

Baseline Data and Stakeholder Participation

in Developing a Sustainable Tourism Economic Plan

for the Lower Andaman Subregion (Krabi, Trang, and Satun Provinces) in Thailand

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Abstract

The purpose of this research is to investigate the quality of tourism-related baseline data and the participation of tourism stakeholders in the development of a sustainable tourism economic plan for the Lower Andaman Subregion (Krabi, Trang, and Satun Provinces) in Thailand from August 2019 to May 2020. In order to increase the validity and reliability data were gathered using multiple methods by studying relevant organizations' data, conducting in-depth interviews and focus groups with stakeholders selected by applying the purposive sampling technique, divided into three groups: 1) tourism communities (26 communities), 2) tourismrelated government organizations (11 organizations), and 3) tourism entrepreneurs (30 entrepreneurs). Data were analyzed by content analysis. The results revealed gaps in the baseline data used to develop a sustainable tourism economic plan, including a lack of systematic data collection, government agencies collecting tourist information only for those with a mission to collect such information, no information exchange with other relevant agencies, and a lack of data collection at the district, sub-district, and village levels. These constraints resulted in a lack of information that reflected what had been done and how the specified indicators needed to be responded to, making assessing the plan's success impossible. Furthermore, the findings revealed that the development of a sustainable tourism economic plan involved the process of participation among various stakeholders, including the private, government, and public sectors. However, the size of the public sector is insufficient. In order to improve the quality and availability of the baseline data, government agencies should educate and train people to collect data for sustainable tourism assessments and establish a tourism data center. Furthermore, an effective communication process among stakeholder groups at the decision-making level is essential in order to promote stakeholder engagement and collaboration in the planning process. The feasibility of tourism data center establishment should be studied in the future.

Keywords: Tourism Economic Plan, Sustainable Development, Sustainable Tourism, Baseline Data, Stakeholder Participation, Lower Andaman Subregion Thailand

Introduction

Thailand was ranked 36th out of 117 countries in the Travel & Tourism Competitiveness Index (TTCI) in the Travel and Tourism Competitiveness Report 2022 (Uppink & Soshkin, 2022). Thailand has beautiful natural resources and culture, good infrastructures, a clear travel policy, fantastic communication technologies, and reasonable travel expenses. As a result, tourists from all over the world visit Thailand. Therefore, tourism is an important source of revenue for the country's development, accounting for 17.98 and 18.21 percent of the GDP in 2018 and 2019, respectively (Office of the National Economic and Social Development Council, 2022).

However, Thailand tourism has relied heavily on mainstream tourism to generate revenue, and this has a significant impact on the economic structure, society, and environment. As a result, the development and



management of Thai tourism have always been challenging. There are two main challenges of Thai tourism development. First is tourism policy designed and formulated by the central government for implementation by local governments, which focuses on responding to tourist needs (demands) rather than maintaining tourism products (supply) (Koodsela et al., 2019). This policy has affected the beautiful natural resources, which are being neglected and are rapidly deteriorating, and this is an important factor in attracting tourists. This policy leads to a lack of balance in social, economic and environmental dimensions. Second, policy development lacks participation among stakeholders, particularly the destination stakeholders (Dabphet et al., 2012), resulting in ineffective policy, less cooperation in practice, and low levels in success of the policy.

The Lower Andaman Subregion of Thailand consists of three provinces: Krabi, Trang, and Satun, with a combined beautiful coastline of 423.8 kilometers (Department of Marine and Coastal Resources, 2018). It is one of the most popular coastal destinations for tourists to visit Thailand, and therefore its revenue relies significantly on tourism. If the imbalance of tourism policy continues, the tourism in the area will be unsustainable, leading to many problems in social, economic, and environmental dimensions.

The keys to successfully driving a national sustainable tourism strategy are comprehensive planning and decision-making, as well as the participation of all stakeholders, particularly those in tourism-affected communities that will set the direction and manage tourism in their own communities (Lee & Hsieh, 2016; Martins et al., 2022). Therefore, this study pays close attention to the quality of baseline data in order to make better decisions and to ensure the participation of all stakeholders in developing a successful sustainable tourism development strategy.

Literature Review

Tourism in the Andaman Coast

The Andaman coast has approximately 1,093.05 kilometers of coastline and 120,812.12 square kilometers of marine area. This includes a wide range of marine and coastal ecosystems and habitats, including mangrove forests, mud beaches, seagrass beds, rocky beaches, sandy beaches, coral reefs, seafloor ecosystems, and water masses from the coast to the continental shelf. Because of this diversity, the provinces surrounding the Andaman Sea are one of Thailand's most valuable economic areas. According to the Southern Development Plan and the Andaman Province Cluster Development Plan, the Andaman coast is an important marine tourism destination with the goal to develop it into a world-class tourism development zone (Department of Marine and Coastal Resources, 2018).

The Lower Andaman Subregion consists of three provinces: Krabi, Trang, and Satun, with a combined coastline of 423.8 kilometers and coastlines of 160 kilometers, 119 kilometers, and 144.8 kilometers, respectively. The total population is 1,429,863 million people (Department of Marine and Coastal Resources, 2018). Krabi province had a Gross Provincial Product (GPP) of 80,900 million Baht in 2015, with the hotel and restaurant sector accounting for 11,251 million Baht, or 13.9% of the total (Krabi Provincial Office, 2020). In 2017, Trang province's GPP was 75,561 million Baht, with the hotel and restaurant industry producing 1,089 million Baht, accounting for 1.81% of total output (Trang Provincial Office, 2019). Satun province's GPP in 2017 was 31,335 million Baht, with hotels and restaurants accounting for 308 million Baht, or 1.0% of total output (Satun Provincial Office, 2018). It should be noted that the GPP of these three provinces relying on marine and coastal resources was not relatively high. More marine and coastal resources provide opportunities for economic expansion (Office of the National Economic and Social Development Council, 2022).



According to the tourism potential of the Lower Andaman Subregion, which generates significant revenue for stakeholders, the potential that relies on natural resources should be passed on to future generations, and tourism development must be based on sustainability. This study aims to examine the quality of baseline data so that better decisions can be made and to ensure the participation of all stakeholders in developing a successful sustainable tourism development strategy.

Area-based Development Plan

Area-based development emphasizes the development of target areas in geographic, cultural, or other dimensions rather than focusing on target groups or work groups. It is a concept that is frequently used in national and rural development, resource management, poverty alleviation, and other controversial issues. It is a widely used concept in Europe, Africa, and the Middle East. The main characteristics of the area include being local, self-identity, unity, and cultural similarities, as well as a sense of belonging with common needs and expectations. If the area has such characteristics, it will be the policy's target area (Commission to Drive the Country's Practice in the Administration of State Affairs, 2016).

Furthermore, the Sub-Committee on Promotion of Driving Development Based on the Sufficiency Economy Philosophy in Agriculture and Rural Sectors (2015) stated that the characteristics of area-based development are process management, creating a learning process for all stakeholders to learn together, understanding the causes of problems, finding solutions on their own, and creating plans in all dimensions. The area-based development focuses on integrating the cooperation of all stakeholders, including the government sector (central, regional, and local levels), academics, and the public, in order to create a learning process for communities to understand their real problems and needs through various tools and information, such as household accounts, infrastructure data, and other community capital data. It also involves developing a plan to efficiently meet the needs and appropriately support the plan's implementation. Such plans differ from previous actions prompted by national needs related to national economic and social development plans, which shifted from top-down to bottom-up planning.

We discovered that global regional development concepts, particularly in developed countries, have increasingly shifted in terms of their development paradigm by increasing stakeholder participation in planning development. Development plans that fail to enhance civil society participation are frequently the source of misunderstanding and can lead to a tendency to reject the plan. This can then result in non-cooperation in plans' implementation and prevent regional development. As a result, important factors of area-based development include cross-sector cooperation, collaborative learning processes, and the need to solve problems in the area. These are the dimensions that this study aims to explore the participation of all stakeholders in developing sustainable tourism development strategies.

Sustainable Tourism

Tourism is said to be a harmful industry to the environment of destinations, cultures, and communities. The International Environment and Sustainable Development Conference in Vancouver, Canada, known as the GLOBE'90 Conference, defined sustainable tourism development as follows:

Sustainable tourism development means development that can meet the needs of today's tourists and local owners while protecting and preserving opportunities for future generations. It also includes resource management to meet economic, social, and aesthetic needs while preserving cultural and ecological identity. Sustainable tourism is both a product and an important mechanism for driving a sustainable economy (GLOBE'90, 1990 as cited in Bramwell & Lane, 1993).



Furthermore, according to the Global Sustainable Tourism Council (GSTC) (n.d.), sustainable tourism consists of four dimensions: 1) management of sustainable tourism, 2) the economic impact on local communities, 3) lessening the impact on local communities, tourism, and cultural heritage, and 4) environmental impact. Angelevska-Najdeska and Rakicevik (2012) explained that sustainable tourism can be successful when these four elements are equally important.

The World Tourism Organization (2000) stated the seven key principles of sustainable tourism development as follows: 1) implementing under the ecosystem's capacity to replace, restore, produce, and provide relevant services endlessly without deterioration, including realizing community participation and needs, 2) equitable distribution of local benefits, 3) providing tourists with valuable recreational experiences, 4) encouraging visitors to learn about the area, resources, and way of life, 5) concentrating on designs that complement local architecture and make use of local materials, 6) emphasizing the integration of sustainable tourism into local, regional, and national development plans, and 7) emphasizing baseline data as a foundation for decision–making and monitoring.

The third edition of the National Tourism Plan (2023-2027) focuses on promoting sustainable tourism development with key indicators such as the number of tourist attractions and tourism service businesses that have achieved international standards for sustainability, such as the Global Sustainable Tourism Council (GSTC) (Royal Thai Government, 2023). This study investigates the quality of the baseline data used for developing a successful sustainable tourism plan by using GSTC as a framework for studying sustainable tourism.

Stakeholder Participation in Sustainable Tourism

Tourism is a multi-stakeholder industry with diverse objectives and interests, including travel companies, communities in tourist destinations, tourists, and government agencies at the national, regional, and local levels. Numerous studies have been conducted on the critical factors of sustainable tourism development that lead to sustainable development. These factors include encouraging tourism stakeholders to think, make decisions, perform, and collaborate to achieve results (Lee & Hsieh, 2016; Dangi & Petrick, 2021; Martins et al., 2022). Furthermore, Bramwell (2010); and Mathew and Sreejesh (2017) proposed that community participation in travel planning and governance is critical to achieving sustainable tourism. Further, Roxas et al. (2020) emphasized the value of stakeholder engagement, stating that the success of sustainable tourism is dependent on all stakeholders actively participating in all tourism processes. As a result, stakeholder involvement in all processes is regarded as a vital aspect for tourism plan succession since it results in a commitment to put the plan into action.

In order to fulfill the goal of the third edition of the National Tourism Plan, which focuses on encouraging sustainable tourism development at an international level using the GSTC framework, there are two key dimensions to consider: effective indicators and stakeholder participation. As a result, the purpose of this study is to investigate the quality of baseline tourism data and the involvement of three groups of stakeholders: tourism communities, government agencies, and tourism entrepreneurs.

Research Objectives

- 1. To investigate the quality of baseline tourism data in the Lower Andaman Subregion in Thailand for use in developing the area's sustainable tourism economic development plans.
- 2. To investigate the participation of tourism stakeholders in the Lower Andaman Subregion in the development of the area's sustainable tourism economic development plans.



Research Scope

This research was conducted in the Lower Andaman Subregion of Thailand, which encompasses the territorial seas of three provinces: Krabi, Trang, and Satun.

- 1. In Krabi, there are five districts with sea access: Ao Luek District, Mueang District, Nuea Khlong District, Khlong Thom District, and Koh Lanta District.
- 2. In Trang, there are five districts with sea access: Sikao District, Kantang District, Yan Ta Khao District, Hat Samran District, and Palian District.
- 3. In Satun, there are four districts with sea access: Thung Wa District, La-ngu District, Tha Phae District, and Mueang Satun District.

Key Informants

This study applied the purposive sampling technique by selecting key informants with distinct characteristics of three key informant groups related to sustainable tourism stakeholders in the Lower Andaman Subregion, as follows:

- 1. The tourism community group: a selection of 26 tourism communities in all sea-accessible districts of the three provinces: 1) Krabi province, 11 communities, 2) Trang province, 8 communities, and 3) Satun province, 7 communities.
- 2. A group of government agencies involved in tourism: upstream (such as the development of tourist attraction products linked to tourism, etc.), midstream (such as security maintenance of tourism resources, etc.), and downstream (such as marketing, tourism public relations, etc.) in three provinces, totaling 11 agencies.
- 3. The tourism entrepreneur group: including tourism and hotel associations, travel unions, guide clubs, tour operator clubs, restaurants, and souvenir shops in the three provinces, with ten entrepreneurs in each province, for a total of 30 entrepreneurs.

Table 1 The Number of Key Informants Classified by Stakeholder Groups

D. Inc.	Key Informants		
Province	Tourism Community	Government Agency	Tourism Entrepreneur
Krabi	11)	4	10
Trang	8	4	10
Satun	7	3	10
Total	26	11	30

Data Collection and Analysis

In order to triangulate the data and to increase the validity and reliability of the results, multiple methods of data collection were used, including secondary data studied from relevant government agencies and primary data collected using in-depth interviews and focus groups with those three key informant groups. This study was approved by the ethics in human research committee with accreditation code wuEC-20-052-01; thus the key informants were treated with respect and informed consent was obtained to maintain confidentiality. The semi-structured questions for all three key informant groups included the same two items: 1) What information about tourism do you collect, and how do you gather it, while developing the Lower Andaman Subregion's sustainable



tourism economic development plans? 2) How are stakeholders defined in the development of a sustainable tourism economic development plan for the lower Andaman region, and what role do they play? We also asked follow-up questions about topics of interest and asked the informants to offer examples or evidence to support their answers. The average interview and focus group time was 95 minutes.

Content analysis was used to analyze both primary and secondary data. Preliminary findings were validated using content analysis by the researcher. Further, descriptive statistics were analyzed in order to reveal the percentage of each theme's findings. This study was conducted between August 2019 and May 2020.

Findings

Table 2 The Findings of the Research Objectives

Research Objectives	Findings	
	Lack of completeness and accuracy of information to assess the GSTC	
	dimensions of sustainable tourism.	
	Inadequate data integration and collaboration among sectors.	
Quality of Baseline Tourism Data	Collected data could not be used to predict achievement.	
in the Lower Andaman Subregion in Thailand	Collected data were out of date.	
	The emphasis of social development issues remained low in economic	
	development plans for tourism at the provincial and regional levels.	
Participation of Tourism Stakeholders	Lack of public sector participation in tourism development plans.	
in the Lower Andaman Subregion in Thailand		

Objective 1: Quality of Baseline Tourism Data in the Lower Andaman Subregion in Thailand.

Completeness and Accuracy of Information

Most tourism community groups did not yet have an effective system for collecting data or exchanging information. This had an impact on the effective use of information for decision-making. For example, 17 (65.38%) of the 26 tourism communities explained that the community collected visitor data. However, when asked to identify the total number of tourists, only six communities (35.30%) could do so. Furthermore, when asked about gathering tourist data by distinguishing between Thai and foreign tourists, it was discovered that only eight communities (30.80%) could provide such data. This reflects the inefficiency of the data collection system and may result in an inability to plan and make decisions efficiently.

Furthermore, it was discovered that 13 tourism communities (50%) in all three provinces collected tourism income data, but when asked about the estimated communities' income, only two communities (15.38%) were able to provide this information, and no community had a clear answer when asked about the communities' income shared with their members. Therefore, we were unable to find indicators of household income in the tourism sector that accurately reflected reality. This is critical information for assessing the area's tourism development plans.

In addition, 20 tourism communities (76.92%) collected data on tourist satisfaction. When the methods used to collect these data were investigated, it was discovered that they were gathered in an unsystematic manner and were not systematically recorded. This was captured in an extract from a community member.

"We only asked about the taste of food and the convenience of staying overnight. We provided guestbooks where visitors could express their feelings or make suggestions."



Government agencies collected tourist information only for those with a mission to collect such information. There was also no information exchange with other tourism-related agencies. The agencies, however, only collected tourist data at the provincial level and not at the district level. It was further discovered that the tourism entrepreneur group used the data collection system in order to improve work efficiency and to make better decisions based on such data than the community and agency groups.

This finding demonstrates the inefficiency of the data collection system in terms of completeness and accuracy of information in analyzing the GSTC components of sustainable tourism, which may lead to the inability to plan and make decisions efficiently.

Data Integration and Collaboration Among Sectors

Based on the interviews with the tourism stakeholders that reported on collaborative efforts, however, we observed that the stakeholders collaborated separately. This was reflected in a comment from a tourism entrepreneur.

"There was no true participatory process that would result in stakeholders learning together, sharing ideas, making decisions, cooperating, and receiving benefits that would lead to sustainable development."

For example, a government agency organized a project to encourage community tourism by promoting it through online media. The government agency was considered to have worked successfully when success was measured using these indicators. However, it was discovered that most communities did not fully utilize online media due to a lack of online media skills. As a result, the project may be considered a failure because it did not involve a truly participatory process that could result in changes and sustainable tourism development in the communities.

Furthermore, some of the tourism-related government agencies, which were not responsible for collecting tourism revenue data, were unaware of data that could be useful in developing tourism plans. This reflects the separation of work, despite having the same mission related to tourism. As a result, we observed a separation in work collaboration and information exchange among tourism-related agencies. This will influence the overall driving force of tourism strategies.

Data Usage in Order to Determine Success

According to the interviews with the government agencies, when the plan was implemented for a set period of time, such as five years, the progress was evaluated and the plan was reviewed after one to two years. Furthermore, the majority of the project tracking information was presented as project implementation, budget utilization, and success factors. It did not, however, reflect the actions taken to achieve the objectives. As a result, determining the plan's success was challenging.

Data Gaps Used in Planning

Based on the interviews with the government agencies, there were gaps in the information used to create the provincial tourism economic development plan, the provincial integrated tourism plan for the Southern Andaman Coast, and the regional tourism plan. This was reflected in an extract from a government officer.

"The data used to create these plans were not verified for accuracy. Because the information was based on the informant, it could be inaccurate, for example, where the informants frequently reported income that was lower than the actual income."

In addition, some of the information used in the plan's drafting was incomplete, resulting in a lack of critical information used in the plan's drafting and development. Furthermore, information was filtered in various aspects



during the planning process. If any information was missing, it would not be considered when developing the plan, resulting in a missed opportunity to develop plans to solve problems or to increase potential area-based development. A gap in the most recent information was also discovered.

Reflections on Economic Development Plans for Tourism at the Provincial and Regional Levels

The government agencies shared details about the provincial cluster plan, which focused on specific development issues aimed at increasing competitiveness. In the case of non-competitive objectives, development objectives in a provincial cluster could be set in the area of that group of provinces. For example, the Andaman region had the potential to become a tourism cluster. As a result, cluster tourism was emphasized in the provincial cluster plan for the Southern Andaman Region.

Regional plans focused solely on the areas' key potential. They were based on the framework of the 12th National Economic and Social Development Plan, which included ten strategic issues. Departments and divisions completed routine tasks in accordance with the agency's roles and responsibilities. The southern development plan placed little emphasis on social issues or development. As the Southern Andaman Region focused on developing and improving the economy's competitiveness in tourism, the economic potential associated with tourism that generates income for the provinces was identified. However, interviews with communities and entrepreneurs revealed that, in addition to economic development, they preferred social problem resolution, such as achieving a peaceful society. However, the importance of social development issues remained low in the development plan for the Southern Andaman Region.

Objective 2: Participation of Tourism Stakeholders in the Lower Andaman Subregion in Thailand.

Stakeholder Participation in Tourism

According to the interviews with the government agencies, participation in hearing opinions and providing recommendations for the preparation of tourism development plans in the Lower Andaman Region were divided into three sectors: the public sector (30%), the private sector (30%), and the government sectors (40%). It should be noted that government agencies accounted for the majority of the total rather than other sectors, particularly the public sector.

As for the private sector, associations representing various professions such as tourism associations, provincial industry chambers, and fishermen's associations took part in hearing opinions and making suggestions. They cooperated well because they anticipated the importance of developing a plan that would affect their business operations.

According to the data presented above, the proportion of public sector participating in the process of hearing and making suggestions was low (30%); only half of those expressed their opinions and recommendations for the development of tourism economic development plans. As a result, the true proportion of the public sector was about 15%, which influenced votes for or against various issues. Furthermore, public sector participation was based on nominations from each province's government agencies, resulting in a lack of diversity because groups that opposed or disagreed with the province's development principles were not invited to such hearings by the province.

Due to the two stages of hearing opinions, there were also barriers to the participants continuing to provide opinions. For example, a person with decision-making authority over the plan that attended the first hearing opinion had been relocated. In this case, it could have had an impact on the plan's change, such as changing projects under the plan—"change people, change plans", as the saying goes. In this way, provincial plans and provincial cluster plans, some of which were linked to regional plans, were frequently affected.



In conclusion, the low proportion and low level of participation of the stakeholders from the public sector, including the tourism community, had an impact on the effectiveness of tourism development planning.

Conclusion and Discussion

Data Quality for the Development of Economic Plans for Sustainable Tourism

Conclusion

The findings of the research indicated the limitations of the baseline data. There was an absence of systematic data collection in the community sector. Government agencies, on the other hand, gathered tourist information for organizations with similar objectives. Furthermore, there was no information exchange with other tourism-related organizations. The limitations in data collection at the district, sub-district, and village levels were among them.

Discussion

The World Tourism Organization (2000) identified two key principles of sustainable tourism development: integrating sustainable tourism into local, regional, and national development plans, and having baseline data for decision-making and monitoring. The study's findings, however, revealed limitations of the baseline data.

A lack of data showing what has been done in response to the set indicators makes assessing the plans' aims impossible. This also influences decision-making and the integration of sustainable tourism into local, regional, and national development plans in order to create uniqueness in each area that can attract tourists with diverse needs.

Additionally, according to the Global Sustainable Tourism Council (GSTC) (n.d.), sustainable tourism has four dimensions: 1) sustainable tourist management, 2) economic impacts on local communities, 3) minimizing the impacts on local communities, tourism, and cultural heritage, and 4) environmental impacts. According to Angelevska-Najdeska and Rakicevik (2012), sustainable tourism can be successful when all four factors are equally significant. The study's findings, however, revealed that the Southern Andaman Region prioritized the development of the tourism economy. Some coastal communities would be overlooked if they lacked tourism opportunities. Therefore, the development did not meet the needs of the people in the same areas that required solutions and social development, along with economic development.

Furthermore, the World Tourism Organization (2000) identified two key principles of sustainable tourism development: community participation and community needs. According to Koodsela et al. (2019), tourism policy focuses on meeting tourist requirements (demands) rather than preserving tourism products (supply). The study's findings revealed that the Southern Andaman Development Plan did not place sufficient emphasis on social development issues. As a result, gathering baseline data for the tourism development plans should take place concurrently with the development of other areas in order to meet the needs of all segments of the population.

Stakeholders' Participation

Conclusion

This study found that government agencies accounted for the bulk of total engagement in the development of tourism plans, rather than other sectors, particularly the public sector. Associations in the private sector represent a variety of professions. They worked effectively together because they understood the significance of creating a plan that would affect their business operations. The proportion of participants in the public sector was low, with an inactive role and little diversity.



Discussion

According to the Sub-Committee on Promotion of Driving Development Based on the Sufficiency Economy Philosophy in Agriculture and Rural Sectors (2015), area-based development emphasizes integrating the cooperation of all stakeholders, including the government sector (central, regional, and local levels), academics, and the general public. However, the study's findings revealed that the preparation of economic development plans for tourism in the Lower Andaman Region involves a process of participation among various stakeholders, including the private, public, and government sectors, with participation at 30%, 30%, and 40%, respectively. Most research, including that of Bramwell (2010) and Mathew and Sreejesh (2017), suggested that community involvement in a tourist destination was critical to achieving sustainable tourism success through participation in tourism planning and governance. However, the study's findings revealed that the true proportion of the community was about 15% and lacked diversity.

Additionally, Roxas et al. (2020) emphasized the importance of stakeholder engagement, stating that the success of sustainable tourism relies on all stakeholders actively participating in all tourism processes. The study's findings, however, revealed that only the private sector actively participated in hearing comments and giving suggestions since they recognized the necessity of producing a strategy that would affect their business operations.

Furthermore, the policy development that lacks participation among stakeholders, particularly the destination stakeholders, leads to inefficient policy (Dabphet et al., 2012). The study's findings, however, revealed that the public sector that participated in the hearing of opinions was involved in the nominations. Further, the province might not invite groups that disagree with the provincial development principles to such hearings. As a result, there was a lack of diversity in expressing opinions.

In conclusion, because of the low proportion and level of participation of public sector stakeholders, planning with an integrated concept of all sectors, both top-down and bottom-up, may not be as comprehensive as the plan that the operators desire. This study's results can be used by the government agencies in planning process for sustainable tourism development in the Lower Andaman Subregion.

Policy Recommendations

Data Quality

In order to address the challenges of sustainable tourism development in the Lower Andaman Subregion in Thailand, many stakeholders, particularly those in the public sector, are unaware of the significance of gathering data for indicators that reflect sustainable tourism development. Government agencies should educate and train people to collect data for sustainable tourism assessments. This data collection should include more than just quantitative information. In order to gain a thorough understanding of connections, movements, and trends, qualitative data and time series data should be collected. This would contribute to more efficient tourism policy planning and benefit maximization.

Furthermore, the government should encourage the establishment of a tourism data center. This could help with analyzing and connecting data to forecast the number of tourists during each period and in each area, as well as analyzing and disclosing information to stakeholders for easy access. This not only would help tourism stakeholders make better decisions, but it would also the Thai tourism industry grow sustainably. Rungruanphon (2021) explains that the Royal Thai Government was successful in promoting the establishment of the country's real estate information center after the economic bubble crisis in 1997, enabling entrepreneurs in the real estate industry to have quality



and necessary data for effective decisions-making to plan the development of various projects in various locations. This helped to prevent overspending in the real estate market, which could lead to a real estate bubble.

We believe that the government should work proactively rather than reactively, as was the case when the country's real estate information center was established following the 1997 bubble crisis. In the case of tourism, the government should support the establishment of a tourism information center as soon as possible before Thailand loses its tourism competitiveness. Having an efficient tourism information center will result in the efficient use of information for decision–making and planning, allowing Thailand to strengthen its competitive advantages in tourism.

Stakeholders' Participation

Participation should consider stakeholders based on the success factors of sustainable tourism development, including encouraging tourism stakeholders to think, make decisions, perform, and collaborate to achieve results (Lee & Hsieh, 2016; Dangi & Petrick, 2021; Martins et al., 2022). The public sector, in particular, should have the highest proportion of participation.

The groups that opposed or disagreed with the province's development principles should be invited to the hearings, and the government agencies should consider the diversity of participation sectors in terms of area and conceptual dimensions. Further, the participants should be encouraged to actively participate in hearing comments and giving suggestions. Furthermore, an effective communication process among stakeholder groups at the decision–making level is required in order to successfully implement the plan.

Future Study

As the number of samples in this study is relatively small, future research should include more samples for more accurate research results. Moreover, future research situated in different tourism areas needs to be conducted to replicate and extend our findings.

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