

Development of Activities and Tourism Routes in Pink Water Lily Lake, Udon Thani Province

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Abstract

This research explores the development of activities and tourism routes in Pink Water Lily Lake, Udon Thani Province, Thailand. Utilizing a mixed-method approach, the study collected data from 400 questionnaires distributed to tourists and 10 semi-structured interviews with local tourism stakeholders. The research aimed to analyze the strengths, weaknesses, opportunities, and threats (SWOT) associated with the development of tourism in the Pink Water Lily Lake area, focusing on creating a sustainable tourism model that benefits the local community. Key findings reveal the lake's potential as a significant natural attraction, backed by a strong sense of unity and cooperation within the local community. However, the study identifies critical weaknesses such as ineffective fund distribution and inadequate publicity efforts. Significant opportunities exist in the realms of digital innovation and private sector engagement in tourism. The research also highlights the need for more robust involvement from government and private sectors to support sustainable tourism initiatives. The study concludes with practical recommendations for enhancing tourism activities and routes around the lake, including improved marketing strategies, development of digital platforms, community training programs, and the establishment of public-private partnerships. The research provides a foundation for sustainable tourism development in the region, emphasizing community involvement and environmental conservation.

Keywords: *Tourism Route, Tourism Activities, Pink Water Lily Lake, Udon Thani, Thailand*

INTRODUCTION

Nature-based tourism has gained significant attention in recent years, with lakes emerging as popular destinations for sustainable tourism development (Johnson & Thompson, 2018; Patel & Kumar, 2019). Lakes offer diverse landscapes, rich biodiversity, and cultural heritage, attracting visitors seeking authentic and immersive experiences (Nguyen & Davidson, 2020; Torres, 2018). In Thailand, lakes serve as important natural attractions, often associated with traditional livelihoods and deeply rooted in local customs and beliefs (Wong & Puangcharoen, 2020). Pink Water Lily Lake in Udon Thani Province is known for its stunning natural beauty and cultural significance (Wong & Puangcharoen, 2020). The lake is home to a vast array of aquatic plants, including iconic pink water lilies that bloom from November to February, creating a breathtaking spectacle (Udon Thani Tourism Authority, 2023). The surrounding area features traditional villages, ancient temples, and historical sites, offering visitors a glimpse into the region's rich cultural heritage (Interviewee A, personal communication, June 15, 2023). Despite its potential, the lake faces challenges in effective promotion and utilization of tourism resources, including limited infrastructure, inadequate marketing efforts, and the need for sustainable management practices that balance tourism growth with environmental conservation and community well-being (Nguyen & Patel, 2020; Smith & Lee, 2023).

This study aims to analyze the development of activities and tourism routes in Pink Water Lily Lake, focusing on creating a sustainable tourism model that benefits the local community while preserving the natural environment. By examining the strengths, weaknesses, opportunities, and threats associated with tourism development in the area, the research seeks to provide practical recommendations for stakeholders involved in the sustainable management of the lake's tourism potential. The study builds upon previous research on sustainable tourism development in lakes (Bennett & Greenfield, 2020; Johnson & Kumar, 2019) and

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contributes to the growing body of knowledge on community-based tourism initiatives in Thailand (Nguyen & Patel, 2020; Wong & Puangcharoen, 2020). The findings of this research can inform future efforts to promote sustainable tourism practices in similar contexts, emphasizing the importance of community participation, environmental conservation, and strategic planning (Smith & Lee, 2023).

LITERATURE REVIEW

Tourism Route

The concept of tourism routes has gained prominence as a means of promoting sustainable tourism development (Smith & Brown, 2023). Tourism routes connect attractions and destinations, creating cohesive and meaningful experiences for visitors (Anderson & Zhang, 2019). By linking different sites and activities, tourism routes can help distribute visitors across a wider area, reducing pressure on individual attractions and promoting regional development (Garcia & Lopez, 2021). Effective tourism routes consider accessibility, attractions, and visitor management, ensuring a balance between tourism growth and environmental conservation (Garcia & Lopez, 2021). This involves carefully planning the route to minimize negative impacts on local communities and ecosystems while maximizing the economic and social benefits of tourism (Patel & Kumar, 2019).

Case studies from around the world have demonstrated the potential of well-designed tourism routes to enhance visitor experiences, support local economies, and promote sustainable practices (Patel & Kumar, 2019; Johnson & Thompson, 2018). For example, the Inca Trail in Peru has become a model for sustainable tourism development, combining cultural heritage, natural beauty, and community involvement (Rodriguez & Chen, 2019). Similarly, the Great Ocean Road in Australia has successfully integrated coastal conservation, tourism infrastructure, and local economic development (Brown & Johnson, 2019). These examples highlight the importance of stakeholder collaboration, strategic planning, and ongoing monitoring in the development and management of successful tourism routes (Smith & Brown, 2023).

However, the development of tourism routes also presents challenges, particularly in ensuring sustainability and minimizing negative impacts on local communities and environments (Anderson & Zhang, 2019). Overcrowding, environmental degradation, and cultural commodification are common issues associated with poorly managed tourism routes (Garcia & Lopez, 2021). To address these challenges, researchers have emphasized the need for participatory planning processes, community empowerment, and adaptive management strategies (Nguyen & Patel, 2020; Smith & Lee, 2023). By involving local stakeholders in the design and implementation of tourism routes and regularly assessing their impacts, it is possible to create more sustainable and equitable forms of tourism development (Bennett & Greenfield, 2020).

Tourism Activities

Tourism activities play a crucial role in shaping visitor experiences and contributing to sustainable tourism development (Nguyen & Davidson, 2020). Engaging and diverse tourism activities can attract visitors, increase their length of stay, and promote repeat visits (Kim & Park, 2018). These activities range from nature-based pursuits, such as hiking, birdwatching, and water sports, to cultural experiences, such as traditional crafts, festivals, and culinary tourism (Torres, 2018). The development of appropriate tourism activities can help showcase a destination's unique characteristics while providing economic opportunities for local communities (Rodriguez & Chen, 2019).

However, it is essential to ensure that tourism activities are compatible with the local environment and culture, minimizing negative impacts and maximizing benefits for the host community (Torres, 2018). This requires careful planning and management, considering the carrying capacity of natural and cultural sites, the needs and preferences of local residents, and visitor expectations (Nguyen & Davidson, 2020). Sustainable tourism activities should educate visitors, support conservation efforts, and provide economic opportunities for locals (Rodriguez & Chen, 2019). This can involve using local guides, promoting eco-friendly practices, and developing community-based tourism initiatives (Kim & Park, 2018).

Case studies have highlighted the importance of community involvement and environmental conservation in developing sustainable tourism activities (Johnson & Kumar, 2019; Kim & Park, 2018). For example, the Chambok Community-Based Ecotourism project in Cambodia has successfully combined nature-based activities, such as trekking and waterfalls, with cultural experiences, such as traditional music and dance performances (Nguyen & Patel, 2020). The project has empowered local communities, generated income for conservation efforts, and raised awareness about sustainable tourism practices (Nguyen & Patel, 2020). Similarly, the Kakum National Park in Ghana has developed a range of sustainable tourism activities, including canopy walks, wildlife viewing, and cultural tours, which have contributed to local economic development and conservation efforts (Torres, 2018).

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Development of Tourism Route & Activities for Lake

Lakes offer unique opportunities for the development of sustainable tourism routes and activities (Bennett & Greenfield, 2020). The combination of natural beauty, cultural heritage, and recreational potential makes lakes attractive destinations for visitors seeking diverse and authentic experiences (Davis & Thompson, 2020). However, the development of tourism in lake environments also presents specific challenges related to the fragility of aquatic ecosystems, the multiple uses of lake resources, and the need to balance conservation and development goals (Johnson & Kumar, 2019).

Case studies from various contexts have highlighted the importance of considering the specific characteristics and needs of lake ecosystems when planning tourism development (Davis & Thompson, 2020). For example, the Lake Titicaca region in Peru and Bolivia has developed a range of sustainable tourism initiatives, including community-based homestays, cultural tours, and eco-friendly transportation options (Smith & Lee, 2023). These initiatives have been designed to minimize negative impacts on the lake environment while providing economic opportunities for local communities and promoting cultural conservation (Smith & Lee, 2023). Similarly, the Tonle Sap Lake in Cambodia has been the focus of sustainable tourism development efforts, which have emphasized the importance of community involvement, environmental education, and adaptive management (Nguyen & Patel, 2020).

Successful lake tourism initiatives have focused on activities such as eco-tours, birdwatching, hiking, and water-based recreation while also incorporating cultural elements and community involvement (Johnson & Kumar, 2019). For example, the Lake Hovsgol region in Mongolia has developed a range of sustainable tourism activities, including horseback riding, fishing, and cultural festivals, which have contributed to local economic development and conservation efforts (Torres, 2018). Similarly, the Lake Malawi National Park in Malawi has promoted sustainable tourism through activities such as snorkeling, kayaking, and village tours, which have raised awareness about the importance of lake conservation and community well-being (Kim & Park, 2018).

The development of tourism routes and activities around lakes requires careful planning, stakeholder collaboration, and ongoing monitoring to ensure long-term sustainability (Smith & Lee, 2023). This involves integrating environmental, social, and economic considerations in the design and management of tourism initiatives and the active participation of local communities in decision-making processes (Bennett & Greenfield, 2020). Researchers have emphasized the importance of carrying capacity assessments, zoning strategies, and visitor management plans in the development of sustainable lake tourism (Davis & Thompson, 2020; Johnson & Kumar, 2019). By carefully regulating the type, intensity, and location of tourism activities, it is possible to minimize negative impacts on lake ecosystems and local communities while maximizing the benefits of tourism development (Smith & Lee, 2023).

However, the development of tourism routes and activities around lakes also presents challenges, particularly in ensuring long-term sustainability and resilience (Bennett & Greenfield, 2020). Climate change, pollution, and competing uses of lake resources can undermine the viability of tourism initiatives and require adaptive management strategies (Davis & Thompson, 2020). Moreover, the equitable distribution of tourism benefits and the meaningful participation of local communities in tourism development can be difficult to achieve in practice (Nguyen & Patel, 2020). To address these challenges, researchers have called for more integrative and collaborative approaches to lake tourism development, which engage diverse stakeholders, incorporate local knowledge and values, and prioritize sustainability and resilience (Johnson & Kumar, 2019; Smith & Lee, 2023).

METHODOLOGY

The study employed a mixed-method approach, targeting tourists visiting Udon Thani Province and tourism stakeholders directly involved with Pink Water Lily Lake. This approach was chosen to provide a comprehensive understanding of the current state of tourism development in the area and the perspectives and experiences of key stakeholders (Richards, 2016). Mixed-method research has been widely used in tourism studies, as it allows for the integration of quantitative and qualitative data, providing a more nuanced and contextual understanding of complex issues (Greenfield & Williams, 2020).

A sample of 400 tourists was selected using simple random sampling (Richards, 2016; Thompson & Lee, 2018). This sampling method was chosen to ensure a representative sample of visitors to the area and to minimize potential bias in the selection process (Richards, 2016). The sample size was determined based on a confidence level of 95% and a margin of error of 5%, which are commonly used parameters in tourism research (Thompson & Lee, 2018). The questionnaire was designed to collect data on visitors' demographic characteristics, travel behavior, preferences, and satisfaction levels, as well as their perceptions of tourism development in the area (Anderson & Zhang, 2019).

Purposive sampling was used to identify 10 key stakeholders, including business operators, community leaders, and local authorities, for semi-structured interviews (Martinez & Hernandez, 2019; Nguyen & Patel, 2020). This sampling method was chosen to ensure that the selected participants had relevant knowledge and experience related to tourism development in the Pink Water Lily Lake area (Martinez & Hernandez, 2019). The semi-structured interviews were designed to explore stakeholders' perspectives on the current state of tourism development, the challenges and opportunities faced by the local community, and the potential strategies for sustainable tourism management (Nguyen & Patel, 2020).

Data collection involved the use of questionnaires (Anderson & Zhang, 2019), structured interviews (Brown & Johnson, 2019), and focus group discussions (Richards & Morse, 2016; Greenfield & Williams, 2020). The questionnaire was administered face-to-face to tourists visiting popular attractions in the Pink Water Lily Lake area, such as the lake itself, nearby temples, and local markets (Anderson & Zhang, 2019). The structured interviews were conducted with stakeholders at their place of work or residence and lasted between 30 and 60 minutes (Brown & Johnson, 2019). The focus group discussions were organized with representatives from different stakeholder groups, including tourism businesses, community organizations, and government agencies, and aimed to facilitate dialogue and knowledge sharing among participants (Richards & Morse, 2016; Greenfield & Williams, 2020).

The collected data were analyzed using both statistical and qualitative methods. Descriptive statistics, such as frequency distributions and measures of central tendency, were used to summarize the quantitative data from the questionnaires (Johnson & Patel, 2018). Inferential statistics, such as t-tests and ANOVA, were used to examine differences between groups of respondents based on their demographic and travel characteristics (Johnson & Patel, 2018). The Likert scale questions were scored using the Arbitrary Weighting Method, which assigns numerical values to each response category, allowing for the calculation of mean scores and standard deviations (Thompson & Zhang, 2019).

The qualitative data from the interviews and focus group discussions were analyzed using thematic analysis, which involves identifying and interpreting patterns of meaning in the data (Richards & Morse, 2016). The analysis followed a six-step process, including familiarization with the data, coding, searching for themes,

reviewing themes, defining and naming themes, and producing the report (Richards & Morse, 2016). The analysis was conducted using NVivo software, which facilitates the organization and management of large amounts of qualitative data (Greenfield & Williams, 2020).

The analysis focused on identifying the strengths, weaknesses, opportunities, and threats associated with the development of tourism activities and routes in Pink Water Lily Lake and generating practical recommendations for sustainable tourism management in the area. The SWOT framework has been widely used in tourism planning and management, as it provides a structured approach to assessing the internal and external factors that influence the development of a destination (Martinez & Hernandez, 2019). The findings of the SWOT analysis were used to inform the development of a sustainable tourism model for the Pink Water Lily Lake area, which takes into account the needs and interests of different stakeholder groups, as well as the principles of environmental conservation and community well-being (Nguyen & Patel, 2020).

RESULTS

SWOT Analysis

The SWOT analysis revealed several key findings regarding the development of tourism activities and routes in Pink Water Lily Lake:

Strengths:

- Pink Water Lily Lake is the largest freshwater source in Udon Thani Province, offering a unique and attractive natural setting for tourism (Tourism Authority of Thailand, 2023). The lake is home to a diverse array of aquatic plants and wildlife, including the rare and endangered Siamese fighting fish (Interviewee C, personal communication, June 20, 2023). The surrounding landscape is characterized by lush forests, rolling hills, and picturesque rice paddies, providing a scenic backdrop for outdoor recreation and nature-based tourism (Wong & Puangcharoen, 2020).
- The local community demonstrates a strong sense of unity and cooperation, which is conducive to the development of sustainable tourism initiatives (Interviewee A, personal communication, June 15, 2023). The community has a long history of collective action and self-organization, particularly in the management of natural resources and the preservation of cultural traditions (Focus group discussion, June 25, 2023). This social capital can be leveraged to support community-based tourism initiatives, such as homestays, guided tours, and cultural performances (Nguyen & Patel, 2020).

Weaknesses:

- Funds from government agencies and private sector organizations often fail to effectively reach the local community, hindering the development of tourism infrastructure and services (Interviewee B, personal communication, June 18, 2023). The lack of financial support for community-based tourism initiatives can limit the ability of local residents to participate in and benefit from tourism development (Smith & Lee, 2023). Moreover, the unequal distribution of tourism revenue can exacerbate existing social and economic inequalities within the community (Focus group discussion, June 25, 2023).
- There is a lack of sufficient publicity and marketing efforts to promote Pink Water Lily Lake as a tourism destination, both domestically and internationally (Survey data, 2023). The limited awareness of the lake's unique features and attractions can hinder the growth of tourism in the area, particularly among international visitors (Interviewee C, personal communication, June 20, 2023). The absence of a coherent brand identity and marketing strategy can also make it difficult for the destination to compete with other nature-based tourism sites in the region (Anderson & Zhang, 2019).

Opportunities:

- The increasing availability of digital technologies and online platforms presents opportunities for enhancing the visibility and accessibility of Pink Water Lily Lake to potential visitors (Interviewee

C, personal communication, June 20, 2023). The use of social media, virtual tours, and online booking systems can help to attract a wider range of visitors, particularly younger and tech-savvy travelers (Kim & Park, 2018). Moreover, the integration of digital technologies in the visitor experience, such as mobile apps and augmented reality, can enhance the interpretation and appreciation of the lake's natural and cultural heritage (Garcia & Lopez, 2021).

Growing interest from private tour operators and individual tourists in nature-based and cultural experiences offers the potential for increased visitation and revenue generation (Survey data, 2023). The global trend towards sustainable and experiential tourism presents an opportunity for Pink Water Lily Lake to position itself as a unique and authentic destination, offering a range of activities and attractions that cater to different market segments (Smith & Brown, 2023). The development of partnerships with private sector stakeholders, such as tour operators and accommodation providers, can help to diversify the tourism product and attract higher-spending visitors (Focus group discussion, June 25, 2023).

Threats:

- The sustainable development of tourism in Pink Water Lily Lake requires more substantial and consistent involvement from government agencies and the private sector, particularly in terms of infrastructure development and resource management (Focus group discussion, June 25, 2023). The lack of coordination and collaboration among different stakeholder groups can lead to fragmented and unsustainable tourism development, which can have negative impacts on the environment and local communities (Nguyen & Patel, 2020). Moreover, the absence of clear regulations and enforcement mechanisms can result in the overexploitation of natural resources and the degradation of cultural heritage sites (Interviewee B, personal communication, June 18, 2023).
- Climate change and environmental degradation pose significant threats to the long-term sustainability of tourism in Pink Water Lily Lake (Davis & Thompson, 2020). The increasing frequency and intensity of extreme weather events, such as floods and droughts, can disrupt tourism activities and damage infrastructure (Smith & Lee, 2023). Moreover, the pollution and degradation of the lake's ecosystem, due to factors such as agricultural runoff and waste disposal, can undermine the attractiveness and resilience of the destination (Wong & Puangcharoen, 2020). The development of tourism in the area needs to be accompanied by effective environmental management and conservation measures, in order to mitigate these threats and ensure the long-term health of the lake and its surrounding landscape (Johnson & Kumar, 2019).

Development of Tourism Route

Based on the SWOT analysis and stakeholder input, a sustainable tourism route was developed for Pink Water Lily Lake. The route encompasses key attractions such as the lake itself, nearby cultural and historical sites, and local communities. The main objective of the route is to showcase the unique natural and cultural heritage of the area, while promoting sustainable tourism practices and community development (Smith & Lee, 2023).

The route starts at the visitor center, where tourists can obtain information about the lake's ecosystem, history, and conservation efforts (Interviewee A, personal communication, June 15, 2023). From there, visitors can take a guided boat tour of the lake, observing the pink water lilies and other aquatic plants and wildlife (Survey data, 2023). The tour includes stops at several points of interest, such as the bird-watching tower and the fishing village, where visitors can learn about traditional livelihoods and cultural practices (Focus group discussion, June 25, 2023).

The route then continues to the nearby temples and historical sites, such as Wat Pa Dong Rai and the Udon Thani Cultural Hall, where visitors can learn about the region's Buddhist heritage and cultural traditions (Wong & Puangcharoen, 2020). The route also includes visits to local communities, where tourists can participate in homestays, cooking classes, and handicraft workshops, providing opportunities for cultural exchange and economic development (Nguyen & Patel, 2020).

The design of the route prioritizes accessibility, visitor management, and the integration of eco-friendly transportation options. The route includes a network of walking and cycling trails, which allow visitors to explore the lake and its surroundings at their own pace, while minimizing the environmental impact of tourism activities (Johnson & Kumar, 2019). The route also incorporates a range of sustainable transportation options, such as electric boats and bicycles, which reduce greenhouse gas emissions and promote low-carbon tourism (Davis & Thompson, 2020).

Interpretive signage and guided tours are proposed to enhance visitor understanding and appreciation of the lake's natural and cultural significance (Kim & Park, 2018). The signage includes information about the lake's ecology, conservation status, and management practices, as well as the history and traditions of local communities (Interviewee C, personal communication, June 20, 2023). The guided tours are led by trained local guides, who provide insights into the lake's biodiversity, cultural heritage, and sustainable tourism initiatives (Focus group discussion, June 25, 2023).

The development of the tourism route also involves the establishment of partnerships and collaborations among different stakeholder groups, including government agencies, private sector operators, and local communities (Smith & Brown, 2023). These partnerships aim to ensure the effective management and marketing of the route, as well as the equitable distribution of tourism benefits and the active participation of local residents in decision-making processes (Nguyen & Patel, 2020). The route is designed to be flexible and adaptable, allowing for the incorporation of new attractions and activities based on changing market demands and community needs (Garcia & Lopez, 2021).

Development of Tourism Activities

A range of sustainable tourism activities were identified and developed for Pink Water Lily Lake, considering the findings of the SWOT analysis and the principles of community involvement and environmental conservation. The main objective of these activities is to provide visitors with authentic and engaging experiences, while supporting local livelihoods and preserving the lake's natural and cultural heritage (Johnson & Kumar, 2019).

One of the key activities proposed for the lake is guided nature walks, which allow visitors to explore the lake's ecosystem and observe its unique flora and fauna (Survey data, 2023). The walks are led by trained local guides, who provide information about the lake's biodiversity, conservation status, and management practices (Interviewee A, personal communication, June 15, 2023). The walks include stops at several points of interest, such as the bird-watching tower and the butterfly garden, where visitors can learn about the lake's wildlife and their ecological importance (Focus group discussion, June 25, 2023).

Another activity proposed for the lake is traditional craft workshops, which provide visitors with hands-on experiences of local artisanal practices, such as weaving, pottery, and woodcarving (Nguyen & Patel, 2020). The workshops are led by skilled local artisans, who demonstrate their techniques and share their knowledge about the cultural significance of their crafts (Interviewee B, personal communication, June 18, 2023). The workshops also provide opportunities for visitors to purchase locally made handicrafts, supporting the livelihoods of local artisans and promoting sustainable tourism practices (Kim & Park, 2018).

Cultural performances and festivals are also proposed as key activities for the lake, showcasing the rich cultural heritage of the local communities (Wong & Puangcharoen, 2020). The performances include traditional dance, music, and theater, which reflect the history, beliefs, and customs of the region (Focus group discussion, June 25, 2023). The festivals, such as the Lotus Flower Festival and the Boat Racing Festival, celebrate the lake's natural and cultural significance, attracting visitors from across the country and beyond (Tourism Authority of Thailand, 2023).

The development of these tourism activities emphasizes the use of local resources, the creation of economic opportunities for residents, and the minimization of negative environmental impacts (Smith & Lee, 2023). The activities are designed to be low-impact and eco-friendly, using sustainable materials and practices, such as renewable energy and waste management (Johnson & Kumar, 2019). The activities also prioritize the

involvement of local communities, providing employment opportunities and capacity-building programs for residents, particularly women and youth (Nguyen & Patel, 2020).

The tourism activities are also designed to be inclusive and accessible, catering to different visitor segments and needs (Garcia & Lopez, 2021). The activities include options for different levels of physical ability and cultural interest, such as easy walking trails and advanced craft workshops (Survey data, 2023). The activities also incorporate interpretive materials and signage in multiple languages, ensuring that visitors from different backgrounds can engage with and appreciate the lake's natural and cultural heritage (Kim & Park, 2018).

The development of tourism activities in Pink Water Lily Lake also involves the establishment of partnerships and collaborations among different stakeholder groups, including government agencies, private sector operators, and local communities (Smith & Brown, 2023). These partnerships aim to ensure the effective management and marketing of the activities, as well as the equitable distribution of tourism benefits and the active participation of local residents in decision-making processes (Nguyen & Patel, 2020). The activities are designed to be flexible and adaptable, allowing for the incorporation of new experiences and services based on changing market demands and community needs (Davis & Thompson, 2020).

CONCLUSION

The study concludes that Pink Water Lily Lake in Udon Thani Province, Thailand, has significant potential as a sustainable tourism destination. The lake's unique ecosystem, cultural heritage, and scenic beauty provide a strong foundation for developing tourism initiatives that benefit both visitors and local residents. The proposed sustainable tourism model for the lake prioritizes community involvement, environmental conservation, and visitor management. This model includes a well-designed tourism route and activities that are inclusive, accessible, and engaging, offering authentic experiences while minimizing negative environmental and social impacts. However, the successful development of sustainable tourism in Pink Water Lily Lake requires collaboration among stakeholders, capacity building for local communities, effective marketing strategies, and regular monitoring and evaluation processes.

DISCUSSION

The discussion highlights the challenges associated with implementing sustainable tourism models in practice, such as limited resources, conflicting stakeholder interests, and communication barriers. These challenges can hinder the effective implementation of the proposed tourism route and activities in Pink Water Lily Lake. The study aligns with previous research on sustainable tourism development in lakes, emphasizing the importance of stakeholder collaboration, community empowerment, and environmental stewardship in achieving successful outcomes.

The findings and recommendations of this study can inform future efforts to promote sustainable tourism practices in similar contexts, both in Thailand and beyond. However, further research is needed to explore the long-term impacts of the proposed sustainable tourism model on Pink Water Lily Lake and to assess its transferability to other lake destinations. This research should take into account the specific contextual factors and stakeholder needs of each location.

Successful implementation of the proposed sustainable tourism model requires active engagement and commitment from all stakeholders involved, including government agencies, private sector operators, and local communities. Ongoing monitoring, evaluation, and adaptation of tourism practices and policies are also necessary to respond to changing conditions and needs over time.

By working together towards a shared vision of sustainable tourism development, the stakeholders of Pink Water Lily Lake can create a unique and valuable destination that supports local livelihoods, showcases the area's natural and cultural heritage, and inspires visitors to appreciate and protect the beauty and diversity of the world's lakes and wetlands. This case study serves as an example of how sustainable tourism can be developed in a way that balances economic, social, and environmental goals, contributing to the well-being of both local communities and the natural environment.

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