

The Benefits and Drawbacks of Sustainable Tourism in Siargao Islands, Philippines: An Exploratory Inquiry

Stephinejane E. Musico^{1*}, Monsour A. Pelmin²

^{1,2}School of Graduate Studies, Central Philippine University, Iloilo City, Philippines

¹Surigao del Norte State University, Surigao City, Philippines

*Corresponding Author Email: stephinejane.musico-20@cpu.edu.ph

Date received: April 13, 2025

Date revised: May 3, 2025

Date accepted: June 1, 2025

Originality: 99%

Grammarly Score: 99%

Similarity: 1%

Recommended citation:

Musico, S., & Pelmin, M. (2025). The benefits and drawbacks of sustainable tourism in Siargao Islands: An exploratory inquiry. *Journal of Interdisciplinary Perspectives*, 3(6), 559-573. <https://doi.org/10.69569/jip.2025.260>

Abstract. Siargao Islands, Philippines, is globally renowned for its world-class surfing spots, powdery white beaches, and vibrant local culture, positioning it as one of the world's leading island destinations. However, sustainable tourism remains a critical area of inquiry given the limited research on how local stakeholders manage the balance between tourism and conservation. This study addresses this gap by exploring the diverse local perspectives and providing context-specific insights into how the island can balance tourism growth with sustainability. An exploratory qualitative case study methodology was employed, utilizing thematic analysis of semi-structured, in-depth interviews with 19 purposively selected stakeholders including four municipal tourism officers, three accommodation providers, two tour operators, two tour guides, four food and beverage providers, one transportation provider, one local business owner, one startup entrepreneur, and one tourism educator. The findings reveal economic benefits of tourism, such as increased economic growth and livelihood opportunities, environmental conservation, and social and cultural enhancement. Drawbacks include resource strain, erosion of local culture, displacement, rising costs of commodities, and tourism-driven price increases. Reserving natural assets, economic and social development, and competitive advantage driven by tourism are essential for maintaining Siargao as a leading island destination. Nevertheless, fundamental sustainable tourism imperatives such as environmental stewardship, economic equity, and social balance must be prioritized to ensure the attainment of long-term development objectives, including robust infrastructure, financial sustainability, and social and ecological resilience. This study concludes that tourism is essential for building a resilient, balanced, and future-ready island economy. Furthermore, it advocates for the establishment of a unified regulatory framework, community-driven waste management systems, the support of local MSMEs and startups, the preservation of cultural heritage, investment in sustainable infrastructure, the promotion of complementary sectors, enhancement of participatory governance, and land-use protections to protect residents from the drawbacks of tourism.

Keywords: Sustainable development; Sustainable tourism; Philippines.

1.0 Introduction

The tourism industry has significantly contributed to the economic growth of nations across the globe. As both private and public sectors pursue tourism development, there has been a growing awareness of the sociocultural and environmental degradation caused by unchecked growth. This tension has prompted a shift toward sustainable tourism, which the United Nations World Tourism Organization (UNWTO) defines as tourism that considers "its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities." While this definition has become central to tourism discourses, real-world applications often fall short, particularly in fragile island ecosystems where unsustainable

practices threaten cultural identity and ecological integrity (Shen et al., 2020; Zhuang et al., 2019; Ramkissoon, 2023).

Siargao Islands in the Philippines exemplify this paradox. Once a remote locale known for its rich marine biodiversity and world-class surfing spots, Siargao has become a significant tourism destination over the past two decades. This boom has invigorated the local economy through employment generation, growth of microenterprises, and increased public revenue. While Small Island Developing States (SIDS) such as Grenada illustrate the possibility of incorporating ecosystem accounting to inform nature-based decision-making and sustainably manage natural capital (Mengo et al., 2022), such instances are relatively infrequent, and several islands, such as the Siargao Islands, confront escalating tourism pressures without thorough stakeholder-driven resolutions. These consequences underscore the need to assess whether current tourism practices on the island align with sustainable principles.

Siargao offers diverse natural and cultural attractions beyond its world-renowned surf breaks. Additionally, it hosts a range of luxury resorts, such as Nay Palad Hideaway and Siargao Bleu Resort and Spa, as well as budget-friendly hostels designed for backpackers and surf enthusiasts. With all these assets, Siargao attracted approximately 529,822 visitors in 2023, reflecting a significant increase from 125,088 tourists in 2022 (Travel and Tour World, 2023). This growth comprised 476,074 domestic travelers and 53,748 international visitors, showcasing a robust post-pandemic recovery (Department of Tourism, 2023). The increasing number of visitors highlights Siargao's resilience and capacity for economic revitalization through tourism (Manila Times, 2023). Nevertheless, this continued expansion has raised concerns about sustainable development, land use, and environmental conservation.

Literature on sustainable tourism acknowledges its transformative potential but also reveals persistent challenges in its implementation. For instance, studies emphasize the importance of evaluating indirect effects of tourism and promoting inter-sectoral collaboration, private sector accountability, and community empowerment (Hampton et al., 2018; Comerio & Strozzi, 2019). Despite the growing body of work, empirical evidence often reveals a dissonance between policy and practice. Wilkinson (2011), in his compilation of case studies on island tourism, highlighted the recurring failure to achieve genuine sustainability. Similarly, Vu and Ngo's (2019) investigation of Phu Quoc, Vietnam, showed that, despite their apparent success in promoting sustainable tourism, deeper inquiry revealed unresolved issues that required a more structured roadmap. These findings reflect a common gap in the literature: the absence of localized, context-sensitive understandings of sustainability from the ground level.

This responds to that gap by exploring tourism development's perceived benefits and drawbacks among key stakeholders in the Siargao Islands. Through an exploratory case study approach, it aims to provide a deeper, narrative-driven understanding of sustainable tourism from the locals' perspectives. The study helps with ongoing conversations about managing sustainable tourism by sharing these stories. It gives ideas on how island destinations in developing countries can balance tourism growth with lasting environmental and social health. Furthermore, this study corresponds with the United Nations Sustainable Development Goals (SDGs), namely SDG 8 (Decent Work and Economic Growth), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 14 (Life Below Water). In doing so, it hopes to guide more effective and inclusive development strategies that reflect the realities on the ground while reinforcing the global call for sustainable tourism practices.

2.0 Methodology

2.1 Research Design

This study adopts an exploratory qualitative case study design to investigate the benefits and drawbacks of sustainable tourism in the Siargao Islands. This design facilitates a comprehensive and contextualized understanding of tourism practices and stakeholder perspectives, aiming to produce a narrative-rich account of sustainable tourism. Exploratory case study designs enable flexibility in discovering themes without being restricted by predefined categories. Semi-structured interviews and participant observations were employed to gain detailed insights into stakeholder experiences and perceptions.

2.2 Research Participants

The study was conducted in the Siargao Islands, Surigao del Norte, the Philippines' "Surfing Capital." The

Siargao Islands encompass nine municipalities: Burgos, Dapa, Del Carmen, General Luna, Pilar, San Benito, San Isidro, Santa Monica, and Socorro. Purposive sampling was used to identify key informants directly involved in tourism, governance, business, or academia related to Siargao's tourism sector. Inclusion criteria required participants to be residents or long-term stakeholders (minimum five years) in the region, with informed consent obtained before data collection. 19 Participants included four municipal tourism officers, three accommodation providers, two tour operators, two tour guides, four food and beverage providers, one transportation provider, one local business owner, one startup entrepreneur, and one tourism educator. Exclusion criteria eliminated individuals with no direct engagement in tourism or insufficient residency duration. Those who declined to give informed consent were also excluded.

2.3 Research Instruments

The primary instrument for data collection in this qualitative case study was a semi-structured interview guide that the researcher devised. Three micro-theories served as the foundation for the instrument's development: Stakeholder Theory (Freeman, 1984), Social Exchange Theory (Ap, 1992), and the Theory of Planned Behavior (Ajzen, 1991). A panel of four experts initially evaluated the interview guide, three of whom possess doctoral degrees aligned or allied to Tourism Management. One is a seasoned practitioner in sustainable tourism policy at the local government level. Additionally, two scholars are experts in thematic analysis and qualitative research. The guide was subsequently subjected to ethical review and approval by the Research Ethics Review Board of the Central Philippine University. To safeguard the rights and well-being of participants, ethical safeguards such as informed consent, voluntary participation, confidentiality, and the right to withdraw were rigorously enforced.

Each of the five open-ended questions in the final version of the interview guide was tailored to the specific research problems of the study. These inquiries aimed to investigate participants' perspectives on the benefits, drawbacks, and long-term effects of sustainable tourism, as well as its overall necessity for island development and key imperatives. The interview guide's adaptable framework facilitated a rich and authentic dialogue with participants, allowing for contextual elaborations and probing inquiries. Each interview session was approximately 30 minutes to an hour, which was designed to accommodate the depth and comfort of the participants' responses. The interview guide and sample questions utilized in this study can be obtained from the corresponding author upon request.

2.4 Data Gathering Procedure

Semi-structured interviews were arranged through coordination with the Surigao del Norte Tourism Office and referrals from local government offices. Interviews were in person at mutually agreed-upon private locations and recorded using an encrypted audio device. All interviews were transcribed verbatim. Transcripts were anonymized, with identifying details removed, and securely stored in encrypted digital folders. Physical documents such as consent forms were locked in secure cabinets accessible only to the researcher.

2.5 Data Analysis

Following Braun and Clarke's (2021) six-phase approach, thematic analysis was used to analyze qualitative data. The researcher conducted iterative coding, theme identification, and pattern recognition across stakeholder narratives. Atlas.ti Version 23 (License ID L-C7C-D4E, valid until April 29, 2025) was utilized for data management, facilitating organized coding, network mapping, and theme development. Document analysis of local tourism policies, development plans, and sustainability reports served as triangulation, strengthening the validity and contextual grounding of the study (Bowen, 2009).

2.6 Ethical Considerations

This research strictly adhered to ethical guidelines set by the Central Philippine University Research Ethics Review Board. The study protocol was approved on July 19, 2023, under CPU-RERB Protocol Number 2023-192-PG-MUSICO. Informed consent was obtained from all participants, and their participation was voluntary and revocable at any stage without penalty. Measures were taken to ensure anonymity, confidentiality, and data security, including encrypted storage and pseudonym use. Minimal risks, such as emotional discomfort during interviews, were mitigated through a supportive and flexible interview environment. Participants were not offered monetary compensation and were informed that their data would solely be used for academic purposes.

2.7 Trustworthiness

In assessing criteria for high-quality qualitative research, methodological rigor, representativeness, reflexivity, and transferability must be focused on. Clarification and justification of methods were established through transparent reporting of sampling, data collection, and analysis procedures. Reflexive journaling was maintained to minimize bias, and findings were grounded exclusively in collected data. The use of Atlas.ti ensured systematic analysis, while triangulation with documentary sources bolstered data validity. Integrity.

3.0 Results and Discussion

3.1 Benefits of Sustainable Tourism in Siargao Islands

Economic Growth and Livelihood Opportunities

A significant increase in employment opportunities is observed in Siargao Islands, specifically in guiding, transportation, accommodation, and culinary services. A Del Carmen (P2) local guide disclosed that numerous unemployed individuals have been integrated into the tourism industry, while others have effectively established small businesses. Indeed, tourism-related jobs are essential for reducing poverty and promoting economic development (Liu & Xie, 2022). Additionally, residents celebrated how the island's employment opportunities have diminished their need to relocate to urban areas. A tour guide in Pilar (P1) observed that the number of individuals migrating to cities such as Manila has decreased, as there are now viable income sources in the area. The increased wage rate of PHP 1,500 for tour guides, as reported by a municipal tourism officer (P7), represents a substantial advance over conventional income sources such as farming and fishing. The global evidence that tourism strengthens local economies and increases household income is reflected in these developments (Bank, 2021).

Tourism promotes entrepreneurship in island destinations such as Siargao Islands. As the number of visitors to Siargao increases, residents have reported a significant increase in the demand for culinary services and retail businesses. A municipal tourism officer (P11) observed a rise in MSME registrations, encompassing traditional food items such as budbud and pan de totoy, and innovative products such as homemade ice cream in native flavors. Similarly, Guo et al. (2023) emphasized the significant changes in rural tourism entrepreneurship, demonstrating that flourishing tourism sectors generate business opportunities for residents. Community-Based Tourism Enterprises (CBTEs) have been instrumental in expanding inclusive business opportunities. A municipal tourism officer in Del Carmen (P19) described a revenue-sharing model at Sugba Lagoon that guarantees an equitable income distribution among property owners, barangays, and laborers. These findings contrast with Nugraha and Flora (2022), who cautioned against oversimplifying CBTE benefits since property owners and local elites frequently capture a disproportionate share of tourism revenues, resulting in social tensions and disparities within communities.

According to a homestay supervisor, tourism revenues are also allocated to essential social services, notably medical assistance programs that prioritize underprivileged residents (P9). However, P9 clarified that residents in General Luna receive a waiver of these fees as a measure to ensure equity and accessibility. Nguyen (2021) acknowledged that incorporating environmental governance into tourism strategies is a method to increase government revenues by stimulating business activity and improving the overall performance of tourism-dependent economies. Meanwhile, in Del Carmen, a single journey to Sugba Lagoon contributes PHP 50 to the municipal treasury, which equates to more than PHP 5,000 per day during peak periods (P19). Additionally, she cited the annual increase in business tax collections, which she attributed to increased visitor activity. In contrast, apprehension regarding the long-term stability of this economic model, as tourism-dependent economies may be volatile and susceptible to external factors such as global pandemics, economic downturns, or climate change (Yuniningsih et al., 2022).

Environmental Conservation and Resource Management

One of the key benefits of sustainable tourism in the Siargao Islands is the continued implementation of waste management and eco-friendly policies that aim to minimize ecological degradation brought by tourism. Municipalities such as Pilar and Del Carmen were the first to implement single-use plastics regulations, including the mandatory use of reusable containers and the prohibition of PET bottles (P1, P19). In addition to these endeavors, General Luna implemented a plastic-for-rice exchange program that promoted community compliance. Nevertheless, enforcement has been inconsistent. For example, waste segregation is still frequently

disregarded, a practice further exacerbated by the relaxation of enforcement measures during the COVID-19 pandemic (P7). The accumulation of garbage in Barangay Malinao in General Luna has worsened due to the expansion of resorts, which has compelled residents to either burn or unlawfully dispose of their trash. These findings align with Borazon's (2023) emphasis on the significance of environmental conservation and waste management in the context of island destinations being susceptible to revenue and job loss in the event of closures.

A municipal tourism officer (P11) noted that local authorities and communities have implemented stringent conservation and zoning measures, such as those on the coasts near Hope for the Islands. Construction is prohibited on this protected turtle nesting site. Another municipal tourism officer (P5) reports the establishment of Marine Protected Areas (MPAs), and mooring buoys to prevent reef damage, and community-led partnerships also facilitate beach cleanups and mangrove planting, notably in General Luna. This expands the previous findings on creating effective marine sanctuaries, where limiting human access is linked to better results, thus underscoring the need for collaborative efforts (Guabiroba et al., 2022). On a more extensive scale, the Department of Agriculture-BFAR provided fiberglass boats to fisherfolk in Pilar and Dapa, thereby promoting sustainable livelihoods and diminishing dependence on exploitative fishing (BFAR, 2024).

Social and Cultural Enhancement

Community empowerment is another benefit Siargao has reaped from tourism, where formerly marginalized voices have emerged to influence the island's tourism identity. Community members now oversee the tourism operations at Sugba Lagoon (P19). She observed that revenues are no longer diverted to external operators; they are directly allocated to local boatmen and adjacent property owners, some of whom are former mangrove loggers and dynamite fisherfolk. This power shift is exemplified by the localized control over livelihood, transforming the community from passive recipients to active architects of tourism value. This is consistent with Bozdaglar's (2023) assertion that community-based tourism initiatives, when locally owned and managed, generate significantly more benefits than externally controlled ventures. Similarly, a single tourism site in Barangay Maasin employs more than 50 inhabitants from the village, an unimaginable situation decades ago (P1). These narratives corroborate the assertions of Khair et al. (2020) and Suryawan et al. (2024) that empowered communities are more environmentally conscious and resilient. Nevertheless, Dagilienė et al. (2021) warn that to remain effective and transformative over time, such empowerment must be sustained through consistent institutional support and capacity-building.

Cultural preservation and education are profoundly ingrained in the local narratives and everyday governance, which reflect intergenerational learning, discipline, and pride. Municipal government implemented ordinances to reinforce local values, including prohibiting overly exposed attire in town centers and promoting cultural modesty (P11). This endeavor safeguards social norms without alienating travelers, thereby preserving the community's identity in the face of increasing external influences. This complements Sunardi et al.'s (2021) perspective on localized policies being strategies of culture-sensitive governance. P15, a tourism instructor, shared how homegrown programs uncovered young talents such as Anji Salvacion, who began her journey in local contests before attaining national acclaim. These programs serve as springboards of cultural pride and hope for young people, particularly in the presence of external pressures.

Integrating cultural expressions into tourism initiatives guarantees that development is rooted in the values of the community it serves (Uduji et al., 2019). P13, a food kiosk owner, affirms this by highlighting the growing awareness among locals to immerse travelers in respectful engagement through language, local practices, and behavior. This finding solidifies Bell & Reed (2022) and Wasela's (2023) assertions that participatory cultural endeavors enhance social sustainability. Additionally, Lasco et al. (2022) emphasize in their research on crisis-responsive cultural governance that local ordinances that promote cultural continuity also encourage cohesion in the community during periods of disruption, such as the COVID-19 pandemic. However, to remain inclusive, relevant, and empowering, these policies must remain adaptive, as Li et al. (2023) recommended.

3.2 Drawbacks of Sustainable Tourism in Siargao Islands

Environmental Drawbacks

Overcapacity in the Siargao Islands reflects a growing concern among its stakeholders, highlighting the disconnect between tourism expansion and the island's environmental and infrastructural thresholds. Apprehension that no formal study has been conducted to ascertain the island's overall carrying capacity,

despite the apparent strain in locations such as General Luna (P15). She observed that this disparity leads to frequent water and electricity shortages, unmanaged waste, and overcrowding. P1 echoed this sentiment, describing how the overwhelming volume of tourists burdens the island's fundamental services. He added, "*The water tanks run dry by midday.*" These challenges are consistent with the findings of Fang et al. (2020), which indicate that destinations are at risk of degrading their natural assets and reducing the well-being of their residents in the absence of defined limits. Moreover, results affirm prior conclusions of Grofelnik et al. (2020) about excessive tourist inflows accelerating waste generation and resource depletion. The findings may further strengthen Fasa et al.'s (2023) claim that unregulated development threatens environmental sustainability and socio-economic stability.

Persistent waste management concerns significantly impede Siargao's sustainability, highlighting the growing disparity between policy and practice. Although environmental programs are documented, their implementation at the grassroots frequently fails to meet expectations. P6, a transportation provider in General Luna, observed that "*garbage accumulates daily,*" attributing the problem to inadequate compliance with segregation regulations and the lack of public education. Similarly, despite various waste management initiatives, a significant amount of waste was still observed (P17). These challenges affirm previous research. Gamao and Caelian (2023) determined that ineffective waste practices in coastal communities are typically the result of minimal community involvement and inconsistent collection systems—conditions that Siargao stakeholders reiterate. Waste accumulation becomes unmanageable when policies fail to adapt to local realities, eroding environmental health and resident quality of life (Ramadan et al., 2022). The issue in Siargao is not the absence of policies, but rather their failure to acquire traction in everyday community life.

Cultural and Social Disruptions

The erosion of local culture is increasingly observed in the Siargao Islands through behavioral changes among the locals, especially the youth. Many of them are embracing tourism-influenced lifestyles that contradict the long-standing community values. A tour operator (P17) noted that younger locals now adopt the same behaviors as foreign visitors, such as riding motorbikes in bikinis, frequenting beach bars, and engaging in a nocturnal culture previously absent. P12, a food business owner, reiterated this transformation, expressing his regret over the community's transformation from a tranquil and family-oriented environment to a Westernized and party-oriented one. Late-night noise and bar activities have become more commonplace, which has caused tension among the older generation, who remember a more disciplined and modest Siargao (P9). These observations are consistent with Panth's (2024) research in Nepal, which revealed that Western media significantly influenced the behaviors of young people, particularly in the areas of alcohol consumption and social behavior. Moreover, tourism can weaken local identity and lead to cultural fatigue in areas affected by tourism, where global trends overshadow local customs (Bell & Reed, 2022; Tabudlo & Saligan, 2022). This study further emphasized the necessity of community-led cultural preservation, particularly considering the increasing generational gap (Wasela, 2023). Without deliberate efforts to preserve cultural identity, the community may lose its traditions and sense of self.

Displacement and accessibility loss are other growing concerns in Siargao, where locals are increasingly pushed out of their original communities due to soaring land values and unchecked commercial development. P8, a 57-year-old storeowner from General Luna, described how her family was compelled to vacate their seaside residence after the landowner reclaimed the property for future resort expansion. The landowner refused to sell the property to them, as they knew they could not compete with commercial offers. They have been relocated inland; they are now separated from the sea that once influenced their daily existence. These narratives reinforce Panth's (2024) findings and indicate the cultural and spatial dislocation resulting from land commodification. These developments prioritize investors while alienating long-term residents from their heritage. This pattern is further agreed upon by Grisdale (2019), who demonstrates that the increasing demand for short-term rentals in tourist destinations frequently results in the displacement of natives, as profitability precedes community preservation. In these cases, tourism risks becoming a divisive force that fragments communities, creates resource competition, and erodes the cultural foundations of any destination that relies too much on it (Jayakody et al., 2022; Lasco et al., 2022).

Economic Drawbacks

Rising costs and inflation in Siargao reflect a deepening mismatch between the island's growing tourism sector and the declining purchasing power of locals. Rice is priced between ₱80 and ₱100 per kilogram, whereas

popular veggies such as bitter melon may reach ₱120 (P17). Price control appears to be a fantasy as food and transportation prices rise (P12). This finding agrees with that of Zhang et al. (2023), stating that the increasing local market prices pose a challenge for residents in tourism areas with stagnant revenues to maintain their standard of living. This also aligns with previous research (Bischoff & Sandusky, 2023; Hu et al., 2022; Pappa et al., 2023), which shows that tourism frequently increases local prices at a quicker rate than wage growth, thereby exacerbating economic dissatisfaction and inequality. Due to this, residents' perspectives regarding tourism may be influenced by the equitable distribution of its financial benefits, rather than its overall economic benefits.

The concentration of land ownership and tourism profits among a few individuals and external investors in Siargao also demonstrates an unequal benefit distribution. While it is true that tourism has created opportunities, these are most likely accessible to the wealthy or politically connected (P13), as they have the mechanisms to secure the best locations, access funding, and navigate bureaucratic processes. These assessments show that tourism-driven prosperity can exacerbate economic disparities. Inclusive planning and community participation may reduce these inequalities and share tourism advantages more fairly (Sumanto, 2022; Tian et al., 2021). Further, land concentration may lead to social inequality, arguing that marginalized populations remain economically excluded without redistribution (Lee, 2025).

3.3 Effects of Sustainable Tourism on Development Goals

Infrastructure Development

Improved public facilities in Siargao illustrate how tourism can realize long-term development goals of an island destination such as the Siargao Islands. The emergence of sustainable tourism has resulted in the establishment of paved roads, public restrooms, power, and water systems—improvements that were previously lacking in her locality (P13). The quantity of resorts and business establishments signifies tourist demand and enhanced services available to residents (P15). These accounts corroborate findings that tourism-related investments augment access to vital services such as markets, healthcare, and education, simultaneously enhancing the quality of life for both residents and visitors (Adeola & Evans, 2019; Duc et al., 2023; Nazneen et al., 2019; Sánchez-Oro Sánchez et al., 2020). Similarly, community-oriented and inclusive infrastructure planning is vital for guaranteeing that these advantages are sustainable and equitable (Arabov et al., 2024; Tian et al., 2021). This aspect is particularly crucial in Siargao, where governance significantly influences the trajectory of tourism. When effectively administered, infrastructure development enhances economic prospects and the attractiveness of destinations (Yunus, 2021).

One primary objective of tourism development in Siargao is to achieve environmental sustainability. This has been increasingly pursued through resource management solutions that address both ecological and economic challenges. In General Luna, implementing solar panels and rainwater harvesting systems has diminished dependence on fluctuating electricity and water services. Meanwhile, organized tourism fees, which derive from ₱50 per boat trip and ₱150 for wharfage, directly contribute to the maintenance of infrastructure and community services (P19). These localized systems illustrate the reinvestment of tourism earnings into sustainability-focused infrastructure. These reveal a unique perspective on the significance of circular and adaptive models that enhance ecological resilience and foster rural entrepreneurship (Kania et al., 2021; Pongsakornrungrungsilp & Pongsakornrungrungsilp, 2021). Additionally, tailored solutions are crucial for long-term sustainability, especially in environments with varying institutional capacities (Reverte, 2022). These findings further complement previous research, highlighting that with the resurgence of tourism following the pandemic, incorporating green technology and decentralized utilities in island destinations has become essential for sustainability and competitiveness (Tsai & Chen, 2019; Vartolomei, 2018).

Economic Sustainability

Sustainable tourism is integral to Siargao's long-term development objectives, as it fosters economic sustainability by broadening livelihood prospects beyond conventional tourism occupations. A local startup founder (P3) highlighted the promise of digital innovation via platforms such as “E-diskubQR,” a mobile application that links travelers to local wisdom and tourist attractions, thus promoting inclusive entrepreneurship. Similarly, the Municipality of Pilar fosters a synergistic interaction between tourism and traditional sectors, including agriculture and fishing, facilitating greater community engagement in the local economy (P7). These programs demonstrate attempts to marry tourism with cultural identity and heritage-oriented livelihoods, fostering economic resilience and community empowerment (Mahmoud, 2024). Research indicates that sustainable tourism development must incorporate local values and engage several sectors to

achieve long-term success (Badoc-Gonzales et al., 2022; Wakil et al., 2021; Okafor et al., 2022). In contrast, lacking a comprehensive framework incorporating greater developmental goals may result in shortsighted and disjointed initiatives (Boluk et al., 2019).

Long-term revenue generation from tourism is evident through recurring events and partnerships. A representative from the Siargao Tour Guides and Organizers Association (SITGOA) observed that events such as KUMBATI, a locally organized annual boodle fight competition that SITGOA leads, generate consistent revenue through sponsorships and community involvement (P18). This demonstrates how festivals can transform into reliable economic catalysts (Sulistiowati et al., 2020; Purnamawati, 2021). A restaurant supervisor (P14) added that the proliferation of environment-friendly companies has augmented employment opportunities and diminished reliance on peak seasons, facilitating more stable livelihoods year-round (Lestari & Yusra, 2022). These initiatives signify shifting from transient tourism profits to diversified, year-round economic engagement. Community-centered planning in Siargao incorporates cultural identity into tourist initiatives, enriching visitor experiences while strengthening local heritage and pride (Mironova et al., 2024). According to previous studies, these programs foster resilient tourism ecosystems by harmonizing economic objectives with cultural preservation and environmental stewardship (Ernawati et al., 2022; Rahman et al., 2022). This further establishes findings on how cooperatively designed long-term strategies involving stakeholders yield more inclusive and flexible tourism economies, enhancing local governance and social cohesion (Suardana et al., 2024; Bentley & Halim, 2024).

Environmental and Social Resilience

Conservation for future generations in Siargao is increasingly embedded in local tourism and planning practices, prioritizing marine biodiversity and natural landscapes vital to the island's identity and livelihood. A resort supervisor (P16) underscored that infrastructure is currently engineered to uphold long-term environmental objectives, guaranteeing the preservation of beaches and marine ecosystems for future use. Local initiatives, like prohibiting seawall building adjacent to the sea turtle nesting spot at Hope for the Islands, demonstrate ecologically responsible zoning practices (P19). Aligned with global research, community-driven initiatives, strengthened by efforts such as coral reef preservation, mangrove rehabilitation, and the implementation of sustainable design standards, collectively demonstrate a transition towards conservation-focused development (Cisneros-Montemayor et al., 2021; Gustiarini et al., 2023; Pantalena et al., 2020). The focus on environmental education, stakeholder involvement, and compliance with international eco-resort standards underpins Siargao's strategy for harmonizing development with ecological conservation (Davies et al., 2021; Firmansyah et al., 2023). These localized initiatives demonstrate that combining tourism development with conservation goals guarantees environmental resilience and enduring economic and cultural sustainability.

Community involvement in Siargao is also central to building social resilience, with locals playing key roles in environmental stewardship and tourism governance. Local tourist initiatives are designed to guarantee direct benefits for community people (P19). P4, a homestay owner, highlights the necessity of enhancing awareness and reinforcing sustainable practices at the grassroots level. She maintains that residents significantly contribute to sustainability through community-led initiatives, including clean-up efforts, conservation activities, and the enforcement of local rules. These behaviors promote collective accountability, improve adaptive capacity, and incorporate sustainability into daily life. These corroborate with established findings emphasizing the value of participatory frameworks for cultivating resilient, equitable, and sustainable tourism systems (Bentley & Halim, 2024; Duc & Thanh, 2023; Rahman & Baddam, 2021; Rahmawati et al., 2023).

3.4 Sustainable Tourism Imperatives Drawn from Sustainable Development

Environmental Stewardship

In light of increasing tourism pressures, waste management systems have emerged as a crucial imperative for sustainable development in the Siargao Islands. Certain tourism enterprises have begun implementing zero-waste principles—resorts are utilizing biodegradable packaging and managing composting systems to reduce their environmental impact, particularly on marine environments (P1). A municipal tourism officer shared the successes of local regulations, including prohibitions on PET bottles and external food in Sugba Lagoon, addressing persistent sanitary concerns. These studies highlight that carefully developed local policies can substantially enhance environmental conditions by reducing waste and pollution linked to tourism activities (Guo et al., 2022; Mokhtarulbari & Rashid, 2024). However, even a well-organized waste management system may diminish if communities do not recognize substantial direct advantages from their engagement

(Yuniningsih et al. 2022).

Renewable resources have become a critical sustainability imperative in Siargao as stakeholders increasingly seek clean energy alternatives to prevent reliance on fossil fuels and for the future. P1 underscored the necessity for solar power as a feasible alternative because of the island's detachment from mainland networks. Several local enterprises have proactively installed solar panels and implemented rainwater collection to reduce operational expenses and environmental footprint. These grassroots transformations affirm previous findings indicating a transition from temporary solutions to enduring ecological resilience (Bhattarai, 2024; Nugroho et al., 2024). Renewable technology in tourism operations safeguards ecosystems while improving cost efficiency and community resilience (Wu et al., 2023). Nevertheless, energy advancements alone may not avert ecological degradation without concurrent improvements in waste and water management (Ahmad & Ma, 2021; Sun & Zheng, 2020). Furthermore, limited resources and infrastructure, prevalent in island environments such as Siargao, may impede the comprehensive deployment of renewable systems, requiring cooperative planning and Cross-sectoral assistance (Fang & Feng, 2024).

Economic Equity

Supporting local businesses is a cornerstone of economic equity in Siargao's tourism development. One food business owner (P12) articulated that heightened visitor interest in local delicacies and products has broadened livelihood opportunities, underscoring tourism's need to cultivate more engagements with local producers. She operates a modest food shop in a less trafficked area of the island, where she prepares home-cooked meals utilizing products procured from local farmers. She observed that travelers frequently discover her establishment on their explorations, and their patronage contributes to her family's revenue. These exemplify inclusive tourism strategies that amalgamate culinary and cultural experiences to strengthen identity and equitably divide advantages (Vuksanović et al., 2024; Wati et al., 2024; Guo et al., 2022). Advocating for MSMEs and broadening its offers beyond the traditional way of marketing may enhance tourist resilience and reduce economic leakage prevalent in tourism-centric locales (Nugraha & Flora, 2022; Nair, 2021; Paulauskaite et al., 2017). Furthermore, diverting visitors to lesser-known locations may enhance resilience among grassroots communities (Nair, 2021), while equipping entrepreneurs in remote barangays with digital literacy skill sets eases business participation (Mihardja et al., 2020).

Regulatory frameworks are essential to ensuring that tourism development aligns with the community's and the environment's needs. SITGOA representative highlighted the lack of a definitive legal framework to facilitate tourism development, emphasizing the urgent need for unified and enforceable laws throughout towns. He further suggests that participatory governance and transformational leadership are significant in achieving sustainable growth (P18). This aligns with previous research, which indicates that well-structured governance helps protect local communities from harmful investments, increases benefits for the community, and supports environmental protection (Sulfardin et al., 2024; Vuksanović et al., 2024; Adetola et al., 2024). Regulatory measures like travel limits and land-use regulations in environmentally sensitive regions can mitigate overtourism and safeguard vulnerable ecosystems (Ivănescu & Săvan, 2024; Aprilani et al., 2021). Critics highlight implementation deficiencies, such as insufficient political will, inadequate enforcement measures, and poor cooperation among local governments (Sonbai & Resen, 2024). In certain circumstances, imbalanced power dynamics and information disparities have obstructed collaborative governance, which leads to policy disputes and reduced sustainability outcomes (Sulfardin et al., 2024). Even in strong educational initiatives, the absence of adequate enforcement frequently results in municipal policies failing to have their intended impact (Aprilani et al., 2021).

Social Balance

Cultural preservation in Siargao embodies a sustainable tourism imperative rooted in community identity and intergenerational continuity. One municipal tourism office integrates cultural values into environmental training programs, emphasizing that preserving history necessitates the protection of the ecosystems that support local customs (P19). Hence, there is a necessity to harmonize municipal legislation with national directives through proactive cooperation with the Department of Environment and Natural Resources and the Protected Area Management Board under SIPLAS (P7). These initiatives demonstrate the growing integration of cultural heritage into tourism planning, policy, education, and destination management in Siargao. Based on earlier findings, incorporating cultural preservation into tourism frameworks facilitated by stakeholder collaboration and institutional support enhances community cohesion and local resilience (Sihombing et al., 2024; Lamoria et

al., 2024; Guo et al., 2022). Nevertheless, challenges persist in guaranteeing that these efforts are authentically inclusive, well-financed, and resistant to the commodification of culture influenced by tourist expectations (Oladeji et al., 2022; Nguyen, 2021; Rachman, 2024; Yuniningsih et al., 2022).

Community safety and inclusion remain essential for maintaining social balance in Siargao's sustainable tourism, particularly in the face of tourism pressures and rising climate. One municipality constructed seawalls to safeguard coastal towns from storm surges, recognizing that although these facilities modify the aesthetic landscape, the protection of residents is paramount (P11). In Del Carmen, sustainability centered on profit, planet, and people, ensuring that development does not compromise community welfare (P19). These accounts draw from prior research, highlighting an increasing dedication to integrating safety into tourism design and research-based policy to safeguard vulnerable populations (Guo et al., 2022; Parady et al., 2019). However, problems with enforcing rules and not having enough representation can weaken how well these plans work, especially if communities feel left out or overly stressed (Jaiswal et al., 2024). Imbalanced access to tourism benefits aggravates social inclusion concerns, necessitating frameworks that guarantee the protection and representation of all stakeholder groups (Mihardja et al., 2020). This initiative in Siargao to emphasize safety in conjunction with inclusive planning is a significant advancement toward equitable and resilient tourism.

3.5 Importance of Sustainable Tourism

Preservation of Natural Assets

Preserving environmental integrity is essential for Siargao's sustainability as it safeguards the island's natural appeal, which is the lifeblood of island livelihoods and tourism. The absence of pristine shorelines and crystal-clear waters will adversely affect tourism and local lives, highlighting that environmental protection is imperative, not discretionary (P16). Additionally, community clean-ups and beautification initiatives enhance client retention (P14). Measures such as mangrove replanting and coral reef conservation are essential for resource sustainability (P13). These viewpoints indicate an increasing recognition that Siargao's natural resources are communal assets necessitating collective stewardship. A study by Cavalcante et al. (2021) suggests that the absence of competent management and protection of natural, cultural, and social resources jeopardizes the fundamental elements that render tourist destinations appealing and habitable.

Resource sustainability emphasizes the enduring conservation of natural ecosystems, with community members and local leaders actively engaged in ecological management. Significance of measures such as mangrove restoration and coral reef conservation promote environmental equilibrium and enhance tourism diversification through guided paddling and snorkeling activities (P13). Preserving these natural resources is crucial for present livelihoods and future generations (P7). These initiatives exemplify a broader movement to incorporate conservation into tourism governance, consistent with research indicating that grassroots actions enhance environmental resilience and economic diversification (Suryawan et al., 2024; Oka et al., 2021). This further solidifies the essential role of collaborative frameworks among government entities, the commercial sector, and local communities in preserving ecological integrity while promoting tourism (Mardianton et al., 2024; Masitoh & Rahmawati, 2023; Özgit, 2022). Nonetheless, if communities view tourism benefits as exclusive to a particular group of people or incompatible with community priorities, it may result in opposition or withdrawal. In Siargao, promoting resource sustainability entails safeguarding ecosystems while ensuring that tourism develops in alignment with the communities and environments it relies upon.

Economic and Social Development

Sustainable tourism is crucial for Siargao's development since it generates stable and accessible income sources that enhance community welfare. A GL-MODA driver (P6) reported that some former farmers had shifted to tourism-related occupations, such as chartered driving, resort employment, or tour guiding, securing a more stable income to sustain their family. The surge in tourists had revived not just one's establishment but also those of acquaintances employed as sellers, boat operators, and hospitality personnel (P12). The transformations are especially pronounced in regions such as General Luna, Dapa, Del Carmen, and parts of Pilar, where tourism now constitutes a significant portion of the local economy (P12). Studies confirm that tourism engagement in rural regions enhances household income, diversifies livelihood opportunities, mitigates outmigration, and sustains rural land utilization (Ambarawati & Artini, 2022; Sun & Cao, 2024; Song & Li, 2024). In contrast, the seasonality of tourism can lead to job instability, and dependence on a singular industry exposes vulnerabilities during crises, as evidenced by the COVID-19 pandemic (Matanzima & Nhiwatiwa, 2022). The erosion of traditional farming practices may impact local food systems and cultural continuity, especially if

development sidelines local voices or disproportionately benefits elite stakeholders (Ba et al., 2018).

Siargao's development depends on sustainable tourism, which empowers locals to lead, shape, and benefit from the business. Preparing future leaders who can advance sustainable development is essential, as many citizens want to engage in tourism, but few are ready to lead (P18). P18 aims to address that gap, enabling young locals to train, lead, and own Siargao's future, starting with the Digital Nomads Summit and Youth Pitching Competitions. Meanwhile, P19 suggested structured training programs that build technical skills and environmental values, which align with the community-based tourism model's focus on local management and inclusive service delivery. This corresponds with earlier studies, stating that youth leadership, education, and community-led governance promote sustainable, resilient tourism systems (Fernández-Villarán, 2024; Yati et al., 2024). Quality education and leadership development must be matched with participative planning to guarantee that tourism promotes economic and social equity in Siargao.

Competitive Advantage

Siargao Islands provides eco-cultural experiences that attract conscientious, high-value guests. A homestay owner (P4) recalled that her clients are attracted to the island's natural allure and environmentally sustainable practices and community-oriented designs of local establishments. Her family business promotes local entrepreneurship and cultural integrity by hiring locals and incorporating environmental ethics, such as collaborating with fishermen for fresh seafood and implementing resource-efficient water systems. She highlighted that authentic place-specific experiences grounded in local values draw tourists who desire a meaningful connection over commercial recreation. Her thoughts resonate with demands for sustainable tourism strategies that harmonize development with cultural identity and conservation. Studies confirm that tourist destinations prioritizing authenticity, environmental sustainability, and community engagement can enhance their attractiveness and promote enduring economic stability (Wang, 2024; Tulbure & Eduard, 2024; Raveendran, 2024). This potential must be protected from overtourism and market saturation (Nguyen, 2021). Siargao's capacity to preserve its unique value proposition while fostering inclusive and community-oriented tourism practices positions it as a destination that offers recreation and authentic connections.

Sustainable tourism increases Siargao's long-term viability and endures environmental, social, and economic stresses to benefit future generations. P17 strongly mentions that affection for Siargao goes beyond being born on the island; it encompasses individuals who call the island home. She described how non-natives now participate in coastal cleanups and waste management to preserve the island's beauty. For her, Siargao's distinction lies not only in the engagement of organizations such as DOT, DENR, and PAMB, but also in the authentic dedication of the local people to safeguard their environment. She emphasized that affection for the island is not limited to its natives; rather, it is a relationship that develops over time via nurturing, connection, and accountability. She contends that this ingrained culture of communal stewardship is key to Siargao's sustainability and its most significant advantage in confronting future difficulties. This resonates with earlier research, claiming that tourism can be a long-term development tool if inclusive and transparent (Mihardja, 2020; Paulauskaite et al., 2017). In Siargao, this entails safeguarding the land on which tourism is built and empowering the local people.

4.0 Conclusion

This study examined the benefits and drawbacks of sustainable tourism in Siargao Islands, Philippines, shedding light on its vital role in shaping the island's developmental trajectory. The findings reveal that sustainable tourism in Siargao has fostered economic growth through job creation, strengthened environmental conservation, and enhanced cultural identity and community participation. However, it has resulted in ecological strain, cultural disruption, and economic disruption, mainly due to escalating costs and disparate distribution of benefits. Moreover, sustainable tourism substantially advances Siargao's long-term development objectives by enhancing infrastructure, promoting economic sustainability, and strengthening environmental and social resilience. Rooted in sustainable development principles, it underscores ecological stewardship, economic equality, and social balance, guaranteeing that tourist growth is inclusive and responsible. Sustainable tourism is essential for Siargao's future, as it conserves natural resources, improves local economies, and enhances the island's competitiveness as a unique and resilient destination.

Ultimately, this study concludes that sustainable tourism is essential for building a resilient, balanced, and

future-ready island economy when guided by inclusive, environmentally responsible, and community-driven strategies. A unified regulatory framework throughout all municipalities must be developed to guarantee standard and fair policies. Community-driven waste management systems should also be established, alongside enhanced infrastructure, public education, and consistent enforcement. Local micro, small, and medium enterprises (MSMEs), startups, and community-based tourist ventures must also be prioritized through skills development, local funding, and digital resources. Preserving cultural heritage and local values can be integrated into municipal ordinances and youth-led programs. Investment in sustainable infrastructure, encompassing renewable energy systems, rainwater harvesting, and environmentally friendly public facilities, is also advised. Other sectors, including agriculture and fisheries, are equally vital as tourism and must thus be nurtured and developed alongside it. To maintain long-term sustainability, enhancing stakeholder participation by establishing participatory governance platforms that engage citizens, companies, and local government entities is imperative. Ultimately, implementing price regulation and land-use protections is essential to shield residents from inflationary impacts and displacement caused by tourists.

Future research may expand on this study by exploring the role of digital transformation in sustainable tourism governance, assessing the impact of climate resilience strategies on island tourism economies, or conducting comparative studies with other island destinations. These directions enhance local understanding and enrich the global discourse on sustainable tourism in fragile, high-value ecosystems. Siargao's challenges mirror the global concerns experienced by several island destinations. Hence, its emerging solutions can guide international frameworks for climate adaptation, community empowerment, and sustainable economic recovery within the tourism sector. Ultimately, stakeholders, including policymakers, tourism providers, and local communities, must act decisively and collaboratively by implementing data-driven, inclusive, and environmentally sustainable initiatives to ensure Siargao's long-term viability and inspire sustainable transformation in parallel island contexts.

5.0 Contributions of Authors

Stephinejane E. Musico—The main author is responsible for the manuscript's conception and composition, encompassing data collection, analysis, presentation, and revision. This position entails establishing research objectives, implementing data collection methods, and presenting results in an organized format in compliance with academic and methodological standards.

Dr. Monsour A. Pelmin—The co-author functions as the research adviser, contributing to evaluating the manuscript's overall quality. The co-author also offers essential oversight to ensure the research's integrity, coherence, and academic rigor.

6.0 Funding

The researcher received a dissertation allowance from CHED Scholarships for the Instructors' Knowledge Advancement Program (SIKAP).

7.0 Conflict of Interests

Researchers declare no conflict of interest.

8.0 Acknowledgment

Our profound gratitude to Central Philippine University, Surigao del Norte State University, the Local Government Units of Siargao Islands and the Province of Surigao del Norte, and the Commission on Higher Education Region VI (CHEDRO VI). Above all, to God be the glory!

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