



ENVIRONMENTAL SUSTAINABILITY PRACTICES AND OPERATIONAL PERFORMANCE OF BEACH RESORTS IN SAMAL ISLAND

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ABSTRACT :

This study investigated the relationship between environmental sustainability practices and the operational performance of medium-sized beach resorts on Samal Island. Employing a quantitative, descriptive-correlational design, data were collected through survey questionnaires administered to operations managers from 57 qualified beach resorts, selected via total population sampling. The findings revealed that both environmental sustainability practices and operational performance were at a high level. Among the sustainability indicators, employee training and awareness creation received the highest rating, while water consumption, though still high, was the lowest-rated practice. Overall operational performance was also high, with the speed of service delivery receiving the highest rating and cost the lowest. A statistically significant positive relationship was found between environmental sustainability practices and operational performance ($r = 0.640$, $p < 0.05$). Regression analysis further identified water consumption and waste generation, reduction, and recycling as significant predictors, explaining 44% of the variance in operational performance. These findings suggest that as resorts increase their adoption of specific sustainability measures, particularly in water and waste management, their operational performance tends to improve. The study's results support the Stakeholder and Triple Bottom Line theories, highlighting how integrating environmental responsibility can contribute to business effectiveness. The research provides valuable insights for resort owners, local government units, and aspiring entrepreneurs, offering a data-driven basis for promoting sustainable and efficient tourism operations on Samal Island.

Keywords: *Environmental sustainability practices, operational performance, beach resorts, samal island, Philippines*

INTRODUCTION

Operational performance refers to a company's ability to efficiently carry out its core business activities and optimize operations to achieve desired outcomes. In the tourism industry, especially in beach resorts, it is important to improve operational performance despite growing concerns about environmental sustainability. Achmad et al. (2023, p. 220) stated that the success of the tourism sector largely depends on implementing strategic policies to improve overall performance. One effective way to achieve this is by strengthening support facilities and systems. Improving how a business runs, such as making products and services better, lowering costs, increasing productivity, being more flexible, and delivering faster, can help organizations earn more (Mulugeta & Sandeep, 2024, p. 412). This means that beach resorts on Samal Island need to review all aspects of their operations to implement effective strategies for better performance.

Even though Samal Island has a strong economy, focusing on environmental sustainability is still important to keep operations running smoothly. (Indiran et al., 2025, p. 15) explained that businesses that buy large amounts of materials often face problems like wasting resources, especially when suppliers require them to buy more than they need. This shows that unused materials can create challenges for sustainable operations and highlight the difficulty of meeting both business and environmental goals. Chiu, Lin, and Wang (2024, p. 1) emphasized that environmental and spatial factors play a major role in the operational success of tourism businesses. If these areas are not managed properly, it can cause problems with services and harm the environment.

This is clearly seen in the Philippines, where places like Boracay Island had to close temporarily because of environmental issues. These included shoreline erosion, wetland loss, high levels of fecal coliform in Bolabog Beaches, pollution from poor waste disposal, and illegal buildings in protected areas (Cubos, 2023, p. 1). These problems show how poor environmental practices can lower service quality, reduce customer satisfaction, and harm profits. While implementing sustainable practices can be difficult, they often lead to creative solutions and improve long-term business success. Actions

such as protecting the environment, managing resources effectively, conserving water, and planning for the future not only benefit nature but also improve overall business performance (Marneros, Papageorgiou & Efstathiades, 2023, p. 184).

Although sustainability has become a key concern worldwide, beach resorts in the Island Garden City of Samal continue to grapple with aligning their operational goals with environmental regulations. The specific link between environmental sustainability practices and operational performance, particularly for mid-sized resorts, remains underexplored in current literature. Understanding this relationship is vital for tourism development that prioritizes both environmental responsibility and operational effectiveness. In the Philippine tourism sector, Abari and Malibiran (2024, p. 163) found that although awareness of sustainable practices is increasing, their application remains uneven throughout the industry. Tourists who were surveyed also expressed concerns about waste management and the environmental impact of tourism-related activities. Research from other countries suggests a positive relationship between green initiatives and improved performance in the hospitality industry. For instance, Langgat et al. (2023, p. 1) highlighted that Malaysian hotels adopting environmentally conscious approaches, such as conserving resources, managing waste efficiently, and using green technology, achieved better financial health and operational improvements. Similarly, findings from Pakistan indicate that practices such as minimizing energy and water consumption, reducing waste, and choosing eco-safe materials have led to increased customer satisfaction, improved employee morale, and enhanced financial outcomes (Shahzady, 2023, p. 4). Rubio, Martinez, and Cruz (2023, p. 18) also emphasized that aligning environmental efforts with government policies, regulations, and green certifications helps integrate sustainability smoothly into hotel operations. While sustainability is widely explored in hotel management, research on beach resorts in coastal areas with ecological concerns remains limited. These areas face unique environmental challenges, necessitating sustainability strategies tailored to their specific contexts.

More recent studies have explored how sustainability practices affect business outcomes. Sustainable practices enhance business performance through cost reduction, improved delivery and product quality, and greater flexibility in volume and product mix (Magon et al., 2018, p. 117), though mechanisms and impacts vary by context. However, Villarias and Estores (2021, p. 845) stressed that island resorts should improve their efforts in conservation, energy efficiency, recycling, and waste reduction. It helps improve operational performance while reducing the resort's negative environmental impact. Additionally, more businesses today are adopting sustainability practices to improve their operations, meet market demands, comply with environmental regulations, and demonstrate social responsibility (Singh, 2024, p. 33).

Implementing green resource management substantially enhances the effectiveness of hospitality operations, demonstrating its considerable benefit to the industry (Waniwan & Cabuguing, 2025, p. 3493).

Previous studies have looked closely at the relationship between environmental sustainability practices and operational performance, concluding that adopting sustainable practices can greatly improve operational outcomes. Ali et al. (2021, p. 1) claim that operational effectiveness increases when suppliers and customers use green supply chain management systems. Their findings demonstrated that using environmentally friendly solutions increases organizational effectiveness and competitiveness. In addition, Martínez et al. (2022, p. 203) stated that companies that focus on environmental sustainability have higher levels of employee engagement and motivation. Similarly, Riyaz (2024, p. 30) found that eco-friendly practices such as renewable energy and waste reduction positively impact profitability by reducing operational costs, attracting eco-conscious tourists, and enhancing brand reputation. While initial investment is high, profitability gains are long-term. Correspondingly, Baliga, Raut, and Kamble (2019, p. 1182) noted that businesses can boost productivity and reduce waste by implementing circular economy principles such as recycling and resource recovery. These programs position companies as sustainability leaders in their sectors by enhancing operational performance and environmental results.

This study is anchored in Stakeholder Theory and the Triple Bottom Line (TBL) Theory. Stakeholder Theory holds that managers should develop and execute strategies to meet the needs of all relevant stakeholders within the organization (Freeman and McVea, 2001, p. 10), emphasizing fair and sustainable relationships for long-term value creation (Dmytriiev et al., 2021, p. 1470). For Samal Island beach resorts, this means balancing the interests of owners, employees, guests, customers, tourists, residents, and LGUs, especially given the sector's economic and environmental impact.

Supporting this, Triple Bottom Line (TBL) Theory focuses on economic, social, and environmental performance (Elkington & Rowlands, 1997, p. 42). This theory is highly relevant for measuring and understanding the various dimensions of sustainability (including environmental) and how they contribute to overall performance, particularly since tourism involves strategies to reduce emissions, conserve resources, and manage waste (Amaral et al., 2020, p. 5337). This implies that applying the TBL framework requires beach resorts in Samal Island to regularly evaluate their economic, social, and environmental sustainability practices. Therefore, this study aims to investigate how medium-sized beach resorts in Samal Island integrate these theoretical frameworks to achieve sustainable operations.

The conceptual framework focuses on the relationship between the independent variable, environmental sustainability practices, and the dependent variable, operational performance. Environmental sustainability practices, which serve as the independent variable in this study, involve actions aimed at protecting natural resources and reducing the negative impacts of human activities on the environment, ultimately ensuring a better future for future generations. Hazen and Sutton (2024, p. 1) explain that environmental sustainability is about maintaining the qualities of the natural world that we value. This research looks at five key areas. The first is energy consumption, which considers how much energy the resort uses. The second is water consumption, focusing on the resort's water usage. Third is waste generation, reduction, and recycling, which includes how much waste is produced, how it's reduced, and how much of it is recycled. Fourth, employee training and awareness-building are key to ensuring employees are well-trained and informed about environmental sustainability efforts, recognizing that their involvement is vital to these initiatives. Lastly, provide environmentally friendly products, highlighting the resort's efforts to offer guests ecologically sustainable items and experiences.

In this study, the dependent variable is operational performance, which refers to how well different parts of a business work together to meet key goals. The study also considers aspects such as service efficiency, customer satisfaction, as reflected in repeat visits and fewer complaints, and improvements in revenue and customer acquisition (Oke, 2022, p. 134). Operational performance is examined using four indicators. The first is cost, which refers to overall operating expenses and the efficiency with which they are managed. The second is flexibility, or the resort's ability to respond to changing market needs and environmental conditions. The third is the quality of products and services, which includes customer satisfaction and the likelihood of return. The fourth is the speed of service delivery, which assesses how quickly and efficiently services are provided. These indicators help assess

whether environmental practices affect business operations. This study examines how beach resorts on Samal Island implement environmental conservation practices and how these practices influence their daily operations. While there are studies on sustainable tourism, few have focused specifically on beach resorts in the Island Garden City of Samal.

Previous research on sustainability in tourism has largely focused at the national or international levels, overlooking the unique environmental and operational challenges faced by smaller, more specific destinations such as Samal Island. This study addressed that gap by specifically examining how environmental sustainability practices impacted the day-to-day operations and long-term performance of beach resorts in this distinct local setting. By focusing locally, the research aimed to identify effective strategies, persistent challenges, and key influencing factors to provide practical recommendations for enhancing both environmental protection and operational efficiency within Samal Island's resort sector.

This study determined the relationship between environmental sustainability practices and the operational performance of Beach Resorts on Samal Island. Specifically, this study aims to answer the following questions:

1. What is the level of Environmental Sustainability Practices of Beach Resorts in

Samal Island in terms of:

- 1.1 energy consumption;
- 1.2 water consumption;
- 1.3 waste generation, reduction, and recycling;
- 1.4 employee training and awareness creation; and
- 1.5 provide an environmentally friendly product?

2. What is the level of Operational Performance of Beach Resorts in Samal Island in terms of:

- 2.1 cost;
- 2.2 flexibility;
- 2.3 product and service quality; and
- 2.4 speed of service delivery?

3. Is there a significant relationship between the Environmental Sustainability Practices and the Operational Performance of Beach Resorts on Samal Island?

4. Do Environmental Sustainability Practices Influence the Operational Performance of Beach Resorts in Samal Island?

This study is significant as it investigates the relationship between environmental sustainability practices and operational performance in Samal Island beach resorts. The researchers aim to share the results of this study with several potential beneficiaries: resort owners and managers, who are the primary beneficiaries, can use the findings to guide which sustainable practices they might adopt to attract environmentally conscious tourists and increase operational efficiency. Second, the results can guide the Local Government Units (LGUs) in developing policies and regulations that promote sustainable tourism and environmental conservation, thereby aiding the area's broader development. Third, this study can help future hospitality business owners use its findings to guide their efforts and establish a solid foundation for adopting sustainable practices. Lastly, for future researchers, the findings of this study will significantly expand their understanding of the relationship between environmental sustainability practices and operational performance in beach resorts on Samal Island.

This study aligns with SDG 12: Responsible Consumption and Production, which focuses on the environmental sustainability practices of beach resorts on Samal Island. It promotes resource efficiency, waste reduction, and sustainable consumption habits to ensure the long-term viability of their enterprises and the island's natural resources. Furthermore, the research also contributes to SDG 11: Sustainable Cities and Communities by examining how responsible tourism operations can foster inclusive, safe, resilient, and sustainable urban and human settlements within the context of Samal Island's growing tourism industry.

METHOD

Research Respondents. The target population for this study consisted of registered beach resorts located in the Island Garden City of Samal, covering the Districts of Babak, Samal, and Kaputian. This locale was strategically chosen because of its high concentration of tourism-related businesses, which makes it a suitable setting for investigating the link between environmental sustainability practices and operational performance. According to the official records of the local tourism office, there were 179 registered beach resorts in the city. From the total list, 60 resorts were identified as suitable for inclusion based on the following common characteristics: medium-sized, officially registered, actively operating, and offering overnight accommodation services. The study employed total population sampling, a method that involves selecting all participants who meet a defined set of criteria. This approach was chosen because it is appropriate when the population is small and specific and when all members meet the inclusion criteria (Hossan et al., 2023, p. 222). This technique ensured the selection of respondents who are directly relevant to the study objectives.

The inclusion criteria required that the resorts be medium-sized, currently operational, registered with the tourism office, and offer lodging services. Resorts were excluded if they were categorized as small or large, offered only day-use services, were temporarily closed, or did not provide overnight accommodation. Additionally, three resorts initially identified as eligible withdrew their participation, citing internal policies that restricted the sharing of operational data and participation in external research. As a result, 57 beach resorts were successfully included in the final study, ensuring the collection of data that is both focused and representative of the defined population.

Materials and Instruments. The study used an adapted questionnaire based on Karimi's (2014, p. 55) study, titled "Relationship Between Green Operations Practices and Operational Performance of Hotels in Kenya." It consisted of two parts: a questionnaire on environmental practices and one on the operational performance of beach resorts on Samal Island. The questionnaire was divided into two sections: the first concerned environmental sustainability practices, and the second concerned operational performance variables. The respondents were the beach resort's operations manager and staff members known for their expertise in green practices within their respective departments. One response from each hotel was considered.

The following scale was used to measure environmental sustainability practices and operational performance in beach resorts:

Rating	Descriptive Equivalent	Interpretation
4.21 – 5.00	Very High	This means that environmental sustainability practices and operational performance are very evident.
3.41 – 4.20	High	This means that environmental sustainability practices and operational performance are evident.
2.61 – 3.40	Average	This means that environmental sustainability practices and operational performance are somewhat evident.
1.81 – 2.60	Low	This means that environmental sustainability practices and operational performance are less evident.
1.00 – 1.80	Very Low	This means that environmental sustainability practices and operational performance are not evident.

Design and Procedures. This study used a quantitative approach, utilizing surveys or questionnaires. A descriptive-correlational research design was employed to determine the relationship between environmental sustainability practices and the operational performance of beach resorts on Samal Island. In a correlational study, correlations between two or more variables are identified. In simpler terms, it investigates whether an increase or decrease in one factor leads to a similar change in another. A correlational study's findings allow researchers to determine if and to what extent two variables change in response to one another. Both variables change in the same direction when there is a positive correlation (Tan, 2014, p. 269). As a result, this design is best suited to this study because it will assess how the variables interact.

In gathering pertinent data for the study, the researchers took the following steps: First, they wrote a letter seeking permission to conduct the research, addressed to two individuals—the school director and the dean of the college. Upon receiving approval, the researchers promptly sought a suitable questionnaire and prepared it for validation. They then submitted the questionnaire with a validation request letter. After obtaining the validated questionnaire, they wrote a letter to the tourism office requesting permission to collect data. Once the data from the tourism office had been collected, they wrote another letter requesting permission to conduct the study at the beach resorts and submitted a parent consent form. The researchers then conducted a face-to-face survey. After the respondents completed the survey, the researchers promptly tallied the data and wrote a letter to the statistician, who then analyzed the necessary statistics. The study employed a descriptive correlational design, utilizing the mean to assess variable levels and the Pearson Product-Moment Correlation to examine their relationship.

RESULTS AND DISCUSSIONS

Level of Environmental Sustainability Practices

Table 1 shows the level of environmental sustainability practices of beach resorts in Samal Island. The results indicate that the level of environmental sustainability practices was high, with a mean score of 3.92 and a standard deviation of 0.487. Among the specific indicators, employee training and awareness creation had the highest mean of 4.32, with a standard deviation of 0.579, and was described as very high. Conversely, water consumption had the lowest mean, 3.46, with a standard deviation of 0.767, although it remained within the high descriptive rating.

Table 1.

Environmental sustainability practices of beach resorts, n=57

Indicators		SD
Energy consumption	3.62	0.697
Water consumption	3.46	0.767
Waste generation, reduction and recycling	3.97	0.542
Employee training and awareness creation	4.32	0.579
Provide environmentally friendly products	4.21	0.564
Overall	3.92	0.487

The high overall level of environmental sustainability in Samal Island's beach resorts, particularly their strong focus on employee training, suggests a proactive, integrated approach to responsible tourism that can attract environmentally conscious travellers' and foster a positive image for the destination. This clearly indicates that the resorts place strong emphasis on training their staff in environmental knowledge and skills, ensuring that their sustainability efforts are supported and clearly demonstrated. On the other hand, water consumption recorded the lowest mean among the indicators; however, it still received a high descriptive rating. This suggests that water-saving practices are in place but may not be as strong or consistent as other sustainability efforts. It indicates that there is room for improvement through enhanced strategies and actions. Collectively, these findings demonstrate a strong commitment to sustainable operations.

Moreover, these results strongly affirm that beach resorts in Samal Island are aligning their operations with both Stakeholder Theory and the Triple Bottom Line (TBL) Theory. This is evident in initiatives such as staff training on environmentally sustainable practices, which contribute to significant social benefits (Ocho et al., 2025, p. 110) and show a strong commitment to environmental performance and long-term value creation. However, the observed gap in water consumption, although still rated at a "high" level, suggests that water management may not be as consistently practiced as other sustainability efforts. This finding is consistent with studies by Malacapay and Tababa (2020, p. 1714) and Pabilando, Caparro, and Bantilan (2021, p. 1714), which note that water-saving measures are often less emphasized in Philippine beach resorts. Overall, these insights support the idea that beach resorts place high value on environmental sustainability practices, as emphasized by Soriano (2022, p. 97), and are actively adopting environmental management strategies to promote sustainable tourism (Manalo and Afafe, 2023, p. 27).

Level of Operational Performance

Table 2 shows the level of operational performance of beach resorts in Samal in terms of cost, flexibility, product and service quality, and

speed of service delivery. The results indicate that the overall operational performance of beach resorts in Samal Island is high, with a mean score of 4.00 and a standard deviation of 0.476. Among the indicators, the speed of service delivery had the highest mean value, 4.28, and a standard deviation of 0.692. Conversely, cost obtained the lowest mean score of 3.64 and a standard deviation of 0.632. Table 2.

Operational performance of beach resorts, n=57

Indicators		SD
Cost	3.64	0.632
Flexibility	3.95	0.718
Product and service quality	4.13	0.753
Speed of service delivery	4.28	0.692
Overall	4.00	0.476

The high overall operational performance indicates that beach resorts on Samal Island are managing their resources and operations effectively to deliver a positive guest experience. This means operational performance is evident, and these resorts are generally performing effectively across the evaluated dimensions. The “very high” score in speed of service delivery reflects a high level of guest satisfaction with how quickly services are provided across different areas of resort operations. It also shows that management is effective at delivering timely, efficient services that meet customer needs. On the other hand, the lower cost score is still rated as high. It indicates that some guests may find expenses relatively high or that the resorts could improve how guests perceive value for the money they spend. This may relate to different areas of resort spending, such as accommodations, food, or other paid services. This points to a possible area for improvement, where resorts can consider adjusting their pricing or adding more value to their services to stay competitive and keep guests satisfied.

Moreover, these results support the Stakeholder Theory. Consistent with the theory, the results show that beach resorts are trying to meet the expectations of guests and other stakeholders by delivering high-quality, timely services. This aligns with findings from Quitoriano, Echavez, and Dagang (2024, p. 184), who found high guest satisfaction with resort services in Misamis Oriental. Likewise, these results also align with the study's Triple Bottom Line (TBL) Theory, particularly the economic dimension. The high operational performance of beach resorts can lead to profitability and customer satisfaction, as demonstrated by Olivar et al. (2022, p. 192), whose research in Mati City showed effective marketing strategies resulting in high performance levels. This also resonates with Guray (2018, p. 212), who found high client satisfaction with services received at Banana Beach Resort.

Significance of the Relationship between Environmental Sustainability Practices and Operational Performance of Beach Resorts in Samal Island

Table 3 presents a correlation matrix examining the relationships between environmental sustainability practices and the operational performance of beach resorts in Samal Island. The results indicate a statistically significant positive relationship between the two variables, with correlation coefficients ranging from .308 to .640. On the other hand, the strongest positive correlation is observed between overall environmental sustainability practices and overall operational performance (0.640). Conversely, the weakest correlation, which is also negative and statistically non-significant, is found between waste generation, reduction, and recycling, and cost (−0.006). Another non-significant correlation exists between employee training and awareness creation and the speed of service delivery (0.192).

Table 3.

Correlation Matrix of the Measures of Environmental Sustainability Practices and Operational Performance

Environmental Sustainability Practices	Operational Performance				
	Cost	Flexibility	Product & service quality	Speed of service delivery	Overall
Energy consumption	.238	.325*	.329*	.394*	.475*
Water consumption	.250	.511*	.367*	.462*	.589*
Waste generation, reduction & recycling	-.006	.391*	.405*	.558*	.509*
Employee training and awareness creation	.279*	.302*	.276*	.192	.386*
Provide environmentally friendly products	.415*	.445*	.198	.284*	.488*
Overall	.308*	.514*	.412*	.495*	.640*

* $p < 0.05$

The results imply that adopting environmental sustainability practices generally improves the operational performance of beach resorts on Samal Island. The strong positive link between overall sustainability efforts and overall performance highlights the value of taking a broad approach to environmental practices. This suggests that as beach resorts increase their adoption of sustainability measures, their operational performance tends to improve. However, the nonsignificant relationships between energy consumption, water consumption, waste generation and reduction, and recycling practices, and the cost performance of beach resorts indicate that these efforts may not have a direct or measurable impact on operational costs. In other words, implementing or enhancing these practices does not significantly lower or raise overall expenses. Similarly, the study found nonsignificant relationships between employee training and awareness creation and the speed of service delivery, as well as between providing environmentally friendly products and product and service quality. Although these initiatives are important for promoting sustainability, they may not immediately influence how quickly services are delivered or how customers perceive the quality of products and services. This detailed finding shows that while overall sustainability is helpful, the effects of specific practices on performance can vary and may warrant further study.

This result affirms the study of Duric and Potočnik Topler (2021, p. 22), which emphasized that implementing environmentally sustainable practices in the hotel and tourism industry positively impacts overall performance. Similarly, Gamero, Azorin, and Ortega (2023, p. 30) found a positive relationship between sustainability practices and operational performance in hotels and beach resorts. Ratajczak (2021, p. 14) also confirmed a significant link between environmental practices and financial performance. In contrast, the inverse correlation found between waste generation, reduction, & recycling and cost (−0.006) is consistent with Agesa et al. (2022, p. 119), who noted that waste management efforts may not have a measurable impact on cost performance. Furthermore, the non-significant correlation between employee training and awareness creation and speed of service delivery (.192) aligns with findings by Sao Jao et al. (2019, p. 15), suggesting that this particular sustainability practice does not have a statistically meaningful effect on the speed of service delivery. Moreover, this finding clearly supports stakeholder theory by confirming that being environmentally responsible not only satisfies stakeholder expectations but also improves overall performance, aligning with the TBL's aim of integrating environmental and economic goals. Resorts that invest in green practices benefit from better service delivery and guest satisfaction, indicating a win-win for business and the environment.

Significant Influence of Environmentally Sustainable Practices towards Operational Performance among Beach Resorts

Table 4 presents the regression analysis conducted to determine the significant influence of implementing environmentally sustainable

practices on the operational performance of beach resorts. The results revealed that the overall model was statistically significant, with an R-squared value of 0.438. Among the predictors, water consumption had a beta value of 0.354 and was statistically significant at the 0.05 level. Similarly, waste generation, reduction, and recycling had a beta value of 0.352 and were statistically significant at the 0.01 level. In contrast, energy consumption (beta = 0.058), employee training and awareness creation (beta = -0.124), and the provision of environmentally friendly products (beta = 0.248) did not show statistically significant effects.

Table 4.**Regression Analysis for Variables Predicting Beach Resorts' Operational Performance (n=57)**

Variable	B	SE B	β
Energy Consumption	0.040	0.099	0.058
Water Consumption	0.219	0.100	0.354*
Waste Generation, Reduction & Recycling	0.309	0.096	0.352**
Employee Training & Awareness Creation	-0.102	0.122	-0.124
Provide Environmentally Friendly Products	0.210	0.124	0.248
R ²		0.438	
F		9.729**	

*p<0.05 **p<0.01.

The R² value of 0.438 indicates that about 44% of the variation in operational performance can be explained by environmental practices, such as water consumption and waste generation, reduction, and recycling. Meanwhile, the remaining 56% can be explained by factors not included in the study. In addition, the F-value of 9.729, with a significance level of p<0.01, confirms that the overall result is statistically valid. Findings revealed that water consumption obtained a beta value (β) of 0.354, and waste generation, reduction, and recycling obtained 0.352, indicating a positive influence. This implies that beach resorts that manage water use more efficiently and implement proper waste handling practices tend to perform better in their operations. This suggests the importance of focusing on effective water management and waste reduction efforts to improve the performance of beach resorts, making these key areas for sustainability initiatives. On the contrary, energy consumption, employee training and awareness creation, and providing environmentally friendly products did not show a significant influence in this study, although they still contribute in other ways with beta values (β) of 0.058, -0.124, and 0.228, respectively. This suggests that this area does not directly contribute to beach resorts' operational performance. As supported by (Mustapha and Wahidin Awang, 2018, p. 213), resorts that implement water conservation strategies and waste management practices tend to perform better financially and operationally. Similarly, waste management and water conservation practices are more commonly adopted, possibly due to profit and performance motives (Osiako and Reddy, 2020, p. 15).

Moreover, this result also aligns with both theories. The result supports the Triple Bottom Line (TBL) Theory by showing that environmental efforts (planet) can lead to economic benefits (profit) through improved operational performance. In addition, the results support Stakeholder Theory, as they highlight that stakeholders value specific environmental actions such as efficient water use and waste management, which, in turn, can positively impact the resort's operational success and reputation. This indicates that focusing on these key environmental practices not only contributes to sustainability but also meets stakeholder expectations, ultimately enhancing the overall performance of beach resorts.

Conclusion

Based on the study's findings, beach resorts on Samal Island demonstrate a high level of environmental sustainability, indicating that these practices are evident. This suggests a consistent implementation of sustainable practices across the surveyed beach resorts in terms of energy and water consumption, waste generation, reduction, and recycling, employee training and awareness-raising, and the provision of environmentally friendly products. Among the indicators, employee training and awareness creation had the highest mean value, indicating that each resort did its best to demonstrate environmental sustainability practices. Meanwhile, water consumption, while still high, was identified as the area with the lowest rating. These results suggest there may be more room for improvement in how these beach resorts manage their water resources.

Additionally, the operational performance of these beach resorts also demonstrated a high overall level. This suggests that, in general, the beach resorts in Samal Island are performing well. Among the indicators, the speed of service delivery had the highest mean value, suggesting that most beach resort customers on Samal Island are satisfied with how quickly services are provided. Cost, though still high, received the lowest rating, suggesting that guests may find prices a bit high or expect more value for what they pay.

Moreover, results show a significant relationship between environmental sustainability practices and operational performance. This suggests that implementing environmental sustainability practices generally improves the performance of beach resorts on Samal Island. This indicates that as environmental sustainability practices increase, operational performance also tends to improve. The strongest positive relationship was observed between overall environmental sustainability practices and overall operational performance. However, the study also identified instances where certain environmental practices, such as waste management, reduction, and recycling, showed a non-significant or even a negative relationship with cost, and employee training and awareness creation had a non-significant relationship with the speed of service delivery. Furthermore, the analysis indicated that aspects such as water consumption, waste management, reduction, and recycling significantly influenced operational performance.

Furthermore, findings align with Stakeholder Theory and the Triple Bottom Line (TBL) Theory. Similar to Stakeholder Theory, the results show that beach resorts demonstrate efforts to address stakeholder needs, particularly through employee training and environmentally sustainable practices that foster long-term relationships and value. Similarly, the TBL Theory is reflected in the study, which emphasized the balance among environmental, social, and economic outcomes, with sustainable practices contributing to improved operational performance and customer satisfaction. Hence, these results affirm the theoretical foundations in the context of Samal Island's beach resorts.

Recommendation

Based on this study's conclusion, it is recommended that resort owners and managers consider enhancing their water conservation efforts, as this area showed the lowest mean score among the sustainability indicators. Simple improvements, such as regular maintenance and water-saving practices, may lead to greater efficiency. Reviewing pricing strategies may also help address guest concerns related to cost. Moreover, continuing staff training and sustainability programs is encouraged, as these contribute positively to overall performance.

Local government units may consider offering support through policies, training programs, or incentives that promote sustainable tourism practices.

Collaborating with resort operators to establish environmental standards and provide technical assistance could help improve both sustainability and service delivery within the island. Future business owners entering the hospitality industry are encouraged to prioritize environmental sustainability as

part of their business planning. Focusing on resource efficiency, staff development, and quality service can contribute to both guest satisfaction and operational success.

Future researchers are encouraged to delve deeper into the nuances of environmental sustainability by conducting a qualitative study, with a particular focus on small enterprises and on exploring the perceptions and lived experiences of beach resort stakeholders on Samal Island. Additionally, comparing how sustainability operates across different types of resorts or places, or studying it over a long period, could help us better understand how these practices affect business performance in various situations.

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