EVOLUTION OF THE HOTEL BUSINESS SECTOR AND SUSTAINABLE TOURISM DEVELOPMENT IN HOTEL BUSINESS: A STUDY IN VIETNAM

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Article History	Abstract
	Abstract In tandem with the global expansion of the hotel industry, the hotel business market in Vietnam is also experiencing significant growth, occupying a pivotal position in the country's economy. According to UNWTO, Vietnam is ranked 6th out of 10 countries with the highest tourist growth rate worldwide, and it has been selected as a leading tourist destination in Asia by WTA. However, this rapid growth comes with adverse effects on resource, environmental, and cultural concerns. These manifestations signify unsustainable development. Consequently, the need for sustainable tourism development, specifically green tourism, has become an imperative requirement. This demands concerted efforts from the Vietnamese tourism industry as a whole and tourism enterprises, including hotels, to achieve this goal. This article delves into the realm of green tourism development and its application within the hotel business sector in Vietnam. **Keywords:** green tourism, sustainable tourism development, eco-friendly hotels

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Introduction

The concept of sustainable development has become both a global trend and an imperative within the realm of economic advancement. This paradigm shift has also permeated the broader landscape of the tourism industry, including the specific domain of

hotel business in Vietnam. Despite encountering several challenges during implementation, the tourism sector in Vietnam, along with its hotels, is gradually evolving to align with this trend. Achieving desired outcomes necessitates meticulous guidance from governmental bodies in terms of policy direction, resource provisioning, collaborative engagement from pertinent sectors, and earnest efforts from hotel enterprises, local communities, and tourists alike.

1. Historical Development of the Hotel Business Sector

The inception of the hotel business sector traces back over a millennium, approximately 1200 years ago, with the earliest concept of "lodging" emerging alongside the use of currency as a medium of exchange. Among the essential components of the tourism infrastructure, lodging and dining services hold pivotal significance. Among the diverse forms of lodging, hotels have emerged as a rapidly proliferating segment worldwide. According to the World Tourism Organization (UNWTO) in 2010, global international tourist arrivals reached 940 million, generating a tourism revenue of USD 919 billion, constituting over 30% of the world's commercial service exports (UNWTO, 2011). This surge in tourism activities has spurred the concurrent growth of the hotel industry and other lodging establishments. Travelers venturing beyond their habitual abodes inevitably require lodging, dining, and resting facilities.

In ancient times, as humans embarked on their initial ventures far from their indigenous tribes, they were obliged to secure their own accommodations and sustenance. Early tourists primarily encompassed soldiers or traders engaged in the exchange of goods, who could set up temporary camps wherever necessary. The earliest records of lodging establishments across the globe are found in regions such as the Far East, Greece, and Babylon. During this era, lodging establishments merely comprised rudimentary chambers aimed at providing overnight accommodations for itinerant guests.

In ancient Greece, lodging facilities for travelers can be traced back to the ancient Greek term "Xenia," signifying not just a place of lodging but also embodying the concepts of protection and hospitality. During this period, lodging facilities were intrinsically connected to sacred spaces. The goddess Athena was regarded as the patron deity of strangers and travelers, leading to the term "Xenia Athena."

During the Roman Empire (27 BC - 395 AD), in conjunction with the development of an extensive road network spanning from Europe to Central Asia, a system of roadside accommodations and small inns began to emerge along major trade routes, stretching from Spain to Turkey. In England and Europe, many lodging establishments were strategically situated at picturesque locales near natural springs. These inns of the time were referred to as "Cauponas" and were often accompanied by taverns called "Tabernas."

In the Middle Ages, trade and travel started to burgeon, leading to the emergence of monasteries, churches, and ecclesiastical guesthouses as replacements for traditional inns. Contributions from travelers' alms were considered significant revenue sources for the ecclesiastical institutions of that era. The prolonged Crusades spanning two centuries revitalized the middle class and commercial activities across Europe, thereby fostering the proliferation of inns throughout Europe and adjacent regions. While journeying through Persia (modern-day Iran), Marco Polo (1254 - 1324) documented the activities of guesthouses in the Islamic world. His records indicated approximately 10,000 inns along his route, averaging one inn per every 25 miles.

During the Renaissance period, when King Henry VIII instigated the dissolution of monastic guesthouses and reclaimed church lands, along with the establishment of national stagecoach routes and improving socio-economic conditions across Europe, the business of inns experienced a favorable impact. In the 1600s, the first inns were constructed in America. Inns did not serve as proprietors' residences, and serving within an inn was not considered servitude but rather a trade. In this era, inns served as the precursors to contemporary hotels.

Small inns expanded throughout the 17th and 18th centuries. With the advent of railways, inns often adopted the names of taverns. The onset of the Industrial Revolution in select European countries triggered rapid transformations in the tourism landscape. The first hotel in the United States, the "City Hotel," opened in 1794 in New York with 37 guest rooms. However, the world's first luxury hotel akin to modern establishments, named the "Tremont House," was erected in Boston in 1829. Spanning three floors with 170 rooms featuring private locks, in-room water facilities, complimentary soap, and professionally trained staff, this establishment set the standards for opulence. In 1874, William Chapman Ralston constructed the lavish 7-story "Palace Hotel" with 800 rooms in San Francisco, earning recognition as the most luxurious hotel of its era.

At the dawn of the 1900s, a range of luxury hotels emerged to cater to the demands of middle-class, upper-class, business, and official travelers. This era also saw the rise of a new hotel category - the "business hotel." Notably, Ellsworth M. Statler constructed the modern Buffalo Statler hotel in New York in 1908 (later merging into the renowned Hilton Worldwide conglomerate). He is regarded as the pioneer of the modern hotel industry in the United States.

The late 19th and early 20th centuries were deemed the "Golden Age" of hotel engineering. Numerous grand hotels were erected in capital cities worldwide. Hotels in resort areas underwent continuous expansion and enhancement. Equipped with hot water systems and room heating, these establishments placed a strong emphasis on service

quality as an effective competitive strategy. Scientific and technical innovations permeated the hotel industry, concurrently giving rise to hotel chains.

The period of economic recession in the early 20th century and World War I slowed down the hotel industry. Following World War I, many hotels were constructed in major cities and outlying public areas. In 1927, the "Stevens Hotel" opened in Chicago with 3,000 rooms (later renamed Chicago Hilton), considered the largest hotel of its time. The interwar period was characterized by the development of the automobile industry and the emergence of motels in the United States in 1927. During this time, globally renowned hotel corporations like Hilton and Sheraton were established.

World War II inflicted heavy losses on the global hotel industry. Many hotels were destroyed or repurposed as hospitals and other facilities to meet various needs.

Post-World War II, the hotel industry witnessed robust growth not only in Europe and the Americas but also globally. Asia also experienced significant development in the hotel sector, with countries like Japan, Hong Kong, Singapore, South Korea, and Taiwan making remarkable strides. This period also marked the expansion and competition among famous hotel chains such as Hilton, Sheraton, Marriott, Holiday Inn, Hyatt, alongside the establishment of Disneyland and the growth of Las Vegas.

In Vietnam, according to official research, during the early 20th century, French colonialists developed tourism activities by organizing French scientists to explore Vietnam, seeking unique tourist resources and cool climates for constructing resorts for colonial officials. Examples include Ha Long, Sa Pa, Tam Dao, Mau Son, Ba Vi, Do Son, Sam Son, Bach Ma, Nha Trang, Da Lat, and Vung Tau. Even today, these French-chosen destinations remain attractive, renowned tourist centers that draw many visitors for sightseeing and relaxation. Alongside the nation's historical development and the growth of the overall tourism industry, the hotel sector has always been a focus of attention for Vietnam's Party and State, aligned with the country's economic and social development strategy in line with revolutionary requirements.

Broadly speaking, we can delineate the history of the formation and development of the tourism business, in general, and the hotel business in particular, in Vietnam into several distinct phases with the following fundamental characteristics:

In the period when the country was temporarily divided, during intense warfare from 1960 to 1975, tourism emerged to serve the needs of the Party and State's delegations. Tourists entered the country under decrees. To achieve this objective, the Government Council issued Decree No. 26/CP on July 9, 1960, establishing the Vietnam Tourism Company under the Ministry of Foreign Trade. State tourism management came under the purview of the Ministry of Foreign Trade with a specialized department of four individuals; in 1969, these functions transferred to the Prime Minister's Office and

subsequently to the Ministry of Public Security. Under the harsh circumstances of war and through various administrative bodies, the tourism sector persevered, surmounted every challenge, and incrementally expanded numerous tourism facilities in Hanoi, Hai Phong, Quang Ninh, Tam Dao, Hoa Binh, Thanh Hoa, Nghe An, etc. The tourism sector fulfilled its political missions, provided safe and quality services, serving a substantial number of guests from the Party and State, as well as international socialist delegations, in aiding Vietnam's dual tasks of constructing socialism in the North and liberating the South to unify the nation. Simultaneously, the sector accommodated the needs of relaxation, sightseeing, and tourism for officials, military personnel, and the people.

After the full liberation of the South, the country was unified, and tourism activities expanded across the entire nation. The tourism sector initiated the development of organizational structures, labor forces, and technical infrastructure, including lodging facilities, as it transitioned toward socialist-oriented market mechanisms. During this phase, the tourism sector operated under the conditions of a country that had undergone a protracted liberation struggle, focusing on healing the wounds of war, economic recovery, and overcoming the encirclement and embargo policies of the United States. Additionally, the sector continued to protect the northern and southwestern borders. From 1975 to 1990, during the period of national reunification, the tourism sector effectively managed, preserved, and developed tourism facilities in provinces and cities that had recently been liberated. The sector expanded and constructed new facilities from Hue, Da Nang, Binh Dinh to Nha Trang, Lam Dong, Ho Chi Minh City, Vung Tau, Can Tho, gradually establishing state-owned tourism enterprises under the Tourism General Department and Provincial, City, and Special Administrative Zone People's Committees. In June 1978, the Vietnam Tourism General Department was established under the Government Council, marking a new development phase for the tourism sector.

 During this period, the tourism industry played a positive role in actively promoting and introducing the country and its people to the world. It organized trips for people to travel between the North and the South, contributing significantly to fostering patriotism and national pride. Through tourism, the world gained a deeper understanding of the perspectives and aspirations of the Vietnamese Party, State, and people, who desired to be friends with all nations in the global community, striving for peace, independence, and development while contributing to breaking the embargo and isolation imposed by the United States. On the economic and social fronts, the tourism industry made advancements, achieving good results and laying the foundation for a new phase.

From 1990 to the present, along with the country's renewal efforts, the tourism industry has excelled, demonstrating innovative management and development approaches and achieving significant initial successes. It has been growing in both scale and quality,

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gradually affirming its role and position. Directive No. 46/CT-TU issued by the Party Central Committee in October 1994 firmly stated that "Developing tourism is an important strategic direction in the path of economic and social development, contributing to the modernization and industrialization of the country." A framework for the development of tourism policies was established step by step, institutionalized through legal documents to create an environment conducive to tourism development and enhance management effectiveness.

After being merged into the Ministry of Culture and Information, and then into the Ministry of Trade, the Vietnam National Administration of Tourism was reestablished in November 1992 as a government agency. The administration quickly strengthened and stabilized its organizational structure, built up a civil servant workforce, overcame challenges, and improved on all fronts to effectively fulfill its state management functions in tourism from central to local levels. In the course of administrative reform, the central-level state management apparatus for tourism consists of the Vietnam National Administration of Tourism, while localities have 15 Departments of Tourism, 2 Departments of Tourism and Trade, 46 Departments of Trade and Tourism, and 1 Department of Foreign Affairs and Tourism.

The history of the formation and development of the hotel business in Vietnam over the past 50 years is relatively young compared to other economic sectors. Nevertheless, given the current rapid pace of development in the tourism industry, including hotels, along with predictions about the industry's growth by tourism experts, there is promising potential for tourism and hotel businesses in Vietnam.

2. Green Tourism and Sustainable Green Tourism Development

2.1. Definition

According to the Institute for Tourism Development Research, green tourism is understood as tourism based on the sustainable and efficient exploitation of natural resources, coupled with environmental protection, biodiversity conservation, greenhouse gas emission reduction, and adaptation to climate change. The development of green tourism is the key to responsible tourism development, ensuring sustainable tourism growth. The development of green tourism involves adhering to principles of respecting and protecting natural resources, safeguarding the environment, promoting eco-friendly tourism, preserving and promoting cultural and ethnic values, ensuring national defense, security, social order, and creating opportunities for interaction, learning, and mutual assistance among people from different regions, areas, countries, and ethnic groups.

In the hotel business, the development of green tourism is understood as the efforts made by hotels to become more environmentally friendly by saving energy and water resources and creating a "green" culture in their services while still maintaining service quality.

The "green" criteria in hotels include: (1) Energy, water, waste, and air management: Hotels adopting this criterion implement solutions for using renewable energy sources, employ wastewater and waste treatment technologies suitable for the environment, minimize the use of harmful cleaning and maintenance chemicals by replacing them with biodegradable alternatives, and more. (2) Service-related activities: Using environmentally friendly materials for single-use items in hotels (such as towels, toothbrushes, razors, etc.). (3) Recent information indicates that, as part of efforts to reduce waste, the European Commission plans to ban the use of small-sized bottled shampoos and shower gels in hotels due to their significant environmental impact arising from their plastic and paper packaging. Consequently, hotels will provide personal hygiene kits in large, reusable containers, and guests will not be allowed to take them away. (4) "Green" staff: Hotels should encourage staff participation in green tourism development through training sessions, competitions, and fostering awareness in service culture.

The development of green tourism within hotels yields several notable benefits for these accommodation establishments. Some prominent advantages include: (1) Enhanced customer trust: Guests feel more satisfied staying at green hotels and are more likely to return if the hotel meets their environmental protection requirements. (2) Reduced operational costs: By implementing energy-saving solutions, resource management, and waste reduction, hotels can cut operational expenses and achieve long-term cost savings. (3) Competitive differentiation: In today's environmentally conscious world, guests prioritize eco-friendly choices when selecting accommodations. Being recognized as a green hotel can enhance competitiveness and brand reputation. (4) Employee motivation: Participation in green tourism activities allows hotels to motivate their staff through training and guidance, leading to increased job satisfaction, improved work performance, and subsequently, enhanced service quality and sales. (5) Increased revenue: With a growing customer base and cost savings, hotels embracing green practices can boost their revenue. (6) Environmental contribution: Green tourism activities positively impact the environment by minimizing waste, conserving energy and resources, safeguarding natural resources, and contributing to sustainable development.

With such benefits, green tourism is emerging as a new development trend in the tourism and hotel industry, providing opportunities for improving business efficiency.

2.2. Principles of Developing Green Tourism Growth

Ensure stable growth rate, focus on in-depth, quality, and efficient development; "green" business activities and tourism consumption.

Investment in tourism development must follow a "green investment" approach. Investments should be responsible, resource-efficient, and focused on developing tourism

while respecting the original nature of tourism resources. This includes ensuring a balance between conservation and development, without sacrificing resources for tourism development at any cost.

Develop infrastructure systems, technical facilities for tourism, tourism human resources, and other elements compatible with the model of green growth tourism development.

Emphasize the protection of resources, the environment, and biodiversity conservation. Adapt to climate change, minimize negative impacts, and damages caused by climate change. Reduce greenhouse gas emissions and environmental pollution. Develop tourism based on a civilized, polite, friendly, and safe social and environmental foundation, developing tourism for and with people, ensuring communities and individuals enjoy tourism's values. Create green and sustainable employment, increase income, and improve living standards for local residents. Address social welfare and well-being issues. Conserve and optimally promote cultural and ethnic values. Develop tourism based on principles of fairness and equality.

2.3. Influential Factors

Institutional frameworks and policies: The development of green tourism must be guided by the Party's directions and policies, as well as the state's legal system.

Socio-economic conditions: Tourism is a comprehensive, interrelated economic sector. The development of green tourism is directly affected by various other economic sectors.

Cultural and social factors: Distinctive and diverse cultural values serve as both input resources and objects that need to be preserved and promoted through green tourism development activities.

Environmental and climate change factors: Favorable environment and climate conditions are prerequisites for tourism development. Conversely, if climate change and environmental degradation occur, they will pose challenges to tourism development, necessitating efforts to restore them.

Scientific and technological factors: Modern science and technology are essential for green tourism development. Advances in science and technology contribute to sustainable tourism development without negative environmental impacts. Technologies such as waste and wastewater treatment, new energy production, renewable energy, etc., play crucial roles in this regard.

3. Applying Green Tourism Development in Hotel Business in Vietnam

In the face of the adverse impacts caused by climate change, people are becoming increasingly conscious of the need to protect the environment and are adopting "green consumption" behaviors. As a result, businesses in the accommodation sector in Vietnam have gradually updated and implemented measures to develop green tourism in their business activities. A lodging establishment aiming to implement sustainable practices

needs to focus on three crucial foundational factors: energy, water, and waste management. Careful management and successful treatment of these elements significantly contribute to minimizing the hotel's environmental impact, building customer trust, and gaining a competitive advantage in the market.

Currently in Vietnam's hotels, managers recognize two existing green development trends: green construction and green operation. However, creating a sustainable physical infrastructure remains an open question for hotel management. In many Vietnamese hotels, this aspect hasn't been integrated with environmentally-friendly measures from the outset. This is why the trend of green operation is being favored by many hotels.

Although Vietnamese hotels are becoming more aware and proactive in protecting the environment and aiming for green development, they encounter challenges during implementation, including: (1) Insufficient initial investment costs (capital), unfavorable hotel locations (geographical factors), lack of standardized green regulations from relevant regulatory authorities (regulations and implementation guidelines), dependence on customer satisfaction (customer feedback), and significant workforce fluctuations (employee engagement). (2) The cost of conceptualizing, building, and investing in physical infrastructure to create a "green hotel" is higher than constructing a standard hotel. Consequently, investors need to wait a long time before recouping their initial investments. (3) Building green infrastructure in urban areas presents difficulties due to various factors. (4) Vietnam lacks a standardized set of regulations for green tourism, preventing hotels from constructing and implementing systematic and efficient green practices. (5) Not all guests have a correct understanding of green tourism; some guests at 3-5 star hotels have certain expectations corresponding to the amount they pay, which might not align with green practices. (6) Lastly, the issue of human resources within hotels is challenging. High turnover rates make training new employees in environmentally-friendly habits and awareness difficult and costly.

4. Existing Issues of Green Tourism Development in Vietnam

4.1. Excessive Carbon Emissions

Tourism is a comprehensive economic sector, characterized by its interconnectedness, regional ties, and complexity. Traveling in the context of tourism involves the movement of people away from their residential and working areas for a certain period to satisfy various needs such as sightseeing, entertainment, and relaxation. Consequently, besides necessary travel for daily life, the tourism industry generates a substantial amount of carbon emissions, contributing to air pollution. In addition to the transportation used to serve tourism needs, the machinery and equipment present within tourist destinations also contribute to carbon emissions, causing ecological pollution within these sites. According to a report from the United Nations World Tourism Organization (UNWTO) on carbon

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emissions related to tourism transportation, tourism's carbon footprint accounted for 22% of total emissions in 2016, and this trend is projected to continue until 2030. Vietnam ranked 27th in the world for emissions.

Vice Minister of the Ministry of Natural Resources and Environment, Vo Tuan Nhan, noted that environmental experts have identified climate change as a result of greenhouse gases (gases causing the greenhouse effect). Of these gases, 95% are attributed to human activities, while only 5% result from natural processes. International tourism, especially long-haul flights, constitutes the fastest-growing segment of the industry and contributes approximately 25% of the total carbon emissions from the tourism sector. According to the International Air Transport Association, the total number of air passengers is expected to double by 2036, reaching 7.8 billion passengers per year. Consequently, carbon emissions associated with transportation pose a significant challenge and require the tourism industry to collaborate closely with the global transportation sector to expedite decarbonization efforts.

4.2. Ineffective Communication and Lack of Regulatory Oversight

The tourism consumption market is heating up, with strong consumption patterns attracting attention from various regions. This has led to the exploitation of local natural resources for tourism development, primarily for profit-making purposes. As a result, wastage of resources, environmental pollution, and improper planning in constructing tourist destinations are common occurrences. In some places, there is a blatant disregard for conserving and responsibly using natural resources, undermining the principles of green tourism. A significant portion of these issues can be attributed to ineffective communication, lack of proper information dissemination to tourists and investors, and inadequate oversight from regulatory agencies.

4.3. Limited Awareness of Green Consumption among Tourists

Tourists play a pivotal role in supporting the tourism industry, and their consumption behavior has a direct impact on the entire tourism process. The consciousness and behavior of tourists are decisive factors for the sustainable development of the environment. Currently, tourist destinations and businesses across Vietnam, along with the Vietnam Tourism Association, have launched the "Tourism Joins Hands to Protect the Environment, Reduce Plastic Waste" action plan. Additionally, efforts have been made to develop green tourism products to ensure sustainable development at the local level. These initiatives include raising awareness about the environment, minimizing single-use plastics, organizing periodic cleanup campaigns, and collecting waste at tourist sites. However, due to the vague and less convincing understanding of green consumption and green tourism concepts, some tourists are not fully aware of these principles.

Consequently, they engage in impulsive behaviors that negatively impact the development of green tourism.

5. Strategies for Green Tourism Development

5.1. Enacting Clear Laws and Regulations

In the tourism industry, stringent and comprehensive legal frameworks enhance ethical behavior and influence positive relationships between people, people and the environment, and society as a whole. Therefore, state agencies responsible for environmental management in the tourism sector should conduct comprehensive research on Vietnam's tourism environment to provide a basis for rational resource exploitation, ensuring an environment for sustainable tourism development. In particular, inter-sectoral relationships in environmental management with the Ministry of Natural Resources and Environment should be strengthened. Policies, laws, and regulations related to tourism development also need quantification, such as quantifying annual carbon emissions. Additionally, specific green assessment indices should be established to promote rational natural resource development, considering both profits and environmental protection, as well as assessing tourists' green consumption behavior to limit excessive consumption and other unreasonable behaviors. For travel companies, specific environmental protection assessment indices, involving sectors such as transportation, dining, and accommodation, should be developed.

5.2. Strengthening Oversight

Enforcement of laws and regulations requires strict and comprehensive monitoring from tourist destinations, tourists, tour operators, and other tourism businesses. This monitoring should cover all aspects of tourism behavior: on one hand, closely monitoring the process of natural resource exploitation and conducting quantitative assessments; on the other hand, establishing a specialized department to promptly and comprehensively address environmental pollution.

5.3. Education and Increasing Awareness of Green Tourism

The limitations of functional agencies' monitoring efforts need to be addressed from a long-term perspective. Only when tourists realize the real benefits of green consumption for themselves, their families, and society, can green tourism truly develop. Therefore, widespread awareness of the benefits of green tourism needs to be generated among the public. For instance, creating short, engaging, and lively videos about the consequences of environmental pollution or the benefits of green tourism during train and flight journeys can be effective.

5.4. Enhancing Collaboration and Communication between Localities

As tourism activities frequently cross provincial and international borders, the laws and regulations crafted in each region may differ. A particular consideration is that foreign

tourists may not understand these regulations when visiting local tourist sites. Therefore, all localities need to enhance collaboration and exchange information. This presents an opportunity for localities to learn from each other's strengths and adapt to their respective circumstances, facilitating the widespread promotion of green culture nationwide.

5.5. Smart Tourism

In recent years, the development of information technology, such as the Internet of Things and wireless sensor networks, has accelerated the transition to the digital world (referred to as the digital age), and has increased the emergence of an information network aimed at sustainable tourism. In practice, information technology is increasingly integrated into tourism business activities, such as tourist experience feedback and travel company management. The application of information technology in tourism development encompasses all technologies that allow organizations and individuals to interact in the digital world, including software, hardware, transactions, communication technologies, data, internet access, and cloud computing.

Alongside the rapid advancements in information technology, the growth of travel companies has also made significant strides, essentially transforming all conventional tourism activities into smart sustainable tourism. For instance, the lack of real-time information, such as the number of tourists, is one of the biggest gaps in understanding and managing the impacts of tourism. In this context, the information technology sector plays a crucial role in data collection and analysis. To gather data, wireless sensor networks enable continuous monitoring from small scales (specific areas) to global scales. They are flexible in application with manageable costs and easy deployment. Additionally, real-time monitoring systems, a use case of wireless sensor networks, are extremely important for measuring environmental parameters at each tourist location.

These networks utilize environmental monitoring systems based on a series of interconnected wired and wireless sensor networks. For example, Novas et al. (2016) developed a real-time monitoring system that records multiple super data points such as temperature, relative humidity, wind speed and direction, carbon concentration, atmospheric pressure, rainfall amount and intensity, presence, and the number of visitors. The real-time monitoring system is designed to present super data points online in real-time anywhere. This real-time system can also track the cave environment over time to assess the relationship between sustainable tourism and the natural environment, or wireless networks that continuously monitor important environmental parameters, such as humidity, temperature, total solar radiation, photosynthetic active radiation, and soil moisture in the Peruvian Amazon. This is the largest permanent wireless network covering a range of 450 km, assessing the impacts of global climate change.

6. Current State of Green Tourism Development in Vietnam

Given the comprehensive and diverse benefits as analyzed earlier, green tourism has become an important development direction for Vietnam's tourism industry. The tourism development strategy of Vietnam until 2030, as approved, sets out specific directions for promoting sustainable and green growth in tourism. The solutions and directions outlined in this strategy aim to ensure environmental protection, preserve cultural heritage and natural resources, and effectively respond to climate change. Below are some highlights from the strategy:

Application of Technology: The strategy proposes the use of technology to manage resources, control pollution and environmental incidents, promote advertising, and build tourism brands. It also encourages the application of green and clean technologies in tourism activities.

Environmental Protection: The strategy focuses on raising awareness and consciousness about protecting resources and the tourism environment. It involves creating and implementing projects and missions for environmental protection in the tourism sector. Additionally, it aims to enhance the effectiveness of state management in environmental protection and the ability to adapt to and mitigate the impacts of climate change.

Renewable Energy and Clean Technology: The strategy encourages tourism service businesses to use clean energy, recycle and reuse products, and adopt clean technologies to minimize environmental pollution and greenhouse gas emissions.

The existence of such a sustainable tourism development strategy reflects the Vietnamese government's concern for environmental protection and ensuring sustainability in tourism development. The implementation of the solutions and directions outlined in the strategy will play a crucial role in building a green and sustainable tourism industry. Recent activities in the tourism industry also show positive signs, as many localities, travel companies, and hotels in Vietnam have focused on developing green tourism. The emphasis on forms of tourism such as community-based tourism, garden tourism, and island tourism demonstrates the diversity and creativity in tapping into the tourism potential of each locality.

The development of garden tourism in Hue and island tourism in Nha Trang can serve as typical examples of innovative and sustainable exploitation of local tourism potential. Activities in these locations are designed and operated responsibly to ensure the protection of natural landscapes, minimize negative impacts on the environment and resources, and adhere to green tourism management regulations. In addition to protecting the environment and resources, the development of garden tourism in Hue and island tourism in Nha Trang also creates opportunities for economic development and improved

livelihoods for local residents. Local communities can participate in the tourism sector by becoming guides, providing local cultural and traditional services, contributing to income enhancement, and generating employment opportunities. This also helps to boost the development of related local industries, including agriculture, food processing, and handicrafts. The development of garden tourism in Hue and island tourism in Nha Trang not only brings economic benefits but also enhances awareness and consciousness about environmental protection in general and marine resources in particular. Tourists engaging in these activities will experience and gain a deeper understanding of the unique natural and cultural heritage while fostering environmental protection. Travelers will explore and discover unique cultural and natural heritage and enjoy a serene and pristine environment. Through these experiences, tourists will recognize the importance of conserving and protecting the environment, forming attitudes and behaviors that contribute to environmental protection in their daily lives.

The transition to green tourism by many businesses within the tourism sector is also an important step. The development of green tourism packages and obtaining green certifications for hotels ensures that tourism activities are conducted responsibly and adhere to sustainable principles. Green tourism packages are designed to maximize the use of renewable resources, minimize waste, and reduce negative impacts on the environment. Similarly, obtaining green certifications for hotels ensures that lodging establishments comply with standards and regulations related to energy efficiency, waste management, sustainable water use, and environmental protection. Green certifications not only foster trust and confidence from customers but also serve as powerful advertising tools to attract environmentally conscious travelers to the business. Examples of businesses that have successfully implemented this approach include Buffalo Tours, a leading travel company in Vietnam, which has created green tourism programs to explore and protect important natural areas. They have developed low-impact tourism journeys that promote minimal environmental impact, provide opportunities to meet and interact with local communities, and enhance awareness of environmental conservation. An Lam Retreats, a luxury resort provider, has committed to green tourism and offers sustainable travel experiences. An Lam Retreats resorts are located in stunning natural areas and have implemented environmental protection measures such as using renewable energy, waste management, and biodiversity conservation. In conclusion, the transition to green tourism models by businesses helps reduce negative impacts on the environment and enhances tourists' awareness and responsibility for environmental protection and maintaining the sustainability of destinations.

 7. Solutions for Implementing Green Development in Hotel Businesses in Vietnam

Based on the recognition of the necessity of green development in the hotel business and acknowledging the existing challenges in the implementation process, the author proposes the following solutions:

From the Perspective of State Tourism Management Authorities: It is essential to formulate a comprehensive national strategy and plan for tourism development towards green growth. This should involve developing environmentally friendly transportation infrastructure and tourism technical facilities, as well as fostering inter-agency coordination for green tourism development. Additionally, encouraging policies should be established to enhance the "green" aspect of tourism development. Clear regulations regarding "green" criteria and comprehensive, unified guidelines for their implementation are necessary. Supportive policies for businesses to develop in a green direction should also be in place. Furthermore, specific and clear penalties should be enforced to address businesses that operate counter to green development criteria.

From the Perspective of Hotel Businesses: Long-term investment plans for green development are crucial. Presently, many hotels have successfully invested in green energy usage such as solar and wind energy, implemented key card systems with power activation features, and utilized motion sensor faucets to conserve water. These basic applications need to be scaled up to benefit more hotels. Furthermore, hotels can adopt additional measures such as investing in rainwater harvesting systems for daily activities, or investing in environmentally friendly alternatives based on their own conditions and resources. For instance, using organic products such as bamboo bedspreads, natural room cleaners, or infrared sauna rooms can be considered. Avoiding plastic usage, opting for substitutes like cotton or woven bags instead of polythene, or using fired clay containers instead of plastic boxes can also be implemented. Minimizing paper use by leveraging technology for information storage and management is another approach. Enhancing awareness and attitudes among staff members about green development and fostering a green culture within the business are important. Encouraging eco-friendly consumer behavior among customers, such as limiting laundry for reusable fabric items, can also be promoted.

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