation, support local economic benefits, and encourage responsible environmental behavior among tourists. These results imply that ecotourism serves as a teaching tool for environmental stewardship as well as an economic activity in the Philippines.

In addition, Yango (2023) noted that sustainability in ecotourism destinations in Benguet depends on effective management of natural resources and continuous community engagement, reinforcing the need for integrated



sustainability planning in local tourism sites. This supports the need for developing an integrated business model for Bulacan that incorporates environmental stewardship and stakeholder participation as strategic drivers to enhance long-term destination performance and competitiveness.

The Philippine tourist industry has implemented recovery frameworks at the national level that prioritize sustainable integration, resilience, and responsible travel (Philippine News Agency, 2024). This is part of a larger trend toward more sustainable tourist reconstruction initiatives rather than just economic recovery measures. This supports the study's objective by reinforcing that a new business model for Bulacan should align with sustainable recovery principles, ensuring that competitiveness is achieved through resilience, responsible tourism practices, and integrated sustainability strategies.

## Institutional Governance of Ecotourism Sites

Ecotourism governance remains one of the most critical challenges in Philippine tourism development.

Bernardo et al. (2024) stated that institutional structures, policy coordination, and stakeholder participation are critical in managing ecotourism areas like Pasonanca Natural Park. The study found that governance effectiveness has a direct impact on the balance of environmental preservation and economic usage.

Rahman et al. (2025) noted that environmental governance in tourism socio-ecological systems is crucial to establishing sustainable ecotourism outcomes, particularly through stakeholder participation, institutional structures, and policy enforcement mechanisms. Weak governance systems can impede sustainability initiatives and contribute to environmental damage.

In order to achieve sustainable resource management and long-term destination competitiveness, a new business model for Bulacan must include robust governance systems, including as compliance monitoring and multi-stakeholder collaboration, according to these findings.

## Theoretical Framework

This study is anchored on ecotourism theory where it stated that economic development and natural resource conservation are mutually exclusive aims (King, 2010). As a result, recent definitions of ecotourism have placed a premium on conservation, education, ethics, sustainability, social effect, and local advantages. As defined by Weaver (2011), ecotourism is a form of tourism that promotes learning experiences and appreciation of the natural environment, or certain components thereof, within its related cultural context. Additionally, ecotourism is handled in accordance with industry best practices in order to achieve environmentally and sociocultural sustainable outcomes while also maintaining financial viability (Weaver, 2011).

According to King (2010) and Weaver (2011), ecotourism theory emphasizes the integration of environmental conservation, community participation, cultural preservation, and good governance as the foundation for sustainable tourist development. These principles are expressed in physical characteristics, cultural elements, and ecotourism goods, which are the primary attractions that must be safeguarded and managed responsibly. The idea also emphasizes the importance of social readiness and institutional components, which ensure that communities are actively engaged and supported by strong governance systems. Furthermore, ecotourism services, markets, and accessibility are consistent with the requirement to provide excellent, responsible tourism experiences while controlling visitor flow and demand. Overall, these variables put ecotourism theory into practice, indicating that destination competitiveness is dependent on a balanced combination of environmental, social, economic, and institutional elements.

## Conceptual Framework

The study uses IPO model and the paradigm below is the answers of the researcher from documentary analysis, survey and interview for improving and solution of the gathered data to formulate an output on the basis of the result of the findings.

1. **Input:** The input consists of the fundamental factors that guide the investigation. These include related theories and literature, the National Ecotourism Strategy 2013-2022, and applicable regulations such as Republic Act 9593 (Tourism Act of 2009) and Republic Act 7160 (Local Government Code). These inputs give the legal, theoretical, and conceptual foundation for understanding ecotourism development, governance, and sustainability, all of which are critical in determining the fundamental components of a competitive ecotourism business model.
2. **Process/Intervention:** The process includes the actual research tasks required to collect and analyze data. This includes creating and validating interview guidelines and survey instruments to ensure their accuracy and relevance. The study then conducts interviews and surveys to determine key ecotourism dimensions such as features, benefits, programs or methods, and problems. Following data gathering, replies are

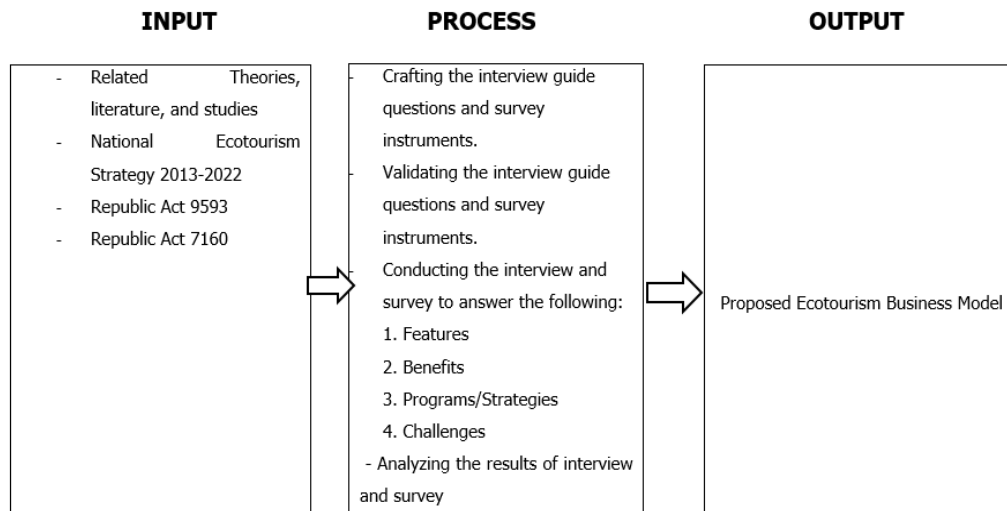


carefully examined to identify important trends and insights that will aid in the creation of the ecotourism business model.

3. Output/Outcome: The output of the study is the proposed ecotourism business model for Bulacan, which is developed based on the synthesis of literature, policies, and empirical data gathered from stakeholders.

This model aims to enhance destination competitiveness, sustainability, governance efficiency, and community participation, ultimately serving as a strategic framework for improving ecotourism development in the province.

**Figure 1.** Research Paradigm on the Building Competitive Ecotourism in the Province of Bulacan



The variables used in the process—such as characteristics, benefits, programs, and challenges—are important indications of the current level of ecotourism in Bulacan. These variables are examined in light of existing theories, policies, and stakeholder viewpoints to find gaps and opportunities. The incorporation of these findings directly supports the study's main goal: to create a comprehensive and competitive ecotourism business model that is both sustainable and locally responsive.

### Statement of the Problem

Ecotourism has emerged as an important strategy for promoting sustainable tourism development while ensuring environmental conservation, socio-cultural preservation, and economic benefits for host communities. In the Philippines, the government has adopted the National Ecotourism Strategy as a framework for developing ecotourism destinations that are environmentally responsible, socially inclusive, and economically viable. Despite these initiatives, many ecotourism destinations still face challenges related to resource management, infrastructure development, institutional coordination, and community participation.

In the province of Bulacan, several municipalities such as Doña Remedios Trinidad, San Miguel, and the City of San Jose del Monte possess natural attractions that have the potential to support ecotourism development. However, the competitiveness and sustainability of these ecotourism sites depend on several critical factors, including physical attributes, social preparedness, cultural features, ecotourism services and products, market accessibility, and institutional support. In addition, local government units must address various operational and environmental challenges such as waste management, informal tourism activities, and the preservation of cultural heritage.

While previous studies have examined the impacts of ecotourism on local communities and environmental conservation, limited research has focused on assessing the competitiveness of ecotourism destinations and developing integrated business models that can guide local tourism governance and sustainable destination development. There is therefore a need to evaluate the features, benefits, challenges, and management strategies associated with ecotourism development in Bulacan.

This study sought to assess the competitive features of ecotourism destinations in Bulacan, examine the perceived benefits and challenges associated with ecotourism development, and develop a proposed ecotourism business model that can support sustainable tourism management and destination competitiveness in the province.



## Research Objectives

### General Objective

To assess the competitiveness of ecotourism destinations in Bulacan and develop a proposed ecotourism business model that supports sustainable tourism development in the province.

### Specific Objectives

1. To assess the competitive features of the ecotourism industry in Bulacan in terms of:
  - physical attributes
  - social preparedness
  - cultural features
  - ecotourism services
  - ecotourism products
  - market aspect
  - accessibility
  - institutional aspects
2. To examine the perceived benefits of ecotourism in Bulacan in terms of:
  - environmental benefits
  - economic benefits
  - socio-cultural benefits
3. To identify the challenges encountered by local government units in managing selected ecotourism destinations in Bulacan.
4. To analyze the strategies implemented by local government units in addressing the problems and challenges of ecotourism management.
5. To develop a proposed ecotourism business model based on the findings of the study.

### Research Questions

This study aimed to answer the following research questions:

1. How can the competitive features of the ecotourism industry in Bulacan be described in terms of:
  - physical attributes
  - social preparedness
  - cultural features
  - ecotourism services
  - ecotourism products
  - market aspect
  - accessibility
  - institutional aspects?
2. How do respondents describe the benefits of ecotourism in the province in terms of:
  - environmental benefits
  - economic benefits
  - socio-cultural benefits?
3. What challenges are encountered by local government units in managing selected ecotourism destinations in Bulacan?
4. What strategies are implemented by local government units to address the problems and challenges of ecotourism management?
5. What ecotourism business model can be developed based on the findings of the study?

### Methodology

### Research Design

This study employed a sequential-explanatory mixed methods design of research. Since the nature of the questions lead to numerical data, the study incorporated the use of both qualitative and quantitative data. The quantitative data were addressed first, followed by the qualitative phase. The process was conducted in a sequential



manner, and the questionnaires were answered independently by respondents (locals, tourists, and business owners). The interpretation of findings was subsequently carried out after the systematic and sequential collection of data.

**Population and Sampling**

The respondents of the study came from the tourist attractions in Bulacan. In the conduct of this study, there were one (1) city and two (2) municipalities which host the main attractions in the province. The study used stratified proportion sampling technique. To elicit confidentiality, the breakdown of target respondents per municipality or city is listed in Table 1.

Table 1. Respondents of the Study

Place	Respondents				Total	Percentage
	Local	Tourists	Business Owner	Local Government Unit		
Dona Remedios Trinidad	100	100	20	1	221	71%
San Jose Del Monte	20	20	4	1	45	14%
San Miguel	20	20	4	1	45	14%
<b>Total</b>	<b>140</b>	<b>140</b>	<b>28</b>	<b>3</b>	<b>311</b>	<b>100%</b>
<b>Percentage</b>	<b>45%</b>	<b>45%</b>	<b>9%</b>	<b>1%</b>		<b>100%</b>

**Instruments**

The study utilized survey questionnaires as the research instrument for the development of an ecotourism plan for the Province of Bulacan. The questionnaire consisted of three (3) parts.

The first part was a self-made questionnaire anchored on the criteria set by the National Ecotourism Strategy 2013–2022, which was used to describe the characteristics of ecotourism sites in terms of educational value, local community participation, physical attributes, ecotourism products, social preparedness, cultural features, ecotourism services, market, accessibility, and institutional aspects.

The second part of the survey instrument consisted of a self-made questionnaire related to the perceived benefits, which covered the three (3) domains of the ecotourism industry, namely environmental, economic, and socio-cultural. The last part consisted of a set of interview guide questions that pertained to the problems and challenges encountered by the local government unit in managing eco-tourism destinations, as well as the strategies implemented to address these challenges during the implementation of development plans.

The Content Validity Procedure was utilized by the researcher in validating the instrument. The procedure involved determining the extent to which the instrument contained an appropriate sample of items representing the construct being measured and adequately covering the construct domain. Crucial to this process was the solicitation of expert judgment from four (4) specialists in the field of hospitality and tourism, particularly with regard to the ecotourism industry. The invited experts were drawn from both academic and government institutions specializing in hospitality, tourism, and public tourism management, including key officials from universities and the provincial tourism office.

A pilot test was conducted to assess the reliability of the questionnaire and to ensure that it effectively measured the features of ecotourism in the province’s attractions. Guidance throughout this process was provided by the research adviser.

Table 2. Cronbach’s Reliability Test for the Research Instrument

Reliability Statistics	
Cronbach's Alpha	N of Items
.775	56

For the reliability test, the research used 60 sample respondents outside of the target sample to test the consistency of the questionnaire. Upon running in the statistical software, it was found that the reliability index of the questionnaire was 0.77, indicating a passing margin. This result means that the instrument has high reliability. The



margin set for the acceptance of the index is from 0.7 to 0.9. By observation, the index of reliability falls in the interval of acceptance, thus, the instrument has high reliability.

After proving the reliability of the test, the study used the instrument in measuring the different aspects of ecotourism across the tourist attractions in the province of Bulacan.

### Data Collection

Permission was secured from the provincial government unit through a letter of intent, followed by approval from the local government units of each municipality and city to conduct the study in various tourist attractions. The respondents included locals, tourists, and business owners. Data collection was conducted from January to June 2024 using an assisted-administered survey. Consent letters and non-disclosure agreements were given to ensure data privacy and ethical compliance. The gathered data were encoded in a spreadsheet and prepared for analysis and interpretation. After the study, all raw data were properly disposed of in accordance with ethical guidelines.

### Treatment of Data

After the data gathering phase had been completed, the responses were classified in accordance with the sequence of the statement of the problem. Frequency and percentage distributions were used to describe the profile of the respondents. The Likert scale was employed as a non-comparative scaling technique due to its clarity and ease of understanding.

The respondents were asked to indicate their responses regarding the features of ecotourism sites in the province in terms of physical attributes, social preparedness, cultural features, ecotourism services, ecotourism products, market, accessibility, and institutional aspects using an ordinal Likert scale.

The respondents were asked to indicate their level of agreement with statements on the perceived benefits of ecotourism in terms of environmental, socio-cultural, and economic aspects using a five-point Likert scale ranging from 1.00 to 5.00. The scale was interpreted as follows: a mean score of 4.50–5.00 was described as Strongly Agree, 3.50–4.49 as Agree, 2.50–3.49 as Somewhat Agree, 1.50–2.49 as Disagree, and 1.00–1.49 as Strongly Disagree.

Table 3. *Likert Scale for Perceived benefits of Ecotourism Destination*

Score	Nominal Scale	Verbal Interpretation
5	4.50 - 5.00	Strongly Agree
4	3.50 - 4.49	Agree
3	2.50 - 3.49	Somewhat Agree
2	1.50 -2.49	Disagree
1	1.00-1.49	Strongly Disagree

Descriptive statistics were utilized in the analysis of the survey forms. Furthermore, the responses to the questionnaire were provided by the respondents. Certain portions of the questionnaire were intended exclusively for business owners, which consisted of qualitative questions. The responses to the essay portions of the questionnaire were analyzed using thematic analysis.

The Likert-based ordinal data were coded into interval data to enable transformation into weighted means. In this way, the results were used to represent the rating for each criterion under the variable. Lastly, thematic analysis was employed to appropriately analyze the ecotourism features and their benefits to the Province of Bulacan.

Also, the challenges encountered by the local government unit and the strategies they implemented in managing selected eco-tourism destinations in Bulacan were analyzed using thematic analysis. Responses were systematically coded through open coding, where significant statements were identified and labeled. These codes were then grouped into categories, which were further organized into emerging themes reflecting patterns and areas of concern. This process allowed the qualitative data to be interpreted and conclusions to be drawn in a structured manner.



## Ethical Considerations

The researcher observed ethical norms in the conduct of the study. Initially, participation was voluntary, and informed consent was obtained from the participants, ensuring their right to freely choose whether to participate or not. Participants were also informed of their right to withdraw from the study at any time without any consequence. Anonymity was secured, and all responses were treated with strict confidentiality. The survey results were handled with complete objectivity, reflecting professional respect for the quantitative data gathered from the respondents. The study fully complied with Republic Act 10173, or the Data Privacy Act of 2012.

## RESULTS AND DISCUSSION

### Part I. Features of the Ecotourism Industry in Bulacan

Table 4. *Ecotourism Features Ratings Summary of the Attractions in Bulacan*

Features of Ecotourism Industry	Weighted Mean	Descriptive Interpretation
Physical Attributes	4.54	Highly Appreciated
Social Preparedness	4.44	Prepared
Cultural Features	4.85	Highly Significant
Ecotourism Services	4.85	Highly Available
Ecotourism Products	4.98	Highly Available
Market Aspect	4.88	Very Popular
Accessibility	4.45	Accessible
Institutional Aspects	4.00	Optimal Implementation

*N= 308 respondents*

*Summary.* There are three main places of attractions in the province, which are located on San Jose del Monte City, Doña Remedios Trinidad, and San Miguel. These attractions were rated on different Likert scales.

Generally, the ratings of the ecotourist destinations in terms of physical attributes was rated 4.54 which translates to Highly Appreciated, social preparedness at 4.40 which translates to Highly Prepared, Highly Significant cultural features at 4.85, Highly Available ecotourism services and products (4.85, 4.98), Very Popular market aspect at 4.88, Very Accessible destinations (4.45), and lastly, an Optimal Implementation of institutional aspect among the ecotourist destinations (4.00).

The results showed that ecotourism destinations in Bulacan are generally rated highly across all indicators, particularly in cultural features, availability of ecotourism services, and market popularity. This suggests strong overall destination appeal and visitor satisfaction. Physical attributes and social preparedness were also rated highly, indicating that the destinations are well-maintained and that local communities are adequately prepared to accommodate tourists. Accessibility and institutional aspects received slightly lower but still positive ratings, suggesting that while tourism sites are generally easy to access and well-managed, there is still room for improvement in governance and infrastructure support.

The high ratings imply strong potential for hospitality enterprises to expand eco-tourism-related services such as guided tours, cultural experiences, and value-added tourism packages. Moderate rating of institutional aspects suggests the need for stronger coordination between stakeholders, which is essential for sustaining long-term tourism development and improving service quality in ecotourism destinations.

Recent research has shown that well-preserved natural settings, cultural authenticity, and diverse tourism options are important predictors of ecotourism appeal and visitor satisfaction (Siregar et al., 2024). These characteristics are regularly acknowledged as key factors in developing favorable tourist experiences and destination preferences.



The high ranking for social preparation shows that local communities and tourist stakeholders can effectively accommodate guests. This reinforces the results that stakeholder engagement and community participation are critical for promoting sustainable ecotourism development and boosting tourist interactions (Samal & Dash, 2024). Similarly, recent research suggests that community preparation improves both service quality and overall destination sustainability (Romero et al., 2025).

The results imply that tourism and hospitality enterprises should continue improving and diversifying their eco-friendly and culturally based products and services to meet strong market demand. Cafés and restaurant operators are encouraged to promote local cuisine and enhance service quality to support the destination's cultural and ecotourism identity. Destination managers should strengthen coordination, infrastructure, and overall management, especially to improve accessibility and institutional support. Tourism policymakers need to focus on improving policies, infrastructure, and sustainability programs to support long-term ecotourism development. Community stakeholders should be more involved in tourism activities and capacity-building to ensure inclusive and sustainable benefits from tourism growth.

Overall, the findings are consistent with current ecotourism literature, which emphasizes that sustainable destination performance is dependent on the integration of environmental quality, cultural value, community involvement, accessibility, and robust governance systems.

## Part II. Respondents' Assessment of Ecotourism's Benefits to the Province

After measuring the ecotourism features of the province of Bulacan, the respondents were then surveyed about the benefits of the ecotourism in the province. It is a known fact that Bulacan is a home to several tourist attractions. Through this established fact, the researcher has proceeded in measuring three possible aspect of the benefits of ecotourism, namely, (1) environmental, (2) economic, and (3) socio-cultural.

*Summary.* Similar to the previous objective of the study, there were three significant points of interest in the province, which were located in San Jose del Monte City, Doña Remedios Trinidad, and San Miguel. Different Likert scales were used to evaluate each of these attractions.

Table 5. *Assessment Summary of Ecotourism's Benefits to the Province*

Assessment of Ecotourism's Benefits to the Province	Weighted Mean	Descriptive Interpretation
Environmental Benefits	4.74	Strongly Agree
Economic Benefits	4.40	Strongly Agree
Socio-Cultural Benefits	4.64	Strongly Agree

### *N = 308 respondents*

The researcher assessed the agreement of the respondents over the supposed benefits of ecotourism on the following aspects, namely (1) environmental, (2) economic, and (3) socio-cultural. The respondents were also classified to determine whether their responses vary regarding their ratings on the benefits of ecotourism. By observation, the respondents strongly agree on all aspects of benefits concerning the implementation of ecotourism in the province of Bulacan. Clearly, residents, tourists, and business owners alike do not show any disagreement on ecotourism in Bulacan. As shown in the table below, the environmental benefits of the attractions were mostly seen (4.74), while the socio-cultural benefits (4.64) were seen as second most important, next to economic benefits (4.40).

The very high rating for environmental benefits indicates that ecotourism is regarded as an effective method of protecting natural resources and raising environmental consciousness. Recent research (Emiroğlu, 2024) show that ecotourism promotes biodiversity conservation, reduces environmental degradation, and fosters environmental stewardship among stakeholders.

The significant sense of economic benefits implies that ecotourism helps to generate cash, create job opportunities, and promote local economic growth. Recent research demonstrates that ecotourism has a significant



impact on rural economies by establishing job possibilities and supporting small and micro businesses within tourism locations (Cossengue et al., 2025; Romero et al., 2025).

Meanwhile, the high rating for socio-cultural advantages indicates that ecotourism is viewed as a way to preserve cultural assets and promote community identity. According to studies, ecotourism promotes cultural appreciation, community empowerment, and meaningful relationships between tourists and host communities, all of which contribute to socio-cultural sustainability (Patil & Pattanshetti, 2024; Samal & Dash, 2024).

Overall, the data confirm that ecotourism is widely regarded as a sustainable and integrated development approach that strikes a balance between environmental conservation, economic growth, and sociocultural preservation.

The strong environmental, economic, and socio-cultural benefits of ecotourism suggest that tourism planning should prioritize conservation while supporting sustainable development. Policies should promote local employment and encourage community-based tourism to ensure inclusive economic growth. The high socio-cultural benefits highlight the need to preserve cultural heritage and actively involve local communities in decision-making. Overall, sustainable tourism strategies must balance environmental protection, economic development, and social well-being. Effective destination governance also requires collaboration among government, private sector, and local stakeholders to ensure long-term sustainability.

### Part III. Challenges Encountered in the Management of Eco-Tourist Destination in Bulacan

The following themes were identified on the respective sections:

#### **Theme 1: Environmental Challenges**

Interviews with residents revealed that Wacuman Inc. has managed a landfill in the mountainous area between San Jose del Monte and Norzagaray, Bulacan since 2007, collecting various types of waste from several towns and neighboring provinces. The landfill was originally envisioned as a modern and environmentally friendly waste management facility modeled after clean sanitary landfills abroad. However, concerns have emerged regarding the environmental sustainability of nearby ecotourism destinations due to pollution, vandalism, and increasing waste generated by tourism activities. Similar challenges are also experienced in Doña Remedios Trinidad, Bulacan, including the presence of informal settlers and illegal wildlife hunting, which threaten environmental sustainability. Despite these issues, tourism development has also encouraged local communities to become more active in environmental conservation, reducing practices such as illegal logging and charcoal production. Residents additionally reported socio-economic concerns such as limited livelihood opportunities, poor infrastructure, and inadequate access to health and educational services in remote areas.

#### **Theme 2: Economic Challenges**

Bulacan has historically reported a lower poverty rate compared to the national average, indicating relatively stable economic conditions in the province. San Jose del Monte, located about 42 kilometers from Manila, has experienced an increasing number of tourism-related businesses operating with government permits. While tourism growth contributes to local economic development, it also raises concerns regarding regulation and management of these businesses. In Doña Remedios Trinidad, a major economic issue is the rampant selling of land, including public, private, and ancestral domain areas, which worries local government officials. Meanwhile, San Miguel reported minimal economic challenges aside from concerns similar to those observed in San Jose del Monte.

#### **Theme 3: Socio-cultural Challenges**

Bulacan's historical connection with Manila contributed to the development of a wealthy and educated elite and the flourishing of Tagalog culture and arts. The province also played an important role in the Philippine reform movement, producing notable leaders such as Marcelo H. del Pilar, Pio Valenzuela, and Mariano Ponce. Despite its rich heritage, ecotourism sites in Bulacan face socio-cultural challenges, including vandalism and the growing influence of social media-driven tourism. Indigenous communities such as the Dumagats in Doña Remedios Trinidad benefit from ecotourism through guiding opportunities, though concerns about ancestral domain regulations remain. Historical attractions in San Miguel, such as Aguinaldo Cave associated with Emilio Aguinaldo, have also experienced vandalism. Overall, the study highlights environmental, economic, and socio-cultural challenges affecting tourism development,



including limited livelihoods, inadequate infrastructure and services, poverty, vandalism, and gradual cultural change among local communities.

#### **Part IV. Strategies of the Local Government for the Problems and Challenges of Ecotourism Management**

Concurrently, the respondents were also asked about the strategies done by the LGU to address the problems and challenges of ecotourism management in the province of Bulacan. The following themes were derived to address the challenges of ecotourism:

##### ***Theme 1: Waste Management***

Barangay Francisco Homes–Yakal in San Jose del Monte has experienced challenges in managing solid waste, similar to other local government units in the Philippines. To address this issue, local officials implemented waste management initiatives and conducted seminars, orientations, and learning visits organized by the City Environment and Natural Resources Office. These programs helped barangay leaders gain the knowledge needed to establish effective waste management practices in their community. With strong leadership and cooperation among local officials, the barangay successfully built a Material Recovery Facility (MRF) to reduce the volume of waste sent to the city's open dumpsite. The study also aims to replicate these waste management practices in other ecotourism municipalities such as San Miguel and Doña Remedios Trinidad. In Doña Remedios Trinidad, the local government established MRFs in tourist sites to manage the increasing waste produced by tourism activities. Waste segregation, recycling, composting, and the prohibition of styrofoam food packaging were also implemented to reduce environmental impact.

##### ***Theme 2: Coordination with Public and Private Agencies***

The Section 37 of the RA 9593 said that LGUs, in consultation with stakeholders, are encouraged to utilize their powers under the Local Government Code to ensure the preparation and implementation of a tourism development plan, the enforcement of standards and the collection of statistical data for tourism purposes. The plan should integrate zoning, land use, infrastructure development, the national system of standards for tourism enterprises, heritage and environmental protection imperatives in a manner that encourages sustainable tourism development.

Local government units (LGUs) are encouraged to coordinate with various agencies, such as business permits, licensing offices, engineering departments, MENRO, and the PNP, to regulate tourism establishments and maintain order. This includes addressing the growing number of tourism businesses operating without proper permits or licenses. According to Section 17 of RA 7160, LGUs are responsible for providing fundamental services, including tourism development, promotion, facilities, equipment acquisition, regulation of business concessions, and security. LGUs also possess corporate powers and autonomy in managing their economic enterprises, as stated in Sections 15 and 22. However, this autonomy is limited by the provisions of the Code and other applicable laws. The current administration's focus on LGUs functioning as corporate entities has been beneficial, as tourism, alongside agricultural development, is seen as a key source for increasing local revenues.

##### ***Theme 3: Cultural Integration***

The respondents have noted that cultural integration is a complicated aspect to mess with, that is why they are hesitant to suggest things that would help the province of Bulacan's ecotourism. However, there are already efforts being done to integrate culture in ecotourism.

The Provincial History, Arts, Culture, and Tourism Office of Bulacan organized seminars and conferences in September 2021 to help preserve the province's heritage, including heritage churches and cultural practices. These initiatives align with respondents' suggestions to educate stakeholders and provide regular training for tour guides. Additionally, locals are encouraged to participate in tourism activities to appreciate their culture and improve their livelihoods.

Since the coverage of this study was the ecotourism destinations in Bulacan located in three municipalities namely Dona Remedios Trinidad, San Jose Del Monte and San Miguel, the three informants were the Municipal Environmental and Natural Resources Officer (MENRO) who handled all related ecotourism activities in their jurisdiction in terms of planning, organizing, and addressing certain problems and challenges with regards to implementation of ecotourism strategies and development plan.



**Part V. Proposed Business Model**

At the final stage of this study, the researcher has scrutinized the need to promote the aspect of ecotourism in the province of Bulacan. With that motivation, a proposed business model was developed.

<b>Key Partners</b> <ul style="list-style-type: none"> <li>Local Government Unit</li> <li>Non-government Organization</li> <li>Business Owners</li> <li>Local community</li> <li>Indigenous people</li> </ul>	<b>Key Activities</b> <ul style="list-style-type: none"> <li>Waste Management</li> <li>Coordination</li> <li>Cultural Integration</li> </ul>	<b>Value Propositions</b> <ul style="list-style-type: none"> <li>Sustainable Development</li> <li>Nature enjoyment</li> <li>Historical value</li> <li>Cultural value</li> </ul>	<b>Customer Relationships</b> <ul style="list-style-type: none"> <li>Communication Channels</li> <li>Nature First</li> <li>Guides for a Cause</li> </ul>	<b>Customer Segments</b> <ul style="list-style-type: none"> <li>Travel and tour companies</li> <li>Cultural Enthusiasts and Explorers</li> <li>Bloggers and Social-Media Influencers</li> <li>Advertisers</li> </ul>
	<b>Key Resources</b> <ul style="list-style-type: none"> <li>Ecotourist destinations</li> <li>Local Products</li> <li>Nature Activities</li> <li>Tourist services</li> <li>Social media platforms</li> </ul>		<b>Channels</b> <ul style="list-style-type: none"> <li>Social media platforms</li> <li>Ecotourism paraphernalia</li> <li>Booking websites</li> <li>Google Map and Waze</li> </ul>	
<b>Cost Structure</b> <ul style="list-style-type: none"> <li>Information Center Costs</li> <li>Marketing and Sales</li> <li>Research and Development</li> <li>Administrative Costs</li> <li>Miscellaneous Costs</li> </ul>			<b>Revenue Streams</b> <ul style="list-style-type: none"> <li>Ad revenue</li> <li>Payment revenues</li> <li>Environmental Fee</li> <li>Tour Guide Fee</li> </ul>	

**Figure 2. Proposed Ecotourism Canvas Business Model**

The researcher patterned the model on the business model canvas, which was based on Alex Osterwalder's Strategyzer framework. It is composed of nine building blocks that illustrate the logic by which a business intends to deliver value and earn money.

The nine blocks address a business's three primary concerns: desirability, viability, and feasibility. The business model serves as a blueprint for implementing a strategy via organizational structures, processes, and systems.

Below a description of each of the nine blocks with links to detailed support on each block.

**Feasibility Block**

Key resources refer to the essential assets needed to operate a business model, such as ecotourism destinations, local products, nature-based activities, trained local tour guides, and social media platforms for promotion. Key activities include important actions like implementing effective waste management, coordinating with public and private entities, and integrating local culture to strengthen the identity of the tourist attraction. Key partnerships involve collaboration with suppliers, organizations, and government or private institutions to support the successful development and sustainability of the ecotourism initiative.

**Viability Block**

The value proposition refers to the products and services offered by a business to meet the needs of specific customer segments and encourage them to choose the business over others. Customer segments include groups such as travel and tour companies, cultural enthusiasts, and tourists interested in exploring ecotourism and indigenous environments in Bulacan. Businesses communicate and maintain relationships with these customers through channels like social media, partnerships, and promotional activities to strengthen tourism promotion and customer engagement.



## **Desirability Block**

The value proposition refers to the set of products and services that provide value to a specific customer segment by addressing their needs and encouraging them to choose one business over another. Customer segments identify the groups of people or organizations that a business aims to serve, such as travel and tour companies, cultural enthusiasts, and tourists interested in exploring ecotourism and indigenous environments in Bulacan. Meanwhile, channels and customer relationships highlight how businesses communicate and engage with these customers—primarily through social media, partnerships, and promotional activities—to enhance tourism promotion and customer experience.

The proposed model suggests the mobilization of communication channels so that potential tourists could book places for leisure and exploration. At the same time, the ecotourist destinations would be implementing a 'nature-first' policy, which will encourage the tourists and locals alike to follow the rules and regulations and be aware of the prohibitions to promote a sustainable ecotourism to the attractions. Moreover, the indigenous people (The Dumagats) can be employed to act as guides to the ecotourist destinations near the mountainous areas, especially in the Norzagaray area and DRT area.

## **Conclusions**

The study examined the competitive features, benefits, challenges, and management strategies associated with ecotourism destinations in the province of Bulacan. The findings indicate that the ecotourism sites demonstrate strong compliance with the criteria established under the National Ecotourism Strategy. Respondents rated physical attributes, cultural features, ecotourism services, and ecotourism products as highly significant components contributing to the competitiveness of tourism destinations in the province.

The results further reveal that ecotourism generates multiple benefits for the province, including environmental conservation, economic opportunities, and socio-cultural development. Increased employment opportunities, income generation, and heightened awareness of environmental protection and local culture were recognized as key advantages of ecotourism development.

Despite these benefits, several challenges remain in the management of ecotourism destinations. These include improper waste disposal, the proliferation of informal tourism-related businesses, and incidents of vandalism in tourist sites. Local government units have addressed these issues through strategies such as waste management programs, coordination with government and non-government institutions, and initiatives that promote cultural integration and community participation.

Overall, the study contributes to tourism management and sustainable destination development by providing empirical insights into the competitiveness of ecotourism destinations and by proposing a business model that may guide local governments, tourism enterprises, and community stakeholders in strengthening ecotourism development in Bulacan.

## **Recommendations**

Based on the findings of the study, the following recommendations are proposed:

1. Ecotourism destinations in San Jose del Monte and Doña Remedios Trinidad may pursue ecotourism accreditation similar to the Biak-na-Bato ecotourism site in San Miguel to strengthen their competitiveness and compliance with national ecotourism standards.
2. Local government units may increase collaboration with non-government organizations and community groups in the planning and development of ecotourism initiatives to enhance social preparedness and stakeholder participation.
3. Tourism authorities may strengthen the promotion of Bulacan's ecotourism destinations through strategic marketing initiatives such as social media campaigns and tourism promotional materials placed in major transportation corridors such as the North Luzon Expressway.
4. Local government units may improve transportation access and infrastructure leading to ecotourism destinations, particularly in Doña Remedios Trinidad, to enhance accessibility for visitors.
5. Tourism management authorities may assign trained personnel and law enforcement officers in ecotourism destinations to monitor tourist activities and ensure compliance with environmental and safety regulations.
6. Tourism stakeholders may promote environmentally responsible tourism practices such as tree-planting activities, waste segregation programs, and the use of environmentally friendly materials in tourism operations.



7. Tourism entrepreneurs may explore opportunities to develop ecotourism-related products and services such as farm tourism, guided eco-adventures, and local cultural experiences to strengthen the economic contribution of tourism in Bulacan.
8. Local government units may involve local communities and indigenous groups in tourism planning and decision-making processes to ensure that ecotourism development remains inclusive, culturally sensitive, and beneficial to host communities.

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