WJARR

World Journal of
Advanced
Research and
Reviews

World Journal Series
INDIA

(REVIEW ARTICLE)

Check for updates

Sustainability in Thailand's Hospitality Industry: Emerging green initiatives shaping the future of tourism by 2030

Aphisavadh Sirivadhanawaravachara *

Associate Professor (Magadh University), Industrial Professional, Bangkok, Thailand.

Abstract

The current research investigates thoroughly the new and progressively rising green schemes acquiring root in Thailand's hospitality sector and their broader implications for sustainable tourism in the next decade. Even though it is a long-standing global contributor to many forms of environmental degradations, the hospitality sector, particularly hotels, has been found to exhibit a noticeable and worrisome laggardness in embracing completely holistic eco-friendly practices. But there is a rising and rapidly growing recognition within the industry of the paramount significance of sustainability, fueled by immediate environmental concerns as well as the rising, evolving expectations of tourists. The study presents the current landscape of Thailand's hospitality industry in detail, the critical role that hotels play in tourism development, and the fast-rising trend towards green hotels that give utmost priority to environmental responsibilities. It deals extensively with the diversified impact of such new green policies not only on the sector's overall green reputation but also on the interlinked social and economic dynamics of the country that are very much dependent upon these activities.

1. Introduction

Although one of the largest, most successful and most environmentally harmful industries in the world, hotel companies have traditionally evaded calls for socio-environmental accountability. They have succeeded in avoiding environmental responsibilities because most individuals do not associate hotels with industry-caused environmental issues. Even influential green hotel critics have generally been critical of the tourism sector in general but ignored the hotel aspect. Though tourism is an industry that has earned for itself the reputation of a 'smokeless industry', ironically it is the smokeless industry par excellence one that depends on the health of the physical environment to function. Tourists fly millions of miles to destinations whose major attractions are environments that are said to be exotic, beautiful, clean, and unpolluted. Tourism also has a vested interest in the conservation of its natural and cultural resources because they are the very lifeblood of all tourism businesses. Unfortunately, conservation of resources is hindered by the fact that tourism has a fractured structure. It is the hotel that processes tourists, controls how much the attractions are promoted, and how much physical barrier to attraction to build at the destination site (Kasim, 2004). Such critical functions of a hotel can lead to socio-environmental loss at two stages, i.e., construction and operation. During construction, uncontrolled growth of hotels in a desired environment which a location enjoys can lead to environmental degradation through dust, raw waste, and runoff. Tourism growth might appear to raise the economy and lead society into a modern status but simultaneously create the gap between the poor and the wealthy larger. While wealth from the rich pours in, the poor and oftentimes forgotten poor are shoved to where one cannot find any glamour and glitz. Resentments at the local level, increased tensions, and social unrest may result as the underprivileged feel they are begrudging about their circumstances while kept aware of the excesses of the prosperous ones (Goh et al., 2017).

∗ Corresponding author: Aphisavadh Sirivadhanawaravachara https://orcid.org/0009-0007-1885-5065

2. Overview of Thailand's Hospitality Industry

Today, tourism is a significant sector in Thailand's economy. The sector provides 12.1 percent of the country's gross domestic product (GDP), 3.8 percent of the employment, and 7.0 percent of the total goods exported. Thailand is a wealthy, dynamic, and diverse country with its own unique culture and customs. The mixture of various cultures, such as Indian and Chinese cultures, can be seen in cultural festivals and events. Apart from natural resources, such as beaches, mountains, and forests, and culturally unique architecture, hinder the beauty of the country. The emerging economy, secure political climate, and safety of tourists favor the tourist industry. The country receives visitors from other countries who come for a variety of reasons. The tourism industry in Thailand offers large and small enterprises various business opportunities. Hospitality industry is comprised of services that provide food, provide accommodation, transport people, and engage in recreation for guests. In addition to accommodation, food and beverages, and recreational services, hospitality firms may include establishments engaging in catering or banquet services or retail prepared foods. It may also include laundry services and companies engaging in arranging tours, providing automobile parking facilities, and other services to travelers. The hospitality is vital to the Thai economy. Besides creating income and job opportunities, it helps preserve the culture and traditions of Thailand and introduces foreigners to these traditions. Management practices in this industry and Thailand's best practices in sustainable tourism have garnered scarce literature. Ongoing and active community processes for the tourism sector yield a bountiful source of practices and policies that ideally should enhance greater sustainability. Each community is unique, and its participatory process reflects social organization and cultural norms. Globalization provides a mature environment for exchanging and transferring knowledge among communities for wider sustainability experiences. Twenty-one sustainable practices are shown. Through local agendas for knowledge transfer, these practices could be utilized towards a more sustainable tourism industry locally and worldwide.

3. The Importance of Sustainability

Sustainability efforts have been shown to benefit tourism, the hospitality industry, and how people will be living in the future. Sustainable eco-tourism reduces the use of goods and energy by restaurants and resorts and thus reduces carbon output. By doing so, and with help from nature, local communities can conserve their land and resources and keep their environmental reflex. These steps can directly influence the education part of the tourism industry where companies can promote the movement of eco-friendly production chains, optimizing their product flows, and the bio-dynamism of the buying process. Straightforward initiatives that target both employees and clients can include. It's no big deal, but I'll stay here to save power, that's it! "To bring that to mind, forward this email to 2 or 3 of your non-work buddies and forward another to 2 or 3 (work) buddies, if any." This can be easily duplicated from email to A3 print paper and stuck on the wall. In the mid-sized plot, a specific chair can be placed to wait for a walk. Both Chinese and English wording can be used, thus enabling it to grab the attention of both local and international tourists. "Nothingness" such as this cannot be seen anywhere in the hotels. It would help in generating hypotheses unconsciously to inquire "why no-waiting-chairs." Essentially, sustainability can enhance the competition in attracting tourists. Nowadays, Thailand's most renowned resorts and restaurants are extremely well-known, so the rest of them that do not have a better reputation may not be able to catch the eye of the tourists. Nevertheless, sustainability is a quality and an object that should be honored not just because it is a good thing to do, but because it is a virtuous habit. It's tempting to be courageous: to propagate a story that allows actions on sustainability. Even if one could only briefly state it in the brochure or on the reception wall, these actions would be considered. It would be a great privilege if the act to honor this planet can remind even a small portion of people to become the advocate of Planet Sanity. Eco-sustainable practices make this a reality (B Aday & V Phelan, 2011).

4. Current Green Initiatives in Thailand

Globally, there is obviously an increasing level of awareness and concern regarding worsening natural environments and resources, especially in the hotel industry. The sector is becoming aware that something must be done now to avoid the worst predictions of global warming and its anticipated effects, to bring in a sense of sustainability and safeguard the future of the hospitality sector. With this consciousness in mind, most industries, including hotels, are at the forefront of attempts to impact on the environment positively and contribute towards sustainability. There is also growing pressure for hoteliers to take their share of environmental responsibility and demonstrate greening initiatives. Aspects of "greening" are gaining prominence among nations and tourists alike, as expressed through various environmental conferences. While industries are said to be culprits of environmental problems, they can contribute positively through green concepts and practices (Kasim, 2004). Hospitality practitioners, in the last decade, have accomplished hotel greening as a responsive and responsible means to impact the environment positively, where customers' and external stakeholders' contributions can be garnered, with the end in view being sustainability. Overall,

while most businesses are turning green, this is not the case for most hotels. Greening within hotels is in its infant stage, at least in more extensive and more obvious aspects of green. Reviews suggest there are more single-use applications than dual-modes of considered and tacit greening, which is a developing deficiency. Most hotels have some greening efforts in mind, with no perception of a too-narrow green pool. This observation is reiterated with suggestions to utilize wider visions for green policies, and to formulate infrastructural facilities of greening. Aspects are discussed on how practices can help, how ignorance of the many hidden bounties can hinder. Management ignorance of hoteliers' own power shows minimal appreciation of climate risk, which can hinder appropriate motivation for greening. It can align with more local NGOs to wed hoteliers to green government policies (Mungai & Irungu, 2013). Going green has an influence on a hotel's sustainability performance, although it has a limiting effect in the short run due to a period of mismatched investments and returns. It is possible to have sustainable greening pathways through obtaining green certification.

4.1. Eco-Friendly Accommodations

Eco-hotels and eco-hotels are where tourists experience an emotional connection, which are also branded as sustainable tourism. It reduces environmental degradation and offers an environmental gain to tourists. Hence, hotels' eco-counseling services are evaluated based on their friendship patterns and other factors. Hotel customers go about looking for their green strategies as hotels go green. Current studies limit the theoretical framework by excluding critical perspective. Instead of hotel guests, hotel managers are trained practitioners with the capacity to provide more educated insights into the discrepancy between practice and perceived green features in hotels. A mix of quantitative and qualitative approach is deemed appropriate. A cross-sectional survey among managers of environmental hotels is carried out. Variables include eco-counseling hotel performance and guest attitude towards eco-counseling hotels, which have a significant influence on guest attitudes towards such hotels. Managerial recommendations and advice to future researchers are given, and the research will contribute academically to hospitality management research in South Africa, that is, for environmental hotels and pro-environment behavior. Sustainable tourism aims at raising the standard of living of all the stakeholders and maintaining the environment upon which tourism is dependent. The anticipated growth of international tourism is a formidable challenge. United Nations agencies have called for setting up rudimentary monitoring systems and for collecting data on the sustainability of tourism. Growth has tended to lead to environmental degradation, social disruption, and dissatisfaction with economic impacts in tourist regions. Most tourist destinations and therefore tourist enterprises are labeled as non-sustainable and therefore unsustainable (R. Sucheran & V. Moodley, 2019).

4.2. Sustainable Food Practices

Sustainable food in the hospitality sector is governance actions for sustainable sourced foods as an interface between producers and consumers to resolve environmental issues. Hospitality and tourism are primary areas of food supply and consumption in the world. Regardless of the food consumption pattern's types (full served food, buffet, or food takeaways), considerable amounts of food are purchased, stored, prepared, and cooked. Innovative sustainable food practices that have been implemented include both suppliers and consumers to attain well-being, ethics, and environmental impacts. Supply-based initiatives include sustainable food procurement policy, optimization of sourcing structure, adequate purchase inputs, organic food and beverage processing, and sustainable waste management (Dowpiset, 2015). Consumed-based strategies include customer awareness, control of ordering, menu engineering, portion control, and food donation. Best practices provide overall operation explanations and illustrate that green food practices assist in various eco-objectives and influence sales (Ranae Alcorn, 2014). Streams of research to be established in the future are grand theories of environmental food practices, comparative studies between countries and food supply environments, further literacy of food practices interacted with a wider environment agenda, and nudging issues investigated. The eating environment in food vending machines on campus has changed food access patterns, particularly unhealthy purchases by same-day students. Various nudges were introduced to promote food vending healthiness and advocate healthier food options. The impact of the nudges on food purchases, total purchases, and healthiness was evaluated to develop a platform for further studies. The findings showed that choice architecture, educational nudges, and pricing nudges have a positive impact on food vending. Reduction in overall purchases was observed using a game-based educational nudge. Various nudges are to be used in promoting behavior change in food vending environments, with more complex nudges needed to understand behaviors theory.

4.3. Waste Management Solutions

Even while sanitation and waste management increasingly capture the interest of scholars, the media, and the public, municipal solid waste management issues continue to be a special concern in Thailand, especially in local tourist towns. Hill towns—centers of both cultural and eco-tourism—have even more complicated issues for waste management (Sakcharoen et al., 2023). Management of waste in the tourist town maps two waste flow dimensions: one resulting

from tourism and another from urbanization in the district. Overall, waste is a complicated, cross-cutting problem with a lot of similar problems like tourism, urbanization, city planning, good governance, and environmentally friendly city. Waste banking and an open session every month with members of the public exchanging shopping coupons for organic waste were noted to be practice community engagement. A systematic literature review strategy was adopted to search for empirical case studies in Thailand and similar contexts. Research indicated that waste management in most areas was poor due to inefficiently carried out waste management, production of toxic waste, loss of waste to the environment, and tourism-induced waste management. In many cases, top-down waste management solutions are apt to neglect local participation and measures to create a sense of ownership and care for the locality. There was little integration of waste management solutions in each local setting, resulting in piecemeal cosmetic solutions. Since each case has its own limitations, one needs to aggregate and plan a city-level solution to waste with different parts being complementary to each other and available for everyone to join. In business models, reward-based community-sharing initiatives can be attempted, especially waste banking since land development funds tend to be available in the system. If powered, blanket monthly or weekly operations for rewarding recycling through valuable commodity swaps can be extended to tackle unsorted waste to newly built cities. Most importantly, local centers of training to support the expertise as well as resources of decentralized methodologies and systems need to be co-designed. Fore-strategic neighborhood action and staged city-wide initiative to waste handling through decentralized solutions using decentralized technology for servicing all suburban areas must be a priority.

4.4. Energy Efficiency Measures

Energy efficiency is one of the main environmental tracks of hotels, and it has been extensively examined through various studies adopted across the world (Švec et al., 2023). While seeking enhanced energy efficiency measures, hotels have pursued alternative sources of renewable energy. In Spain, a study was done where initiatives of hospitality sectors were assessed for the adoption of renewable innovation through advanced innovations, supportive innovations, and dominating projects (del Populo Pablo-Romero Gil-Delgado et al., 2017). The study revealed that overall, in the energy supply of resources consumed in the hospitality sector of Spain, there have been few changes that are encompassed in the adoption of renewable energy innovations within the hospitality sector. In this regard, it would seem more evident that, ultimately, the hospitality sector still needs to enhance energy efficiency strategies and, to a significant extent, renewable energy innovations.

5. Green Certifications and Standards

Green certification standards vary widely, illustrating a non-conformity consensus on eco-certifications (J. Zhang et al., 2014). Despite the difference, test methodology and certification use are comparable. Certified hotel research largely shows variation in eco-practice between certifications. Different eco-effective use certificates vary, while requirements to stay certified offer evaluation consistency while handling different GTBs. Differences in GTBs are expected to bring inequivalence in the realization of eco-efficiency goals and varying pre-specified routes towards greater levels of eco-efficiency. As the majority of GTBs address similar issues for reducing resource intensity and thus emissions, operations decisions could be influenced by which GTBs a hotel adopts only indirectly. This eliminates intuitively expected variations in performance based on GTB characteristics. Still, these requirements are different in ways of achieving the eco-efficiency goals, hence the net implications of simultaneous attainment of several certifications are unpredictable. This is a contradiction of "rules-in-use"abstract policy outcomes and "rules-in-form," strict legislation open to little interpretation. Motley levels of organizations with different mandates add complexity to the certification procedures. Eco-certifications have spread to sly crevices and recesses, rendering increasingly unclear what green certified means. Characteralignment under Eco-certifications would enable improved understanding of letting this is done and possible unexpected effects. Generally, a shift in market power would be desirable towards more outcome (eco-effectiveness) rather than process orientation (eco-eco-efficiency). Long-term dependency on eco-certifications or on lower-tier ones is worrisome due to pent-up rehabilitations of hotels. The re-establishment of eco-certifications would alter the structure of production and profit, putting hotels back onto an accepted eco-eco-efficiency trajectory as re-investment once again became available. Substantial and CPI concurrence long-haul relationships are often actively pursued by GTBs and travel agencies, uncommon for the hotel sector. Substantial effort to create a complete tool of comparison can arise with governments, GTBs, and travel agencies successfully mobilized with existing indicators. A bar to repeated entries would constrain reduction in eco-effectiveness as a means of doing so without potential deadly loss of eco-benefits would likely be sought extensively. Management of well-being of eco-certifications would also warrant attention.

5.1. Global Certification Programs

Under scrutiny in this article are a few of the internationally recognized hotel certifications. Most common, and likely most valuable, are the Green Globe Awards and Cornell and ISO certifications, both administered by two distinct

organizations. Thailand, in September 2004, was the initial country to be brought on board the Green Globe certification program's 2,000 properties, and since then has been followed by other nations with vast success. The celebrity award specializes in hospitality energy, preservation of nature, and focus on social opportunities. Use of the award demands that a hotel subject itself voluntarily to assessment by experts from Green Globe's FType criteria analysis team. The Certification award that achieves certification necessitates prevention lodging data entry (J. Zhang et al., 2014). Cornell University and ISO internationally both offer an equivalent program that signifies the non-Thai nature of the Green Globe program. The ISO certification is for the accommodation operator's responsibility of management and actual conservation activity of those accommodation operators who implemented it and designed it. Those activities carried out for certification that are more detailed for that property can also be included. The most visible part, though, is the presentation of decades of preserved and retained pieces of what would otherwise have been lost or destroyed. This would encompass, for example, the numerous artifacts preserved from either the pre-historic society institutions to the current institution if separated and possibilities Pink Letters (Patricia Martínez García de Leaniz et al., 2018).

5.2. Local Certification Initiatives

Global developments of eco-certification schemes need to consider local challenges and preferences. Hospitality consultancy firms become the most dynamic drivers for change in Thailand. Sustainability in the hotels should emerge from an understanding of their own context. With the huge magnitude of Thailand's hospitality industry, how one delineates a sustainable hotel during industry stakeholders' gathering organized by the research team is most welcomed as the starting point towards an uninterrupted understanding of what sustainability means. The perspectives of the experts towards how to journey towards sustainability and what the government needs to do are just as much of primal importance. Certifying body reliability, conformity to tourism authorities' agendas, and compliance with local market tastes must be tackled in order to ensure the success of the future roll-out of any upgraded eco-certification schemes in Thailand. With the persistent and pressing call to action, all attempts should be exerted to coarse up local eco-certification efforts, founded on past best practices, as soon as possible. The adoption and enforcement of international eco-certification schemes by export-focused businesses may not be the best in the first instance. Tighter compliance with local specifications and constraints and more limiting factors would offer a more realistic way forward and avoid further involvement with sustainability in Thai tourism. An attempt at a national effort to standardize and duplicate best practices could lead to future requirements that are compatible and less complicated. The first in-country eco-certification initiatives by hospitality consultancy firms and tourist boards are a welcome and fitting start towards it. Guidelines for sustainability call for efforts on the part of mid-size hotels in the industry. Behavioral adjustment required to achieve compliance under an eco-certification system and opportunities lost through failure to do so existed were seen as relevant. Future eco-certification programs would have to look at the expansion of the hospitality sector in Thailand. Mid-size hotels' eco-certification requirements must be accommodated to enable successful take-up of the initiatives (J. Zhang et al., 2014).

5.3. Impact of Certifications on Consumer Choices

More and more, stakeholders—governments, consumers, and non-governmental organizations (NGOs)—are calling on the hotel industry to react to environmental concerns (Patricia Martínez García de Leaniz et al., 2018). The study established the impacts of communications about eco-certifications in terms of operational effectiveness and estimated their wider impacts on sales in terms of consumer decision. More importance was given to the period 2001 to 2010. These were the years during which awareness of eco-certification had first started to grow. Eco-certifications were not yet old but rapidly growing (J. Zhang et al., 2014). This study drew and analyzed a spelling-match sample of hotel comments to investigate how the eco-certifications and consumer-consumed resource efficient environment evolved concurrently. The findings demonstrate that eco-certification has an immediate impact on consumer choice, particularly among stayers on holidays. The impact diminishes after a while as the number of certified hotels expands, perhaps owing to the market dilution impacts of a highly saturated market. Eco-certification is also estimated that it will amplify the growth levels of resource efficiency externalities in measures of operation corresponding to measures of certification institutions. These growth rates are approximated using difference-in-differences based upon Yelp review records. A new text analysis algorithm captures and evaluates the semantic material and target of consumer reviews in balancing spelling similarity, assigned weight, and spelling difference accumulation. Collectively, the findings validate that sustainability initiatives like eco-certifications work. They allow for more intimate linking of resource efficiency at the attention and operation levels. By taking initiative to address consumer concerns, hotels can potentially instill greater efficiency and effectiveness in the use of resources upstream and stabilize the downstream in consumer choice patterns. While the desire for sustainability has hardly diminished, consumer interest continues to continue to evolve. New candidates deserve consideration, observation, and regulation. Consumer concern not only varies from one memorable focus to the next perpetually, but they are abrupt and indiscriminate.

6. Case Studies of Successful Green Hotels

Some of the world's hotels are already on the road to sustainability. Many others are exploring the topic in corporate offices. Some of the specific environmental issues being tackled are those relating to waste disposal, air quality, energy conservation, and water conservation. A few also consider carbon footprints of operations and effects on user health. They both conserve energy and water and produce less waste. These savings and reductions have translated into big dollar amounts on utility savings and are often touted in marketing materials to meet consumer demand (Huff, 2019). Green Innovations Hotels are hotels that reduce the operating costs of resource consumption while investing in energy and water efficiency and waste minimization. This is taking place in hotels globally, but they are few and far between, as many are too scared to implement something untested in their situation. That opens opportunities for consulting firms to work with hotels to implement agricultural-scale deployment of assessments and green innovations to create energy, water, and waste efficiency management plans. For instance, there had been extensive management consulting in the health club space drawn from work with facilities like fitness centers, but very little in the hospitality, lodging, and hotel space. The Ritz Carlton brand is one of the only two Five-Star Five-Diamond resorts in Naples, Florida, and the company has been working with sustainability and green innovation for more than ten years. Considerable efforts and investments focus on waste, energy, water, air quality, and materials and products on property to responsibly perform the task in a luxury manner. There is a cogenerated chilled water plant providing power and hot water for heating that is run using ozone in dishwashing machines. Terra Sticks are also used in buffet hot food islands. There are thermostats set at 78 degrees during the day and 70 degrees at night in the guest rooms (Mungai & Irungu, 2013). There is a move to save towels and linens, and telemetry and cycle driving in closet and refrigerator cars. Overall, there are AVL and ONVI re-combinators putting sensed motion back into the product. There are some 40/Filters/ Re-Tx in elevators, which make the air more refreshing.

6.1. Hotel A: Innovative Practices

The second action to be suggested is the installation of an intelligent control water-saving system. The smart water meter can detect a small amount of water leakage in hotels and send alarms to find faults. Therefore, the water-saving intelligent control system plays an important role in the hotel industry. Saving revenue can be gigantic by installing a water-saving intelligent control system. Invest in advanced intelligent control devices at the property level. Guest rooms may employ the use of radar to control the operation of toilets' and urinals' water pumps. This will save money because the pumps will not lose water. This can achieve energy savings in saving time but has a longer payback period as the maintenance and operation cost of lighting controls will be higher. The hotel industry can utilize pressure-sensing toilets. It is prevalent in Japan but in most other nations all over the world it is lagging. Therefore, competition can be attained, which will promote lower operation costs due to less repeated maintenance queries and complaints. Hotel business is encouraged to adopt wall plants from sustainable materials as an alternative for a typical wall curtain or plant frame. Wall plants are part of the wall, with the green indoor garden look without making any noise within the room, thus providing an improved environment for visitors. Hotel business is encouraged to adopt a smart energy-saving meter. It can show actual usage values in an LCD screen. Energy awareness can be produced through monitoring tourists' electricity reports, which will yield a positive result in heightening tourists' awareness of new products and saving energy better than the display presented on site only. More visitors become aware of their electricity through the smart meter compared to very negative or non-opinion tourists before installation

6.2. Hotel B: Community Engagement

Hotel B has been engaging with the local community and has been involved in a variety of community activities. Community activities in the hotel include using local suppliers for F&B. Most of the seafood is sourced from a fisherman in a nearby small nautical village. The hotel also donates food and leftover items to a local zoo. The hotel gives financial support to a scholarship fund for children of local villages. This project was set up after the Asian Tsunami in 2004 with a motive to support local low-income families and local school children. Additionally, the hotel has been successfully involved in a volunteer program, where guests can participate in a half-day program of work on the Royal Project. There have been long-term benefits for both the local community and the visitors. The other outcomes of this program are that guests are thrilled to be a part of creating a positive difference in the community and that there is a remarkable increase in word-of-mouth communication for the hotel. Greeted by multicolored flower and strawberry fields and vegetable cultivation, guests can feel the wonders of nature. Despite no direct participation in the community issues that negatively impact the tourism industry, Hotel B donates and makes purchases to support the local community. However, it is not a process that was carried out proactively. The hotel brags, keeps it top secret, and has not entertained any marketing potential. There are also other instances from hotels that voluntarily and more openly undertake this. The hotel's CSR activities are also not clearly outlined and consolidated into a corporate document. CSR also needs to be expanded and intensified to address other critical issues like cheesy tourism, children and sex exploitation, and

appreciation and involvement of locals for cultural heritage, Thai traditional society, and local religious beliefs (Kasim, 2006).

6.3. Hotel C: Renewable Energy Usage

Hotel C is a luxury hotel located in downtown Bangkok. It is committed to environmental protection through balancing technological development and preservation of nature (R. Sucheran & V. Moodley, 2019). Green practices at the hotel should reduce atmospheric temperatures, air pollutants, and energy costs as far as possible, and improve its operational reliability (Huff, 2019). These involve four green management areas as follows: (1) use of renewable resources to save energy; (2) resource conservation by reuse or recycling to provide energy back; (3) building management activities to keep track over green areas by AI technologies; and (4) safeguarding the environment from catastrophes by implementing measures on site. Through the enhancement of consumption of the electricity generated through renewable source, the hotel will generate 60 MWatts of electricity every year from 15,000 sq.m. installed solar cells on the west roof. Its 4MWatts capacity cogeneration plant or Waste Heat Recovery Generator will generate 80% of fresh water used by the cogeneration system and the generated electricity. The hotel will also expect a significant reduction in greenhouse gases. The freshwater generated from the cogeneration water will feed the chillers and steam system to obtain cost on boiler waters. The 10,000 m3 water storage tank will help in maintaining the water stored in reserve in case no water is supplied by the local authority. This freshwater can also be used for structural building pumps. Building management control systems will utilize a calculation procedure to predict heat and ventilation by AI technologies for energy savings without compromising comfort factors. The agreed building automation system will consider the rotation speed of pumps, fan speed, and chillers load to provide operation reliability. The hotel will also protect the environment from disasters by taking measures on site. A sure way of looking out for nearby disasters will be the provision of help in sending alerts to owners and guests.

7. Challenges in Implementing Sustainable Practices

Since there has been increased awareness of climate change and sustainability, the tourism industry is set to help improve the environment worldwide. Thailand's hospitality industry has attempted to change their practice for sustainable development with all the stakeholders and levels of society due to the change in the environment over the last decade, but it's difficult to demonstrate whether the sustainability practices are implemented. Therefore, issues in continuing the sustainable practices exposed by actors in the hospitality industry in Thailand come to the fore. Six major issues emerged from thematic parallel analysis to the Sequential Framework: awareness, financial resources, market demand, price competition, personnel, and operation type. These findings provide the evidence base needed for additional research of sustainable practices in specific segments in the tourism industry (Rowe, 2018). This study contributes to the literature with commonly debated overall issues to driving sustainable tourism development in the tourism industry through the theme of thematic analysis that was a less applied methodology in the field of study as well as the case of Thailand. This study makes deeper and more comprehensive understandings of issues regarding the barriers to continuing sustainable tourism practices by different players in tourism such as independent single and multiple small and large-scale hotels, civil society groups, and researchers. These results serve as a foundation for exploring other targeted segments or contexts in tourism in developing countries. Furthermore, this study provides directions on how to perform practices or initiatives to contribute to the development of the industry at the grassroots level by working from all levels to help provide answers to the recent call for future studies in this area. Thematic analysis of manager responses to what are the challenges to moving forward with sustainable practice was conducted according to the framework analysis process to establish a coding framework from a thematic map. Nineteen themes were generated. These were then reconceptualized into six fundamental challenges to align with the Sequential Framework: awareness, finances, market demand, price competing, staff, and nature of operation. To inform the players in the hospitality chain that they are formulating, implementing, and monitoring the pace of the chain's sustainability transition process, the time for the adoption of sustainable practices is estimated with reasons.

7.1. Cost Implications

While modern-day tourists continue to place importance on sustainable tourism, doubt still exists in whether tourism product owners are ensuring that their packages are sustainable, feasible, and attainable regarding price and resource aspects. It precipitates an argument exploring and placing the price elements of sustainability in the context of tourism. The current paper discusses the expenses incurred by tourism product owners to make their business sustainable. A qualitative research approach was utilized with the application of semi-structured interviews as a means of data collection. Purposive sampling was applied in participant selection from within the tourism industry, where eight interviews were conducted. Data analysis applied content analysis and thematic analysis. The findings revealed that there were costs associated with sustainable tourism product development and operation, which affected its future growth and development potential in South Africa. Concurrently maintaining industry-specific capability and

infrastructure while competing for significance, realization, and feasibility was determined to have been impactful (R. Sucheran & V. Moodley, 2019).

In Thailand, while recent visitors have been placing greater priority on sustainable tourism aspects such as in budget, timetables, abilities, provisions, and places as well, either internal or external leaders or actions enabling sustainability from in the context of this research tourism resources embraced have not been accompanied by correlational attentiveness. Substantial doubt arises from the way sustainability is ensuring the design cycle or development cycle of tourism product provision regarding climate change, resources, and logistics sustainability also regarding cost, responsibility, and scope. Hence, this forms a discourse that builds and explains heuristics to interrogate and situate the design aspects of sustainability in tourism exactly as the heuristics are used to guide a case study of new green projects of a Thai hospitality context.

7.2. Lack of Awareness

Understanding the word 'greening' and its definition has been studied previously among certain groups outside the tourist industry, for example, students and other industrial sectors. There were no previous studies, however, carried out specifically on the hotel industry as a single unit. Therefore, little is known regarding awareness of 'greening' and the possible implications (and potential) that the tourism sector may derive in relation to the future of sustainable tourism, commerce, and the hotel industry. There is a recognition that there are several barriers to the idea of being able to meet 'greening' adequately–whether green concerns, standards and/or labeling. Thus, to support (encourage) the hospitality sector in its future sustainable endeavors in the future, one must first learn about their awareness and perception, and maybe the implications that these cognitions will entail (Kasim, 2004). The purpose of this research paper is to report on the findings of a research study that examined Thailand's hospitality sector in terms of their awareness of the term 'greening' and the implications (if any) the term and its possible implications will have on future trading and award of hotels and ultimately Thai tourism. The study yielded several key findings that can contribute to the larger tourism sector in subsequent sustainable projects and understanding Thailand's greening mindset. Implications of theoretical and practical are also addressed. Questionnaires were asked to be completed by all participating hotels which were to be personally handed over to management delegates to collect primary data concerning the subject of investigation. The survey had five parts–section 'A' consisting of demographic questions, section 'B' consisting of hotel operational questions, section 'C' consisting of awareness questions, and sections 'D' and 'E' with ramifications questions to be replied to.

7.3. Regulatory Hurdles

The state must be restricted in its sphere – most business opportunities must be reserved for entrepreneurs to decide. Encouraging corrupt business actively is not only foolish and economically destructive; it will also provoke intense public resistance and wide-ranging intolerance of corrupt activity. Commercial development will generate social disturbance even when it fails to create employment and deteriorates the conditions of work. But pure neoliberalism is not feasible since much of public life must stay in some sense the reserve of the state. The glaring order of priority is summed up in the following axioms: No business regulations except if they were voluntarily agreed upon and were not imposed. An ill-concealed greed for revenues produced measures that are worst-case scenario insincere – evasive and evasive of the hard but real issues, such as the failure of the present organizations to deal with tourism or the inability of the foreign bilateral aid organizations. There is deception, since not all the tourists are equally good for the economy. In addition to mass tourism which has been generally destructive to the economy and inanely damaging to the more sensitive ecosystems of southern Thailand, 'quality' tourism was sought which for the most part entailed the privatization of portions of the interior, accessible only to foreign tourists. Pursuits and friendships with willing parties to develop quality tourism in the south were spurned while overseas have primarily gone undeveloped. Based on quantitative and qualitative evidence gathered from 50 in-depth interviews with Penang hotel executives, it was found that as an experience/product emerging in the hospitality sector, corporate environmentalism (CE) was a Penang hotel management practice that is dominated by non-regulatory drivers. As an emerging trend in the industry, CE enables hotels to interact with consumers with competitive edge and value. Among the strong drivers, certain regulatory requirements have also been described as key drivers. However, there were even some hindrances to the enforcement of CE for Penang hotels, and these had obstructed Penang hotel developments with CE. Compliance with EIA had also been viewed as burdensome for industry and fire safety complaints as well as air pollution grievances were as rampant. There is environmental sustainability law in Penang. However, they have been found to be ineffective in promoting CE. There are also no legal or enforcement provisions for sustainable utilization of ambient air as well as the integrity of the natural landscape. Emerging as a component of corporate social responsibility (CSR) activities, CE mirrors the interests of the hotel industry in environmental issues. Synchronizing economic, social, and environmental matters, guest and environmental issues have been considered as measures of sustainable tourism in the host location of international convention centers and venues (Kasim, 2007). Being a developing destination to supplement convention/tourism

activities and strengthen the tourism advantage, Penang's hotels must become sensitive to such issues. Being an intrinsic intermediary to design the tourism experience, hotels could no longer afford to indulge in denial or indifference to CE measures.

8. The Role of Government in Promoting Sustainability

Despite the environmental expenses of tourism throughout the years, the Thai government is attempting to promote green tourism. This article has analyzed the existing efforts towards developing sustainable tourism in Thailand, namely sustainability practices engaged in by the Thai hospitality industry to undo the environmental problems. It has also unveiled several challenges inhibiting Thai hospitality operators from operating sustainable businesses. Sustainable tourism is any economy's top agenda since tourism development brings with it both benefits and negative environmental impacts. Growing demand for sustainable tourism, now a top priority for tourists and tourism enterprises alike, is compelling hospitality businesses to adopt more environmentally friendly practices (Amarando et al., 2019). However, the high initial cost of adopting sustainable practices can deter small- and medium-sized enterprises from adopting them. Moreover, many Thai operators lack awareness and knowledge of sustainability practices. Global Certifications and the Greenhouse Gas Reduction Pact are other challenges. Such efforts at environmental standard setting do not work since they are Western in nature and in contradiction to the Thai way of life. Moreover, such certifications are typically tailored for large-scale operations and costly for small-scale operators. The Thai operators prefer investing in sustainable practices that reflect their local circumstances and cultural practices. Because the environment is such a contested socio-political space, there cannot be a single definitive form of sustainability. Therefore, the government must give precedence to locally devised practices of sustainability. Thailand has invested heavily in tourism, as one can judge from the large share of GDP. However, this huge income for the country has begun to show its dark side: whole areas are being taken over to build hotels and other infrastructure, leading to illegal forest and beach clearance. Environmental standards are not always followed, and the country must develop a sound policy for balancing tourism development and environment preservation. To curb this problem, there is a necessity to learn from other successful and similar countries about developing sustainable tourism and environmental measures towards preserving these main resources of their economies for future generations. Making tourism development more sustainable and redirect ecologically unsustainable activities would involve lengthy and sometimes painful processes with local communities and many often-conflicting interest and stakeholder groups. The results of such a process would involve major trade-offs, including sacrificing some unsustainable operations, repositioning others, and putting more pressure on some groups, e.g., commercial interests that may no longer be able to accept continuing expansion in certain locations.

8.1. Policies and Incentives

A more forward-looking attitude toward the environment is being adopted from top to bottom. Measures to forestall potential environmental catastrophes are backed by influential groups. Large-scale creations of global safety nets are projected. Relief under the Environmental Fund against negative effects on human and bio-systems of farm pesticides, new technologies for industry, and atmospheric transformation are likely to follow. However, dramatic changes in tourism trends are also expected, leading to new destinations becoming more attractive in the context of sustainability or safety. With the susceptibility of the Thai landscape, anticipated devastation is much more likely. Flooding could become a nationwide issue, with droughts possibly happening in Provincial Land Use Planning areas and popular tourist spots. End-of-well-stage oil production and disasters would all have possible effects on tourist destinations. Warning bells have rung concerning increased inelastic demand for deals in bargain-basement, under-regulated places for cross-border processing. Over-development welcome legislation or regulatory traditions could be massive mobs of aggrieved tourists, or brutalities against objects and people. Resilience is the only way of reconciling adaptation with caution. Some actions will also be needed: renaming Bangkok, newly grid-out urban and rural space, and dedicating a new public transportation system as an environmental impact buffer. With future shocks ahead, low-grade, self-contained, unassuming tourism is predicted, and therefore thinking runs along the lines of decentralization, with redundancies established. Niche markets will stand poised to fill a demand. Measures might range from launching Home Stay at Tha Takiap Mudsill, to creating a new Buddhist order for visitors within and around Bangkok, to creating niche interest museums and relocating temple waiting-women in acculturated villages. With spontaneity and emergent activities as its center, infrastructure can then be investigated. Permits must be confirmed, and areas of neighboring stakeholders established. It is not to concentrate on beast-formed mountains, or mass-produce Santai or Moken, but to create catalysts of sustainability, or hubs. Projected cultural spheres form bases for tourist attractions and command centers for eventual development. Restricted by culture, climate, shape and farming, their distinctive character needs to be protected and enhanced, with controlled tourist conduct. Generally, new types of tourism development are required (Kasim, 2004).

8.2. Public Awareness Campaigns

In considering the new green ventures being proposed in Thailand's hospitality industry and looking at public awareness campaign impacts and future trends, it is necessary to examine the impacts and views from sector experts and operators. Questions were answered by summarizing again the challenges highlighted and responding to future questions from the audience. In the first panel discussion about the Emerging Green Initiatives in the Hospitality Industry, four industry speakers were invited to talk regarding what initiatives are relatively new to the industry and whether such initiatives are borrowed from other industries. In going ahead to contemplate the scope of sustainability and broader applicability, it transcends hotel operations and is also prevalent in related industries such as restaurants. It was noted that sustainability is in detail and now it counts for green walls, vertical gardens and even in using locally sourced food to reduce carbon emissions in other areas of operation. While debating the impact of hospitality and eco-tourism operators at the local level, a remark was made that hospitality operators manage waste streams both at the local level and across multiple levels of policies. In responding to a question on whether they see opportunities for other tourism-related industries to do more to boost sustainability, it was referred to as a well-produced movie by a local operator, which was highly respected and received. Following this, it was observed that certain small size operators producing environmental awareness films and getting their facts right by learning about issues in deeper ways and producing more relevant things to tourists could bring about changes in the long run. While examining the potential for tourism in 2030, there are such views that tourism in 2030 would be catering to niche markets with customized travel. Though mass tourism might still be a problem in 2030, there was some doubt raised on the possibility of tapping the likes of tourists visiting Thailand in a non-congested and affordable manner. It was denied and pointed out huge headings of sustainability which might remain the same i.e., reducing carbon emissions, energy saving, food trends, and environmentally friendly hotels.

9. Future Trends in Sustainable Tourism

The future of ecotourism and green tourism in Thailand is widely discussed as regards its new heights of green and eco sustainable progress in most of the tourism sectors considering newly emerging issues of destructive tourism activities. The travel industries are largely connected with air transport service providers that contribute to greenhouse effects. In a bid to reduce or to lower the levels of carbon dioxide emissions from hotels and accommodation, other alternative energy must be utilized. This directly impacts hoteliers on the price of electricity since green energy is more expensive than natural gas. The impact of green energy production in hotels and tourism is playing out from transportation to islands and urban centers at marine borders. Along with the use of electricity as an energy source, the various creative and responsible tourism incentives scenarios for the effective measures must be discussed and debated. Green tourism programs will need to bank upon the awareness and co-operation of all segments of the society including the government departments regarding regulations, rules and infrastructure development on mass public transport services system and railway services. Value added of the tourist products, nature, culture and lifestyle and income distribution must be relied on by the sensitive co-operation of residents since tourism indirectly concerns the social impacts which transform on the way of life and cultures, the essence of tourism. It must be taken in the long term and handled by societies with a sense of understanding and respect and a sense of responsibility towards an existing, traditional and dominant way of life. The local products, raw or processed must take into consideration the local supply chain collaboration and therefore not converted to mass production and therefore disintegrated the locals' culture base income generation. The commodity quality and environment of the tourism product is a requirement as well as the replacement of the sale price. The articles on local wisdom and arts need to be withheld from exploitation and hence need to rethink on the reasonable price based on value return and production efforts while the monitoring system needs to be an input for tourists on admissions and price. These measures need to have to hope to create and impose the legislation as well as an optimized amendment and act stronger with the tourists' violations.

9.1. Technological Innovations

Green innovation, which places greatest emphasis on ecological and environmental concerns along with technological development, is of greatest significance in sustainable economic development. The speed of green innovation has more influence on sustainability in the tourism sector. The technological innovations regarding eco-system and green projects will play a huge role in sustainability in the hotel sector in Thailand, promoting development in boost tourism. Continuous efforts to examine current technological developments adopted by the industry to address future directions in 2040 were carried out and thus are presented here. Throughout the COVID-19 pandemic, Thailand's hotel sector witnessed enormous technology-driven shifts. Mobile payment transactions increased further, and pre-pandemic contactless payment tendencies were elevated further because of fear of COVID-19 through new digital wallets and QR code payments within gambling and even in remote regions. With mass use of smart systems high contact redefined hotel management security gear as mobile keys became mainstream in 2021. QR codes on mobile apps enabled hotels to launch contactless food and beverage and room service orders and cashless payments. Digital innovation used during

the COVID-19 pandemic was reported to be highly valuable rather than time-consuming. It can also assist in lessening pandemic-caused variation in hotel quality measures and marketing programs. Nevertheless, the hospitality sector is expected to concentrate more on Virtual Reality or Augmented Reality and Metaverse-based platforms for delivering services. Cyber security existed in all stages for guaranteeing customers' belief in data safeguarding. Artificial Intelligence could create personalized services for all kinds of customers at the back end of hotel operations. Effective applications of big data applications in marketing, reservations, up selling and cross-selling will be most important (Huff, 2019). Having been a past destination of the year the Royal Kingdom of Thailand is facing challenges in sustainability. Application of international standards will lead to the selection of sustainable hotel operations on the environmental factor in green hotel certification. Academic collaboration will enhance innovations, research and development in energy efficiencies, policy, and regulation studies. Five honorary chairs across various universities and faculties will aid and promote the suitability of tourism and hospitality destinations for sustainability. Furthermore, hotels are encouraged to adopt green practices in a bid to combat climate change through; Energy efficiency encouraging hotels to invest in green technology like energy-efficient appliances and lead by example by providing allied guests carbon footprint tolls. Lastly, increasing green standards adopted are most likely to take up ecotourism and tourism, provide biodiversity and increase conservation awareness.

9.2. Consumer Preferences Shifts

There is a global trend for decarbonizing economies and lifestyles. Thais have increasingly been enjoying nature in Thailand, which has driven the increasing sectoral shares of tourism and agriculture. These trends will create additional pressures on and pose potential damage to the natural environment. The tourism industry needs to be at the frontier of the fight against climate change and the loss of biodiversity. Effectively, the tourism sector has expanded so rapidly while widening inequalities and unpaid environmental costs. Loss of biodiversity and global warming have increased exponentially with the expansion in the tourism sector. Thais believed that their pristine environments, rich flora and fauna and sunny climates were their true treasures and were only assets to be shared. In fact, the environment was Thailand's greatest asset, on which depended the country's health, happiness and prosperity. This would involve understanding but with strong leadership of policy and academia this could be achieved through outreach and education (R. Sucheran & V. Moodley, 2019). In this context, conservation could be addressed along with good sustainability practices to allow tangible results to be delivered. Yet, there were considerable gaps in academic studies, expert insights and Thai awareness, perceptions, knowledge, and attitudes. Most of the stakeholders in Thailand believed that climate change was a complicated phenomenon only experts who were trained possessed the experience to decipher and address. This meant there was a great potential for an interdisciplinary/ transdisciplinary scholarly collaboration to break down the issue, especially in local cases of the impacts of climate change on Thailand's biodiversity and ecosystems. Though they acknowledged the drastic change in the weather, anomalous tide incidents and blooming patterns, there was very little suspicion of their linkage to anthropogenic climate change, especially with the role of tourism's increased carbon footprints. Yet, there were many sub-questions to ask about how to proceed with such research. Here are just a few of them: How do species and ecosystems sense, respond and adapt to climate change? How do these responses impact happiness, healthiness and wealth? How does coastal Thailand's unique ecosystems sense, respond to and try to adapt to climate change.

9.3. Impacts of Climate Change on Tourism

Tourism is among the world's biggest and fastest growing industries, with both beneficial and detrimental effects. The tourism industry makes a substantial contribution to the world economy. In 2018, there were 1.4 billion international arrivals, which means $1.7 trillion in export earnings, and approximately 10% of world GDP. Additionally, one out of every ten jobs all over the world is in tourism. Though tourism is lucrative and substantial, it represents one of the countries which actively participated in the State's Greenhouse gases (GHG) emissions. Climate change is one of the greatest threats to the tourism industry as it imposes negative impacts on weather, ecosystems, socio-culture and economy. Its impacts result in loss of tourist attraction as well as reducing tourists' intention to visit the affected destinations (Tam, 2019). Besides climate change impacts, tourism is also among the greatest contributors to climate change and GHG emissions worldwide. This puts into question the sustainability of travel and tourism. Although travel brings prosperity in the form of economy and creation of employment, it leaves behind a huge path of destruction of local cultures and environments, thus undermining its own foundations of prosperity. Due to the above-mentioned dual effect on climate change, the tourism sector by itself has initiated several mitigation efforts to reduce global greenhouse emissions into the atmosphere. The tourism sector has long played a significant role in climate change mitigation. The pledge throughout the sector, as well as the wide range of actions being undertaken by individual businesses to curb emissions and stimulate climate adaptation planning, has consolidated the role of the sector as a key actor and partner in developing worldwide resilience to climate change. Tourism sector's own GHG emissions have, nevertheless, undermined the efforts of climate change. Therefore, a retrospective of the performances and major events,

achievements, and dilemmas of tourism in the climate change context is deemed a valuable task for coming up with useful lessons and insights for future actions.

10. The Economic Impact of Green Initiatives

Sustainable practices in the tourism industry foster collaboration among tour operators and governments. Suggestions such as reduction of energy and water consumption by hotels and conservation of marine life by SME hotels are put forward with a view to achieving a shared agenda of sustainability. A synergistic effort among the stakeholders has the likelihood of paying economic and social returns to the community and environmental returns to the tourist destination. The possible threats of tourism must be mitigated for sustainable tourism. Most of the tourism companies will be unaware of the threats of climate change and environmental degradation. They need proper guidelines on how to reveal the threats to decision-making in the travel and tourism sector. A holistic approach to sustainability enables hotels to embrace energy conservation, achieve investments, and improve the bottom line (George, 2019). Hotels and external stakeholders may hold differing perceptions of sustainability, and as such, these perceptions can therefore influence the assessment of environmental investments. Hotel firms are thus recommended to promote awareness of sustainability among external stakeholders during assessment. One green initiative yields three outcomes identical to sustainability performance. Sustainability performance enhancement initiatives are to be linked with competitive advantage development. More investments in sustainability are advised because hotels cannot procure cutting-edge technology solutions from their competitors without incurring exorbitant costs. Greening among hotels are ceilings that increase the profitability of hotels and therefore are non-rival because there is a spillover effect on other nearby hotels.

10.1. Job Creation in Sustainable Tourism

Australia's tourist interests are dependent on a good environment. To promote the environment within and around destinations, there needs to be selling of sustainability. The green tourism market exists, as does the perceived one. Green destinations have sustainability built into their product, e.g., in their modes of transport or sustainable accommodation. These sustainable tourism operations could be utilized for market destinations that are nonconventional or not common in terms of their sustainability campaigns, promoting them so they become visible and appealing. There is a level of regional and industry organization collaborative marketing to spotlight sustainability using destination marketing in collaboration with its stakeholders just like consumers find value in sustainability operations to gain competitive edge by having the capacity to differentiate from prospective clients. Tourism and travel and destinations contribute towards sustainable development in terms of revamping themselves within their marketing practice. Authenticity is transparency-driven authenticity, and that includes extending towards consumer perception as well as business operations. Green destination marketing is a combined effort of various stakeholders such as local government, tourism boards, non-profits, and individual stakeholder businesses. They are all targeting a common market and promoting their sustainability initiatives. There are different parameters that can be utilized to measure the sustainability of a destination, and stakeholder collaboration can be promoted by selling more profitable features. It must be protected by branding a destination as green or sustainable, and that involves regulation and guidelines to educate companies in viable notions of sustainability. In the hotel industry, there has already been considerable proof that economic activity related to hotels generates jobs in cities, and the hotel industry is one of the biggest employers. As one of the three pillars of participatory governance, the critics of guest houses being constructed have ridiculed these projects as converting the city's cultural heritage into jobs instead of saving the city's distinctive attractions. Instead of employing locals for familiar jobs, the traditional occupation of palm leaf plaiters and shoe making and smoking has yielded to the new employment at restaurants and guest houses (George, 2019).

10.2. Long-term Economic Benefits

The scope of the study here is limited and open to personal factors that may affect the findings of the study, especially in a country as large as Thailand with such vast growth and developmental potential in the restaurants. Therefore, in the future, studies on recommendations and suggestions about the population and work in any sector may be conducted. The author thus suggested that green restaurants' impacts and effects were to be observed in terms of how crucial the tourism industry was to trainer and the artists within such restaurants across other regions in Thailand. The thesis is directed to some popular Thai dishes and vegetarian food as the main menu in tourist industry restaurants, which occupy a small percentage of Thai dishes but should be made use of to accommodate tourists. This is particularly so for vegetarians in many countries and occupies a small percentage of Southeast Asian countries. Broader coverage with more food varieties is also proposed for reference. The study's findings capture a segment of the event that is not entirely covered in the tourists' perception of the services of green restaurants that have been carried out during their stay. Future research would be helpful. These are looking into the events outside the tourism industry, and these can include the aspects of promotional events, educational events or event management. Studies at these levels would be appropriate to create a spark for studies on this matter in the future. The use of sustainability strategies by Thai green

restaurants is most important in forecasting future tourist holidays and remaining competitive. There exists a need for assistance in this regard. It was confirmed that there have been developments in the execution of eco-sustainable activities and interventions taken, with recommendations to be mindful of possible time designation for cleaning. Emerald Cafe must focus its eco-improvement on information provision and orientation activities for tourists to recognize its sustainability in tourism facilitation. In the context of Thai green restaurants catering to the tourist industry, this is the first study of opinion on restaurant performance and sustainability concerns.

11. Social and Cultural Implications of Sustainability

Social impacts of sustainability practices among hotels in Thailand's hospitality industry can be described in regard to the attitude of stakeholders towards the application of sustainability, impact of sustainability practices on workers' motivation and worker retention in hotels, dreams of tourism students to work in more sustainable hotels, and impact of sustainability practices at hotels on wider social issues within local communities where hotels operate. The significance of sustainability to stakeholders is a multifaceted issue that must be weighed with caution to account for diverse interests. In most cases, however, major stakeholders in the hospitality and tourism industries increasingly recognize sustainability practices as having some or considerable worth. For instance, green practices were rated as having "great" value to the environment, individuals in whose environments hotels operate, visitors, hotel owners, investors, employees of hotels, and some value to restaurant and hotel suppliers and tour operators. There are several social consequences associated with the sustainability practices being adopted by hotels. Hotels' adoption of sustainability practices and greater efforts towards sustainability in the hotel industry may strengthen their attitudes towards the hotel industry making a positive social contribution, particularly among tourism students, travel agents, and hotel owners. Perceived future effects of sustainability practices extend beyond the boundaries of the hotel industry. Sustainability practices assist in improving tourism's social and cultural benefits and its local acceptance, knocking down barriers to the future growth of hotels. However, while positive impacts from sustainability practices are desirable, they should not be overstated or seen as panaceas: the sustainability practices of Thailand's hotels are no panacea. For instance, even with whatever sustainability is practiced in hotels, the industry is still guilty in aspects that are worrying. Sustainability practices might fail to address the deeply felt perceived cultural invasion and elimination of traditional practices and customs in the tourism context. The industry is also considered not to be able to help to enhance the inclusion of farmers and other domestic producers into the tourism industry and to help them compete better with transnational corporations, whether the hotel is sustainable (Goh et al., 2017). For the case of Kumarakom in Kerala, India, sustainability measures to mitigate negative societal, cultural, and environmental effects of tourism did not end the sense of domination by tourist numbers and control over the lack of cultural and ethnic respect by tourists ((George, 2019)). According to the idea that sustainability practices will have unforeseen consequences, a breakdown of what is taken into consideration when their impacts are measured provides great understanding of their legitimacy, effectiveness, and prospects.

11.1. Community Involvement

Tourism is a new industry on Dagang Island. However, it is difficult to link the island tourism development with incorporating the local communities into the tourism development plan. Therefore, the CI participatory planning and designing are required for Dagang Island habitat for sustaining local life and having abundant flora and fauna. Poor habitat areas will be identified in this project, and poor habitat restoration will be conducted together with the fishermen community as a volunteer. Before developing tourism, they need to preserve the island's habitat and meet public expectations in tourism business activity. Proposed CI themes are inclined towards nature and poorest areas and problems, but methods of approaching the locals and building public expectations in Dagang will be decided through further workshops. The project aims to develop a community-based infrastructure facility that is suitable to find preventive solutions for flooding. Participatory design principles shall be introduced as a guiding framework for the study. Public participation in design, more specifically the independent chance of local communities, is essential for community-based environmental conservation facilities. The question of whether society can systematically design community-driven infrastructure facilities is raised. The existing social facility of infrastructure is analyzed to consider the construction in developed societies. The intended community would be engaged in proposing CI themes and group works or workshop and the CI interpretations. The proposed CI has been examined and outlined already. The CI is a community-loaded form with unique function and performance based on a hierarchy and resonance, and open space where CI would be used independently by community members who visit individually or gather.

11.2. Cultural Preservation Efforts

This chapter discusses the new green initiatives taken by Thailand's hospitality sector, their perception by its visitors, and their implications for the future of the tourism industry. There are several issues at stake currently relating to awareness of sustainability, the evolution of eco-consumerism, and the impacts on hotels and hospitality companies,

and an awakening on corporate social responsibility. This qualitative research used semi-structured interviews via webcam to gather data from twelve experienced hoteliers who have implemented sustainability practices in their businesses. Compared to current sustainability practices, a conceptual framework for Thailand hotels was proposed and how to improve future practices was discussed, including government support. Recommendations for future research were also proposed. Increasing consumer awareness of saving the environment will radically alter traditional shopping behaviors and lifestyle trends. Eco-consumerism has created an awareness explosion regarding various green issues concerning global warming, pollution, and natural resources depletion, and a strong desire to save the environment rather than harm it. Larger groups of eco-consumers now purchase green products, which forces hotel owners and operators to respond and make green investment. Therefore, the traditional style hotels will be in danger of being boycotted. However, it will take more investments to convert high-grade hotels into 'green' hotels. Although green hotels can attract more green consumers, the conversion cost will outweigh revenue anticipated, leading to negative returns on investment. Conversely, a 'no eco-label' low-budget hotel will incur no branding or advertisement cost, with an opportunity to exploit the eco-trend crisis in high-grade hotels. In the scenario of eco-hotels, government agency co-investment is necessary to reduce the initial capital and operating costs because government incentives have a significant effect on sustainable tourism development. A case study of green practices at eco-hotels and eco-sensitive hotels in Thailand involves past sustainability operations providing the initial investment, payback period estimates, one-time features, frequency of maintenance activities, and annual room-price surcharges that high-grade hotels can charge for sustainability maintenance activities.

12. Measuring the Success of Sustainable Practices

It is crucial to quantify the success of sustainable practices in the food service environment and hospitality industry. Since sustainability has emerged as a central goal of most organizations and industries, the hospitality industry, like most others, has embraced sustainability as a central goal. Green practices take a variety of different forms, such as selecting locally owned or gender-balanced vendors, serving alcoholic beverages responsibly, offering vegetarian options on menus, purchasing seafood from environmentally sustainable sources, and donating leftover food and soup to local charities. Environmental issues and practices in the hospitality sector include conserving water, energy, and disposable materials; minimizing waste; restoring and preserving green space; and promoting green products and services. Metrics of sustainability in the hospitality sector include energy star initiatives, waste management, and environmental policy targets. Consulting firms aid in assessing sustainability programs, and big hotel chains provide generic schemes to assess environmental sustainability programs for improving brand image. Practicality is a crucial concern in the food service environment since the consumer's dining experience does not take place in a vacuum but under the influence of several external conditions (Ranae Alcorn, 2014). Green practices are being adopted in large numbers throughout the hospitality industry. A study indicates that an environmental initiative on the property level promotes the personal employee's environmental behavior (compliance with programs) and is associated with self-reported operational efficiency (i.e., cost savings). However, there has been concern raised regarding more than 60% of luxury hotels framing themselves as being sustainability oriented based on low environmental consciousness. Literature indicates the hospitality sector has become a trendsetter in environmental management by the adoption of green practices. Despite the existence of academic literature examining the quality and effectiveness of local policies on sustainable restaurants or hotels, literature analyzing sustainability in food service is sparse. Furthermore, studies assessing sustainability in the restaurant sector to assess hospitality environmental performance comprehensively to bridge the gap between restaurants and hotels would add an important level of knowledge to both sectors since restaurants and banquet systems are part of the hotel (B Aday & V Phelan, 2011).

12.1. Key Performance Indicators

These KPIs were used to quantify and measure the performance of the adopted green initiatives by the Thai hotels. The computed scores from the KPIs were divided into four groups of the level of performance, namely, highest performance, very high performance, high performance and lowest performance. Table 5 shows overall performance scores of hotel performance based on KPIs. In general, at the highest level of performance, Thai hotels pledged to apply four green practices out of seven KPIs: 1) green buildings, preserving, conserving & developing natural character, 2) green open spaces, 3) energy management, and 4) waste management. All these projects were in the natural sustainability category under environmental protection (Mungai & Irungu, 2013). These projects are fully in line with the needs of the One-Stop-Services hotel. Thus, the top four green projects were endeavoring towards including the hotels in the Green Hotel scheme in need of hotel development promotion. In the very high-performance sector, Thai hotels adopted two strategies; 1) conserve & preserve traditional architecture & environmental elements and 2) water management. They constructed their buildings in Thai architectural style such as roof shape with eaves, decorated with sacred colors & motifs, while conserving & preserving ancient buildings. Water management was also widely employed. This program assists with a naturally vegetated environment that removes pollutants, as well as hosting wildlife habitats that are

conducive to biological pest control. Both programs assisted with the maintained natural landscape by the river without any loss of ecological processes and services (Bohdanowicz-Godfrey & Zientara, 2015).

12.2. Feedback from Stakeholders

All the participants in this study were asked to give their opinions and perceptions on future-related practices future-making in terms of foresight. Respondents who were employed in hotels reacted positively towards longer foresight, particularly hotels initiating initiatives in fighting global warming and planning and preparing for environmental issues, assessing and reporting environmental issues, and researching becoming "carbon neutral" in its operations. The belief that hotels have a role to educate and influence visitors' behavior receives enthusiastic agreement by an overwhelming number of hotel staff. Government officials have the same degree of optimistic sentiment when compared to hotel participation across various aspects of global warming-related foresight. However, government participants are less optimistic regarding hotels acting in fostering a snug accommodation climate, although most of them remain optimistic regarding this transformation. On the contrary, researchers have inconsistent views, with a relatively higher percentage of negative attitudes towards hotels discouraging the inflow of harmful external forces into the hotel industry and providing sustainability input to other interested stakeholders in the hotel value chain. Perhaps, the sample population of researchers generates an outlier issue or evidence of variable needs by hotels and the academic community in research books and journals (Goh et al., 2017). All provinces and areas of Thailand are impacted by global warming issues, according to most stakeholders. Of the 26 general global warming impacts on the questionnaire, climate change impacts on hoteliers and their guests are categorized into five groups. The most, under the "main focus: climate and extreme weather changes" category, has climate change and extreme weather conditions. The category "major impacts on health issues" is the second most agreed category, where impacts like infectious diseases and insect group proliferation have been considered as major drawbacks.

13. Conclusion

Thailand's hotel industry is increasingly becoming competitive due to the relative advantage it holds over other tourist spots with exotic nature. International organizations are increasingly taking note of the growing desire of tourists to not only visit but also to understand exotic nature. It is required to understand, therefore, how Thailand's hospitality industry, and the hotel sector in particular, is preparing and positioning itself to deal with this increased competition and changing tourist demands. It is also equally required to address the increasing recognition of the need for mitigating the adverse environmental impacts of tourism-related development in Thailand's hospitality industry. Tourism development, especially in emerging tourist destinations such as Thailand, is held responsible for impacting the socio-cultural, environmental, and economic factors. Large numbers of tourists converge on specific destinations, typically referred to as mass tourism destinations. The ecology of these destinations is confronted with a threat of loss of flora and fauna, water shortage, pollution, garbage, and other such problems. Negative socio-cultural and economic effects are also created in most cases. Negative socio-cultural impacts such as lowered quality of life among locals, loss of culture and traditions, and congested and polluting roads are typically observed. Also, the adverse economic impacts can include a money-leakage effect, inflated land prices, and price inflation due to increased demand. All these issues should be addressed proactively through the adoption of prudent planning and sustainable development. Following the previous call for sustainable development in hospitality businesses published in the recent issue of the International Journal of Hospitality Management (Rahimi & Taheri, 2019), this special issue presents a collection of new research that investigates new green practices undertaken by hotels in Thailand's hospitality business. The articles include empirical papers and conceptual perspectives on a range of issues like physiology, sociology, and environmental sustainability of hotels. The research facilitates a better understanding of the contribution of sustainability in the hospitality industry from the Thai experience practice. Potential future research directions in this practice are also addressed. The position of hospitality and sustainability has attracted much interest from hospitality researchers and practitioners. These green practices need to be viewed in the same regard. Special editions would be augmented by a reflective tour of Thailand's hospitality industry towards sustainability facilitated by various stakeholders such as the government, hospitality practitioners, and tourists.

References

[1] Kasim, A. (2004). Socio-Environmentally Responsible Hotel Business: Do Tourists to Penang Island, Malaysia Care?. [PDF]

[2] Goh, E., Muskat, B., & Han Tsai Tan, A. (2017). The Nexus between Sustainable Practices in Hotels and Future Gen Y Hospitality Students' Career Path Decisions. [PDF]

[3] B Aday, J. & V Phelan, K. (2011). Tourists' Perceptions of Eco-Sustainable Practices While Traveling. [PDF]

[4] Mungai, M. & Irungu, R. (2013). An Assessment of Management Commitment to Application of Green Practices in 4 – 5 Star Hotels in Mombasa, Kenya. [PDF]

[5] R. Sucheran, D. & V. Moodley, D. (2019). Guest dynamics and perceptions towards environmentally-friendly practices in hotels in KwaZulu- Natal, South Africa.. [PDF]

[6] Dowpiset, K. (2015). Editorial. [PDF]

[7] Ranae Alcorn, M. (2014). Green Restaurant in Practice: Employee Attitude and Behavior Towards Environmental Sustainability. [PDF]

[8] Sakcharoen, T., Niyommaneerat, W., Faiyue, B., & Silalertruksa, T. (2023). Low-carbon municipal solid waste management using bio-based solutions and community participation: The case study of cultural tourism destination in Nan, Thailand. ncbi.nlm.nih.gov

[9] Švec, R., Pícha, K., Martinát, S., & Navrátil, J. (2023). Direct or indirect energy savings in food and beverage services? Visitors' preferences in hotel restaurants. ncbi.nlm.nih.gov

[10] del Populo Pablo-Romero Gil-Delgado, M., del Pozo Barajas, R., & Sánchez-Rivas García, J. (2017). Relationships between Tourism and Hospitality Sector Electricity Consumption in Spanish Provinces (1999–2013). [PDF]

[11] J. Zhang, J., Joglekar, N., Heineke, J., & Verma, R. (2014). Eco-efficiency of Service Co-production: Connecting Eco-certifications and Resource Efficiency in U.S. Hotels. [PDF]

[12] Patricia Martínez García de Leaniz, R., Herrero Crespo, A., & Gómez López, R. (2018). Customer responses to environmentally-certified hotels: the moderating effect of environmental consciousness on the formation of behavioral intentions. [PDF]

[13] Huff, A. (2019). Winning Project: Living the Suite Life: The Implementation of Environmental Technologies in the Hotel Industry. [PDF]

[14] Kasim, A. (2006). The Need for Business Environmental and Social Responsibility in the Tourism Industry. [PDF]

[15] Rowe, K. (2018). Hoteliersu27 Perceptions of Sustainable Practices on Small Hotel Optimization: A Phenomenology Inquiry. [PDF]

[16] Kasim, A. (2007). Corporate Environmentalism in the Hotel Sector: Evidence of Drivers and Barriers in Penang, Malaysia. [PDF]

[17] Amarando, M., Assenov, I., & Visuthismajarn, P. (2019). Sustainable wine tourism and vineyards' environmental consciousness in Thailand.. [PDF]

[18] Tam, S. (2019). Sounding the alarm: Is the Sri Lankan tourism sector prepared for climate change?. [PDF]

[19] George, A. (2019). Impacts of Responsible Tourism in Environmental sustainability issues: A Case Study in Kerala, India. [PDF]

[20] Bohdanowicz-Godfrey, P. & Zientara, P. (2015). Environmental performance assessment systems in the hotel industry. [PDF]

[21] Rahimi, R. & Taheri, B. (2019). Guest editorial. [PDF]