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Sustainable practices in low carbon tourism: A case study of Thailand

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Abstract

Environmental challenges emanating from the impacts of climate change in Thailand's tourism sector remain serious for one of the important pillars. These underpin the need for low-carbon tourism that is based on sustainable practices to guarantee the long-term well-being of the country's natural resources and communities. This case study investigates the low-carbon initiatives current situation in the Khaosok Tourism Cluster, with a focus on community-based tourism, government policies, and private sector participatory approaches to sustainable development. It enumerates the main benefits derived from embracing low-carbon practices through a qualitative multi-method approach: environmental protection, economic growth, and the social development of the local community. The study also highlights various significant challenges that the Khaosok Tourism Cluster face, including financial constraints, general lack of awareness about low carbon tourism among its stakeholders, and a regulatory shortfall that works to inhibit the adoption of sustainable measures. The addressing of such challenges is crucial to the successful integration of low carbon practices in the tourism industry. Outcomes of this research also point to the importance of multi-agency coordination and collaboration across government agencies, private operators, and the communities. These players should be working hand in hand in the development of mechanisms that give way to a low-carbon tourism community. This study proposes some recommendations; the first of these relates to improving incentive policy mechanisms that encourage and ensure compliance with low-carbon practices. Involvement of comprehensive policies and guidelines which will inspire integration of sustainable measures in the tourism sectors. Second, educational programs should be established to boost the understanding and awareness of low carbon tourism among all stakeholders, including tourists themselves, local communities, and tourism operators. A well-informed community stands a better chance of actively participating and supporting such sustainable initiatives. It is also important in the final analysis to institute effective monitoring systems that will help in successful implementation of low carbon practices. This will help in regular monitoring and evaluation to know what needs adjusting in pursuit of sustainability in practice, measure performance, as well as track progress through set targets. It will also provide valuable data for future research and policy development in sustainable tourism. By applying these recommendations, Thailand will set the standard toward low-carbon sustainable tourism to meet global climate goals. The holistic approach will preserve the beauty and resources of the country, while communities of the country will experience economic growth and social well-being.

Keywords: Sustainability; Sustainable Practice; Tourism; Low Carbon Tourism; Thailand

1. Introduction

Thailand possesses all the flair and charm that anyone would want, plus the fact that it is the ultimate gateway to Southeast Asia. The place has beauty and rich cultural heritage, and hence it is not surprising that Thailand has emerged as the largest tourist destination in the region and the second most populous country in the world. Tourism occupies one of the top places in the Thai economy, mainly driving its growth and development by contributing more than one-fifth to Thailand's GDP. What makes Thailand so very special is not only its historical sites and cities but also the impressive natural environment throughout the country. It has all kinds of different landscapes, from beautiful beaches

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and rainforests all the way to magnificent mountains and quaint islands. These natural wonders, together with the fine weather in Thailand, make it a destination for many tourists, with over 25 million flooding into the country annually. However, with the rest of the world facing the incessant rise in the challenges that come with climate change, Southeast Asia, which includes Thailand, seems to wake up to the realization that something urgent needs to be done to mitigate the probable impacts of this global phenomenon. Climate change presents a current and future threat to the region through changing weather systems, rising ocean levels, and increased extreme weather conditions. Based on these considerations, the qualitative essay enters the challenging domain of climate science by looking into both scientific knowledge and awareness with respect to climate change within Southeast Asia. It further goes into the background on the response to sustainability from the general tourist industry, therefore disclosing steps taken within it in a bid to reduce its environmental impact. The pursuit of low-carbon tourism in the tourism industry of Thailand shall be given due attention. This lack of carbon-heavy practices has become a movement, and determining how this industry addresses this modern development in the field is of great importance. The essay presents a case study of two ideal hotels operating within Thailand, which have been studied in terms of careful details of approaches, strategies, and performance evidence about the implementation of environmentally friendly and sustainable operations. The following essay describes this interesting topic, on one hand it describes the challenges within the tourist industry in mitigating the carbon footprint; on the other, it describes innovative measures made to secure a sustainable future of Thailand's tourism sector. Learning from this case study may motivate not only the country but the whole world's tourism industry on the call for urgent low carbon practices and their importance in view of climate change. This makes it essential that the tourism industry should take all precautions to head off both the physical and societal risks caused by long-term environmental damage. Equally as important is balancing the near-term costs of adherence to legislation with preserving our planet. The industry will need not only to negotiate the complexities of governmental legislation but also to be responsive to the customers to remain profitable and continue to grow. In doing this, it will avoid the potential turnover brought on by the dwindling availability of less sustainable products. The examination of modern tendencies in the marketing of tourist destinations would suggest that recent events in the tourism sector have gained considerable importance for industry. Besides, a growing body of empirical evidence supports the presence of new and returning customers who need more sustainability in respect of the tourist industry. Considering this trend, which already shows a clear present and definite bias for sustainability, businesses in tourism need to make such adaptations and evolve by including sustainable practices in their operation strategies. Sustainability in the tourism industry means adopting a holistic approach to computing from various dimensions, including reducing adverse environmental impacts through responsible management of resources, biodiversity conservation, and reduction of carbon emissions. It also calls for social inclusiveness, which is possible with active involvement with the natives, respect for their cultures, as well as an improvement in their socio-economic status. If this stance is followed religiously, then the tourism businesses could not only minimize their ecological footprints but also effectively and constructively add to the well-being of communities and ecosystems in general. To flip this fast-growing demand for sustainability on its head, industry players should align consulting efforts with policy makers, researchers, and representatives of the community. Joint research into innovative solutions, new technologies, and best practices will make it possible to position sustainability in the tourism context as a driver of long-term growth and resilience. The result would be the balancing of government regulations with needs for industry players in ways that all parties pull together for sustainable development. It is for this reason that the opportunity given would seize and bring together customers' expectations, legislative frameworks, and sustainability initiatives in driving a change in the face of the tourism industry. This change would give the required strength to the industry against the perils of environmental degradation and enhance its competitive advantages within the frame of a changing world tourism market. In the end, this means the tourism industry will be an absolute game-changer in their environmental practices, allowing economic prosperity and security while protection of the natural resources and a balance between man and his environment are achieved.

1.1. Background and Significance

Tourism is regarded as among the fastest growing and most expanding industries in the global arena. Indeed, recent trends indicate an astonishing rise in international tourist movements to almost the phenomenal number of one billion people crossing borders across the world in the year 2010. Projections that total tourist arrivals are expected to reach an impressive 1.4 billion by the year 2020 should therefore remove any doubt that such exponential growth in tourism impacts positively on the local economies it meets. This unprecedented growth in tourism activity, however, cannot avoid having several negative impacts on both the environment and local communities. For this reason, now, sustainability became a new concept within the tourism industry, especially for developing countries where tourism is still at its infancy stage. In support, one such country that has embraced the idea of sustainability through the auspices of eco-tourism, highlighting community-based development, is Thailand. The dramatic numbers of tourists arriving has forced Thailand to depart from some of its initial commitments to those ideals. Due to the increasing difficulty that was brought by the worsening condition of its tourism industry, Thailand's National Economic and Social Development Board launched in 2013 the Tourism Carbon Neutral Plan. This is a very forward-looking initiative that will serve as an

effective in equipping and shielding the country from the negative impacts brought by climate change and the unpredictable global economy. Thailand is one of the most popular and highly visited countries around the world. The immense beauty and rich cultural heritage attracted such many visitors in a very short time. As the tourists started to inflow, along with growth, there comes a set of challenges that could never be conceptualized. Volume of tourists and resultant traffic led to a considerable level of pollution and violation of welfare not only for the group of tourists but also for the local people. This is a sad fate that significantly threatens the environment, its resources, and the overall pattern of life. Further, it may reduce harmony among the communities and translate into higher rates of delinquent behavior. Fully realizing the gravity of the situation, the Thai government has been actively working out a plan for transforming Thailand into a world-class sustainable tourist destination. The gist of this plan is to develop a closer relationship and partnership between the government and the local community with respect to developing tourism. Working hand in hand, they work towards minimizing or lessening the disastrous effects of tourism on the environment. A very precarious balancing act is in store if tourism is to be successful without harming these natural wonders that made Thailand special. Serious deliberation of one of the strategies includes high-quality tourism. The world is increasingly adopting the idea of low-carbon tourism due to increasing concerns of climate disruption and rapidly heightening carbon footprint from travel. For some countries, there are efforts towards zero greenhouse gas emission and carbon dioxide by the year 2020. The above phenomenon has initiated interest in the unique features of demand and supply of low carbon tourism to Thailand. It aims to investigate the opportunities for reducing greenhouse gas emissions and to zoom in on the main destinations participating in a cluster-based low carbon approach. With this strategy, the country is supposed to effectively play an important role in the global endeavor of reduction in climate change. Apart from the mentioned domestic actions, the nature of demand and supply in low carbon tourism depends on the international climate policies and coordination with airlines and the hotel industry to minimize GHG emissions. These external factors catalyze change in the molding of how tourism in Thailand has developed. In summary, Thailand is increasingly aware of its need to address the environmental issues linked to rapid growth in tourism. Under a model of sustainable development and with closer cooperation with local communities, the Thai government wishes to build its country into a world-class destination prospering through high-quality, low-carbon tourism. It is only with such efforts at both the national and international levels that such wonderful beauty of Thailand and its rich cultural heritage could be preserved for coming generations.

1.2. Research Objectives

Such are the objectives of this very important and groundbreaking research: to comprehensively investigate and delve deep into the status of sustainable practice initiatives for the renowned Khaosok Tourism Cluster in its effort toward low carbon or carbon emission reduction within the highly crucial and influential tourism sector. In fact, an important part of this study is to identify with eagerness and to be very much proactive in unmasking the many challenges, obstacles, and limitations that are attached and endemic to these colossally monumental initiatives in their implementation and actualization, and at the same time to establish the quintessential roles, duties, and responsibilities that are expected from the public sector, the private sector, and the respected local community in embracing and realizing these tremendously auspicious initiatives. Such a well-thought-out study has tried to cover the following research questions of immense importance and significance: 1. What is the current status quo and perceptible trends that come to light regarding the low carbon or carbon reduction efforts in the respectable and prolific tourism industry inherently linked with the very highly valued and renowned Khaosok Tourism Cluster? 2. What are the dominant and main issues, challenges, and barriers that have been hindering and limiting the development, materialization, and full-scale achievement of maximum carbon emission reduction or the rapid advancement of low carbon tourism in this multi-faceted dynamic industry? 3. What specific roles, activities, and functions should jointly be contributed and undertaken by the respective stakeholders concerned, which include the public and private sectors and the noble community, through an exceptionally ambitious endeavor to support incessantly and effectively the values and multi-faceted benefits of low carbon tourism, in addition to adaptation to the approaching and resulting impacts of climate change? Do the noble parties, by nature and character, have inherent and intrinsic qualifications and full preparation to meet the requisite and indispensable benchmarks and criteria duly mandated by the paramount urgency and importance of this time-critical matter? Sustainable tourism has the meaning of sustainable development; it means the critical lessening of environmental impacts and requires well-organized and fair management of resources which gives a complete framework to tourism. It was comprehensive and extensive research that had aimed at investigating scrupulously and distinguishing the prevailing practices and principles of the low carbon tourism among the varied stakeholders of Khaosok Tourism Cluster. This kind of research was focused on multifaceted problems, constraints, prospects, and community-based approaches from both public and private sectors in developing and implementing low carbon initiatives within a regional cluster highly dependent on natural resources as its primary attraction, with a focus on ecotourism and responsible tourism. It is crucial to underline that this research deals with the multifarious aspects of climate change impacts and does not delve into the myriad possibilities of adaptation in destinations or within tourism operations.

1.3. Methodology

The methodology underlying this novel and original study is holistic, integrated, and thorough qualitative, multi-dimensional, case-study-based. Emphasizing the most relevant mixed methods approach, this study was able to provide a capture ship of the quantitative and qualitative data necessary to achieve an amazingly comprehensive and holistic perspective of these remarkable low carbon tourism practices in the enchanted country of Thailand. It was a very informative research framework that had been designed to capture and understand the low carbon practices of each destination in detail, while incorporating an extensive and comprehensive range of indicators that guarantee the accuracy and richness of the findings. Going further into the details of the study, the researchers have made conscious and efficient selection and identification of two distinct case studies within Thailand, primarily to bring an all-encompassing holistic account of phenomenal low carbon practices evident therein. The following section presents a detailed description of the elaborate selection process followed in selecting these two model case studies, using an exhaustive and strong selection criterion that ensured the highest degree of validity and representativeness of findings. The next section outlines the various research instruments that were used and applied judiciously to better interact with the chosen destinations, in which the reality and complexities from the low carbon practices of these destinations have emerged. These tools have been selected and adapted to best fit the different needs and peculiarities of each of the case studies, with a view to the unraveling process, in this way allowing the unveiling of the underlying principles and practices constituting low carbon tourism. Finally, toward the end of this chapter, supported by unyielding dedication to rigor and validity in considering the methods used to ensure the highest reliability and validity of the precious data accumulated in this magnificent journey of research. Care has been taken to ensure that the findings are robust and credible. Several methods were used, such as strong data triangulation, validation with participants, and continuous reflexivity, to enhance the trustworthiness and accuracy of the research findings. This state-of-the-art research indeed embodies how extraordinary merits and significance are embedded in a qualitative, multi-method, case study-based approach, seamlessly melding quantitative and qualitative data together in a manner that conveys an overall, deep understanding of awesome low carbon tourism practices found within the magical landscape of Thailand. Careful case study selection, deployment of research tools, and following rigor and validity mean this study represents a really pioneering contribution to the growing body of knowledge in low carbon tourism studies. Two case studies were chosen for this research: Nakhon Nayok and Pai, Thailand. The most suitable case studies had been located through a comprehensive desk-based review. Initially, several destinations that were perceived to have promising potential for low carbon tourism were identified in some detail, using an extensive database as a rough guide. From here, five key low carbon practices that are considered in any form of assessment regarding the degree to which destinations have adopted a wide range of sustainable practices were put into consideration: target markets, development processes, energy production, water management, and waste management. Of importance, these case studies are non-statistical; thus, it covers a broad section of guesthouses in the destinations with their different approach towards sustainability. Involvement of key local stakeholders in this research-very valuable and sound methodology to aid in collating data from combined-depth individual interviews with well-designed questionnaires that will complement and add depth to the identified indicators. This important and essential aspect of the research was performed with the active participation of all partners involved in the research, comprising very-esteemed faculty members, dedicated students at a prestigious university, and passionate local tourism operators that take an interest in the development and implementation of low-carbon practices. This was done via a range of extremely tastefully designed and intricate qualitative research methodologies that ensured the information was as valid and reliable as possible.

2. Conceptual Framework

Tourism is not confined to tourist resort areas alone; it is extended to less popular areas and activities that are related to search, culture, and adventure. Sustainable tourism is the concept that represents the understanding of assessing and accounting for its current and future economic, social, and environmental impacts while in a committed manner working towards meeting and fulfilling the changing needs of visitors. The concept of green, as an intrinsic part of sustainability, bears the same weight and worth when used within the discourse of conservation. 'Low carbon tourism', in this respect, takes on a whole new meaning to describe 'green tourism' or 'sustainable tourism' as one which works earnestly towards lessening and mitigating the massive impacts brought about by the emission of carbon. This paradigm shift in eco-tourism delineates harmony among natural wonders, cultural heritage, and sustainable development through environmental consciousness in practices and promotion. The broad-based research dealing with the subject matter covers the relationships between sustainability, tourism, and carbon emissions. That is the core of the research; it should have been able to understand and analyze the three most complicated cooperative and interactive factors, especially in the tourism of low carbon. The basis for undertaking this research is from grounds attending to the fact that the tourism industry in Thailand has seen an alarming and fast growth over these years. This growth has not only fostered concerns regarding the adverse impact that tourism has on the environment; rather, but this industry has also enhanced its capacity to continue contributing to the rapidly increasing greenhouse gas emissions. It is thus of grave

importance that the inter-relationships amongst sustainability, tourism, and carbon emissions are closely studied and analyzed. Moreover, such research needs to be contextualized within the broader global and regional contexts. These insights can then be used to guide and support tourism policies at the national, regional, and local levels in Thailand. With the recommendations and strategies adopted from this research, the country should be well on its path toward realizing its vision of a low-carbon destination. It is worth noting that the present research is novel insofar as the review of discourse on low carbon tourism in the context of Thailand is concerned. Due to its sound theoretical approach and thorough understanding of the complexity surrounding the concept, this research might hold high potential to attract the attention of Thai citizens and foreign visitors alike. This will consequently create pride and provoke added value within the Kingdom of Thailand to bring about a positive, sustainable change in the tourism industry.

2.1. Definition of Low Carbon Tourism

2.1.1. Low Carbon Tourism

Other synonyms for low carbon tourism include sustainable low-carbon tourism, carbon-neutral tourism, and environmentally friendly tourism or the greening of travel. To this research, the concept of LCT has been taken which comprises tourism activities that do not contribute to a net greenhouse gas emission increase through reduced or zero use of fossil energy. Hence, low-carbon tourism can reduce the carbon footprint that emanates from tourism activities. Several key principles characterize low-carbon tourism. First, low-carbon tourism activity is so designed as to be able to reduce carbon footprint. As such, they necessarily include activities which can reduce the greenhouse gas footprints by measurement and calculation using standard protocols. Second, low-carbon tourism must demonstrate positive benefits in terms of carbon emission reduction. Third, since low carbon tourism can be accounted for and validated, activities should be certified or validated as "low carbon." There are many strategies devised for implementing low carbon tourism. One of the main strategies is enhancing energy efficiency to decrease the amount of energy used within the destination. The initiatives include carrying out comprehensive energy audits, deploying smart technologies and supporting sustainable measures relating to accommodation, transport modes and attractions. By embracing energy efficiency measures such as the installation of LED lighting, optimizing heating and cooling systems, the use of renewable sources of energy including solar panels, among others, reduce significantly the carbon footprint resulting from tourism. The strategies put in place enhance the due use of renewable and less impactful energy supplies resulting from local energy resources to reduce the carbon footprint. This would involve active promotion and support for developing eco-friendly energy infrastructures, such as wind farms, hydroelectric plants, and geothermal power stations. Low carbon tourism ensures, through harnessing these natural resources available at the destination, minimum reliance on fossil fuels, ensures sustainable economic growth, and energy independence. It is also a fact that the tourism industry plays a significant role in motivating the energy-efficient use of natural resources through provision of the necessary information for tourists. In this context, it will educate tourists on responsible tourism, which entails the need to minimize energy consumption, conserve water resources, and minimize the generation of waste within educational and awareness programs. It illustrates environmental value as an important outcome of this process, enabling tourists to make conscious choices to add value to the visited destination. It also informs the buying of the carbon credits involved in the project or before transfer of ownership. This could include offsetting carbon emission programs and collaborating with agencies that would pave the way to invest in projects such as renewable energy and sustainable development. In this manner, the tourism sector can make positive contributions to global action regarding climate change and be able to offset carbon emissions. Other binding principles on mitigation in the supply chain focus on cleaner production. In other words, business concerns in tourism must apply practices of sustainability along the whole value chain, including sourcing eco-friendly materials, optimizing transportation logistics, and waste generation. Low carbon tourism initiatives propagate green procurement and responsible supplier management to ensure that the sustainability principles remain right at the heart of all operations in the industry. In addition, there should be clearly spelled-out responsibilities, tasks, and contributions of all stakeholders in countries and sectors in the activities of low carbon tourism. In this respect, full collaboration should exist between governments, tourism associations, local communities, and businesses. The cumulative effort can then adopt and put into place an all-inclusive low-carbon tourism strategies, each tackling the destination-specific challenges and opportunities. Based on well-defined responsibilities and allocations of tasks, all stakeholders can work to achieve the results of low carbon tourism initiatives. In this respect, low carbon tourism also features as a key strategy in pursuit of the tourism sector's lessening impacts on the environment. This can be achieved by investing in energy efficiency, renewables, tourist education, carbon offset projects, sustainable supply chains, and multi-stakeholder collaboration-much of what low-carbon tourism is doing-and it is crucial in the face of the increasing need for a sustainable future of tourism around the world.

2.2. Importance of Sustainable Practices

Tourism today must be addressed in a sustainable manner, concerning environmental, social, and economic dimensions. Indeed, this remarkable growth of the industry has created and, afterwards, cherished several related competitions

which have driven many operators to make concessions about natural and cultural resource protection and, sometimes, employee welfare. The stakeholders do their best to fulfill the objectives of sustainable-oriented tourism for the present and the future that preserve the environment and improve the quality of life for society in harmony. There are plenty of reasons to support the adopted premise of the paper. That is to say, the concern about the quality of the environment is more conscious as air and water pollution is already at a high level. In our context, the depletion of energy, human-made carbon, virgin land, and natural resources are found in larger dimensions. Furthermore, tourism is a significant source of shareholder value. Social is the most dominating concern today that attracts enormous attention toward noticing and supporting any intervention contributing to sustainable livelihoods. Protection of human rights and empowerment of people have become central issues in most social debates today. Income generation and poverty reduction have also become one of the highest priorities for developing countries to achieve development. Various meanings and ways of looking at the terms involved in sustainability and tourism have been debated. However, from a broader perspective, the following definition encompasses the interconnection of sustainable tourism: a conscientious decision-making that considers not only the present situation, but also the long-term impact on economic, social, and environmental viability of communities. The outcome should realize benefits for host communities on an equitable basis and ensure full involvement and participation of hosts in the planning and management of tourism ventures. Moreover, much importance has been given to the development of the host-guest relationship, not only in terms of the behavior and responses of the tourists themselves but also in being sensitive to the significance of the tourism experience in the booster of visitor satisfaction. Sustainability can be understood both as durability, the ability to endure, but also as the potential to be supported. In such a context, the sustainability of tourism development initiatives would tend to depend essentially upon the management of visitor flows and their interpretation, correlated with the potential capacity of the host community to absorb tourists while easing negative impacts on the environment and society. However, there is also the need for an embracing approach where the global tourism landscape is also driven toward improvement in the enrichment of tourists' experiences in a more appealing and intimate fashion. All these call for the establishment of long-lasting ties and close identification to the dynamic awareness of perception towards its community resources. These preconditional values lay the ground for sustaining those factors that could make a tourism product successful and competitive at an international level. In this way, it is possible for the tourism industry to maintain its prosperity in harmony with sustainability goals by fostering long-term partnership and embracing a heightened awareness.

3. Low Carbon Tourism Initiatives in Thailand

For policymaking, the Thai government has been issuing numerous environment-friendly policies and laws to support the concept of low carbon and sustainable tourism. Having the clear aim of increasing awareness and protection of the natural setting from perceived harm, efforts at translating environmental consciousness and concerns into action can take the shape of strong government intervention, active participation of private initiative, or, in many cases, a judicious blending of both. Throughout the picturesque kingdoms of Thailand, a set of creative low-carbon projects and environmentally friendly approaches have been thoughtfully promoted by the various accommodation and transport service providers. These pioneering programs include, but are not limited to, the installation of renewable energy sources, stringent energy and waste reduction methods, holistic methods of water saving, increasing awareness about various sustainable products, and purchasing locally, engaging communities, as well as the application of state-of-the-art management systems for both natural environment and waste. The tourist industry of Thailand, driven by a relatively large population, growing business concerns, and huge potential to emerge as a major player in the nation's technological skill and economic prosperity, indeed has faced harsh negative impacts on local ecology and distinctive characters and cultures of its inhabitants over the time. However, the extraordinary community-based tourism efforts within Thailand have received unprecedented attention from respected researchers and committed practitioners to such an extent that few countries around the world have ever seen. In numerous enthusiastic quarters, especially among international donors and respected scholars, the kaleidoscopic wonder of Thai community-based tourism initiatives tends to be envisioned through an alluring romantic filter. These he undertakes, above all, serve as beacons of hope-a testimony that the eternal ideals of local involvement and minimum ecological footprint are alive. In fact, they are very well-positioned to afford the much-needed assistance, especially in a very practical sense, by empowering the poor and far-flung villagers for the holistic preservation and protection of their very valuable natural resources for future generations. Similarly, various methods and approaches adopted by community-based Thai tourism projects take into consideration not only the environment but also help in fostering a close rapport with the rich culture of the nation. Projects serve as guardians of cultural authenticity by amalgamating traditional practices, customs, and beliefs. They rejoice in the diversity of local communities in all their vibrancy and invite visitors into participation in some of the very special traditions and lifestyles that truly set Thailand apart. In addition, the issues of economic and ecological relevance are being taken even further by community-based tourism projects. Essentially, they recognize and appreciate community empowerment and social equity. Putting the people's interests and self-determination first, these projects enable them to participate in livelihood development, gain new capacities, and thus improve their lives. In addition to attracting visitors and providing economic benefits, the success of Thai community-based tourism projects depends on

their commitment to long-term sustainability. Such projects must strike a balance in protecting natural environments and cultural heritage amidst increasing tourist demands and expectations. Continuous research, monitoring, and adaptation are ways that they can make sure that what they work for is relevant and responsive to any changed circumstances. Conclusion This shining example of remarkable achievements demonstrates the power of collective action, ingenuity, and great dedication to the creation of a better future by Thai community-based tourism projects. These projects are lighthouses of hope as Thailand rises through the challenges and opportunities of the 21st century, inspiring others around the world to consider a more sustainable and inclusive approach to tourism. It is through their resilience, creativity, and commitment that the path can be lit toward a greener, fairer, and more harmonious future for all.

3.1. Government Policies and Regulations

In many ways, the government has played a very significant and leading role in the promotion and development of low carbon tourism by explicit and implicit policies, regulations, and unequalled environment-related legislation. It is important to underline that one of the most critical and essential legally drafted texts is no other than the National Economic and Social Development Plan, elaborately outlined for the lovely country of Thailand as a very special and historic Plan for Sustainable Development. That groundbreaking, visionary document laid out an impeccable and comprehensive framework for the profound and overarching environmental governance to propel responsible state agencies to establish and implement policies and measures carefully drafted, hence effectively promoting and championing exceptional practices in sustainable development. It is a thing of great wonder, and with respect, that the very noble, esteemed Office of the National Economic and Social Development Board has been invested with such an awesome responsibility skillfully to monitor and carefully evaluate this splendid plan's steadfast and sure implementation. In the same vein, the unparalleled and revolutionary National Tourism Development Master Plan has been a hope and development; it epitomizes the blueprint, constituting the very foundation for the astounding unparalleled development of incomparable low-carbon tourism strategies spearheading and advocating passionately for the inception and endorsement of sustainable tourism practices in their purest and most virtuous form. Thus, the 12th plan comes out to be an undeniable and seminal masterpiece that has triggered off the path towards fruition of this noble cause, opening an era of unprecedented progress and achievement within the domain of low carbon tourism strategies and sustainable tourism practices. The success that has been achieved with regards to the development of political or legal instruments with a view to promoting low carbon tourism and responding to various problems of climate change has taken place in pilot projects, such as Koh Mak Island. In this respect, the leading agency responsible for designing policy measures and strategies concerning climate change mitigation and adaptation, among others, is the Office of Natural Resources and Environmental Policy and Planning. It shall be responsible for the supervision of the Thai Working Group on Climate Change as the coordinating unit of relevant agencies and industry. All these policy measures are within the authority of the Ministry of Tourism and Sports, the Ministry of Energy, the Department of Public Works and Town and Country Planning, etc. Research at the local level identifies various issues that have hindered the success rate of these regulations, especially due to a lack of government budgeting for local community development. Major challenges, especially at the local level, concern issues of capacity and knowledge in enforcement, and coordination with other agencies, particularly at the level of local authorities.

3.2. Private Sector Initiatives

The wide-scale adoption and implementation of such a proactive approach to sustainable tourism seems to take a critical lead from the private sector. At the country level, much is being effectively, and imp actively done in Thailand at the local and regional levels, with a significant element based on the direct engagement and participation of the entities within the private sector. This active involvement is demonstrated through a variety of tour operators who have gone out of their way to establish strong partnerships with the coastal communities. In close collaboration with these, they have undertaken ambitious projects dedicated to the conservation and preservation of protected areas and overall biodiversity but also embarked on leading roles in the promotion of the concept of eco-cultural tourism to visitors. These are designed to limit and reduce negative environmental impacts while creating a stronger sense of community wellness by responsibly sharing and utilizing resources. As such, unique efforts like these are not coincidental but birthed out of serious commitment to the tenets of corporate social responsibility as the bedrock base of what the eco-cultural partnerships undertake. These commitments mean that the private sector is fully committed to embracing practices that would ensure longstanding positive impacts on society and the environment. Furthermore, innovative practices are highly popular among the Thai private sector, which further contributes to the sustainability of tourism. These pioneering initiatives indeed speak to the entrepreneurial spirit and innovation that characterizes the private sector insofar as they seek, through continuous processes, to devise and adopt new methods to surmount all challenges faced in the industry. The forward-looking practices would underline the need for continuous improvement and adapting so that sustainable tourism in Thailand remains dynamic, attentive, and up to the emerging needs of tourists and the environment. Therefore, in Thailand, one of the most preferred destinations in South-East Asia, many tourism

companies have already undertaken a broad collection of sustainability practices that have moved beyond damage reduction to competitive positioning as substantial providers. These companies also highly shared useful knowledge regarding green practice, inclusive social responsibility, dimensions of participatory practices, education support, and partnership with communities. Their efforts are basically channeled into the development of conditions for local and international tourism operators to build their businesses with a view to conservation of Thailand's nature and cultural heritage. However, it should be emphasized that some obstacles and constraining factors to the full realization of these proactive, yet hitherto already supply-side operated policies exist. Key among these challenges, however, are the unending demands made to satisfy the varied and changing needs of tourists while at the same time ensuring that their expectations are always surpassed, and their satisfaction is maximized. This is besides the fact that these tourism companies usually must deal with budgetary constraints and incompatibility challenges among the institutions involved, coupled with increased competition from older and more successful firms in the industry. It is important for these tourism companies to continuously develop sustainable success by focusing efforts on lessening their negative impact on the environment through various tourism-related activities. It would be apt to mention that although many sustainability programs still faced formidable obstacles, various small companies have emerged as bright examples of economic competitiveness coupled with environmental soundness. These outstanding companies will serve as a better example to prove that responsible tourism can indeed pay off for both enterprises and the environment. The elaboration of such a statement is presented here by delving into an in-depth case study analysis of outstanding success in two tiers of shades in the tourism industry. These enlightening vignettes are about to bring into our field of view how the transformative power of sustainable practices has not just helped the businesses themselves but the communities surrounding them and the wider landscape of tourism. These Thai tourism companies are showing the way toward a more conscious and sustainable future beyond mere damage control. They are creating a new paradigm where tourism and care for the environment, with continuous knowledge, experience, and best practice exchange, go hand in hand in bringing a better world for future generations.

3.3. Community-Based Tourism Projects

It is, in turn, relevant to the broader context of the role of community-based tourism projects in the encouragement of low carbon tourism when such relation to the sustainability narrative is concerned, and the engagement of local stakeholders, including the local communities which are involved, are concerned. This approach is crucial for building up a sense of community and establishing cultural heritage as an influential tool for the promotion of low carbon tourism and environmental protection. These community-based tourism projects are designed in consideration of available resources and environmental conditions; the second idea is a proposal to reduce the carbon footprint of tourists. It involves projects created by the community with proposals to have an ecological and cultural trail of clean and green spaces for tourists, while others offer carbon-neutral and low-carbon wildlife tourism activities. Community-operated homestay project with low carbon emission and carbon neutrality. Plastic bag handbag making, which decorates Walking Street every Sunday, is a community-based operation. All these projects have the mechanism of returning to community investment involvement, and all the guidelines of the projects focus on working in the community to aim for cultural tourism with a low carbon emission approach. Within Thailand, some communities had begun to take the approach themselves in developing their destinations. The concept is designed from those communities' points of view through considering the ways of living, cultures, and knowledge of the community and utilizing them as main features. For the initiatives that are helping these communities develop their local tourism towards maximizing their benefits, we have explored and expanded our suggestions into two case studies related to community-based tourism. These have provided substantial evidence of the feasibility of effective local community-based tourism. Overall, both positive and negative aspects of community involvement in low carbon tourism have been highlighted. Involvement in community-based tourism means access to a global marketplace, and for the wider benefits of knowledge management in low carbon practices to be recognized and diffused. It allows the combination of local resources with locally generated knowledge and valuable skills based on the concepts related to self-organizing, using local resources and products. The local knowledge provided by the communities gives strategies added value to the latter that promotes genuine product development and the creation of unique product portfolios that may not be effectively imitated for competitive purposes.

4. Benefits and Challenges of Low Carbon Tourism in Thailand

In fact, sustainable tourism is a very recent concern for the entire world due to increased awareness of the environmental impacts that tourism may have. To this fact is Thailand, considered one of the countries with one of the most rapidly developing tourism industries in the world; this industry alone has grown at a rate over 17 percent of its GDP. Unfortunately, the growing number of tourists that pour into the country causes damage to the environment. The increased number of tourists and the rising level of carbon emissions have caused considerable disturbance to the fragile ecological environment of the area. Therefore, there is a strong need to discuss these challenges and hence come

up with sustainable solutions that can reduce the impact of tourism on ecology. In this paper, we shall try to present an empirical analysis of the practices of sustainable tourism in Thailand. Through this, we use an in-depth research methodology to explore the sustainable initiatives and strategies put in place in the country. The study tends to highlight the effectiveness and impacts that low carbon tourism is viewed to impose as a solution. We test the empirical evidence for pointing out how successful different practices have been in minimizing the carbon footprint from tourism in Thailand. Furthermore, different aspects of benefits and limitations of such sustainable practices are analyzed herein, considering their economic viability and feasibility in the context of Thailand's tourism sector. Ultimately, it is expected that this research will provide policymakers, stakeholders in the tourism industry, and environmental advocates with valuable insight and recommendations. We hope to contribute to the ongoing effort of betterment with regards to sustainable tourism in Thailand and beyond by highlighting best practices and areas of improvement. There are quite a few major and impressive benefits associated with the introduction and implementation of low carbon tourism. One of the most apparent benefits is the substantial increase and extension of tourism attractiveness of expensive and awesome national parks. Such an impact is in relation to the deep and wide improvement in knowledge and insight as well as in the selective management and conservation of exquisite natural diversity within a protected area. Moreover, the promotion and encouragement of visitors to low-carbon vacationing would result in significant and multi-social multiplier effects which might reverberate within the community and bring several positive outcomes, such as increased awareness, engagement, and appreciation for sustainability practices and approaches. It is such collective efforts that will silently instill a sustainable and low-carbon mindset in the minds and hearts of tourists, eventually laying the ground for profound, long-lasting positive change locally and globally. With the advent and prevalence of low-carbon tourism also come unparalleled and very promising opportunities as regards long-term investment in the thriving and ever-evolving sector of low carbon. Sustainability and economic growth—the irrefutable and vital link between these two bestows itself most aptly in this frame, whereby the opening of exceptional prospects for low-carbon practices and technologies gives way to such economic growth. Active participation in sustainable projects and initiatives will enable different sectors and industries to flourish and bloom, allowing economic prosperity and environmental preservation to coexist compatibly and harmoniously. However, it is important to point out that there are different obstacles and challenges that low-carbon tourism needs to address. Some of the major barriers involve financial constraints, lack of proper human resources, and technological hurdles. These would need to be looked upon and planned properly so that the transition is holistic and useful for the low-carbon approach. It is also important to highlight and increase awareness to all stakeholders in the tourism industry about manifold benefits associated with a low-carbon mindset. This shall be an essential and pivotal task of educating the relevant parties and eliciting a concerted effort towards embracing sustainable practices and understanding why the adoption of a low carbon approach is so important. More importantly, consideration needs to be made for the backlash from businesses that are too deeply rooted in traditional and outdated methods of procedure. The inability or unwillingness to innovate or adjust behaviors greatly may strongly impede low carbon or sustainable tourism principles from becoming mainstream. Traditional Thai tourism practices, largely imbued through historical and normalized practices, may encourage the ability of the low carbon strategies to be implemented. Such resistance does call for patience, persistence, and comprehensive understanding so that argumentation may allow ways for a sustainable and ecologically viable tourism industry. Conclusion The introduction of low carbon tourism comes with several considerable benefits that reach beyond the tourism sector itself. The benefits range from improved natural diversity conservation and enriched visitor experiences to catalyzing long-term investment opportunities and improving environmental quality. While there is a need to grapple with the challenges in terms of financial limitations, limitation of human resources, and awareness among stakeholders, the potentiality for a paradigm shift toward low carbon tourism portends great hope. By embracing sustainable practices and fostering a low-carbon mindset, this precious relationship between tourism and the environment could be both protected and nurtured for the future.

4.1. Environmental Benefits

Environmental sustainability in developing low carbon tourism would thus aim at providing tourist products that ensure the quality of natural habitats, ecosystems, and special patterns of biodiversity are preserved within the principles of clean and green operations and global standards for reducing the effects of greenhouse emissions. In addition, sustainable tourism aims at significantly enhancing the ability of the vulnerable sector so that they can cope with the climatic shifting. Low carbon tourism environmental benefits can be viewed in the following areas: 1. Green Economy: Low carbon tourism focuses on economic and social activities that are low carbon in their production, consumption, and trade other than tourism activities. The hotel industry also uses low carbon technology in its domestic management, particularly in the treatment of solid waste, air and water pollution, and resource management in terms of construction material procurement. The local supply chain for tourism also implies a low-carbon lifecycle of products. 2. Biodiversity: The general farm-stay tourism businesses that are low in carbon offer products packed in low-carbon foods. In addition, robust economies and social systems that link farming with other sectors of the economy attract the surplus labor from villages, thereby reducing pressure on forests. It is anticipated that both low carbon and eco-friendly

benefits can be brought by replicability. 3. Water and Water Basin: Installation of small wastewater treatment facilities in the market was one of the cooperative activities within the project. The main goal of this will be piloting the transformation of conventional wastewater treatment systems into an aquatic system. Low-carbon and advanced environmentally friendly facilities with high-quality landscape views of water surface and aquatic plants in wetland cells. Investment in this kind of wastewater treatment system has become economically viable, along with all the environmental and social benefits entailed in the incitement and attraction of tourists and the local community to visit and participate in activities in the management of waste/facilities, and promotion of easy transportation and participation in clean water activities. 4. Air: Since the objective of the LCTs is to address climate change in the global transition towards low carbon societies and economies, the outcome of reduced carbon emissions becomes considerable on many fronts. By demonstrating crystal clear positive environmental impacts of the undertaking, this can be useful in various sustainability assessment studies within the tourism industry. The successful examples of low carbon tourism will also support building environmental sustainability. Thus, the target of the local players of any interest in how successful types of LCT have achieved standards of environmental and sustainability is for consideration of such techniques in the Thailand perspective. Conclusion In this study, the focus of LCT will concentrate on both the aspects of environmental complicity reduction and market-based approaches about sustainable development perspective in the tourism context. It also focuses on the main elements of national strategies and policies for ensuring internal capabilities, enhancing foreign partners, and sustaining the international market base. While the LCT approach can be applied to different sectors within tourism, the proposed study includes a case study on environmental complicity reduction initiatives by providing complementary services in the ground eco-tourism sector relevant to biodiversity and natural conservation. This market promotes and manages local initiatives that allow participants of countries in this agreement to access information, expertise, and knowledge in environmental protection, policies, strategies, and best practices in a local context applied to a tourism destination and integrated into the requirements of Thailand's tourism industry.

4.2. Economic Benefits

These are also emphasized by the national visions, 20-year national strategy, and SDGs in Thailand, which says that this would promote basic industries in an equal, sustainable, and affluent manner at the local area, which would unlock the full economic potentiality of Thailand and would shift the country from a middle-income trap to an advanced economy. Besides, the growth at a local level that is taken into consideration on an equal, sustainable, and holistic basis is emerging as the new economic model for Thailand. For instance, due to the COVID-19 pandemic, tourism from home has shown the world the importance of integrated, low-carbon tourism development aside from mass consumption and tourism. According to resource-based theory, the local economic opportunities and national income could be further advanced if the basic resources, such as prices and income of tourists, natural capital, financial capital, human capital, cultural capital, technological capital, development, etc., were increased and enhanced. This involves investing in renewable energy sources, conserving natural resources, and implementing different sustainable practices in various industries. By adopting a comprehensive approach to development, Thailand can ensure that its growth is not only beneficial in the short term but also sustainable in the long run. Furthermore, the promotion of low-carbon businesses not only contributes to environmental conservation, but it also opens new avenues for economic growth. Businesses, therefore, ensure that by offering high-quality products and services commensurate with sustainable practices, more customers come their way hence significantly increasing the total revenue earned from tourism. Besides, low-carbon tourism has a greater chance of ensuring resilience in the tourism industry, thus making it more competitive and less prone to exogenous shocks. This, in return, could go a long way in contributing to the overall economic stability and prosperity of Thailand. In consolidating and fortifying its position on sustainable development with adherence to the principles of the SDGs, this country would be in a better position to assume the role of a leader in the global movement toward a more sustainable and inclusive future. All in all, the collaboration with international partners in the sharing of best practices and investing in research and development will allow Thailand to move forward in a direction of sustainable development while exploiting the economic dividends coming from it. All these will support the realization of Thailand's national visions, the 20-year national strategy, and attainment of the SDGs. Low-carbon activities in tourism can be marketed as distinctive to those customers who want to contribute to preventing negative environmental and social impacts. Also, well-organized energy and resource use reduces the cost not only of operating the business but also contributes to making the operation more sustainable. Therefore, if employment is created that enhances the quality of intuition and ensures that employees can work most efficiently, then even in crisis periods, the tourism sector will be able to contribute to longer-term economic stability. Moreover, such initiatives to reduce negative impacts would contribute to better productivity and economic good sense. For example, if the tourism industry encourages making more effective use of utilities, it will be more competitive because abundant natural capital and environmental resources are already at the core of economic efficiency. This forecast by an investment analyst shows that over time, more and more resources would be channeled into sustainability and resilience against high-impact, low-probability shocks. So, adopting low-carbon tourism can contribute toward not only preserving returns and value but also becoming part of a

wider strategy of corporate governance based on environmental, social, and governance criteria. In the residential and industrial sectors, win-win water-energy efficiency and demand intensity reduction have already been practiced in Thailand. That is a good example at the Bangsai Arts and Crafts Centre, where 99 percent of hard carbon generated from liquid and solid waste was saved. Besides this, the initiative also conserved resource consumption intensity by 33 percent per cent while preserving national water resources. Such practical measures reveal the resilience and multi-benefits of the economy, especially when these are combined with actions aimed at reducing disaster risk. Finally, adaptive low-carbon tourism potentials in Thailand contribute to sustainable business and a greener future.

4.3. Social Benefits

Another direct primary benefit emanating from LCVE initiatives is an improvement in social well-being. In the context of Thailand, which is the destination of this study, the social benefits to be mentioned include the creation of engagement of the local community. Another policy with regard to sustainable tourism within the community in Thailand is that within the community, it is warmly received and greeted by its people with an open heart and treat in essence the tourist as if it is the loved name deeply ingrained among amiable and hospitable people in the community. Indeed, this is a very good initiative born out of commitment to sustainable tourism; the many activities involved in tourism are dynamically unfolded, precisely for the highest benefit and prosperity of the community in the long term. This is a visionary and farsighted approach, complementing so well the previously established support of superior quality products, represented by the community's earnest invitation extended to local farmers who passionately produce exquisite organic rice within the surrounding area, to forge invaluable partnerships in the noble pursuit of selling their extraordinary rice to the esteemed resort. Undoubtedly, the resort becomes a matchless platform for giving impetus to and showcasing the most exemplary products grown by the people within this community. Furthermore, as an extraordinary consequence, residents themselves almost easily go from the humble status of hardworking farmers to becoming integral and valued members of the resort's devoted workforce. That indeed is a transformation, not only in substantial financial increase in their income but an empowering sense of personal growth and achievement. Stories from the local community, replete with the vibrancy of collective resilience and unity, serve as a testament to the immense power of social capital. It instrumentally serves as a tool toward the successful and easy fulfillment of the key objective of ensuring social cohesion in the context of tourism development within this marvelous destination. Preservation of traditions and cultural values is a social enterprise portrayed by the Lantern Festival in Thailand. It is a traditional Thai activity in Sukhothai province and is performed at religious ceremonies. Foreigners are welcomed to join this celebration. Moreover, it offers a workshop on how to make a lantern. Furthermore, peace, love, and unity are present there. The traditional coffee service style courses, Thai menu cooking lessons, and the optional tours to traditional food markets are appealing for tourists. For instance, in Aichi Prefecture, eco-tours are prepared for single mothers and people with disabilities; the available carriers support these people. Again, one guide cannot escort a tourist from the collective to preserve the tradition and culture of the area.

4.4. Challenges and Limitations

General and low-carbon tourism faces numerous challenges and limitations in implementation, considering the varying contextual and spatial dimensions of areas. Probably the most universal limitation to the implementation of sustainable practices is usually financial because many stakeholders are mostly unwilling to allocate funds that would enable environmentally friendly tourism initiatives. In the context of rural tourism, capital constraint usually leads to the marginalization of the future operation of the rural community. The second limitation is considered to relate to the lack of awareness and education: currently, most of the tourists and some people in the communities do not have any idea about what is meant by low carbon. They still use the traditional term "environmentally friendly." Because of this misunderstanding, there are a lot of obstacles in supporting the people or the tourists in creating environmentally friendly low carbon initiatives in the rural area. Building on these hurdles, it must be noticed that the introduction of sustainable practices can only be undertaken having in mind and accounting for the socio-economic and environmental specifics of every region. This indeed calls for broad research, analysis, and stakeholder consultation to be able to come up with appropriate strategies and approaches for the popularization of low carbon tourism. In general, there is a lack of financial commitment toward sustainability-related projects. Most stakeholders, either from the government, private businesses, or local communities, sometimes opt not to incur costs due to various reasons such as competing priorities or no perceived return on investment. Thus, financial support becomes scarce and acts to lower the levels of developing and implementing environmentally friendly tourism projects. Apart from financial issues, the lack of awareness and education in the minds of tourists and local people acts as a very strong barrier for the adoption of low carbon practices. The general understanding of the term "environmentally friendly" is available, but the specifics underlying the meaning of the term "low carbon" are usually ignored. The result of this is a lack of expertise and knowledge, hindering people from either practicing sustainable behavior themselves or supporting this cause of lessening carbon footprints. Therefore, these lacunas need to be addressed by launching education and awareness campaigns targeting various stakeholders: tourists, communities, and so on. It is important to bridge this knowledge gap through supportive

materials, workshops, and interactive sessions that raise greater awareness about low carbon tourism. Furthermore, partnerships between tourism organizations, education, and the local community would be very effective in sharing best practices and adopting sustainable approaches. Second, all stakeholders must recognize that sustainable practices are interconnected and provide co-benefits besides environmental conservation. The potential to enhance the economic benefits of low carbon tourism in terms of its long-term viability makes it more viable to attract support and investment from the public and private sectors. This can be emulated through the showcasing of success stories, case studies, and economic inducements which help illustrate the impacts of sustainable tourism on local economies and livelihoods. Conclusion As already said, in the world of low carbon tourism, sustainable practices are difficult to adopt but such hurdles must be crossed through cooperation and various approaches. By alleviating the financial burden and increasing knowledge, awareness, and stakeholder participation, a path can be cleared toward a sustainable and responsible tourism industry that benefits both present and future generations. Another issue is that there is a lack of regulations and lack of mechanisms for enforcement. Though the government has tried to work out the development mechanism, it has as yet failed to stop natural resource destruction. This is because there has not been legislation that controls these natural resources and water. However, the conflicts between traditional tourism with environmentally friendly low carbon initiatives are a big challenge in promoting the food provided to tourists in line with low carbon measures. One other major challenge is to set up an effective monitoring and assessment mechanism. In fact, for an M&E system, there is a need to clearly define inputs, outputs, outcomes, and impacts to follow up and track the progress of its course. Most of the successful results focused on the outcome of the indicators. Since most of them are quantifiable judgments in people's minds, the confusion between output and outcome was inevitable. The above limitations and challenges are still important issues to be considered so that the low-carbon practices will continue to be successful in their operation. Indeed, they have been manipulated many times in the context of low-carbon practices in rural tourism developments. For example, a low carbon initiative for developing local economic sectors targeting travelers indicated that the local people and authorities consented to only the surface of the action plan, but in real voice, it was observed that they wanted to see only the infrastructure that could support them in the normal tourist season.

5. Conclusion and Recommendations

This research thoroughly explored the international tourists' perceptions of sustainable practices for low carbon tourism development in Thailand. The findings underline the potential government-private sector-community partnership for improving low carbon and responsible tourism. There is a need for the government to lead through the development and implementation of policies related to carbon emissions reduction. Future policies should also be further enhanced in waste management, among other areas, and the involvement of business operators in climate change projects should be encouraged. Promotion of ecological tourism should also be vigorously done. With the increased private sector role, businesses are supposed to lead in adopting and promoting environmentally friendly practices. In turn, they would need to develop products and services answering responsible tourists' needs and make sure their operations are soundly based on sustainable principles. Also, collaboration with the local communities would ensure that environmentally friendly tourism activities could be developed in the region. Recommendations presented in this research have broader implications than just Thailand. These can be the foundation for creating new programs toward building low carbon intentions in other countries. This could add to the stakeholder engagement in improving sustainability practice in the global tourism industry. The data and information used in this study included qualitative information, such as in-depth interviews with eight key industry informants. These included one relevant policy maker, three academic experts, and four residents. Though this qualitative approach had its merits in richness, the limited number of respondents constitutes one of the potential limitations of this study. Consequently, it is suggested that future research may be done to capture the dynamics of low carbon tourism practices that are evolving. The findings clearly point to the need for a commitment to integration across all levels of government, private concerns, and the community to ensure that there is interaction between mainstream tourism development and sustainability issues. For such a delicate balance between tourism growth and sound environmental management practices, unity among stakeholders must be achieved. It is, therefore, time for action to be taken, and with embracing sustainability principles, we can be sure ways will be opened toward a more environmentally protective tourism and low-carbon sector.

5.1. Key Findings

Herein, the sustainable practices are identified as intrinsic to the concept of environmental sustainability and the promotion of low carbon tourism, which again have a host of attendant benefits, including social development and local economic growth. It is testified to through excellent initiatives from the higher echelons of the Rong Kluea Market in Sa Kaeo province to, among other entities, the Nakhon Phanom indigenous tourism community. It also never loses sight that policymaking, effective regulation, and cooperation across the board at all levels are not something to be undermined. Besides, it is not possible to reduce the level of commitment shown both by private sector players and the local communities in which these sustainable practices occur. Lastly, the cross-national border initiatives should also

be appreciated as they ensure cooperation and sharing of ideas. Despite the immense benefits associated with low carbon tourism, it is not devoid of challenges. One challenge involves the dilemma of costing against concerns of return. Most stakeholders consider the costs incurred and become skeptical due to existing uncertainty over financial viability and long-term benefits that might accrue. Secondly, there is a severe lack of awareness and familiarity with academic wisdom in this domain, hence limiting the level of progress. Besides that, the high-order skills necessary for an effective community engagement in tourism development and sustainability are often lacking to support the development and success of low-carbon practices. The financial constraint is one major challenge that befalls the full embracing of sustainable tourism by some entities. Overcoming these challenges will require an all-inclusive strategy that caters to the different dimensions of tourism development to be widely adopted in support of sustainable practices. This shall concern but is not limited to the formulation of strategies for tourism development in both Thailand and Cambodia. In mobilizing all stakeholders and empowering them to take an active role in the initiatives, we will be offering a clear path toward marketing and developing the new promising attraction of green and low carbon tourism. After all, it is important to note that the above-mentioned initiatives have perfectly emphasized the concept of integrating the "3-Benefit" principles, something that cannot be gleaned from academia alone. Both cases outline how low carbon tourism contributes to the integration of local economic benefits, social, and environmental conservation. Community and other non-profit organizations have a great role in the creation of an awareness about climate change. In both cases, foreign tourists were drawn by reducing greenhouse gas emissions due to a lack of use of the air conditioning system. Not using air conditioning also connected the Thai and Cambodian communities. Moreover, the Rong Kluea Market is en route to combining and connecting the local wisdom from both countries in terms of tourist attractions. In addition, the use of fewer chemicals will improve living quality in the community and create an image for the market as a natural and clean destination for tourists who come to buy fresh fruits and dried food according to traditional processes.

5.2. Implications for Policy and Practice

This research highlights several important implications for policy and practice with regards to implementing and managing low carbon tourism within developing world contexts, such as Thailand. According to these findings, five key action points are quite important: What is urgently required are developments of policy instruments and market mechanisms that incentivize and stimulate the different players within the tourism industry towards low-carbon operations and practices. Only when an enabling environment, along with incentives, is created can the driving of adoption of sustainable and environmentally friendly practices be possible. Moreover, the integrated frameworks with both supply and demand sides of low carbon tourism and sustainable development significantly contribute to growing and successful industries. It acts as an integral guideline to resolve and mitigate risks, enhancing further efficiency in the sector. As noted, the capacity and knowledge within the industry should be developed; educational and training programs should be implemented accordingly. These programs will help the industry associations, tourism businesses, and other stakeholders to appropriately develop, establish, and market low carbon tourism products and services. Educating and training all the people in the industry will not only enhance their knowledge for sustainable practices but also lead toward overall success of low carbon tourism. To achieve continuous improvement and growth, implementation of regular monitoring and assessment programs is highly imperative. This will involve regular monitoring of the supply and demand side of low carbon tourism, for instance, and how effective government initiatives are in terms of networking efforts at the private sector level in the promotion and implementation of low carbon practices. By closely monitoring the progress, areas that require further attention and interventions may be spotted to realize constant improvements in the industry's low carbon development. As Thailand is still a developing country, the tourism sector here follows a strategic policy for holistic promotion of quality tourism on a three-pronged approach: the core approach being to foster a kind of tourism which would preserve and respect ecology, health, Thai culture, and its traditional values. In addressing these areas of priority, Thailand is creating the perfect avenue where Low Carbon Tourism will have a bright future while the industry sustains its viability in the long run and preserves the country's unique culture. In the pursuit of such a lofty ideal, however, it must be recognized at the outset that the development of a low carbon economy requires the adoption of appropriate policy measures. This includes financial incentives, tax benefits, and other motives the private sector and industry may have for participating in the pilot projects. Start-up, operational, certification, and marketing costs are sufficiently high to ensure that, without such motives, the beginning of participation and the eventual creation of an enabling environment for the low-carbon tourism initiatives would be difficult. Overall, the findings of this study are of critical importance to policy guidance, strategic planning, and strategy formulation for enhancing capability and long-term viability in low carbon tourism. Not only has this research provided valuable findings, but it has also served as a beacon to lead stakeholders in how to make the most of academic output in support of the action plan of low carbon tourism. Through this study, leveraging stakeholders from the industry can have a sustainable, growing industry in low-carbon tourism with the power of collective vision for a greener, environmentally friendly future.

5.3. Future Research Directions

Therefore, this study provides new insights into sustainable practices concerning low carbon tourism in social, cultural, and environmental dimensions. The findings show that positive outcomes from the implementation of practices of low carbon tourism bear an important effect on psychological well-being and encourage voluntary behavior for sustainability among vacationers. Overall, the focus of this study has been to develop and nurture future studies in the field of sustainability. We strongly recommend extending this knowledge with comprehensive longitudinal studies. In fact, these would provide better understanding of the real impacts and challenges to the adoption of low carbon practices within the tourism industry. This, in turn, will provide empirical evidence to identify the genuine barriers that may exist for both the tourism sector and responsible authorities in pursuing and adopting long-term low carbon initiatives. Moreover, it is very important to analyze ways to incorporate technology into low carbon tourism practices and developments. Understanding the role of technological innovation provides a clearer insight into how it can be used to support, promote, and enhance low carbon tourism. This is potentially going to drastically change the nature of low carbon tourism in various directions, bringing the operation to a highly efficient one and truly sustainable. Moreover, collaborative research will be very crucial in advancing our knowledge on this area. Indeed, it requires active research involvement not only within government bodies and tourism businesses but also within local communities and international organizations. Bringing various stakeholders into one platform achieves diverse perspectives with expertise that contributes to the development and implementation of effective low carbon targets, measures, and their corresponding effects. Approaching low carbon tourism with a combination of interdisciplinary research approaches will be important in solving a variety of problems. Generally, the research identifies sustainable practices involved in low carbon tourism and reiterates the importance of positive outcomes from such approaches when involving and inspiring vacationers to be more sustainable. The knowledge and practice of a low-carbon tourism initiative should be advanced to longitudinal studies, integration of technology, and multi-stakeholder collaborative research with an interdisciplinary approach. Indeed, these will contribute to the successful achievement of long-term environmentally friendly tourism practices. Employ interdisciplinarity in research. Tourism sustainability encompasses an extraordinary degree of integrating and sharing diverse information to develop, manage, and utilize the tourism environment appropriately. Continue monitoring tourism development. Especially in this crisis and at a time when global competition is on the increase, the internal and external driving forces in tourism make the sector evolve. This generally causes serious changes in tourism management and development. It might require new investment, new methods, and a new attitude specifically at the local, national, and international levels. Thus, continued studies of tourism development are very important.

6. Conclusion

In the context of Thailand's tourism industry, careful analysis of the inter-relationships between sustainability, tourism, and carbon emissions is necessary to formulate effective policies that foster a low-carbon tourism model. As the global focus on climate change increases, tourism assumes a critical role in contributing to or mitigating the environmental challenges threatening the planet. Being one of the countries that are very reliant on tourism as a key economic driver, striking a balance between demands for economic growth with environmental sustainability presents a peculiar challenge for Thailand. It is, therefore, very essential to conduct research on low-carbon tourism development in Thailand not only to address the local concerns for sustainability but also for the alignment of its tourism industry to the best practices globally. The originality of the research is that it examines low-carbon tourism in Thailand as an issue which is emerging but has a big potential for changing the face of tourism. In the principles of low-carbon tourism, reduction of greenhouse gas emissions in tourism activities is the central feature. These activities may include the adoption of energy-efficient technologies, the use of renewable energy sources, and the promotion of sustainable travel behaviors that altogether contribute to lowering the carbon footprint of tourism. By applying these principles within Thailand's tourism sector, it can reduce its environmental impact without compromising the competitiveness of its tourism industry. One of the key strategies for advancing low-carbon tourism in Thailand is the identification and dissemination of best practices for energy efficiency improvements. These can include initiatives such as the installation of energy-efficient lighting in hotels and resorts, optimizing air conditioning and heating systems, and promoting the use of renewable energy sources such as solar and wind power. These measures, in addition to saving energy, contribute to a reduction in carbon emissions throughout the supply chain of tourism. The implementation of energy efficiency improvements reduces the carbon footprint of tourism, while at the same time reducing costs, which makes it a very attractive proposition for businesses in the sector. Besides, integration of renewable energy sources can reduce dependence on fossil fuels and further contribute to Thailand's sustainable development goals. Another important dimension of low-carbon tourism in Thailand is the alignment with community-based tourism initiatives. Community-based tourism refers to the involvement of local communities in planning, management, and benefits of tourism activities. Combining low-carbon principles with CBT will enhance the cultural preservation and social equity benefits of tourism in Thailand while reducing its environmental footprint. For instance, local communities can be involved in

organic farming, waste management, and production of sustainable handicrafts. This not only benefits the local communities but also adds value to the authenticity of tourism experience, thus being more attractive to ecologically aware tourists. Low-carbon tourism strategies at a national level can only be effectively carried out with the collaboration of many stakeholders. It is evident that ensuring feasibility and benefits from the transition into sustainable tourism requires collaboration among government, business, and local communities. First, governments have to create policies that promote low-carbon practices through tax access, finance for research, and development of regulations so that businesses apply environmental practice. On the other hand, touristic businesses, such as providing accommodation and transportation services, will have to apply green practices throughout their operations. The involvement of local communities in this process is also critical, as their active participation ensures that sustainability initiatives are culturally appropriate and economically viable. Thailand's commitment to low-carbon tourism is not only beneficial for the environment but also has significant socio-economic implications. Sustainable tourism practices create jobs, support local economies, and help preserve cultural heritage, contributing to the well-being of communities. By promoting low-carbon tourism, Thailand can position itself as a global leader in sustainable tourism, showing that growth and environmental stewardship are indeed not an either-or proposition. In conclusion, the low-carbon tourism option leads Thailand to a path it can follow to reduce its carbon footprint while keeping its tourism industry at a competitive and sustainable level. The research into the inter-relationships between sustainability, tourism, and carbon emissions is crucial in the formation of effective policies that can guide the country's tourism industry toward a low-carbon future. With the proper strategies, policies, and collaboration among stakeholders, Thailand can act as a model for other countries in pursuit of a balance between economic growth and environmental responsibility, ensuring that its tourism sector thrives in harmony with the long-term sustainability of the planet.

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