

COMPARATIVE ANALYSIS OF VISITOR SATISFACTION AND ENVIRONMENTAL AWARENESS AT CHAUNG THA AND NGWE SAUNG BEACHES, MYANMAR**Aung Myint Myat, Win Pa Pa Myo, Khine Yin Mon Thant, Hlaing Htake Khaung Tin***

Abstract: The current study analyzes the satisfaction level and environmental awareness of Chaung Tha and Ngwe Saung beaches, which are some of the attractive beaches to visit in the Ayeyarwaddy Region, Burma/Myanmar. With tourism becoming more significant in the economy of the region, it is important to learn more about the tourist himself and his perspective regarding his experience and involvement in environmental issues, which serves as an important factor for sustainable development in the region. For assessing the satisfaction level regarding cleanliness, quality accommodation, safety, food, and experience, a structured survey study involving 200 respondents, equal numbers on the two beaches, is being used for the study. Predictors of environmental awareness include waste behavior of correct disposal, the reduction of plastics, one-way usage, involvement in current environmental initiatives in each location, and the views expressed regarding the ecological impacts of tourism. Significant differences between the two places were noted. Although the other beach resort of Ngwe Saung, known as the relatively more developed and exclusive beach resort, received higher ratings in terms of the quality of infrastructure and tourist comfort and satisfaction, the other beach resort of Chaung Tha, dominated by local tourists, revealed higher levels of awareness with respect to the environment due to efforts by the respective community-oriented approaches to waste management. These results provide implications of the trade-offs between the quality of the infrastructure that contributes to tourist satisfaction and behavior that indicates awareness of the environment. Nevertheless, the study outlines a template in terms of the sustainable tourism strategy for the respective coastlines in Myanmar.

Keywords: Visitor Satisfaction, Environmental Awareness, Coastal Tourism, Chaung Tha Beach, Ngwe Saung Beach.

Introduction: The tourism in Myanmar's Ayeyarwady Region is a part of the local economy, generating employment and small- and medium-enterprise development. The beach resorts are just a few among the attractions within the region that have been so well sought after by both local and foreign tourists. The beaches are graced by the blend of nature, entertainment, and heritage, and thus they

form the focus of local tourism development. Although both are beach resorts, Chaung Tha and Ngwe Saung differ in the level of infrastructure, tourist patronage, and environmental management initiatives, which shape the tourist encounter.

Chaung Tha beach is popular in its simplicity and accessibility, with a larger share of domestic holidaymakers such as family groups and small groups. Its growth is retarded, with fewer luxury hotels, basic food centers, and fewer recreational amenities. Ngwe Saung is a developed, upscale beach, with foreigners and high-spending domestic holidaymakers. Its features are modern resort amenities, higher food diversity, and improved security and recreational amenities. These contrasts are responsible for diverging visitor satisfaction trends, as each destination attracts different segments of the tourist market.

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Apart from satisfaction, ecological sensitivity forms an emerging aspect of sustainable tourism. The coastlines are most vulnerable to destruction by environmental degradation around tourism activities like litter, contamination by plastics, and interference with processes in nature. Tourist environmental sensitivity and practice can help a lot in preventing negative effects and ensuring long-term sustainability. Chaung Tha has been positively affected by environmentally friendly local community initiatives like special collection campaigns at grassroots levels, involving tourists in maintaining beach-based ecosystem systems in pristine conditions. Ngwe Saung, being more developed in infrastructure, lacks ecological balance due to rising tourist visits and less participation in environmental sensitivity educational efforts.

Understanding how tourist satisfaction and ecological awareness intersects provides the nexus in establishing effective policy intervention and greening tourist management. Contrast in both approaches shall allow stakeholders to differentiate intervening actions that attain optimal tourist experience and greening. In the study, the endeavor sets out to illustrate how Chaung Tha and Ngwe Saung shall integrate infrastructure development, tourist satisfaction, and ecology preservation at the same time and obtain practical application towards Myanmar tourism development and policy intervention.

Literature Review

Visitor satisfaction and environmental consciousness are two essential themes of sustainable coastal tourism; both well studied in Southeast Asia and elsewhere. Visitor satisfaction is often described as the extent to which tourists' expectations are met through their experience, spanning a very wide array of elements including infrastructure quality, accessibility, safety, accommodation, food service, and recreational facilities (Chen & Tsai, 2007). Visitor satisfaction was high where repeat visitation was assured, positive word-of-mouth promotion was attained, and a significant economic gain was achieved for the

receiving communities (Kozak, 2001). For coastal destinations, facilities such as beauty in the beach environment, water quality, and availability of recreational opportunities such as boat cruises, swimming, and cultural tourism facilities also impact visitor satisfaction (Li *et al.*, 2018).

In this regard, environmental awareness relates to the tourists being more aware of the ecological impacts of their actions and would rather seek to behave in a manner that is more sustainable. It includes proper waste management and disposal, avoidance of single-use bags and plastic bottles, and making contributions to local conservation efforts on site whenever possible (Lee *et al.*, 2010). Coastlines are particularly sensitive to environmental degradation, and tourist activities of littering, disruption, and pollution surge along with this sensitivity. Research conducted in Vietnam, Thailand, and the Philippines also established the need for environmental education and people's participation in tourism management structures if negative impacts were to be minimized while at the same time enhancing the satisfaction of tourists (Zhang *et al.*, 2019). More importantly, eco-sensitive tourists are found to be more disposed to responsible behavior, which reduces the ecological footprint on highly sensitive coastal ecosystems (Choi & Sirakaya, 2006).

A comparative study regarding beach tourism has also examined the relationship between development accomplishments, tourist types, and levels of environmental awareness. For example, well-developed beach infrastructures would most probably welcome international beach tourists, whose focus revolves around infrastructural developments and comfort, while local beach tourists would more often participate in environmental projects provided with a sense of local contributions (Nguyen *et al.*, 2020). It shows that a compromise can be achieved whereby beach destinations with more developed infrastructures have a greater potential for excellent satisfaction of tourists' infrastructural needs but lack effectiveness regarding environmental issues, and less developed

beach destinations would have a potential to create environmental awareness among tourists through local public and grassroots efforts despite lacking infrastructural developments.

Although not much study in Myanmar examines the connection between visitor satisfaction and environmental awareness in coastal destinations, a significant portion of current literature either concentrates on economic gains or environmental protection in isolation (Myanmar Ministry of Hotels and Tourism, 2023). However, understanding the connectivity of all aspects is vital in encouraging sustainable tourism growth, especially in fast-emerging locations such as Chaung Tha and Ngwe Saung. Based on current literature, the present study conducts a comparative observation on the two beaches in considering the impact of differences in the level of development, composition of visitorship, and societal involvement on both environmental awareness and visitor gratification.

By compiling evidence from studies performed on coastal tourism in ASEAN, the present study provides a set of frameworks in which local and foreign tourists, through their eco-conscious behavior, contribute to sustainable tourism results. Tourism managers, policymaking authorities, and people from communities can utilize them while they are determining frameworks in which infrastructure development is weighed against environmental protection.

Methodology

The research used the quantitative survey instrument to measure the level of visitor satisfaction and environmental awareness at Chaung Tha and Ngwe Saung beaches. It prepared a structured questionnaire and structured questions amounting to 20 questions arranged in two major categories: visitor satisfaction and environmental awareness.

- Visitor Satisfaction indicators included: cleanliness, accommodation facilities, safety, food and beverage quality, recreational opportunities, and overall experience.
- Environmental Awareness indicators included: use of waste bins, avoidance of single-use

plastics, support for local environmental campaigns, and perception of tourism's impact on the environment.

Sampling and Data Collection: The questionnaire targeted 200 respondents who were split equally across both beaches (100 for Chaung Tha and 100 for Ngwe Saung). The respondents were selected using convenience sampling and were foreign and local tourists who were at least 18 years old. The data collection occurred during the high tourist season (March–May 2025) to get the representative sample of the typical visitor experience.

Data Analysis: Satisfaction ratings among visitors were on a 5-point Likert scale (1 = very dissatisfied to 5 = very satisfied), and environmental awareness was recorded on percentage frequencies for environmentally friendly behavior. The descriptive statistics for all the variables and the comparison test produced the differences between the two beaches. Key findings were also shown pictorially using tables and diagrams.

Results and Analysis

Visitor Demographics: There was a total of 200 respondents who took the survey, half at Chaung Tha beach and half at Ngwe Saung beach. Chaung Tha had a greater number of local tourists (78%), while there were more foreign tourists at Ngwe Saung (48%). The gender split was relatively equal at both locations, apart from a greater number of males at Chaung Tha (56%) and females at Ngwe Saung (51%). The split for the different age groups occurred mainly between 18–50 years, suggesting that both beaches enjoy support by a wide range of the adult population. These differences by population demography are in line with previous research findings that open beach destinations which are better developed draw foreign tourists while lesser developed destinations are well-liked by locals (Nguyen *et al.*, 2020). Chaung Tha attracts a larger proportion of local visitors, while Ngwe Saung has a higher share of international tourists. Gender and age distribution are balanced across both beaches in table 1.

Table 1. Visitor Demographics

Variable	Chaung Tha (%)	Ngwe Saung (%)
Local Tourists	78	52
Foreign Tourists	22	48

Male	56	49
Female	44	51
Age 18–30	42	37
Age 31–50	38	41
Age 51+	20	22

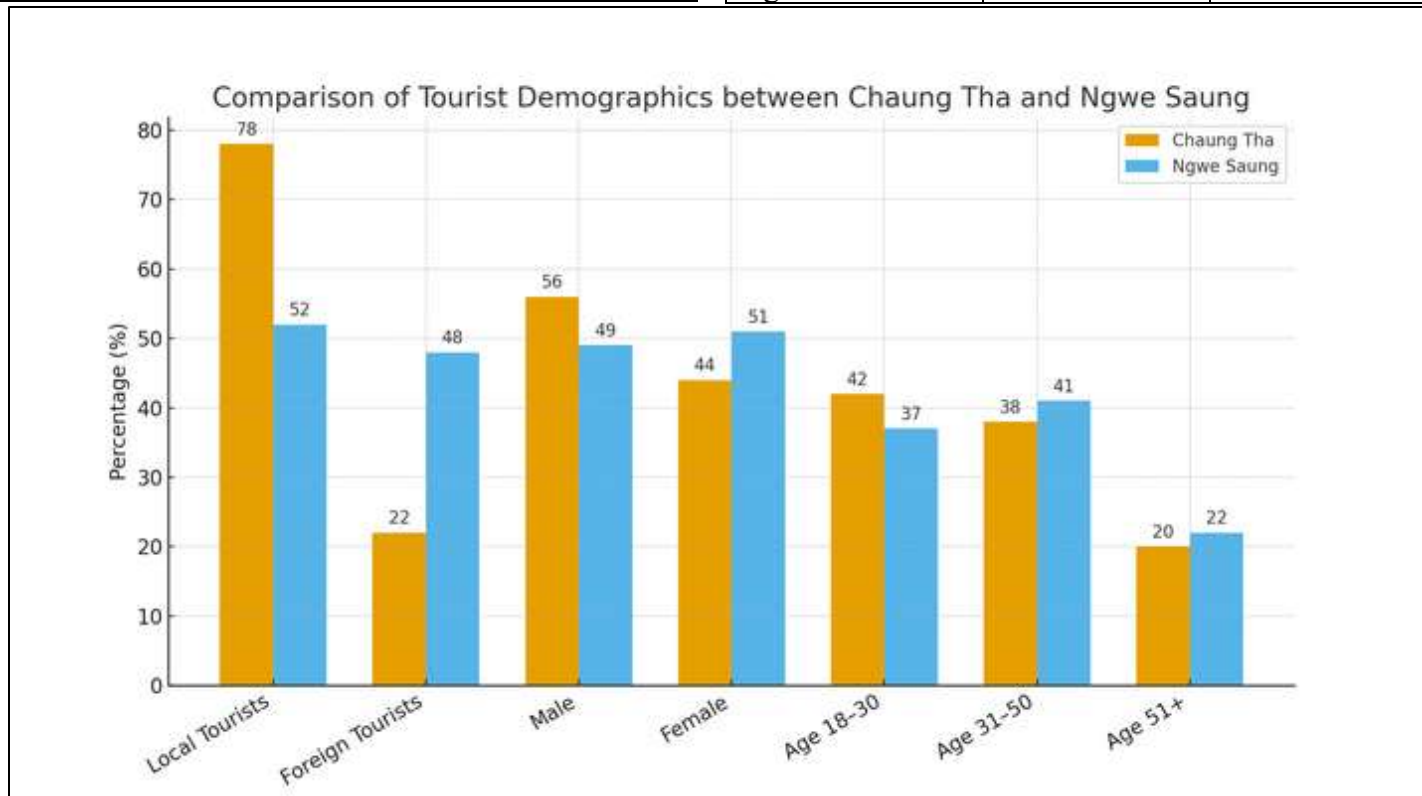


Figure 1. Comparison of Tourist Demographics

Visitor Satisfaction Indicators: The tourists rated their satisfaction in five aspects: cleanliness, facilities in accommodation, safety, food and beverage services, and overall satisfaction. Ngwe Saung scored higher in all aspects, with overall satisfaction being 4.3 out of 5, while in Chaung Tha it was 3.5. The difference in cleanliness was greater, with Ngwe Saung scoring 4.1 while Chaung Tha scored 3.2, while in facilities in accommodation, Ngwe Saung scored 4.3 while Chaung Tha scored 3.4, indicating better infrastructure in Ngwe Saung. Well-developed infrastructure of beaches is found to have major implications in gaining visitor satisfaction in coastal tourism destinations (Li et al.,

2018). Ngwe Saung is higher in all aspects of satisfaction as shown in table 2 below.

Table 2. Visitor satisfaction indicators

Indicator	Chaung Tha (Mean Score 1–5)	Ngwe Saung (Mean Score 1–5)
Cleanliness	3.2	4.1
Accommodation Facilities	3.4	4.3
Safety and Security	3.7	4.0
Food and Beverage Quality	3.8	4.2
Overall Satisfaction	3.5	4.3

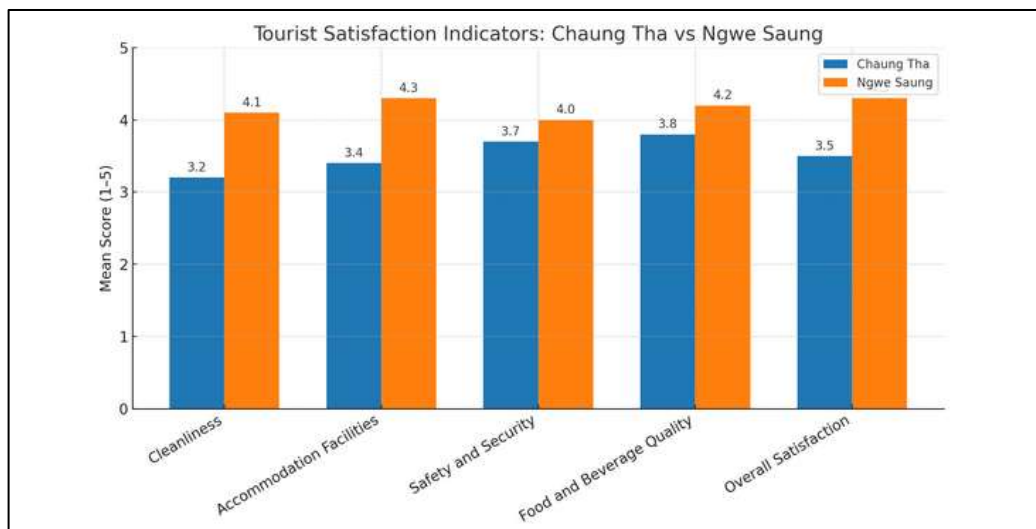


Figure 2. Tourist Satisfaction Indicators

Environmental Awareness Indicators: The results for the indicator of environmental awareness showed that visitors in Chaung Tha showed stronger eco-conscious behavior. The percentage of those who used trash cans regularly was 68%, compared to 54% in Ngwe Saung. Similarly, the percentage of those who support local activities for the environment was 61%, compared to 39% in Ngwe Saung. These results clearly show that the efforts put in by the community in Chaung Tha result in greater support for eco-conscious behavior in visitors. The results support the study of Choi and Sirakaya (2006) stating that the community plays an

important role in encouraging eco-conscious behavior in tourists. The visitors in Chaung Tha display higher eco-conscious behavior in table 3.

Table 3. Environmental awareness indicators

Indicator	Chaung Tha (%)	Ngwe Saung (%)
Always use waste bins	68	54
Avoid single-use plastics	42	33
Support local environmental campaigns	61	39
Believe tourism impacts environment strongly	74	58

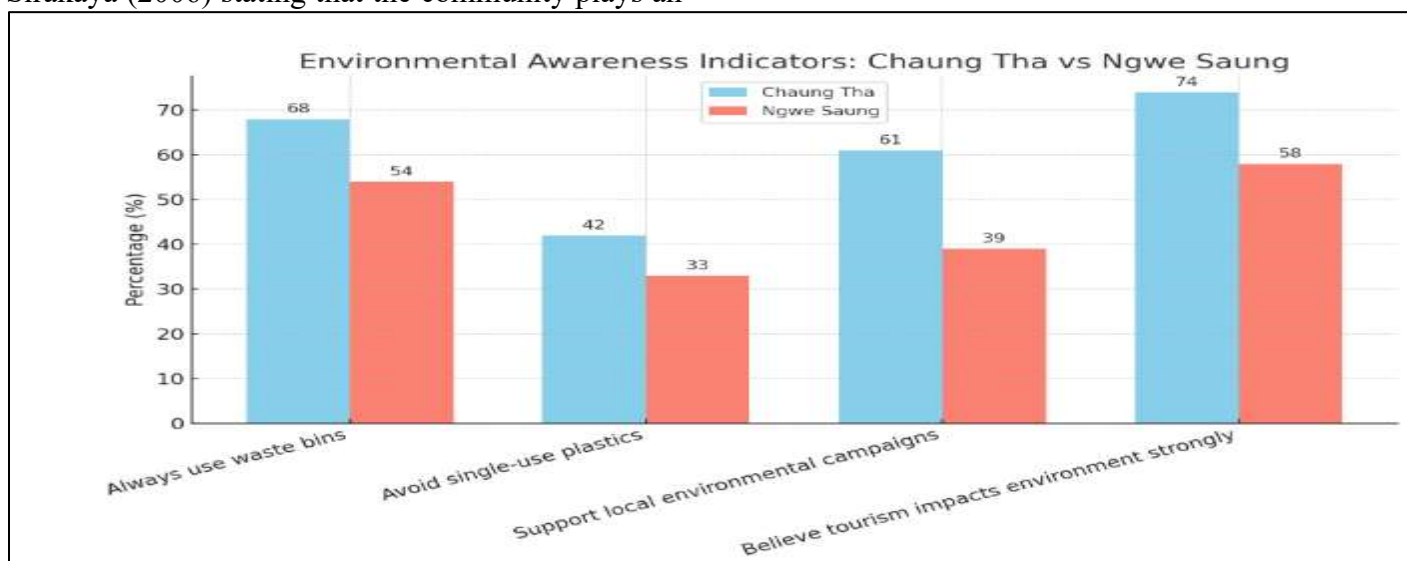


Figure 3. Environmental Awareness Indicators

Comparative Analysis The comparison shows a trade-off between the infrastructural satisfaction and eco-responsibility of tourists. Indeed, Ngwe Saung outperforms in terms of visitor comfort and satisfaction because of higher-order facilities; on the other hand, Chaung Tha nurtures greater environmental awareness among tourists. Foreign visitors in Ngwe Saung appear to mind their comfort more, while domestic tourists at Chaung Tha are very involved in eco-responsible practices. Based on these findings, sustainable development of tourism should include both infrastructure development and environmental education to harmonize visitor experience and ecological protection in the following table 4.

Table 4. Comparative Analysis of the Study

Satisfaction versus Awareness	Ngwe Saung stands out in visitor satisfaction but falls behind in environmental awareness, while Chaung Tha reflects stronger environmental responsibility but slightly lesser satisfaction ratings.
Visitor Profiles	Foreign tourists at Ngwe Saung prioritize comfort and infrastructure, while local visitors at Chaung Tha are more involved in eco-friendly practices.

The following charts figure 4 illustrate key aspects of visitor demographics, satisfaction, and environmental awareness for Chaung Tha and Ngwe Saung beaches.

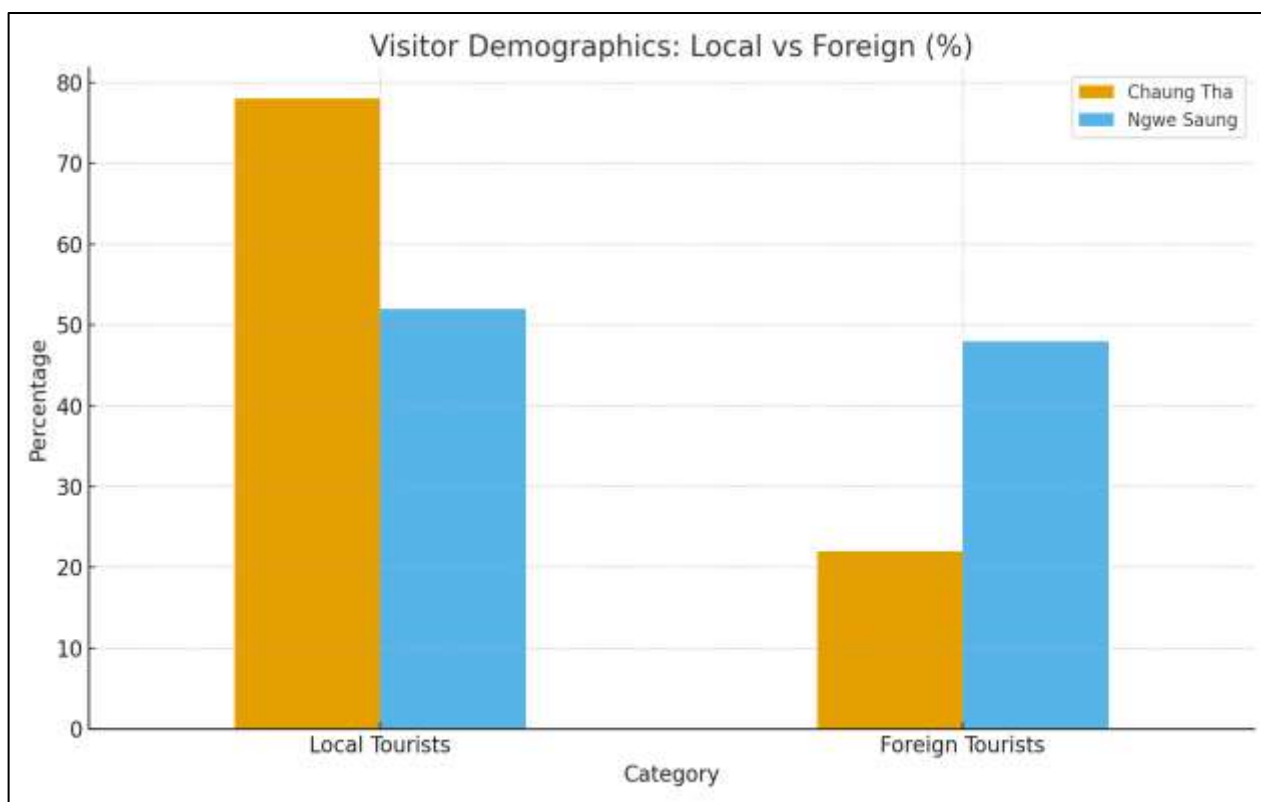


Figure 4. Visitor Demographics: Local vs foreign tourists.

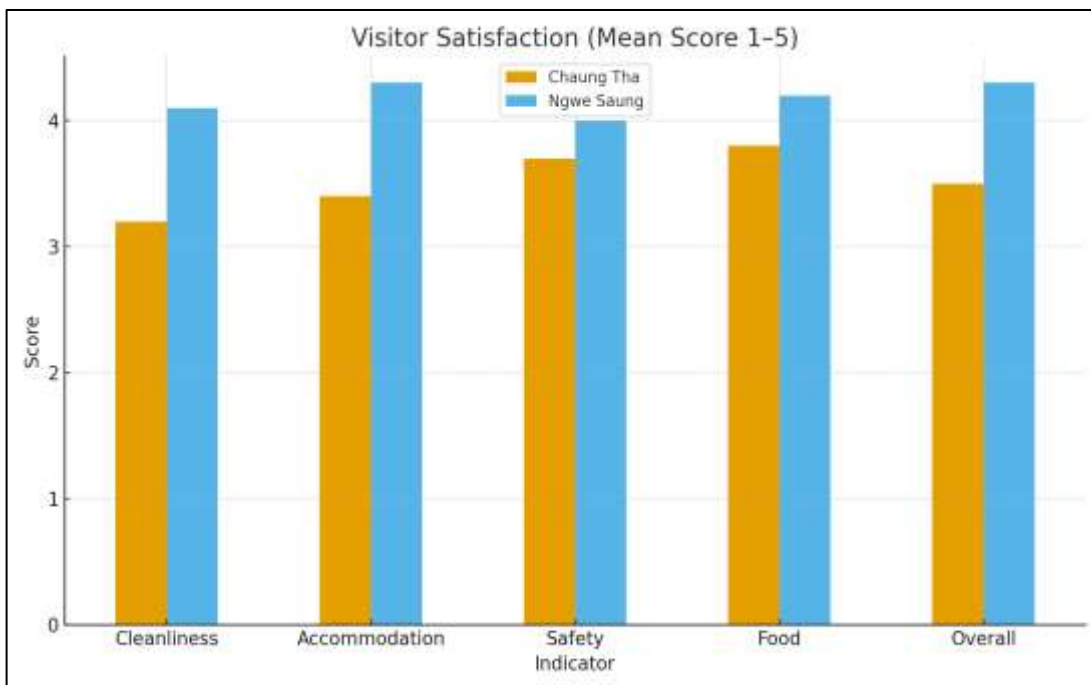


Figure 5. Visitor Satisfaction: Comparison of mean scores between the two beaches.

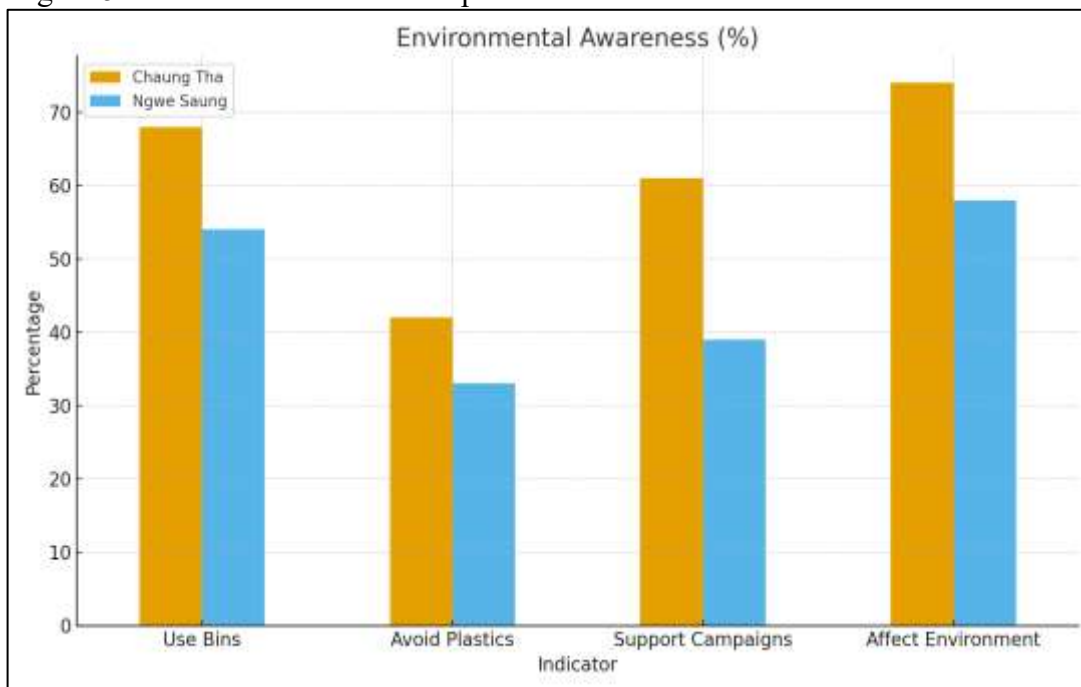


Figure 6. Environmental Awareness: Visitor behavior and perceptions.

Discussion

The findings suggest that happiness in tourists and environmental awareness is dependent upon how developed the area is, who the tourists are, as well as how promoted the area is to tourists. Well-

developed beach destinations have more to provide in terms of comfort; however, they may not be as efficient in spreading eco-friendliness without special projects alone. The less developed beach destinations like Chaung Tha suggest that local

actions are already efficient in spreading environmental awareness without using many resources to this effect. The findings suggest to policymakers to include projects related to eco-friendliness in all beach destinations while allowing infrastructure to develop in an eco-friendly way to help keep tourists happy, along with providing sustainability to the tourism industry in the coastal areas of Myanmar.

Comparison of Chaung Tha and Ngwe Saung shows different patterns of environmental concerns and satisfaction. Chaung Tha is relatively lower than Ngwe Saung in satisfaction level in all respects like cleanliness, availability of accommodations, safety, and overall satisfaction. This finding is ascribed to well-supported infrastructures available at Chaung Tha Beach and easy access to resort hotels and other recreation activities for foreign and rich local tourists. This information is supportive of other studies performed in Southeast Asia, which established that service delivery and quality of infrastructures significantly contributed as predictors for satisfaction with tourist services of each respective beach location (Nguyen *et al.* 2020; Li *et al.* 2018).

Meanwhile, Chaung Tha illustrates higher tourism consciousness of the environment. Relatively fewer numbers of tourists reported not practicing proper garbage disposal, refusing to use single-way plastics, or participating in environmental protection campaigns in the areas. This may be a result of the implementation of community involvement, local waste management schemes, and regular environmental awareness programs. These are similar to findings that local involvement and grassroots activities may enhance environmental awareness among tourists also finds echo in (Choi & Sirakaya, 2006; Zhang *et al.*, 2019).

Results indicated a reasonable balance between infrastructure for satisfaction and environmental responsibility. While Ngwe Saung provides more convenience and comfort to tourists, it falls short in encouraging tourists toward environmental care. Chaung Tha, with relatively less infrastructural standards, has managed to inculcate a culture of

environmental responsibility. It is pivotal to learn about the balance in sustainable tourism planning since an extreme focus on development without environmental control can hamper long-term environmental and social sustainability.

The policy recommendations would be to incorporate environmental awareness campaigns as part of the more advanced tourism infrastructure at Ngwe Saung and enhance Chaung Tha's facilities, not at the expense of its environmentally friendly policies. This can engender both tourist happiness and environmental sustainability, allowing Myanmar's coastal tourism to continue to do well economically while having the least amount of environmental degradation.

Conclusion

The comparative research undertaken around tourist satisfaction and environmental awareness in the cases of Chaung Tha and Ngwe Saung, as destinations for tourist beaches, focuses on the difference in the tourist experience, in addition to the stage of development. In this case, the research reveals that the standard in the tourist infrastructure available to Ngwe Saung is better, while the factor related to environmental awareness is prioritized in the tourist arrivals in the case of Chaung Tha.

The message to be learned in making sustainable tourism at the coast is to strike a balance that is perfect between the factors highlighted above. The implementation of projects based on the environment at highly ended tourist resorts such as Ngwe Saung, coupled with the development activities at Chaung Tha, must be achieved using ecologically sustainable methods. Both factors can combine to maximize customer satisfaction at the two locations, while environmental issues are promoted.

The conclusion of the research emphasizes that the evaluation of visitor satisfaction needs to be mixed with assessment of environmental behavior for purposes of informing policy formulation and management decisions. Through an integrative strategy, coastal tourism in Myanmar can contribute to a people- and environment-specific sustainable future.

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