

## DIMENSIONS OF ENVIRONMENTAL COMPLIANCE TOWARDS SUSTAINABLE TOURISM IN SIARGAO ISLAND

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### ABSTRACT

The study was conducted to determine the dimensions of environmental compliance towards sustainable tourism in Siargao Island. A quantitative research design using exploratory design was employed. A total of 138 respondents of Pollution Control Officers in Siargao Island were recruited using a purposive sampling technique to answer a 51-item research-made questionnaire. The study revealed the following dimensions including collaboration and partnerships of LGU, tourism operators, NGOs, and stakeholders, strengthen the role of pollution control officers, availability and competence of local government unit; public participation; environmental awareness of tourism operators; impose pollution charges (higher fines), fees, and taxes for environmental protection; reinforce the monitoring and assessment of local government units for environmental compliance of establishments; environmental monitoring and reporting; encourage waste management and recycling programs; establish environmental management bureau (EMB) branches or representatives promote green training opportunities for employees; and establish regulations and guidelines to minimize the impact of tourism activities.

**Keywords:** Environmental Compliance, Dimensions, Sustainable Tourism, Pollution Control Officers, Quantitative Research

### 1. INTRODUCTION

Numerous nations attribute a large portion of their economic prosperity to tourism. It boosts economic output, creates countless jobs, upgrades a country's infrastructure, and promotes intercultural understanding between foreigners and citizens. Given its effects on sustainability's socioeconomic and environmental dimensions, tourism poses an intriguing challenge for sustainability. However, tourism may support local economies without harming the environment. As a result, sustainable tourism was recognized and supported by the government, the tourism sector, and non-governmental organizations as a guiding principle in tourism planning and development (Bramwell et al., 2017). According to Janusz and Bajdor (2013), sustainable tourism covers not just environmental protection but also the social and economic dimensions of the tourist area, as well as the living conditions of those most proximate to the environment.

The Philippines is the most well-liked travel destinations in the world, which is the country's identified key bases of revenue. Tourists visiting the country have increased significantly and steadily over the past ten years. The growth rate in 2019 increased to 6.07% which results in 8,260,913 tourist influxes (Department of Tourism, 2019). The country's tourism industry surprisingly increased due to both local and international tourists. Many environmentalists traveled the Philippines to stake projected plans and commendations for encouraging sustainable tourism.

In recent years, tourist visits to Siargao Island, which lies south of Surigao del Norte, have consistently increased by 20%, making it one of the top tourist destinations in the Philippines. (Serrona et al., 2022). Siargao Island has been known as a must-visit location for nature enthusiasts and surfers due to its soaring limestone hills, white sand beaches with tiny shells, intriguing caverns, and pure waters (Department of Tourism Philippines, 2020). Siargao Island's tourism industry serves as the main of revenue for the numerous residents and local businesses due to the massive influx of tourists the island has experienced in recent years.

The industry's carrying capacity is now a major concern due to the trade-offs involved with tourism expansion. Approximately 125 tons of garbage were produced in 2020 as a result of increased waste generated by tourists. (Serrona et al., 2022). Moreover, Siargao Island's bottleneck is the lack of tourists and local businesses' environmental awareness towards sustainable tourism in conforming with the existing environmental laws. It is vital to determine the relevant factors affecting environmental compliance to enhance sustainable tourism on Siargao Island.

### 2. METHODOLOGY

This study employed a quantitative research design using a survey questionnaire among 138 respondents of Pollution Control Officers of island resorts in Siargao. A total of 51-item researcher made questionnaire using a purposive sampling technique to gather data from primary sources. The dimensions of environmental compliance towards sustainable tourism in Siargao Island will be analyzed and interpreted through the use of Exploratory Factor Analysis (EFA) in the study. The online data gathering such as online interviews, google forms (survey and questionnaire), etc.

are most effective technique for conducting qualitative and quantitative research amidst the restrictions and protocols during the COVID-19 pandemic (Torrentira, 2020).

### 3. RESULTS AND DISCUSSION

This study revealed the extracted dimensions of environmental compliance towards sustainable tourism in Siargao Island. Data were analyzed and interpreted using the exploratory factor analysis and the results of the Kaiser-Meyer-Olkin, Bartlett's Test, and principal component analysis were presented to validate the discussion of the study. According to the criterion, a total of 51 items were divided into the following twelve constructs:

#### a. Collaboration and Partnerships of LGU, Tourism Operators, NGOs, and stakeholders

The achievement of sustainable tourism depends on the LGU's involvement, tourism operators, NGOs, and stakeholders in this endeavor. By promoting sustainable tourism in all environmental-related activities, this will aid the LGU in the efficient implementation of policies. Ansell and Gash (2008), claim that collaborative governance, conveys together public and private stakeholders in communal forums with governmental organizations to participate in consensus-based decision making. Therefore, collaborative governance is a type of governance in which public and private actors collaborate in distinct ways while using certain techniques to implement laws and regulations for the provision of public goods. Additionally, it must support the efforts of the civil society, other industries, and particularly the labor, academe, and business sectors in organizing, eradicating, and inspiring the people to confront important environmental issues and concerns in Siargao Island.

#### b. Strengthen the Role of Pollution Control Officers

Environmental compliance is crucially ensured by the pollution control officers of the island resorts in Siargao. Therefore, the following actions should be implemented to strengthen PCOs' roles:

- Provide a clear and comprehensive job description such as monitoring and enforcing compliance with environmental regulations, conducting inspections, and ensuring proper documentation and reporting;
- Offer specialized training programs to increase their knowledge and skills in environmental management and regulatory requirements;
- Empower with the authority to enforce compliance and take appropriate action against violators. This may involve imposing sanctions on non-compliant parties, such as fines or stop-work orders; and
- Recognize and reward the PCOs who perform their duties effectively. It can motivate them to perform their duties effectively and encourage others to take up the role.

#### c. Availability and Competence of Local Government Unit

The planning, growth, and success of the local tourism industry have been given more authority by and responsibility to the local government unit. However, there is still an enormous research gap that is being closely examined for its role in advancing the sustainable development goal in tourism destination environments. Power disputes, a lack of meaningful public participation, and the significant impact of local government authority in local governance institutions were shown to be barriers to the development of sustainable tourism. (Ruhanen, 2013).

By enhancing the availability and proficiency of LGUs in environmental compliance toward sustainable tourism, local tourism is better able to manage and mitigate the environmental impacts relating to tourism. This improves the well-being of local communities, the preservation of natural and cultural resources, and the long-term viability of tourist attractions.

#### d. Public Participation

Public participation has been recognized as one of the fundamental elements of sustainable development. It is essential for ensuring effective and inclusive decision-making, promoting environmental awareness, and fostering a sense of responsibility among stakeholders. The sharing of information between major actors such as government, private sector, and citizen groups will be beneficial to everyone. Therefore, public participation in environmental compliance towards sustainable tourism is a cornerstone of responsible tourism practices.

#### e. Environmental Awareness of Tourism Operators

Environmental awareness of tourism operators is essential towards sustainable tourism in Siargao Island. Tourist guides should be educated about environmental issues. It should be the duty of tour guides to familiarize tourists to pertinent environmental laws and to provide them with free copies of pertinent brochures and newsletters. Additionally, signboards should be put in place to advise tourists of restrictions and tourists can be informed how these delicate resources can be easily damaged. Most essential, local communities, nonprofit organizations, and local governments should have authority over how these environmental regulations are implemented. If those regulations are ignored for

whatever reason, there should be hefty fines that may be used as additional funding for environmental protection and improvement (Tosun, 2001).

**f. Impose Pollution Charges (higher fines), Fees, and Taxes for Environmental Protection**

Imposition of pollution charges with higher fines, fees, and taxes for those violators in Siargao Island is an effective economic instrument to incentivize environmental protection and encourage compliance with environmental regulations. As pollution continue to damage the environment especially in Siargao Island, many natural resources will be affected in the island, thus, more fines and penalties. It will act as a deterrent to the tourists as well as the resort/business operators involved to avoid careless pollution of the environment.

**g. Reinforce the monitoring and assessment of Local Government Unit for Environmental Compliance of Establishments**

The Local Government Unit (LGU) in Siargao Island needs to monitor and evaluate how well-run establishments are in terms of environmental compliance. The LGU should conduct public awareness campaigns to educate the resort/establishment owners, the local communities, and tourists on the island about the importance of environmental compliance. Establishments should undergo routine inspections to determine how well they abide by environmental laws. LGUs should prioritize high-risk or environmentally sensitive establishments in their inspection schedule. Additionally, empower the LGU to enforce adherence to the environment legislation by establishing penalties and consequences for non-compliance, and give LGU the authority to take the required enforcement measures, such as levying fines, suspending licenses, or starting legal processes, if needed.

**h. Regularly Environmental Monitoring and Reporting**

The Environment Management Bureau (EMB) should regularly monitor and report the compliance of resorts/establishment's operators to environmental laws in Siargao Island. It is an essential practice for assessing and managing the impact of human activities on the environment. By regularly conducting environmental monitoring and reporting can help in identifying potential environmental issues, evaluating the effectiveness of mitigation measures, ensuring compliance with environmental regulations, and work towards sustainable practices that protect and preserve the environment. Also, environmental best practices from other resort/establishment owners should be highlighted as examples for other resort/establishment owners to follow.

**i. Encourage Waste Management and Recycling Programs**

Tourists and resort/establishment owners should be educated on waste management and recycling programs using a carefully planned waste education and awareness approach. The Pollution Control Officers and the LGU in Siargao Island are essential to assist the local communities and tourist visitors for the conservation of environmental resources in the island. Also, it will help to reduce the impact of tourism activities. Moreover, the LGU should have a program to recognize and reward those resort/establishment owners who perform waste management and recycling disposal to encourage them.

**j. Establish Environmental Management Bureau (EMB) Branches or Representatives**

There are several factors contributing to non-compliance with environmental laws in Siargao Island. These includes:

1. It may be challenging for resort owners to contact environmental authorities or seek advice on adhering to environmental standards and compliance if the resort is located far from the EMB office.;
2. Distance can affect how quickly reports are submitted and requests for essential licenses or EMB approvals are made. In order to avoid potential non-compliance, resort operators may experience delays in completing necessary environmental reports or applying for permits.; and
3. It could be difficult for authorities to efficiently perform routine inspections and monitor compliance if the resort is far away. Due to the distance, resorts may avoid detection or postpone the implementation of necessary corrective measures.

To address these issues, these are the potential solutions facilitating better compliance with environmental laws and regulations:

1. Establish EMB branch offices or designate representatives in areas with a high concentration of resorts. This can improve accessibility and reduce the travel distance for resort owners and staff.
2. Create online forums or avenues for communication to let the EMB and resorts communicate effectively. To resolve problems, give guidance, and get updates on compliance, this can involve online reporting tools, email correspondence, and video conferencing.
3. To help resort owners and workers better grasp environmental laws and compliance requirements, conduct frequent capacity-building programs and training sessions. This can empower them to take proactive steps in adhering to regulations, reducing the need for frequent interactions with the EMB office.

#### **k. Promote Green Training Opportunities for Employees**

Pham et al. (2019) elucidated that the execution of green practices in integrated resorts is found to be constrained by the staff' low environmental knowledge. Provide green training, effective strategies to encourage employees to be more receptive to participating in the resort's green practices include highlighting the assessment of employees' environmental performance, and assigning environmental responsibilities for personnel. Employees' environmental willingness can be increased the resorts by giving them opportunity to engage in green practices (such as letting them decide how to address environmental issues).

#### **l. Establish Regulations and Guidelines to Minimize the Impact of Tourism Activities**

The LGU should implement regulations to reduce the environmental impact of tourism on Siargao Island. To overcome the rules and regulations barrier, increase incentives and enhance supervision. The creation and application of these rules and regulations must involve all pertinent parties, such as government agencies, tourism operators, local communities, and environmental organizations. To make sure they are effective and to make sure they can adapt to changing circumstances and emerging challenges, regular evaluation and adjustments should be made.

### **4. CONCLUSION**

The study concluded that there are twelve dimensions of environmental compliance towards sustainable tourism in Siargao Island. These include the collaboration and partnerships of LGU, tourism operators, NGOs, and stakeholders, strengthen the role of pollution control officers, availability and competence of local government unit; public participation; environmental awareness of tourism operators; impose pollution charges (higher fines), fees, and taxes for environmental protection; reinforce the monitoring and assessment of local government units for environmental compliance of establishments; environmental monitoring and reporting; encourage waste management and recycling programs; establish environmental management bureau (EMB) branches or representatives promote green training opportunities for employees; and establish regulations and guidelines to minimize the impact of tourism activities.

The various dimensions will be serving a guide for the DENR-Environmental Management Bureau, Department of Tourism, and Local Government Unit of Siargao Island to work together and use them as inputs when performing strategic planning for improved policy execution towards sustainable tourism, comprehensive orientation about these dimensions, and make routine visits to the local government unit of Siargao Island for monitoring and assessment. As a result, it may contribute to tourism's long-term economic viability while reducing its adverse environmental effects. The policymakers may strengthen and harmonize the rules and regulations governing the island's environmental compliance to sustain and reduce the impact of tourism activities. Moreover, these findings could be incorporated into local planning and policy agenda setting, assisting and collaborating with the PCOs and resort/establishment operators to educate tourists and stakeholders about sustainable tourism practices, environmental regulations, and to ensure they are aware of and comply with environmental guidelines. Lastly, future researchers may use the study's findings to create a framework for Siargao Island's to comply with environmental regulations to promote sustainable tourism. However, further research may be made to give LGU and government agencies in Siargao Island for more thorough and holistic perspective, other dimensions may be added that the researcher could have overlooked that may be helpful for the environmental compliance towards the sustainable tourism in the island.

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