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# **Sustainable development guidelines for eco-diving tourism at Koh Phayam in Ranong Province.**

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## **Abstract**

This research article is titled “Sustainable Development Guidelines for Eco-Friendly Diving Tourism at Koh Phayam in Ranong Province.” This study employed accidental sampling, a form of non-probability sampling, employed mixed methods research design. By conducting quantitative research and using questionnaires. The respondents used in this study were community residents a total of 265 persons and Tourists visiting Koh Phayam in Ranong Province, Thailand a total of 385 persons, conducting qualitative research and using in-depth interviews with structured questionnaires in the Public Government and Private sector. all total 15 persons. The research results are summarized as follows:

The Sustainable Development Guidelines for Eco-Friendly Diving Tourism at Koh Phayam in Ranong Province, a multifaceted approach is essential. Key strategies include managing visitor numbers to protect coral reefs, promoting community involvement by creating job opportunities and environmental training for locals and setting eco-friendly guidelines for diving activities, such as using reef-safe products. Raising awareness among tourists is equally crucial, with educational materials provided before dives to encourage responsible behavior. Additionally, regular monitoring of environmental conditions, along with partnerships with academic institutions, will help evaluate and adapt these strategies over time, ensuring that eco-diving tourism benefits both the local community and the marine ecosystem.

Moreover, the current research helps concerned authorities of Ranong to learn how they can utilize and earn more profit from eco-friendly and sustainable diving tourism and make their natural areas recipients of the well-being of their people.

**Keywords:** eco-diving tourism, sustainable tourism, Koh Phayam, marine conservation,

## **1. Introduction**

This world is a marvelous place full of mystifying places and spectacular experiences only waiting for travel around and exploration. Ecotourism builds environmental awareness and recognition of such places. (Kumpecharat, 2020)

Thailand is considered one of the important destinations for tourists around the world because Thailand is one of the countries with complete marine tourism resources in the Asian region. It has a marine area of more than 320,000 square kilometers, consisting of the Andaman coast and the Gulf of Thailand coast. Popular marine tourism activities include sailing, beach tourism, surface, and deep-sea diving, etc. (Jarayabhand, 2015). At the same time, the diving business in Thailand tends to expand continuously in line with the growth rate of Thai tourism. Each year, it is found that more than 500,000 tourists are coming to dive in Thailand, with an estimated market value of more than 5,000 million baht (Siam Business, 2024).

However, of the high growth of tourism in Thailand, another result is that waste and wastewater from resorts, restaurants, and service establishments, including passenger boats that provide services to tourists have increased in number, resulting in the deterioration of the quality of the seawater. In addition, there is the destruction of marine natural resources by the tourism industry in various forms, such as the lack of awareness of business operators who drop anchors near the coral reefs, causing damage to the coral reefs (Pollution Control Department, 2024). In addition, there is an unsolvable problem, which is that more than 90 percent of the scuba diving businesses operating are only employees, such as boat drivers, boat boys, office workers, etc. Thailand is owned by foreigners, with most Thais receiving only a small share of the income, even though they are owners of the resources (Siam Business, 2024). From the aforementioned information, it has a direct impact on business opportunities and the careers of Thai people. Moreover, these foreigners are businessmen who come to invest and seek benefits, so their sense of pride in cherishing and taking care of natural resources may be different from that of the Thais who are the true owners.

Destinations for relaxation to enjoy nature, looking for a slow-life trip where you can sleep and listen to the sound of the sea, walk around the villagers' communities, see the mangrove forest, and breathe fresh air, and you will be even more delighted if it is an environmentally friendly trip. It seems that "Koh Phayam" should be a destination that tourists will like. Koh Phayam is located in Koh Phayam Subdistrict, Mueang District, Ranong Province. It is considered one of the two large islands in the Ranong Sea (the other island is Koh Chang).

In the past, the Tourism Authority of Thailand (TAT) in the southern region has joined hands to support this gem of Ranong to be better known to attract tourists and promote eco-tourism to be more popular. Recently, we have heard more and more about the reputation of this island and more and more tourists are visiting Ranong. The highlight of Koh Phayam that many people like and have made it famous for is the "slow-life lifestyle" because even though it is a small island, it has a great charm from the villagers' way of life, the way of life of the fishing community, and agriculture that is still preserved in the original way in a rather slow-life way that is slow but valuable, which is hard to find in other tourist attractions in the country. Moreover, this is an island that is free of pollution. There are still many natural tourist attractions that are still abundant and worth visiting, which are quite popular with both Thai and foreign tourists.

## Research Objective

1. To study the current situation of sustainable eco-friendly diving tourism at Koh Phayam in Ranong Province, Thailand.
2. To study the demand for community participation sustainable eco-friendly diving tourism at Koh Phayam in Ranong Province, Thailand.
3. To study their awareness and practices of eco-friendly diving tourism Thai Tourist at Koh Phayam in Ranong Province, Thailand.
4. To determine guidelines for developing sustainable eco-diving tourism in Koh Phayam in Ranong Province, Thailand.

## 2. Methods

This study employed accidental sampling, a form of non-probability sampling, employed mixed methods research design. By conducting quantitative research and using questionnaires. The respondents used in this study were community residents a total of 265 persons and Tourists visiting Koh Phayam in Ranong Province, Thailand a total of 385 persons, conducting qualitative research and using in-depth interviews with structured questionnaires in the Public Government and Private sector. all total 15 persons. The statistical significance was calculated at 0.05

## 3. Results and Discussion

### 3.1. Research results according to objective 1 found that:

The sustainable eco-diving tourism at Koh Phayam, in Ranong Province is a critical juncture, characterized by both promising strengths and notable challenges. Then use the SWOT analysis to analyze both external and internal factors together with content analysis. **Strengths** include the island's rich marine biodiversity, pristine coral reefs, and a growing community of eco-conscious operators committed to preserving these resources. Additionally, Koh Phayam relative isolation and small scale compared to larger Thai tourist hubs enhance its appeal to tourists seeking authentic, low-impact experiences. However, **Weaknesses** exist, including limited infrastructure for handling waste, inadequate public awareness, and inconsistent adherence to eco-diving practices among operators. **Opportunities** are abundant, as the increasing global focus on sustainable travel could attract more eco-minded tourists, while partnerships with conservation groups could bolster environmental efforts. Nonetheless, **Threats** such as over-tourism, climate change, and potential damage to coral reefs from increased diving activity remain, risking the delicate balance between tourism growth and environmental preservation. Through ongoing community involvement and stricter eco-guidelines, Koh Phayam has the potential to strengthen its role as a model of sustainable eco-diving tourism.

### 3.2. Research results according to objective 2 found that:

The results showed that the demand for community participation in sustainable eco-

friendly diving tourism at Koh Phayam in Ranong Province, Thailand was at a high level ( $\bar{x} = 3.77$ ). At every level, the highest average Participation in planning ( $\bar{x} = 4.01$ ), followed by participation in benefit distribution ( $\bar{x} = 3.81$ ), and the lowest mean of participation in follow-up and evaluation ( $\bar{x} = 3.50$ ), respectively.

Participation in planning the highest mean is the coordinated planning of sustainable use of space for sustainable tourism ( $\bar{x} = 4.30$ ). Secondly, the waste management and community waste management plan is to be a sustainable tourism destination ( $\bar{x} = 4.22$ ). The lowest average is the plan to limit the number of tourists to suit the potential area of services for sustainable tourism ( $\bar{x} = 3.35$ ), respectively.

Participation in the practice was found to be the highest average of participants in tourism-related meetings for planning and staff training courses for sustainable tourism ( $\bar{x} = 4.20$ ). Secondly, to raise public awareness about tourism as a sustainable tourist destination ( $\bar{x} = 4.00$ ). And the lowest average is the follow-up and evaluation of tourism change as a sustainable tourist destination ( $\bar{x} = 3.30$ ), respectively.

Participation in benefit sharing found that the highest average was the participation in training, treatment, and improvement of environmental quality in tourist destinations. For sustainable tourism ( $\bar{x} = 4.15$ ). Secondly, it contributes to the realization of nature and the environment. For sustainable tourism ( $\bar{x} = 4.10$ ), the lowest mean was participation in environmental sustainability promotion ( $\bar{x} = 3.40$ ), respectively.

Participation in monitoring and evaluation was the highest average in the co-monitoring and evaluation of the provision of public utilities to tourists. Satisfied with the service that is worth the visit. For sustainable tourism ( $\bar{x} = 4.21$ ). Secondly, follow up and evaluate the services provided for each target group. (Disabled persons, elderly and children) for sustainable tourism ( $\bar{x} = 3.59$ ). The lowest average is the joint monitoring and evaluation of the provision of public utilities to tourists to tourists. Satisfied with the service that is worth the visit. For sustainable tourism ( $\bar{x} = 3.20$ ), respectively.

Which results are consistent with Nithcha Koompecharat's research subject is The Demand for community participation in sustainable tourism development in Koh Payam, Ranong province, Thailand. (Nithcha Kumpecharat, 2018)

### **3.3. Research results of the analysis according to objective 3 found that:**

Awareness of diving tourism practices, consisting of 10 items, found that tourist's awareness of diving tourism practices was between 81.6 and 90.7 percent. It can be classified by the top 3 items as follows, first is advice not to throw garbage into the sea (90.7 percent), second advice not to step on or touch coral (89.2 percent), And third place is advice to keep a distance from coral reefs during diving (88.7 percent), respectively.

Compliance with the guidelines for diving tourism from the 10 items above found that diving tourism of tourists was between 92.4 and 96.0 percent, which can be classified by the highest 3 items, first is not to throw garbage into the sea (96.0 percent), second is advice not to feed fish in the sea (95.7 percent), and third is advice not to touch or chase any living things in the sea (94.4 percent), respectively. At the same time, it can be classified by the lowest 3 items as follows, first is advice to use only boats that have buoys for mooring and not to use tour services from diving tourism businesses that moor their boats by anchoring in coral reefs (92.7 percent), second is advice not to eat parrot fish (92.9 percent), and third is advice about the

impact of using sunscreen products (92.2 percent), respectively.

Awareness of coral reef-related laws, which consisted of 3 questions, found that only 1-3 percent of tourists were aware of the laws, while more than 95 percent were unaware of coral reef-related laws.

Which results are consistent with Thanin Sangkhaduang's research subject is Sustainable Snorkeling Tourism Development in Haad Chao Mai National Park, Trang Province. (Thanin Sangkhaduang, 2022)

### **3.4 Research results according to objective 4 found that:**

The developing sustainable eco-diving tourism at Koh Phayam, Ranong Province, it's essential to consider multiple aspects of natural resource conservation and promote tourism practices that minimize long-term environmental impact. These guidelines aim to position Koh Phayam as an example of sustainable tourism.

#### **1. Natural Resource Management**

Visitor Capacity Management: Implement limits on the number and frequency of diving tours to control tourist density and reduce pressure on coral reefs and marine life.

Coral Reef and Marine Conservation: Collaborate with academics and local organizations to research and restore coral reefs. Install water quality monitoring systems to track changes and prevent pollution from impacting the marine environment.

#### **2. Community Involvement**

Income Generation and Employment: Involve the local community in tourism activities, such as hiring local guides or supporting community-owned eco-tourism businesses, providing income and fostering a sense of stewardship toward natural resources.

Environmental Education and Training: Provide environmental conservation and responsible tourism training for local residents and tourism operators.

#### **3. Establish Eco-Friendly Guidelines and Practices**

Environmentally Friendly Practices: Encourage operators and tourists to use eco-friendly products, such as reef-safe sunscreen, to protect coral reefs.

Eco-Conscious Diving Programs: Establish guidelines and recommendations to promote responsible diving, including maintaining a safe distance from coral reefs and prohibiting handling or moving underwater organisms.

#### **4. Raising Awareness and Educating Tourists**

Educational Programs and Information: Develop educational materials, such as brochures, videos, maps, or briefing sessions, to help tourists understand the importance of conservation and the potential impact of irresponsible diving.

Online Media for Awareness: Use digital platforms to promote sustainable tourism and share information about eco-friendly practices.

#### **5. Monitoring and Evaluation**

Data Collection and Monitoring: Track visitor numbers and environmental conditions to assess long-term changes and adjust management strategies as needed.

Collaboration with Academic Institutions: Coordinate with researchers or universities to study tourism impacts and develop sustainable resource management strategies.

These guidelines support Koh Phayam's long-term commitment to sustainable eco-diving tourism by focusing on natural resource conservation, raising tourist awareness, and

fostering community involvement.

#### 4. Conclusion

The sustainable eco-diving tourism industry at Koh Phayam holds great potential but faces significant challenges. Strengths include its rich marine biodiversity, pristine coral reefs, and eco-conscious operators, while its isolation enhances its appeal to low-impact travelers. However, weaknesses such as limited waste management, low public awareness, and inconsistent practices persist. Opportunities lie in the rising demand for sustainable travel and partnerships with conservation groups, but threats like over-tourism, climate change, and reef damage pose risks. With stronger community involvement and stricter eco-guidelines, Koh Phayam can become a model for sustainable eco-diving tourism.

Summary of the demand for community participation in sustainable eco-friendly diving tourism at Koh Phayam in Ranong Province, Thailand, was high: participation in planning, allocation of benefits, and follow-up and evaluation accordingly.

Summary of awareness of tourism practices in sustainable eco-friendly diving tourism at Koh Phayam in Ranong Province, Thailand, found that both awareness and compliance with diving tourism practices passed the criteria of 80% for all items, while awareness of laws related to coral reefs was very low.

Thus, to develop sustainable eco-diving tourism at Koh Phayam, Ranong Province, a multifaceted approach is essential. Key strategies include managing visitor numbers to protect coral reefs, promoting community involvement by creating job opportunities and environmental training for locals and setting eco-friendly guidelines for diving activities, such as using reef-safe products. Raising awareness among tourists is equally crucial, with educational materials provided before dives to encourage responsible behavior. Additionally, regular monitoring of environmental conditions, along with partnerships with academic institutions, will help evaluate and adapt these strategies over time, ensuring that eco-diving tourism benefits both the local community and the marine ecosystem.

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