

**TOWARDS SUSTAINABLE TOURISM DEVELOPMENT  
IN COASTAL AREAS  
CASE STUDY FROM THAILAND**

by

Khov Kuong  
~

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A thesis submitted in partial fulfillment of the requirements for the  
degree of Master of Science.

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## ABSTRACT

There are several researches in the field of tourism which exist and had shown a clearer understanding on how the local community or residents perceive the dynamic and complex phenomena behind tourism. It is apparent that the evaluation of community-level resource utilization and perception of tourism impacts will be valuable information in identifying successful strategies for tourism development.

The goals of tourism development are to find ways on how to boost the benefits at the same time minimize the costs of tourism. This study attempts to investigate the underlying dimensions which explain the resident's behavior of the resource use and perception on the impact of tourism development in Koh Yao Island. In addition, it would identify the potentials and provides a conceptual framework which would focus on the active participation of the local community in the area under study. The social exchange theory provided a fundamental framework for this study. The dimensions of the tourism impacts were addressed by explicating economic, social/cultural, environmental/physical impacts of tourism development from literature review.

Koh Yao Island was selected as the study area because this area provides fine multifaceted tourism attractions, generates many tourists and influences the host community's life. Seven villages were selected from three different sub-districts to represent the whole island. A combination of questionnaire and interview surveys was conducted to measure the perceptions of the local community concerning the utilization of the natural resources, sustainability indicators and carrying capacities. A total of 100 responses were obtained for supporting the data and SWOT analysis.

From the findings of this study, residents perceived the impacts of tourism as five different dimensions embodying economic benefits, social costs, cultural enrichment, environmental deterioration, and physical enhancement. Generally, a higher level of tourism development and growth of community affects residents' perceptions of tourism development impacts. Residents who have higher community attachment and who had been living in the research area for a longer time period had more concerns about the perceived impacts of tourism. In addition, perceived tourism impacts were significantly differed across household incomes, age and education groups. Through the analysis of the gathered information, a proposed tourism development strategy has been created in order to facilitate the need of an effective tourism development planning in Koh Yao Island. For future study, it is suggested that a further investigation of determinants affecting residents' perceptions is needed for better understanding and explanation of the impacts of tourism development. It is believed that this study would help tourism planners and developers formulate and implement better strategies.

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## List of Abbreviations

AIT	Asian Institute of Technology
ASEAN	Association of Southeast Asia Nation
ATC	Andaman Triangle Cluster
CDD	Community Development Department
CEO	Chief Executive Organization
DoLA	Department of Local Administration
MoTS	Ministry of Tourism and Sport
NESDB	National Economic and Social Development Board
NGOs	Non Government Organizations
PAO	Provincial Administrative Organization
PMBC	Phuket Marine Biological Center
PRA	Participatory Rural Appraisals
PW	Public Work
REST	Responsible Ecological Social Tours Project
SO	Strength-Opportunities
ST	Strength-Threat
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TAO	Tambon Administrative Organization
TAPA	Thai Amusement and Leisure Parks Association
TAT	Tourism Authority of Thailand
TCP	Town and Country Planning
TDRI	Thailand Development Research Institute
WAI	Weight Average Index
WO	Weaknesses-Opportunities
WT	Weakness-Threat
WTO	World Tourism Organization

# CHAPTER I

## INTRODUCTION

### 1.1 Background

Tourism has been recognized as an economic activity that has and will continue to play a central role in the future economic and social development of Thailand. Tourism comprises of diverse range of economic activities and as such makes a substantial contribution to the employment creation, exports earning and government revenues. Since 1998, the Royal Thai Government has promoted the country's international tourism with the ad campaign entitled "Amazing Thailand". There is a great amount of international tourists, which increases yearly (e.g. 7.76 million in 1998 and 10.80 million in 2002). With an increase rate of 5 to 10 percent every year, it has brought an amount of 323,484 million Thai baht, in 2002 (TAT, 2003).

The Royal Thai Government and the Tourism Authority of Thailand (TAT) recognize the great potential of tourism and are committed in creating an environment, which is directive to sustainable tourism development through the expansion of tourism in the rural and provincial destinations. In formulating the new tourism master plan, factors such as equitable distribution of tourism economics, additional benefits to more remote areas in the country, generation of additional employment, regional development and enhanced contribution to the national income, are taken into account (TAT, 2003).

It is recognized that the tourism industry in Thailand, is closely associated with the ecosystems, which has proven to be of marginal value from other forms of economic activity (Parnwell 1993). There are a few studies of tourism development that provides an illustration on some of the environment pressures that follow the relatively unplanned and uncontrolled growth of tourism.

The coastal provinces have been selected to be the major tourist attractions. These are as follow: Phuket, Chon Buri, Surat Thani, Songkhla, Phetchaburi, Prachuap Khirikhan, Trang, Satun and among others. Recently, the government is exerting their effort to develop Krabi and Phang Nga as exotic tourist destinations on the Andaman coast, consequent to the drafting of a similar development plan for the southern resort island of Phuket. The government provides financial support for the construction of the infrastructure projects (TAT, 2001).

Koh Yao consists of two large islands: Koh Yao Noi and Koh Yao Yai, which are surrounded by other smaller islands. Lying in the beautiful Phang-Nga Bay, the two islands are only a short distance away from Phuket and can be easily reached from both Phang-Nga and Krabi. Largely unaffected by the booming development of the neighboring island, Phuket, Koh Yao retains its traditional culture almost unchanged (TAT, 2004).

Nowadays, Koh Yao is recognized by the government of the Andaman clustered provinces, as the center of the Andaman link (consist of Phuket, Phang Nga and Krabi) because of its good location in the middle of these three provinces. The pending investment for this island is said to be the main infrastructure that will initially support

other succeeding tourism developments. It will then be followed by building up luxury hotels, business, boutique resorts, spas and etc. (Manager e-magazine, 2003).

TAT had mentioned in its policy that the development of tourism requires the following: the roles of both public and private sectors should be clearly specified, government policies and strategies should be streamlined and lastly, a framework for the development has to be created. With these in mind, it is ensured that tourism development will be economically viable, financially profitable, environmentally sustainable and socio-culturally acceptable (TAT, 2003).

## **1.2 Statement of Problems**

TAT policy had been introduced within decades in order to expand the tourism industry all throughout the nation. In this way, it would attract more tourists and prolong their visit into the country. In particular, attention has been given to the southern part region whose unique identity has been defined. Phuket, Phang Nga and Krabi, three of the provinces that are located in the Andaman coast, have been clustered as one destination area. Several potentials for any tourism destinations could be possibly developed along this region in the future.

It is clearly evident that Koh Yao is enriched with an outstanding cultural background and scenic attractions for tourism destination development. By coveting a prestigious distinction from the TAT and National Geographic travel magazine, the island has continuously attracting more tourists every year.

Although tourism plans have been created for the whole region, practically, these plans may not be appropriate for the tourism development to be integrated and to follow the cluster development policies, as well as, national policies without experiencing any problems. The local governments are not yet ready to acquire the concept of tourism development. Most of the outsiders had taken advantage in the opportunities that they had seen, in order to develop certain areas of the region. High capital investors purchased many plots of beautiful scenic places.

The significant increase in the number of tourists who have a perception on the excellent quality of the tourist destinations that Koh Yao offer, had indicated the positive trends of tourism development but still, there is a concern to manage this development with certain specific guidelines. Since local people were not so aware of the possible benefits from tourism, such as the socio-economic development, they are less concern with the tourism development in their own area.

Moreover, the number of coastal resource exploitation is found to have increased simultaneously with the demand for livelihood and economic improvement. Thus, several alternatives are needed in order to help the local people to mitigate the pressures on the natural resource. This move leads to the conservation and management of cultural and natural resources on the island, which would later on be responsible to the local people's present needs and become sustainable for the next generation.

### **1.3 Rational**

At present, there is no comprehensive study that has been conducted or carried out to clearly address the importance and situation of the tourism development in Koh Yao in terms of its contribution to the community livelihood. It is important to determine how coastal natural resources in this island will be used and what the effective measures should be so as to ensure that tourism opportunities would be given in order to mitigate the resource exploitation.

The results of this study will be beneficial for the local government, planners, managers and provincial decision makers to improve the quality of life of the local people through tourism development. At the same time, it ensures both the sustainability of resources availability and social acceptance.

### **1.4 Objectives**

The broad objective of the study aims to analyze the possibility and find out the means for the sustainable tourism to be developed through the support, involvement and responsibilities of the local community.

#### *Specific objectives*

1. Review supported plan, policy and situation of the tourism industry in Thailand.
2. Identify the resource utilization of the communities in Koh Yao and their perception on the impact of tourism development.
3. Identify the potentials for sustainable tourism development based on the analysis of the gathered information.
4. Develop strategies toward sustainable tourism development and recommendations

### **1.5 Scope of Study**

The author used a case study in Koh Yao (Yao Island), which is located at Phang Nga Bay, in the southern part of Thailand. Seven villages were selected from three different sub-districts to represent the whole island.

This study will address the issue from three different aspects:

1. The plans and policies related to tourism development will be reviewed from the national level up to the local level. The purpose is to examine how these plans and policies would support the sustainable tourism development in Koh Yao.
2. The community resource utilization will be focused in three main coastal resources: mangroves, seagrasses and coral reefs. The author would examine the way the communities use these resources and how these resources are linked to sustainable tourism development. The perception on tourism development will be assessed and analyzed to identify the communities' awareness and readiness for tourism development.
3. The potential of tourism development will be analyzed and grouped into internal and external factors. Internal factors consist of strengths and weaknesses whereas external factors deal with opportunities and threats. The strength and opportunities will be used to eliminate the weakness and avoid the threat for the sustainable

tourism development in Koh Yao Island. In conclusion, the author will be providing the recommendations on this study.

#### **1.6 Problems encountered during the data collection**

Language barrier is considered to be the major constraint that has been experienced by the author in conducting the research study. The author, who is of Cambodian decent, does not have sufficient knowledge of the Thai language. Research participants, on the other hand, were not able to clearly understand the language that the author had used in doing the survey.

There is a scarcity on the secondary data (information that are related about the tourism in Koh Yao) since only a few studies have been done before. Most of the reports and documents were only written and available in Thai language. Once again it hindered the author in providing a more detailed review on the topic of the research. Usually, the researcher was dependent to the local assistant.

Time is another constraint in conducting the research. Most of the survey participants have to go to work and do their responsibilities while the author interviews them. These participants couldn't concentrate in finishing all the questions of the author. With this problem, the author had to spend a lot of time in accomplishing the whole survey. As a result, it was so difficult for the author to arrange and analyze the information, which are needed and essential to the research study.

## CHAPTER II

### LITERATURE REVIEW

#### 2.1 Definitions of Principal Terms

Before providing the general concept on tourism development, it is important to have a review of all the definitions and interpretations of the principal terms that have been used in the following chapters. This revision is intended to serve as background knowledge, in order to clarify the general context of the research topic.

The origin of the English words, "tourism" or "tourist", can be traced back to its Latin roots "tomus" which means a tool for describing a circle. Out of this denotation, the term "tour" was derived and first used as the "sense of going round or traveling from places to places, around an excursion, a journey including visits to many places in circuit or sequence, circuitous journey, embracing the principal places of a country or region" (Kumar, 1996).

Although in Ancient and Medieval Periods, there were a lot of travels, expeditions and explorations that have been done, *human movement tourism*, considered to be a mass movement and an important economic sector, is relatively a new phenomenon.

It was not until the present time, in particular after the World War II, that tourism has become a subject of large massive movement and mass consumption. Improved technologies, an increase in the purchasing power coupled with more leisure time and paid holidays, as well as, the continuous change in the consumer demand for non material goods, had stimulated this "boom" in the tourists' movements all over the world. Furthermore, these events had also paved the way for the tourism industry to know its economic importance.

##### 2.1.1 Tourism

The great variety of definitions for the term "tourism" which exist in different types of literature, clearly show how complicated and multi-faceted the issue was. The lack of an overall accepted standard definition had triggered many scholars in developing their own explanation of the term. This action coincides with the enormous expansion on the significance of the tourism industry that had already affected all-various sectors.

According to the Webster's Dictionary, the word "tourism" has four different meanings: (1) The practice of traveling for recreation, (2) the guidance or management of tourists, (3) the promotion or encouragement of touring, and or (4) the accommodation of tourists. The definitions that were given obviously indicate the complex character of this term.

Several attempts have been made to re-define the term "tourism". It may signify either any of the following meanings: a business industry, a demand by the tourist, a supply by the tourism industry, and or, the production form of the attractions, facilities, services, etc. (Mcintosh, 1977).

On the other hand, according to Hunter and Green, the idea of tourism as a single industry has been flooded with different criticisms. Some of the authors and writers suggest that tourism cannot be described as an industry since it does not produce a single, distinct product.

Kumar (1995) had talked about "tourism product" but pointed out that it differs immensely from an ordinary product as it is, for example, not supplied to the customer nor a transfer of ownership had existed. As a product, it involves many independent units, while as an industry it embraces various other trades or industries.

The definition provided by Gilbert (1990) offers an acceptable compromise. He had stated in his definition that: "tourism while having no clear boundary delineations or concise conceptual clarification, due to the overall size and impact of spatial and temporal movements of people with varying service needs for shelter, sustenance, entertainment and travel, does produce the basis for an industry".

Mill and Morrison (1992) had flatly refused and contradicted Gilbert's definition by saying that: "tourism is not an industry, although tourism gives rise to a variety of industries". Instead, they had formulated another approach, which described tourism "as an activity engaged in by people who travel". To sum it up, they believed that tourism involves all of the activities and impacts that occur when a visitor travels.

In addition to the growing number of tourism definitions, Hunziker and Krapf also took a similar approach defined by Mill and Morrison (1992). They considered tourism as "the sum of the phenomenon and relationship arising from travel and stay of non-residents, in so far as they do not lead to permanent residence and are not connected with any earning activity" (see Burkart, 1981).

Zivaddin had also expressed his own perception of tourism by defining it as "a social movement with a view to rest, diversion and satisfactions of cultural needs" (see Kumar, 1995). With this interpretation of the term, he had specifically stressed the sociological aspect of tourism.

It can be summarized that due to the versatility of the issue, the existing definitions were merely focused on a single or few aspects of tourism, which thereby, neglect other succeeding definitions of it.

It's only in 1993 that the World Tourism Organization (WTO) had provided an agreement which was up to a more comprehensive definition that states: "Tourism comprises the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes".

### **2.1.2 Tourist**

More important than a uniform definition for "tourism" is the need to find a simple blanket definition of the term "tourist". Reliable data is necessary to capture the movements of tourists, in order to quantify the economic, social, or more recently, the environmental impacts that would assess the potentials and finding the appropriate planning for the tourism development.

Furthermore, the distinction between the different categories of travelers is also an essential factor in the planning process, (e.g. the tourist facilities and services), as their demands and needs vary. There are many definitions of the term "tourist" that exists within the literature but they are often extremely formulated in a much broader way.

Often the tourism industries or authorities use this vagueness in order to create their own definition, which was based on their required data. According to Kinnard and Hall (1994), "problem of data compatibility between different places are evident".

Indeed, that there is a need for a clear and universally accepted definition of tourism, so as to prevent biased interpretations and to make an easier and simple comparison of the tourist statistics.

In 1963, the United Nations Conference on International Travel and Tourism that was held in Rome had considered a definition. The main features of the definition are: "*for statistical purposes, the term "visitor" describes any person visiting a country other than his usual place of residence, for any reason other than following an occupation remunerated from within the country visited.*"

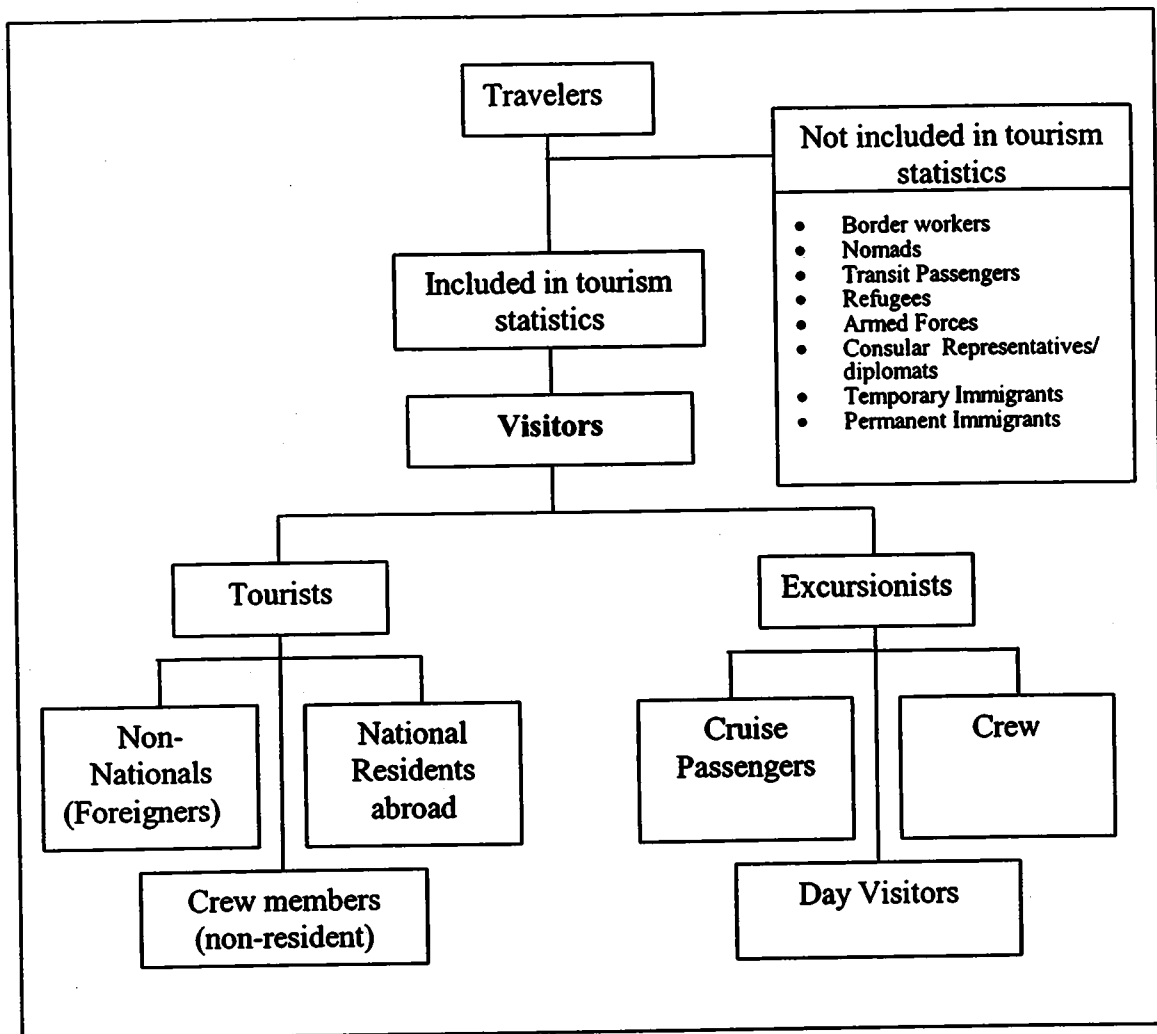
Further specification of the term "visitor" is given between the distinction of "*the tourists*" (temporary visitors staying at least 24 hours in the country visited and the purpose of leisure or business) and "*the excursionists*" (temporary visitors staying less than 24 hours and not making an overnight stay including travelers on cruises).

It is quite important in the planning process to differentiate "*the tourists*" from "*the excursionists*" as their needs and requirements for facilities and services are totally different. What they call as "*day excursionists*", demand facilities to supplement their daily activities and do not necessarily need an overnight accommodation or some other facilities and services.

According to Inskip (1991), a revised definition was prepared by the World Tourism Organisation (WTO) and had been widely adopted. Within the given definitions, the use and importance of relevant terms such as "*visitor*", "*traveler*" or "*excursionist*" often create certain confusion.

In this sense, the simplified version of the chart on the "Classification of Travelers" by the WTO helps to clarify the issue and linkages.





**Figure 2.1: Classification of Travelers**  
 Source: Modification from Inkeep, 1991

## **2.2 Forms of Tourism**

Nowadays, tourism exists in different types or forms across the world and new ones are still continuously emerging. Nevertheless, in order to explain and create a plan on how to get the best and benefit from these, there is a need to make an overall categorization of such forms. Most of the time, there are several factors to consider in order that a particular form could be used in a single country or planning area. These factors consist of the specific resources, locations, tourist markets, tourism policies being adopted and among others. The focus has been placed in the form of tourism that might be applicable and of certain interest to the respective study area of the research.

### **2.2.1 Ethnic Tourism**

According to Inskip (1994), **Ethnic Tourism** refers to people who are visiting their own original home country or places of their ancestral origin. Some countries are encouraging those people who have migrated abroad to visit their homelands. This is considered as an important type of tourist market.

### **2.2.2 Cultural Tourism**

**Cultural Tourism** is a genre of special interest tourism, which is based on the search for and participation in new and deep cultural experiences, whether esthetic, intellectual, emotional, or psychological (Stebbins, 1997). It incorporates a variety of cultural forms that include museums, galleries, festivals, architecture, historic sites, artistic performances, and heritage sites. Moreover, any experience that brings one culture in contact with another for the specific purpose of that contact in a touring situation is also included in this type of tourism.

### **2.2.3 Historical Tourism**

**Historical Tourism** is the museum-cathedral circuit that stresses the glories of the past. This tends to attract many education-oriented visitors and tourism is facilitated because the targets are either in or readily accessible to large cities (Smith, 1977).

### **2.2.4 Environmental/Ecological Tourism**

This form of tourism is often ancillary to the ethnic tourism. Normally, it attracts a tourist-elite to remote areas. It has primarily of geographical character and many education-oriented travelers enjoy driving through mountains and countryside to observe man-land relationship (Smith, 1977).

### **2.2.5 Urban Tourism**

Tourism in towns and cities is widely prevalent. These urban places often offer a broad range of historic and cultural attractions, shopping, restaurants and the appeal of urban vitality. Many urban attractions and amenities are mainly developed for residents, but as used by the tourist could greatly help to support them. Furthermore, urban areas may function as points of arrival and departure of tourists to the country or region, and serve as a base for tourists to take excursions nearby (Inskip, 1994).

## 2.2.6 Water Transportation Tourism

This form of tourism has considerable potentials in some areas. These include cruise ship travel, boating on rivers and canals and yachting. Shore-based facilities of piers, docks and marinas and related facilities and services are required (Inskeep, 1994).

## 2.3 New Concepts of Tourism Development

### 2.3.1. Special Interest Tourism

According to the World Tourism Organization (1985), "**Special Interest Tourism** involves group or individual tours by people who wish to develop certain interests, as well as, visit sites and places connected within a specific subject. Generally speaking, the people being referred to exercise the same profession or have a common hobby" (Weiler & Hall, 1992).

Special Interest Tourism focuses on a wide range of features. Cultural themes include dance, music, fine arts, handicraft, architecture, archaeology, history and historic routes, traditional lifestyles, and unusual economic activities. Nature themes, on the other hand, are related to flora, fauna, geology, scenic beauty, national parks and marine environments (Inskeep, 1994).

### 2.3.2. Alternative Tourism

For many years, tourism experts have sought to develop viable alternatives to mass tourism in order to at least mitigate the negative impacts in the society and the environment. Some communities that try to resist development impositions on their lives have also experimented with small-scale, locally controlled and sustainable tourism activities. "**Alternative Tourism**", nowadays, is considered to be a fashionable idea among those who are dissatisfied with the nature of mass tourism. It is being promoted by tourism establishments despite of possessing economic, social and cultural consequences. The idea of alternative tourism has its source in two contemporary ideological preoccupations: the counter-cultural rejection of modern mass consumerism and the concern for the impact of the modern industrial world on the Third World societies.

### 2.3.3. Eco-Tourism

**Eco-tourism** is often defined as a form of tourism with a purpose. Though in general terms it denotes "environmental-friendly" tourism, yet, it is not officially considered as the real universal definition for ecotourism. The specific definition can vary greatly from one country to another.

In spite of the fact that it lacks one clear definition, the International Ecotourism Society (1991) has classified it as: "responsible travel to natural areas that conserves the environment and sustains the well-being of local people".

Moreover, the World Conservation Union has defined it (1996) as "visitation to relatively undisturbed natural areas with low negative visitor impact and provides for beneficially active socio-economic involvement of the local population".

Despite of having difficulty in defining the concept of eco-tourism, it does have some consistent features:

- The destination itself is usually an unpolluted natural area
- Its attractions consist of the flora and fauna and the entire bio-diversity
- Eco-tourism should support the local economy and its indigenous atmosphere
- It should contribute to the preservation of the environment and promotion on the importance of conserving the nature
- "Eco-trips" often include a learning experience.

#### **2.4. Sustainable Tourism Development**

In defining sustainable tourism, Moore (1996) begins with the World Tourism Organization's characterization - "that to be sustainable, tourism development must meet the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled, while maintaining cultural integrity, essential ecological processes, and biological diversity and life support systems"(WTO).

**Sustainable Tourism** is a concept that attempts to coordinate the complex interactions between the tourism industry, visitors, the environment and the host communities. It involves working for the long-term viability and quality of the natural and human resources. Sustainable tourism has many, often conflicting goals which when combined with different interpretations of the concept, the implementation of these ideals itself is not always successfully achieved. Planning (e.g. land use, town and country planning) has an important role in facilitating the development of tourism while minimizing the negative impacts and achieving sustainability. "It is however, becoming clearer that it is in the long-term best interests of decision makers, local communities and those involved in the tourism industry to find principles, policies and management tools which both allow the development of tourism as an engine of economic growth (perhaps particularly relevant in Developing Countries) and the conservation and /or preservation of environmental resources. Striking such a balance is the aim at the heart of the concept of sustainable tourism". (Hunter and Green, 1995)

Sustainable tourism development can fulfill economic, social and aesthetic needs while maintaining cultural integrity and ecological processes. It can provide for today's hosts and guests while protecting and enhancing the same opportunity in the future. Yet, on the other hand, it also involves making hard political choices based on complex social, economic, and environmental trade-offs. Sustainable tourism development requires a vision, which encompasses a larger time and space context than the strategy, which is traditionally used in community planning and decision-making.

Despite the historical separation of the public planning system and the private tourism sector, it can therefore be concluded that planning, in its strategic, coordinating, monitoring and consultative role, has the potential to facilitate sustainability of tourism development.

#### **2.5. Public Participation and Involvement**

Local people have to be involved in the management of tourist activities. It is a means of creating and achieving a more harmonious relationship between the local people

and the visitors. Green and Hunter (1992) addressed that the public involvement is not simply a way of responding to pressure groups but of recognizing that local people are experts in local situations and activities. With the scarcity of the resources available, as well as, insufficient regulations, it is necessary to motivate the local people so as to contribute with their efforts.

The integration of the tourism and the overall community planning is important from the initial up to the last stage of the tourism development. According to Gunn (1993), "Many communities view tourism as a separate layer that is simply added to a community. Engaging in tourism from this viewpoint is always disappointing because it fails to integrate tourism into the social and economic life of the community."

Tourism touches all sectors of a community - businesses, government services, the natural environment and residents. The efforts in convincing the representatives to get involve in these various elements for discussions and decisions will help to create positive attitudes and a healthy tourism industry, which are in harmony with the community values. All residents should be invited to participate in creating and making the fundamental tourism development decisions. Residents will be more inclined to support tourism if they are involved in the initial discussions and have the opportunities to voice out their opinions. They will also be more willing to volunteer for tourist-related activities (e.g. recreation, information sharing and interpretation) and events (e.g. festivals, celebrations and sports) later on. A survey of local residents can be conducted to assess community attitudes toward tourism development, identify the impacts of tourism on the community and obtain local inputs into the tourism plans. Public hearings, workshops, and advisory boards are some ways to obtain public involvement in the tourism planning. Local support and cooperation is important to the success of tourism programs and should not be overlooked.

## **2.6. Principles for Sustainable Tourism**

Shirley Eber, 1993, has given the ten principles for sustainable tourism. These are as follow:

### **2.6.1. Using Resource Sustainable**

The conservation and sustainable use of resources - natural, social and cultural is crucial and offers a long-term business sense. The tourism industry should:

- Prevent damage to the environment, human and natural resources.
- Act as a force for conservation.
- Develop and implement sound environmental policies in all areas of tourism.
- Install appropriate systems for minimizing water and atmospheric pollution from tourism developments.
- Develop and implement sustainable transportation policies, efficient public transport, (e.g. for walking and cycling) to enhance and protect the environment.
- Adhere to the "precautionary principle", in all its operations and new developments.
- Research and establish the carrying capacity of the destination and then operate within the limit sets, based on the "precautionary principle".
- Respect the needs and rights of the local people.
- Protect and support the cultural and historical heritage of people worldwide.
- Carry out its practices in a responsible and ethical manner.

- Actively discourage the growth of exploitative sex tourism.

### **2.6.2. Reducing Over-consumption and Waste**

Reduction of over-consumption and wastes avoids the costs of restoring long-term environmental damage and contributes to the quality of tourism. The tourism industry should:

- Reduce consumption and promote the reduction of inappropriate consumption by its customers;
- Use local resources in preference from imports, but in an appropriate and sustainable manner;
- Import goods, if and only if, it is absolutely necessary and ensure that these are imported through local agencies and enterprises.
- Reduce waste
- Ensure the safe disposal of waste produced from its tourism facilities.
- Implement waste disposal facilities, including support for local infrastructure, where it is inadequate.
- Recycle waste to the benefit of the tourism industry and of the local community where waste cannot be reduced.
- Invest in the appropriate recycling schemes.
- Take responsibility for restoring damage arising from tourism projects.
- Avoid damage through proper pre-planning and constant monitoring.

### **2.6.3. Maintaining Diversity**

Maintain and promote natural diversity. Social and cultural diversities are essential for a long-term sustainable tourism and therefore create a resilient base for the industry. The tourism industry should:

- Respect the natural, social and cultural diversity of destination areas.
- Ensure a pace, scale and type of development, which protects rather than destroys diversity, local culture and communities.
- Prevent the destruction of natural diversity by respecting each area's carrying capacity, taking steps to establish carrying capacities and adopting the "precautionary principle".
- Monitor the impact of tourism activity on the flora and fauna of a destination area.
- Encourage social and economic diversity by integrating tourism within the activities of a local community and with their full support and participation.
- Prevent viable traditional occupations from being displaced by a tourism monoculture.
- Actively discourage any form of tourism, which contributes to the social problem.
- Foster genuine cultural tourism that does not reduce the host culture to a commodity.
- Promote regions unique features, rather than impose blanket standardization.
- Ensure that the scale, pace and type of tourism is such so as to foster genuine hospitality and mutual understanding.
- Promote tourism attuned with local culture, welfare and development aspirations.

#### **2.6.4. Integrating Tourism into Planning**

Tourism development, which is integrated into a national and local strategic planning framework and undertakes environmental impact assessments, increases the long-term viability of tourism. The tourism industry should:

- Take into account, both the immediate and future needs, of hosts and tourists.
- Integrate all economic, environmental, social, and cultural aspects of the local area in the planning.
- Respect local, regional and national policy in other sectors, such as industry, agriculture, land-use, housing and welfare.
- Consider alternative strategies for development and options for land-use that take environmental imperatives into account.
- Minimize environmental, social and cultural damage to host communities by carrying out comprehensive environmental impact assessments in consultation with the local people and all relevant authorities.
- Continue to monitor positive and negative environmental and other impacts.
- Develop and introduce methodologies for improving environmental impact assessment undertaken by the industry.
- Recognize that a pace of development in agreement with local situations will provide time to properly plan, develop and monitor projects for long-term benefits.

#### **2.6.5. Supporting local economics**

Tourisms that support a wide range of local economic activities and which take environment costs and values into account protect economies and avoid environmental damage. The tourism industry should:

- Take responsibility for maintaining and improving the environment, wherein, it is a direct resource.
- Ensure that environmental costs are taken into account in all of the tourism projects.
- Integrate environmental considerations into all economic decisions.
- Operate within the limits set by local appropriate infrastructure and carrying capacity.
- Undertake full and regular environmental audits on every tourism project.
- Underpin economic diversity by developing tourism infrastructure that also benefits wider interests.
- Ensure that the type and scale of tourism is appropriate to local conditions.
- Prevent over exploitation of individual locations.
- Support local income-generated and small business enterprises.
- Support the economies of destination countries by maximizing retention of tourist revenues within their economics.
- Invest in environmental protection technologies and restoration of existing damage to the environment in relation to tourism.

### **2.6.6. Involving local communities**

The full involvement of local communities in the tourism sector not only benefits the local communities and the environment in general, but also it improves the quality of the tourism experience. The tourism industry should:

- Respect the needs and aspirations of the local people.
- Support the concept that the local people should determine their own development.
- Actively encourage local community involvement in the tourism projects.
- Promote the active partnership of local people and communities in the tourism development.
- Involve the widest range of local associations.
- Actively support local enterprises and cooperatives, which provide services, goods and crafts.
- Support locally owned shops, restaurants and guide services.
- Involve local people through employment at all levels.
- Encourage the development of home-based tourism accommodation and facilities.
- Prevent disruption to and the displacement of the local people.

### **2.6.7. Consulting Stakeholders and the Public**

Consultation between the tourism industry, local communities, organizations and institutions, is essential whenever they are to work together and resolve potential conflicts of interest. The tourism industry should:

- Consult with and inform local residents about certain potential changes that are induced by the rapid growth of tourism.
- Consult with and inform local residents of the potential benefits of non-intrusive, sustainable tourism.
- Introduce measures at the planning stage to encourage greater local consultation.
- Hold workshops, meetings and other ways to communicate with the public, for consultation.
- Support the establishment of proper mechanism for efficient local consultation.
- Consult with the widest variety of local associations, including non-governmental organizations (NGOs) in order to integrate both public and private interests.
- Fully inform and consult with the local government and non-government bodies prior to and during the implementation.

### **2.6.8. Staff Training**

Staff training, which integrates sustainable tourism into work practices along with the recruitment of local personnel at all levels, improves the quality of the tourism product. The tourism industry should:

- Integrate environmental, social and cultural issues into the training programs.
- Enhance the status of all local staff as an essential part of the industry.
- Foster a sense of pride in the job and care for the destination and people.
- Train staff in understanding the complex nature of modern tourism.
- Explore the positive and negative impacts of tourism on host communities, during the training.



- Train staff to foster tourist responsibility towards the destination country.
- Encourage multi-cultural education and exchange programs.
- Train local staff for managerial and leadership positions.
- Channel back profits from tourism into the educational programs, which encourage an appreciation of both the environment and the heritage.

### **2.6.9. Marketing Tourism Responsibly**

A marketing strategy, which provides tourists with information that increases respect for the natural, social and cultural environments of the destination areas, enhances the customers' satisfaction. The tourism industry should:

- Ensure that the marketing of green tourism is not merely a selling ploy but should also reflect sound environmental policy and practice.
- Educate visitors prior to their arrival and give guidance on the environmental "DOs and DON'Ts" in the area of destination.
- Dismantle racial, sexual, cultural or religious stereotyping within the industry.
- Use marketing strategies that respect the people, communities and environment of the destination areas and those parts, which are non-exploitative.
- Make tourists aware of their potential impacts and responsibilities towards the host societies.
- Provide tourists with complete and just information that enables them in understanding all of the environmental and related aspects of holidays, when selecting any of the destination areas included in the holiday packages.
- Market those holidays that correspond to the tourist product and experience which are being offered.
- Provide information to the tourists on how to respect the cultural and natural heritage of the selected destination areas.
- Never impose western mores in countries with different values.
- Encourage tourists to try new experiences, such as tasting exotic cuisines, culture and different ways of life, which the destination area offers.
- Promote tourism that is appropriate to the capacities of a destination in terms of the following: scales, numbers and types of tourism.
- Never encourage tourism to vulnerable ethnic groups or environments.
- Employ tour guides who honestly portray societies and dispel stereotypes.
- Provide customers with detailed pre-departure information, which can be reinforced during in-flights.

### **2.6.10. Undertaking the research**

On going research and monitoring by the industry, using effective data collection and analysis, is essential in solving the problems and bringing benefits to the destination areas, the industry and the consumers. The tourism industry should:

- Initiate, encourage and support research into prior assessment and monitoring techniques for measurement of environmental, social and economic impacts.
- Carry out research into improving the "Environmental Impact Assessments" and other project assessment techniques related to tourism.
- Conduct and support research on the methods for anticipating the impact of tourism, as well as, reactive problem-solving techniques.

- Improve valuation techniques to ensure that the analysis includes wider environmental and social aspects.
- Ensure that the results of research and any relevant information are properly disseminated to the institutions and individuals who are responsible for the tourism decision-making.
- Make sure that the results of the research and studies done are available to the local and national authorities, tourism staff and the general public.
- Carry out studies using local expertise experience and opinions.

## **2.7. Impacts of Tourism**

Tourism is considered to be “the sum of the phenomenon and relationship arising from travel and stay of non-residents”. The interactions between the tourists and the destination might result to a positive or negative nature in the various economical, environmental and socio-cultural impacts.

Hunter and Green (1995) consider that the tourism impacts can arise through construction and operation of tourist facilities or services and from the activities of tourist themselves. They may be of short or long-term, positive or negative, local, regional, national or global and even of direct or indirect cause. This diversity in the range and type of impact partly reflects the characteristics of the tourism industry.

Initially, tourism was developed based on the economic objectives, with limited regards in many areas of environmental and socio-cultural impacts. It is because of the negative impacts that had resulted from that earlier development, that the concern was then focused on the prevention and control of the environmental and socio-cultural impacts along with the idea of achieving the economic objectives. The intertwined nature of both has been realized, with the long-term benefits being dependent largely on a sustainable use of the existing resources.

An understanding of the full range of actual or potential impacts of tourism, requires the consideration of many inter-related characteristics, such as those of the tourists themselves the nature of the tourist destination and the functioning of various tourism agents which operate between the tourist and their destination areas (Green and Hunter, OECD, 1981). The nature and severity of impacts can also be viewed as a function of the intensity of site, the use of the transformational potential of the tourism development, the resilience of the local ecosystem and the rapidity of development (Cohen, 1978).

Table 2.1 a summary on some of the major potential impacts of tourism development in the society, economy and environment.

Table 2.1: Summary on the Positive and Negative Impacts of Tourism Development

	Positive	Negative
<b>Society</b>	<ul style="list-style-type: none"> <li>• Social mix</li> <li>• Mix of culture</li> <li>• Evidence of cultures</li> <li>• Support of cultures and crafts</li> </ul>	<ul style="list-style-type: none"> <li>• Visitors out number residents</li> <li>• Conflicts</li> <li>• Congestion</li> <li>• Irresponsible visitor behavior</li> <li>• Commercialization of cultures</li> <li>• Crime and prostitution</li> </ul>
<b>Economy</b>	<ul style="list-style-type: none"> <li>• Money to local economy</li> <li>• Job and local wealth creation</li> <li>• Multiplier impact</li> <li>• Improved service levels</li> <li>• Variety and scale</li> <li>• Additional income sources</li> <li>• New investment</li> </ul>	<ul style="list-style-type: none"> <li>• Poor job spectrum</li> <li>• Seasonal unemployment</li> <li>• Export of profits from area</li> <li>• Increased demand for infrastructure</li> <li>• Neglect of other economic opportunities</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Environmental improvement schemes</li> <li>• Management of natural areas</li> <li>• Renovation and rehabilitation</li> <li>• Built environment conservation</li> <li>• Money for conservation</li> </ul>	<ul style="list-style-type: none"> <li>• Congestion and visitor</li> <li>• Over-use</li> <li>• Vandalism</li> <li>• Threat to flora and fauna</li> <li>• Visual pollution</li> <li>• Uncertainty</li> </ul>

Source: Jamieson, 1999

## CHAPTER III

### RESEARCH DESIGN

This chapter discusses about the study area, reason for selecting the area as the study concentration, step of the research, data collection method, and the methods used for the analyses of research findings, and a diagram framework of the overall research activities (Figure 3.3)

#### 3.1 Selection of the Study Area

Koh Yao island are two connected islands (Koh Yao Noi and Yao Yai) in Phang Nga province which are located in the middle of Phang Nga Bay between other two provinces, Phuket and Krabi. It can be developed as a central point used as connection for many famous tourism destination along the Andaman coast (figure 3.1). Recently there is expectation of development which the island will be equipped with infrastructure and facilities enabling the area to host tourism activities.

Here, the island was chosen as study site, based on three reasons:

- Since it is the central point for linkage of tourism destination, there will be economic opportunities for the island to be developed as world class tourism destination.
- Its beauty and diverse natural resources such as seagrass, mangroves, coral reef, etc.
- The concern of tourism development raising the negative impact on socio-economics, cultural and ecological feature in the area.

#### 3.2 Step of the study

##### *Step 1: Review the situation of Thai Tourism Industry with supported Policy and Plan*

- Review situation of tourism industry of Thailand to find out how the current situation and trend of tourism would support the sustainable development in the area under study.
- Summarize the Policy, Plan, Development strategy and actors involved in tourism management and planning, through national level, regional level, and local level.
- Discuss how Thailand would challenge their sustainable tourism development by review some environmental issue in famous region.

##### *Step 2: Identify the resource utilization and local community perception on impact of tourism development*

- Using household questionnaires to find out how community use their coastal resources and how they see the condition of the coastal resources
- Determine the community perception on impact of tourism development on their community

- Interview key informants such as village head, TAO, district official, school teacher, etc. to find out the current situation of tourism in area, community need, constraint in tourism development and the possible option for the tourism development, which will compromise the impact.

***Step3: Identify potential for sustainable tourism development based on analysis of the above finding***

The above findings were used in this step for SWOT analysis identifying the strengths, weaknesses, opportunities, and threats for sustainable tourism development in Koh Yao.

***Step 4: Strategy for sustainable tourism development***

- The strategy was made based on the SWOT to use the strength and opportunities to overcome the constraints in sustainable tourism development in Koh Yao.

**3.3 Data Collection Method**

The data collection was carried out for three months starting from January to March 2004.

**3.3.1 Primary Source**

Primary data was collected from field survey using both methods of formal and informal interviews with households and key informant through the checklists and structured questionnaires. Informal group discussions with different key informants as well as observation and field visits were conducted and PRA, were used in order to identify the resource location and condition, popular tourism sites in and around the island, historical event of the island, problems and needs of community related tourism development. The social network of the community was also assessed though PRA.

**3.3.1.1 Participatory Rural Appraisals**

• **Resource location map**

Simple map on which show about the village structures and the resources availability in their own villages such as , the rice paddy fields, the upland farming areas, the mountains, the sea, fisheries, mangroves, and forests. Arial photograph was used to assist the researcher and local participants in this task.

• **Tourism Map**

Simply, the method was used same as resource location map. Some key persons such as, fishing group leaders, tour group leaders, head of village and TAO official, were gathered to demonstrate the popular tourism attraction sites and other possible tourism-development sites.

- **Problem ranking**

The situation analysis resulted in the identification of the problems of tourism development in each of the selected villages. Also, the respective possible solutions raised and proposed by the villagers were listed and ranked according to the prioritized problems that needed the immediate solution.

### 3.3.1.2 Questionnaires Surveys

A structured questionnaire for individual respondents was used as the instrument for community survey. Based on the coordination schema (Appendix 1), the questionnaire was constructed. The questionnaires was designed in English and translated into Thai in order to collect the baseline information. To conduct this household survey, one field assistant who speaks Thai was assisting.

#### A. Sampling Procedures

Three sub-districts (Tambon) including Koh Yao Noi, Koh Yao Yai of Koh Yao district, Phang Nga province, were selected purposely because the three sub-districts form the whole island which possibly tourism activities can take place. Again purposive sampling was applied to select villages from three sub-districts and 7 villages were drawn purposively which are the big village representing a large number of people have participated in social activities such as group or organization and possibly the village itself have more attraction sites for tourism development, (map 3.2). Within the seven villages, households were chosen for survey by a simple random sampling and proportionally from each village to master sample size (Table 3.1).

#### B. Sample Size

The sample size in this study was calculated from the equation below:

$$n = N/(1+Ne^2)$$

e = Level of precision = 0.1

N = Number of all households

n = Sample size

(Source: Yamane, Taro, 1967, Statistics: An Introductory Analysis)

The total sample size included for administering survey is 100 households with sampling fraction between sample size and population being 0.035. Therefore, the sample sizes for Tambon Koh Yao Noi, Yao Yai, and Phrunai will be 41, 21 and 38 households respectively as shown in Table 3.1.

**Table 3.1: Sample size of household survey**

Study area	Number of Household	Name of village	Sample size
Koh Yao Noi	1021	Village 4	13
		Village 5	15
		Village 7	13
Koh Yao Yai	580	Village 2	12
		Village 3	9
Prunai	1176	Village 3	19
		Village 6	19
<b>Total</b>	<b>2777</b>		<b>100</b>

### 3.3.1.3 Field Observation

Visual inspection was carried out in order to verify potential attraction sites, tourism products, natural resource status, urban infrastructure and facilities.

### 3.3.1.4 Key Informant Interview

During field data collection, identification of key stakeholders and selection of key informants was done. Key informants were selected from among the local people and the government agencies concerned. From among the local people, key informants were selected representing the different resource users, tour operator and other tourism business, and other sectors. From the government agencies, key informants were selected from among the different agencies involved or having jurisdiction over the utilization and management of the resources in the area. Key informants and representatives of NGOs were also included.

### 3.3.2 Secondary Data

Prevailing relevant secondary data and information from various official sources were collected. Those data sources are:

- National and local Policies and plan of tourism development for coastal area, particularly Koh Yao Island.
- Development plans of the province, districts, sub-districts: short-term, medium and long term
- National or other policies related to the management & utilization of resources and development in the area.
- Map of the area: satellite images, aerial maps, etc. of different years
- List of different institutions and the corresponding institutional arrangements in the area: government, academic, NGO, etc. and their corresponding roles over the utilization and management of resources & tourism development of the area
- List of related laws and regulations
- Physical, biological, chemical & other important parameters necessary to better understand the issues & situation of the area

### 3.4 Data Analysis

#### 3.4.1 Data analysis by using questionnaire

Both qualitative and quantitative approaches were used for analytical purposes. Data was processed through coding and tabulation and editing, before analysing. Illustration by diagrams, charts and figures were made. The Statistical Package for Social Science (SPSS) was used as the main instrument for data analysis.

- **Descriptive Statistics:**

These were used to describe the current socio-economic status of respondents including household characteristics, and income levels. These typical descriptive statistics included the frequencies, percentages, means, cross-tabulation, graphs, and charts as well as other illustrations.

- **Analytical Statistics**

#### *Chi-square Test*

This was used primarily to assess the differences in distributions of the natural resources in contribution to the local community by different wealth classification such as very low income groups, low-income groups, medium income groups and the high-income groups.

The formula of Chi-square value ( $\chi^2$ ) was computed as follows:

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

Where:  $O_i$  Observed frequency  
 $E_i$  Expected frequency  
With (k-1) df, where (k) equals the number of classes

#### *Weighted Average Index*

To measure the level of people's participation in different activities of various organizations in Koh Yao, index of the level of participation was employed.

Scale:

Never	Low	Medium	high
0-0.75	0.76-1.5	1.51-2.25	2.26-3

(Source: adapted from Miah, 1993, *Applied Statistics*)

Once the scale was decided, computation of the index is simple. In this case, the index is computed by Weighted Average Index (WAI). This is applied for analyzing the



extent of patterns of people's participation in different activities. The formula of WAI as following:

$$WAI = \sum s_i f_i / N$$

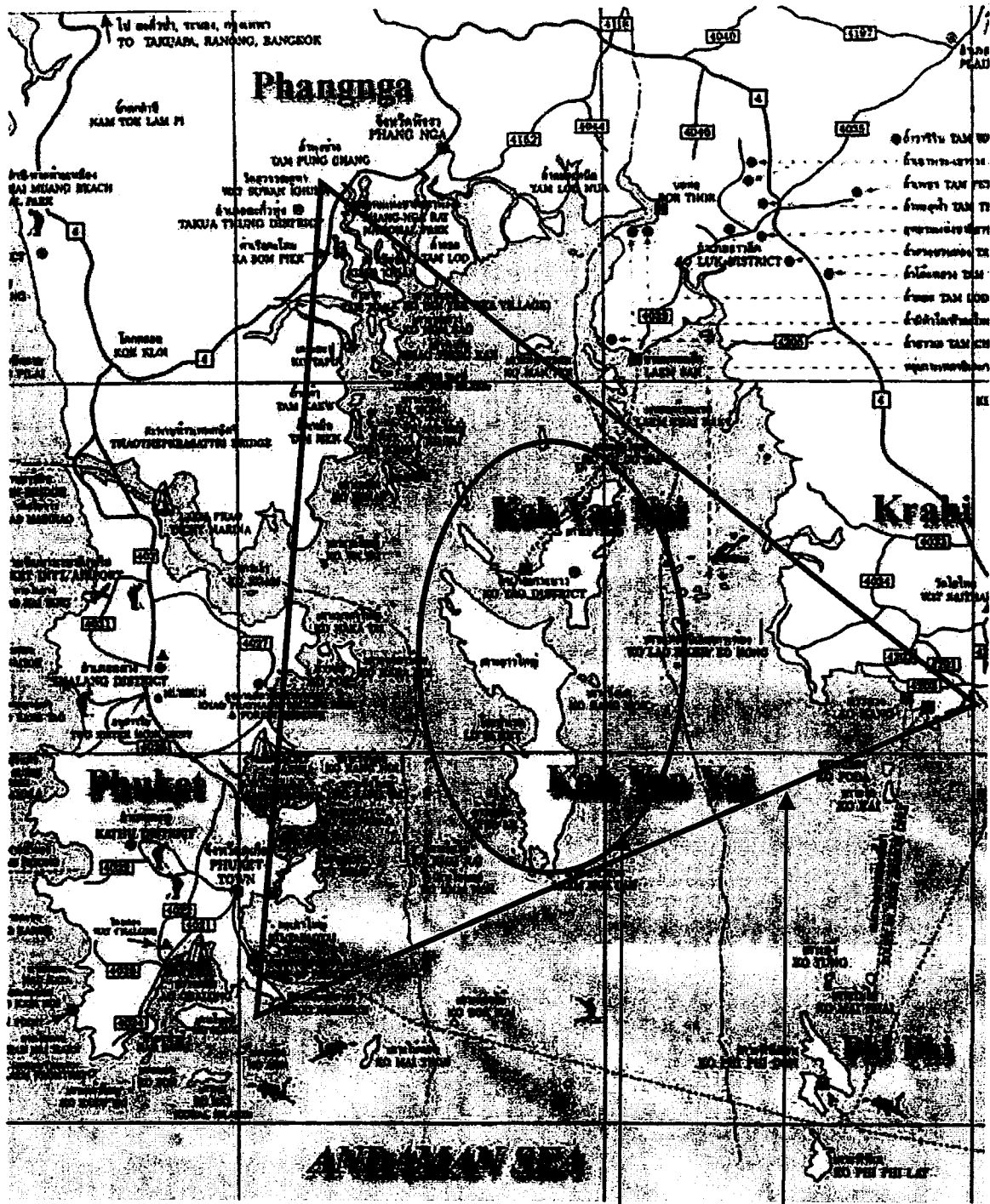
Where, WAI = Weighted Average Index such that  $0 \leq WAI \leq 3$

$s_i$  = scale value at ith level

$f_i$  = frequency of ith level

N = total number of observation

$$= \sum f_i$$



Adaman Triangle

Study Area

Figure 3.1: Map of the study area, Koh Yao , Phang Nga Province

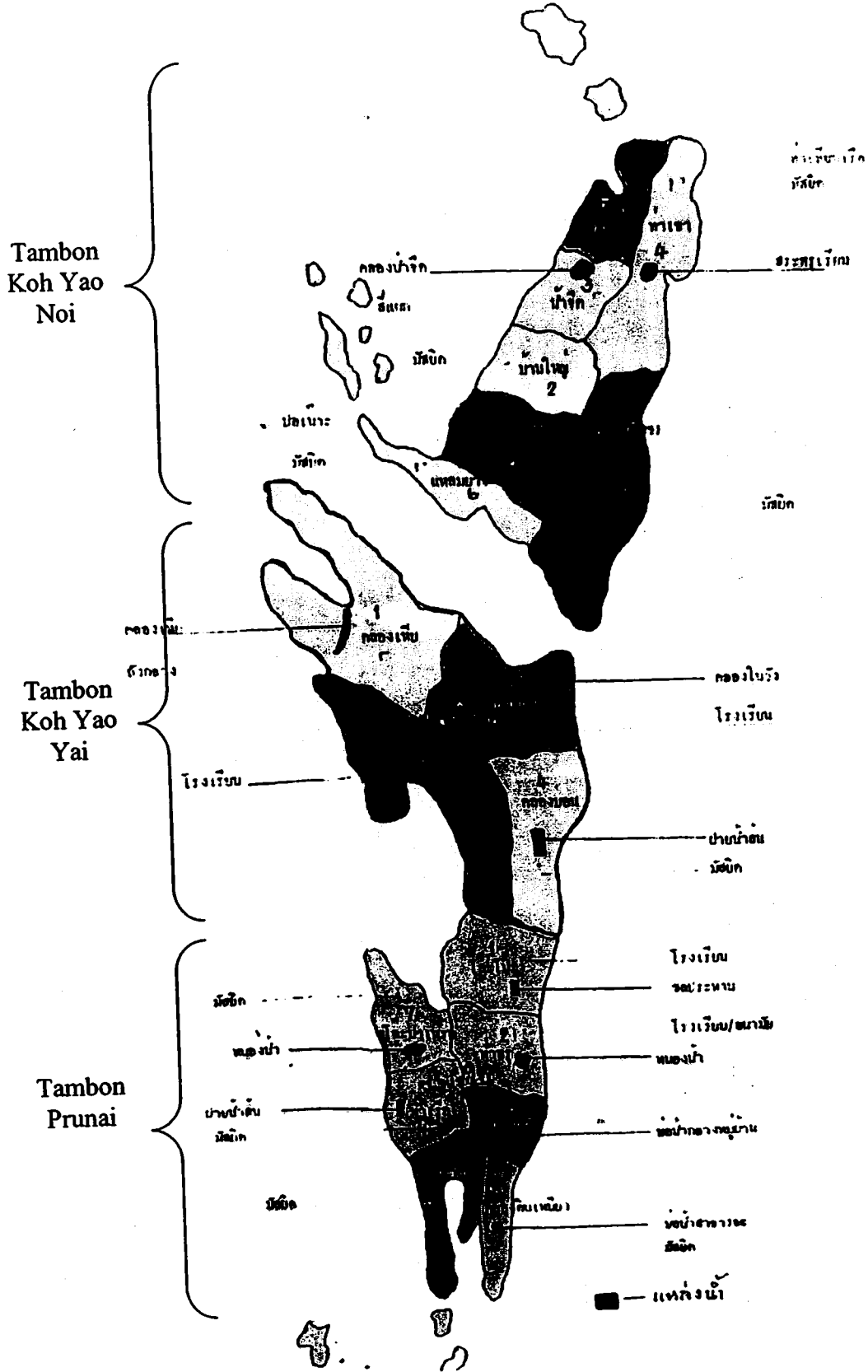


Figure 3.2: Map of Selected villages

# RESEARCH DESIGN

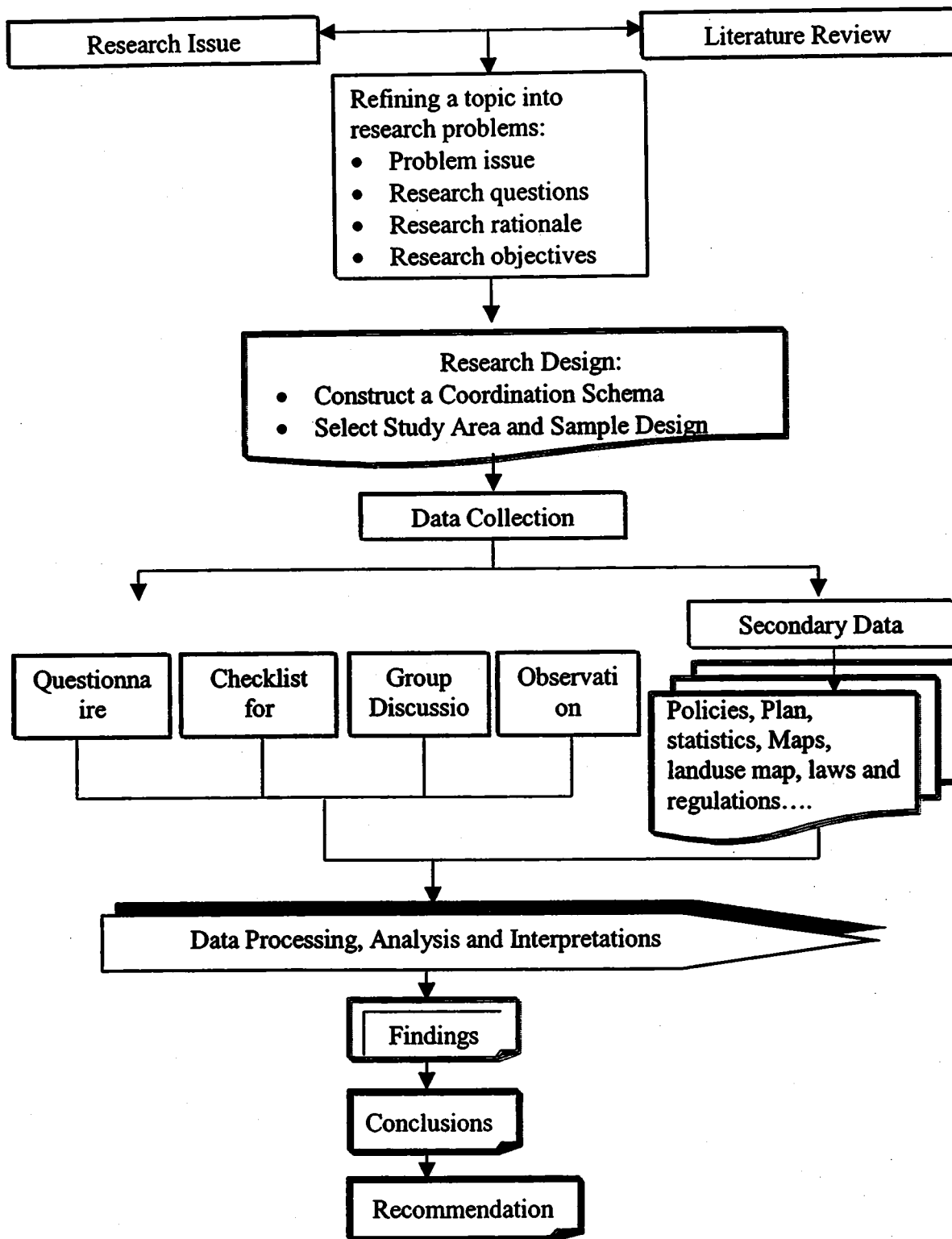


Figure 3.3: Research Design

## CHAPTER IV

### PROFILE OF STUDY AREA AND RESPONDENT

#### 4.1 Profile of Study Area

##### 4.1.1 History

In record in Thalang history, which was written in 1841, During the end of the Ayutthaya era Koh Yao, Koh Lang, Laem Pak Pra were under Thalang, which shows that Koh Yao used to be under the government of Thalang or Phuket of now. In 1903 Koh Yao changed its status to a sub-district and later in 1988 was changed to a district. It is believed that the early population of Koh Yao sought refuge from war in Trang and Satun provinces. Those who came from Trang settled on Koh Yao Noi while those from Satun settled on Koh Yao Yai (Koh Yao district office, 2003).

##### 4.1.2 Location and territory

Koh Yao (Yao island) is located in Phang Nga bay with the total area of 144.061 Km<sup>2</sup> including big and small surrounding islands. There, people settle in only two main islands, Koh Yao Noi Island (the small) and Koh Yao Yai Island (The big). The two islands stretch along connectedly which are divided by a strait of 2 km width. The smaller one, Koh Yao Noi, has been chosen as the center of government with all government offices located there.

The boundaries:

- North: to the sea of Krabi
- South: to the Adaman sea
- East: to the group of islands in Krabi
- West: to the sea of Phuket

(Koh Yao district office, 2003)

Koh Yao has many tourist attractions that still maintain their natural beauty along with many beautiful beaches. The people of this island lead a simple life bond with the sea along with making a living from the sea. Apart from this, not far from the coast of Koh Yao are many exotic islands, which increase the beauty of Koh Yao (TAT, 2002).

Koh Yao has an elongated shape from north to south, with 40 km long, most of area consists of steep mountain, spreading along the northwest part. The plain areas stretch along the seaside and the mountain gaps.

##### 4.1.3 Climate

Since Koh Yao district is a group of islands located in the middle of the Phang Nga bay surrounded by the sea, the climate is tropical cold through influence of sea breeze. Rain falls moderately through the year with two directions of monsoon,

- Southeast monsoon: starts from October to April
- Southwest monsoon: starts from May to September

#### 4.1.4 Administrative System

At present, Koh Yao District is divided into 3 sub-districts, namely Koh Yao Noi, Koh Yao Yai and Prunai. Koh Yao Noi sub-district covers whole small island which all district government offices are located there. Koh Yao Yao and Prunai sub-district are located together cover the whole big island.

The administrative system in local level of each sub-district is Tambon Administrative Organization (TAO), in which the committees of TAO come from two representative villagers of each village in one sub-district. The TAO system comprises two sub-systems: council system and administration system. Therefore, there are three TAOs in Koh Yao district: Tambon Koh Yao Noi, Tambon Koh YaoYai and Tambon Prunai Administrative Organization (Table 4.1).

#### 4.1.5 Population

In 2003, the population of Koh Yao District is 12,682, which comprised of 6,283 males and 6,399 females. The average population density was 87.6 people per km<sup>2</sup>.

Table 4.1: Population in Koh Yao District in 2003

Sub-district	Village order	Village name	Number of household	Number of population		
				Male	Female	Total
Koh Yao Noi	1	Ban Tha Khay	204	478	561	1039
	2	Ban Yai	118	238	238	476
	3	Ban Nam Choeu	177	380	365	745
	4	BanTha Khao	96	227	230	457
	5	Ban Rim Thale	198	444	407	851
	6	Ban Laem Yang	152	355	366	721
	7	Ban An Bao	76	170	160	330
<b>Sub-total</b>		<b>7 villages</b>	<b>1021</b>	<b>2292</b>	<b>2327</b>	<b>4619</b>
Koh Yao Yai	1	Ban Klong Hia	124	251	292	543
	2	Ban Chong Lat	270	515	593	1108
	3	Ban Ya Mi	83	180	190	370
	4	Ban Klong Bon	103	261	253	514
<b>Sub-total</b>		<b>4 Villages</b>	<b>580</b>	<b>1207</b>	<b>1328</b>	<b>2535</b>
Prunai	1	Ban Lo Bo	146	404	388	792
	2	Ban Prunai	263	683	634	1317
	3	Ban Ao Kaphor	298	625	691	1316
	4	Ban Tha Roeu	145	316	344	660
	5	Ban Klong Dinneiv	106	247	235	482
	6	Ban Ok	147	319	292	611
	7	Ban Lo Paret	71	190	160	350
<b>Sub-total</b>		<b>7 villages</b>	<b>1176</b>	<b>2784</b>	<b>2744</b>	<b>5528</b>
<b>Total</b>		<b>18 Villages</b>	<b>2777</b>	<b>6283</b>	<b>6399</b>	<b>12682</b>

Source: Koh Yao District Office, 2004.

#### 4.1.6 Economic status

The main occupations of people in Koh Yao District are agriculture and fishing. The total area for agriculture is 227,208 ha which consists of 2483 ha of Rubber plant, 987.2 ha of Coconut plant, 605.12 ha of Paddy field, and 676.32 ha of other vegetable area. Most of people own the lands for their rubber plantation at their house yard in family scale. About 60% of Koh Yao people do fishing. The fishing activities in Koh Yao are in form of small-scale in which local people use small fishing gear, such as shrimp gill net, fish gill net, surrounding net, etc. For aquaculture, there is both pond culture and fish cage culture. The popular fish for cage culture are sea bass (*Lates calcarife*) and grouper (*epinephelus coioides*), There are few families operate lobster cage culture as it is costly invested and food input. There are other livelihood activities such as animal production with buffalo and goat, merchandise sale, etc. In Koh Yao district there is no bank but only one cooperative credit (Koh Yao district office, 2004).

According to PRA of this study the tourist business is growing very fast during last 3 years because of the promotion of tourism development by government in Yao Island. Along the coastal area, especially famous beaches in Koh Yao Noi Sub-district, such as Tha Kao Beach and Laem Sai Beach, a lot of accommodations, ranked from small family-run bungalow to luxury resort, are built to support the tourists. Besides these, there are diving business, kayaking business, tourist boat business, souvenir shop and restaurant. Some fishermen during low-catch season convert their fishing boat to tourist boat.

#### 4.1.7 Social Status

##### *Education*

There are 13 schools with totally 146 classrooms provide education in elementary level and there are 107 teachers and 2,464 students for primary schools. Only one high school with 14 classrooms provides education up to upper secondary level in which 21 teachers and 432 students are there. There are 6 village-based reading rooms and one people's library.

##### *Religion*

99 percent of Koh Yao people are Muslim. There are 26 masjits in which 18 had them registered but 8 had not. Since there is only 1 percent of people are Buddhism, the Buddhist temple is not existed there.

##### *Public Health*

There is one hospital of 10 beds located in Koh Yao Noi sub-district, providing the health service for people. There are also 3 sanitation stations in the district.

#### 4.1.8 Transportation

Since the geographical characteristic of Koh Yao district is group of island surrounded by the sea, the transportation to the provincial mainland and another surrounding provinces is mainly based on all kind of boats. The distance from island to the

Phang Nga mainland is 48 Km. On the island, most of people use motorbike while only a few cars and trucks are found.

#### ***Transportation from Mainland to Yao Island:***

The transportation between mainlands to Koh Yao usually uses passenger boats. There are four to five boat trips per day between Phuket and Koh Yao while there is only one boat trip between Krabi-Koh Yao and Phang Nga-Koh Yao. There is more economic linkage of Koh Yao with Phuket than other provinces.

Apart from those that run according to regular schedule, boats must be chartered which long tailed boat is the most suitable one.

#### ***Routes within the islands***

There are some concrete routes linked from main point to other important points, which have more business activities such as piers, markets, municipality, etc. Another route connected from one village to another are found in red clay or dirt routes.

#### **4.1.9 Telecommunication Service**

There is one public post office for Koh Yao district located in Koh Yao Noi. Only 283 telephone-lines are already connected for officials and privates. In the downtown of Koh Yao Noi, 3 public phone boxes was set up to provide the service for people. Normally most people prefer to use the mobile phone since Koh Yao have been included in coverage area of some mobile companies recently.

#### **4.1.10 Electricity**

The electricity has been served to most families in Koh Yao district. There are two main electricity sharing system where both are connected from Phuket province through undersea cable. Recently, the service has been extended to 24 hours.

#### **4.1.11 Water system**

Water supply system was found in some part of each sub-district. More system was set up for small towns or crowded villages than other. Automatic pumping wells are popularly used in the island to support the water distribution. Normal wells are found in most houses on the island. There are only few water reservoir and dams in the island which resulting in lack of water supply.

#### **4.1.12 Natural resources and environment**

- **Water resource**

There is inadequate water resource for agriculture and household consumption. Most of the water canals function as way for rainwater flowing down to the sea and for transportation. Those canals are Klong Hia, Klong Yami, and Klong Sokha. The main sources of freshwater are of 4, flowing down from hills. In dry season, the amount of freshwater decreases resulting in very short of water for consumption.



- **Forest resource**

About 40 percent of forest is wet forest. In Koh Yao Noi most forest areas have been converted for rubber plants, remaining only some part on top of the hills. There are dense natural forests located in Koh Yao Yai, which are still in good condition, having conserved as protected forest. Not much amount of mangrove area is found in Koh Yao Noi, but in Koh Yao Yai.

- **Land**

Since most land in Koh Yao is mountainous, they have been used for plantation such as rubber, coconut, etc. The lands, which mix with sand, have been used as rice fields.

- **Environment in Koh Yao**

In general, the environment in the island is still in good condition, lot of natural resources including in the small surrounding islands have been preserved. Since the island is under development, most area along the beach have not yet been equipped with infrastructure and building, consequently the nature is dominant.

#### 4.1.13 Tourism

##### *Tourism Development*

Koh Yao Island has a lot of attraction site for tourists. The local lifestyle is very dependent and peaceful in making livelihood and religion. These contribute in tourism development in the island, which attracts both foreigner and Thai come to visit the island, enjoy the view of sea and surrounding islands and learn the local traditional lifestyle of the people. There is no data about number of tourist visiting the island. Through discussion with the official and local people, the number of tourists has been increased every year, together the amount of bungalow and guesthouse are also increase accordingly. It have been observed by the tour operator and bungalow owner that, the visitors are Thai and foreigner, in which most foreigners come from the Europe, such as Germany, Switzerland, United Kingdom, Netherlands, and France. From observation, bungalow and small resort were found with amount of 11 and there are two big luxury resorts located along the beach, one is Koh Yao island resort and other one is Paradise resort, which just recently started business.

*The interesting tourism attraction sites are as follow:*

##### *Koh Yao Noi*

- **Pa Sai Beach** is about seven kilometers away from the District Administrative Office. This long stretch of white, pristine beach is a place where you can swim is shady with lots of trees. It also provides a spectacular view of the islands.

- **Klong Jaak Beach** from a viewpoint on this beach you can see almost the whole of Koh Yao.

- **Ao Kian** is under the control of the Phang-nga Bay National Park, located on the north of Koh Yao Noi. It has a lush forest with many large trees, along with a white beach and perfect swimming place.

Apart from this, tourist may hire a boat from Koh Yao to Pa Koh, which is a group of more than 100 islands, such as Koh Lao Ka Lao, Koh Lao La Ding, and Koh Pak Bia. They can also go snorkeling at Koh Hong and Krabi.

### ***Koh Yao Yai***

- **Loh Jaak Beach and Loh Jaak Pier** is an important pier from Koh Yao Yai to Phuket. Merchandise worth over 100,000 baht pass through this pier daily. The beach here is white, and the water is clean and clear. Schools of fish swimming near the bridge are a beautiful attraction. Visitors can also go fishing or search for edible shells or see the production process of making dried anchovies (pla ching chang). Long-tail boats can be hired to go to Koh Kai Nok or Koh Kai Nai.

- **Loh Pa Raed Beach** is located in the middle of the island, on the west coast. The long, white beach is parallel to coconut plantations, ideal for camping, swimming, and seeing different types of shells, along with the lifestyle of the Hua Tong boat fishermen. Moreover, there are beautiful rocks on the north of the beach.

- **Klong Son Beach** is ideal for camping amidst the wilderness where you can see boars, mouse deer, and various kinds of birds. You can also take a walk on the beach and look for shells or arrange a campfire night.

- **Ao Thi Kud** is located on the west of the island. At the north of the bay is a cape with a beautiful view.

- **Ao Laan** has a beautiful beach where you can also go swimming. To the north of the beach are deep waters. Getting to this beach would be more convenient by boat since the area is mountainous and the road is not constructed.

***There are also many other interesting islands around Koh Yao as follows:***

- **Koh Kai Nok** has rocks and beautiful beaches with clear water. You can also dive around the island to see the coral and the various types of fish. A school of dolphins can be seen here almost everyday. Koh Kai Nog can be reached by boat from Lo Jaak pier or from Phuket, which is 15 kilometers away.

- **Koh Kai Nai** is a small island with beautiful beaches and shady trees. There are no constructions on the island to come between you and nature. Snorkelling here you will feel that you truly are in a marine national park. See different types of coral and underwater marine life up close. It takes about 25 minutes by long-tail boat to get to Koh Kai Nai from Loh Jaak pier.

- **Koh Rang Nok (Li Peh)** is one of the many islands where swallows make their nests. Swallows nests from Koh Yao are considered to be of the highest quality. Normally visitors are only allowed to see the island from the boat, as going on the island would be disturbing the swallows.

- **Koh Nog** is an island nearby Koh Yao Noi. It has beautiful beaches suitable for camping. This is a very private island and can be reached by a small long-tail boat, which can accept about 5-10 passengers per trip. The price is about 300-500 baht per boat.

- *Koh Phii* (Pu Lao Hantu), this island has the skeletons of sea gypsies in a cave. Sea gypsies normally pass by this island. Visitors can go diving around island. The island is also another place where swallows make their nests and visitors are not allowed on it.

#### 4.2 Socio-economic characteristics of Respondents

In this section, information is provided on the characteristics of the respondents including their age, education, marital status, family member, origin, health, and social and economic status.

The respondents were selected from all 3 sub-districts but only some villages in each sub-district were selected. In Koh Yao Noi sub-district, 3 villages (village 4, 5, and 7) were selected with criteria of tourism business taken place. In Koh Yao Yai and Prunai sub-districts, 2 villages were selected from each which village 2 and 3 were selected from Koh Yao Yai, village 3 and 6 were selected from Prunai (Table 4.2)

Table 4.2: Characteristics of respondents

		n=100	
Characteristics		Number of respondents	Percentage
1. Study area			
Koh Yao Noi	Village 4	13	13
	Village 5	15	15
	Village 7	13	13
Koh Yao Yai	Village 2	12	12
	Village 3	9	9
Prunai	Village 3	19	19
	Village 6	19	19
2. Sex			
	Male	74	74
	Female	26	26
3. Religion			
	Muslim	100	100
4. Status of respondent in family			
	Head of household	88	88
	Member	12	12

##### 4.2.1 Age

The age of respondents of household survey varies from 16 to 66 years old. The average age was 43. When classifying the age of respondents following the adulthood classification of Kaisinthob (2003), the respondents in middle adults (36 to 50 years) are more than young adults (16 to 35 years) and maturity adults (more than 50 years) as shown in Table 4.3.

Table 4.3: Age structure of respondents

Age	Number of respondents	Percentage
16-35 years	25	25
36-50 years	53	53
More than 50 years	22	22

#### 4.2.2 Education

From the survey, there are 4 percent of respondents who are illiterate where as the highest education of the respondents in this study is bachelor degree (2 percent). The result shows that 54 percent of respondents finish their study at primary level (grade 4 to 6) and 40 percent continue their study until secondary school (Table 4.4)

Table 4.4: Education level of respondents

Education level	Number of respondents	Percentage
Illiterate	4	4
Primary school	54	54
Secondary school	40	40
Bachelor	2	2

#### 4.2.3 Household size

The Average household size of the respondents in the study area is 4.5. The maximum number of family members is 9, and the minimum number of family members is 2. When considering household size, there are 71 percent of respondents with a household size of 4 to 6 person, while only 23 percent and 6 percent with household of less than 3 and bigger than 6 respectively (figure 4.1).

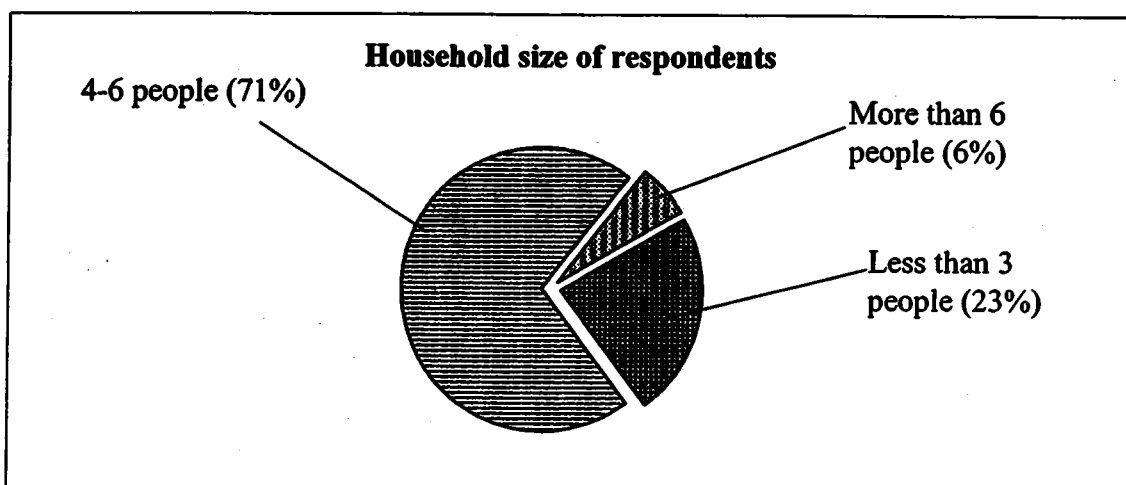


Figure4.1: household size of respondents

#### 4.2.4 Origin

Most of respondents of household survey are originally born in the study areas (96 percent); there are only 4 percent of respondents who come from other area such as Nakorn Sithamrat and Phang Nga. The main reason of migrating is to follow the family after marrying in the study area.

#### 4.2.5 Social status

From questionnaire survey, 26 percents of the respondent had never joined in any group of society, while 46 percent are the general member without any specific position in the group. In term of participation, there are 22 percent of respondents holding position as committee and 6 percent as chairman or leader of the groups. The position of participation in local organization is an important factor effective on people's participation (Phong 2000) (figure 4.2)

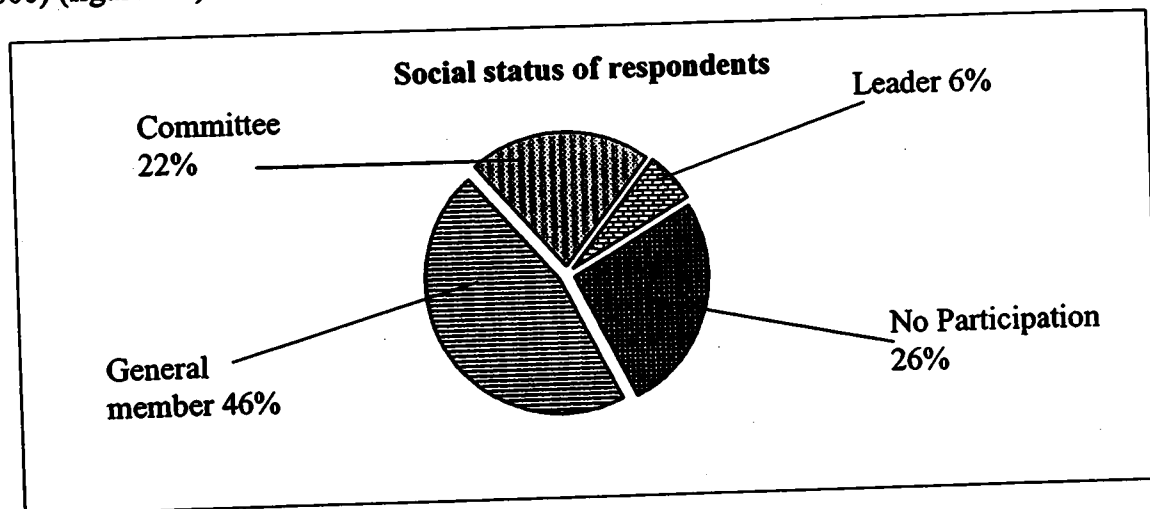


Figure 4.2: Social status of respondents

#### 4.2.6 Economic status

Table 4.4 shows that most respondents have more than one occupation (72%), while only 28 % have one occupation. Since the population in the island is not large, most people get employment or their own occupation. There is no respondent with jobless in the survey. The larger amount of respondents (37 %) has their main job in fishing. Most of fishermen use the traditional fishing technique while small amount tend to modernize due too low catch. From the PRA, it was found that fishing practice was their traditional occupation for livelihood. Only 2 % of respondents engage in mari-culture, which they grow fish and lobsters in the cages.

Another main occupation is plantation. There are many types of plantation such as rubber, coconut, cashew nut, and other fruit plant. However, the planters normally prioritize rubber as the major, subordinated by other kind of plant. From the table 4.5, there are 23 % of respondent engage their main job with rubber plantation.

Table 4.5 also shows the main occupation related to tourism such as bungalow and restaurant, which are 8 and 2 % respectively.

The other main occupations of the respondent are private business with 10 % (such as grocery, fruit vender, cloth shop, etc.) general labors with 8 % (such as carpenter, fisher labor), government official with 2 %, general employee with 8 % (such as staff in company, restaurant, and resort).

The main occupation of respondent are more diversified at the present than in the past because of the effect of tourism development while some respondent change their main job from plantation to tourism-related business such as resort, bungalow and restaurant. Some fishing boats have been converted to tour boat.

Table 4.5: Economic status of respondents

Occupation	Number of respondents	Percentage
<b>1. Number of occupation</b>	(n=100)	
No occupation	0	0
One occupation	28	28
More than one occupation	72	72
<b>2. Main occupation</b>	(n=100)	
Rubber Plantation	23	23
Fishing	37	37
Aquaculture	2	2
Private business	10	10
General labor	8	8
Government official	2	2
General employee	8	8
Bungalow	8	8
Restaurant	2	2
<b>Total</b>	<b>100</b>	<b>100</b>

### *Income*

Table 4.6 shows the income group of the respondents. 66 % of the respondent got their annual income of 10,000 to 100,000 baths, while 24 % and 10 % generate annual income from 100,000 to 20,000 and more than 20,000 respectively.

When comparing the annual average income among diversified occupation, tourism business has earned the highest annual income range from 100,000 to 400,000 because of increase of tourist every year. General labor has the lowest annual income about 10,000 baths because of the labor dependency on their employer.

Table 4.6: Income group of respondents

Income group	Frequency	Percentage
1-10	66	66.0
10-20	24	24.0
20- up	10	10.0

## CHAPTER V

### SUPPORTED PLAN AND EXISTING SITUATION OF TOURISM

#### 5.1 Existing Situation of Thailand's Tourism Industry

##### 5.1.1 Success of the Tourism Industry

Tourism has become one of Thailand's primary sources of foreign exchange earnings. There's no doubt that it has an important role to play in the country's booming economy. Thailand started to have a significant increase in the number of international tourists' visits between the years - 1980 to 1997. During this period, particularly in the 90's, the tourism industry has become the nation's strategy in order to stimulate the economic growth and the purchasing power of its inhabitants (TAT, 2002).

From 1990 up to 2002, international visitor arrivals had doubled from 5.30 million to 10.79 million (see Figure 5.1). Total visitor arrivals grew gradually every year at an average annual rate of 8.17% in 1990 to 2002, with the sole exception of the year 1991. In this year, the arrivals fell by -4% due to the Gulf War. Even in 1997, during the Asian economic crisis, visitor arrivals still grew by a slight increase of 0.3 %. The previous percentage had rebounded by 7.53 %, where, the number of visitor arrivals had reached to 7.76 million arrivals in 1998.

Moreover, the publicity generated by the "Amazing Thailand" campaign of 1998-1999 had further escalated the visitor arrivals by 10% to 8.58 million in 1999. The growth was maintained in 2000, when the visitor arrivals surged by another 11 % to 9.51 million.

International visitor arrivals to Thailand 1990-2002

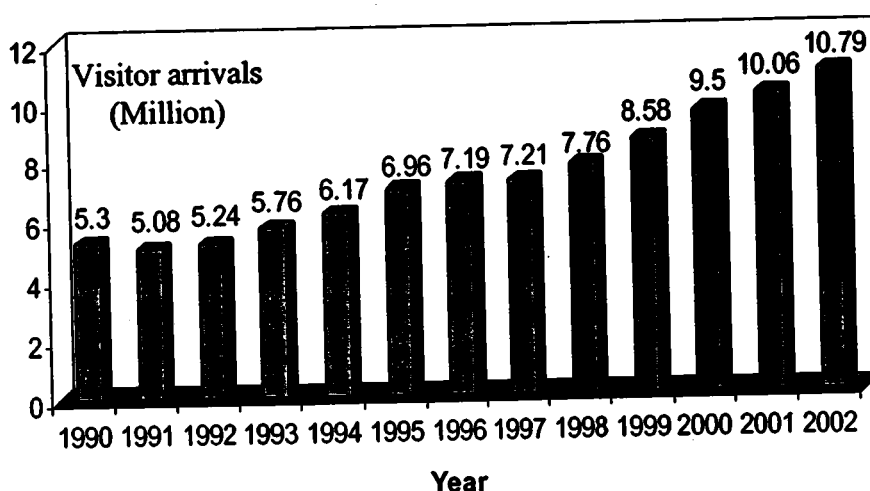


Figure 5.1: International visitor arrivals to Thailand from 1990 - 2002  
Source: TAT, 2004

The tourism industry constitutes a key sector for Thailand's economy representing 11.4% of the GDP, 10.1% of the exports and 7.7% of the total investments for 2001. The tourism sector is the second source of revenues for the country, after the computer business industry. The tourism activity assets have increased by 10.4% average per annum in the last ten years. Thailand tourism industry employs 1.2 million people directly (e.g. hotel staff, travel agents, etc.) and about 5 million indirectly (e.g. souvenir shops, restaurants, etc.) Currently, Thailand is one of the leading tourism destinations among the ASEAN members (TAT, 2002).

### **5.1.2 Job Creation**

There is an irrefutable job creation potential in the travel and tourism industry that helps to alleviate the increasing unemployment rate in all sectors of the Thai society. This positive effect emphasizes TAT's public, private, national and international cooperation development. More than two million Thai citizens were employed, directly or indirectly, in the travel and tourism-related jobs (TAT, 2001). These include hotels, airlines, transportation services, restaurants and catering services, retail outlets and souvenir shops, sports, leisure and entertainment, theme parks and recreational facilities and many other services useful to travelers.

All these tourism-related jobs require minimum and high specific skills from the workers. Moreover, all of them have to speak English so as to perform their functions, which are mainly for customer services, transport and hotel reservation systems, as well as, the sales services. In cooperation with the universities and association, TAT developed numerous sophisticated training and skill programs (TAT, 2001). This educational system is a rapid and efficient way for the workers to gain more knowledge and skills, which actually, need continuous training, seminars or other methods to improve their efficiency at work. All these employers and students, represent the core of the tourism industry's success and national global dynamism. By supporting the tourism, state agencies give their contribution in the country's sustainable development. Nowadays, Thailand is one of the most competitive countries in the East Asian Region.

TAT statistics shows the monthly variations on the international arrivals, that are explained by the "high seasonality" in the tourism activity (TAT, 2001). Indeed, January to April, as well as, July to August are considered to be the months of "high peak season". In some other period other than the months that were previously mentioned, the weather can be quite rainy, humid and sometimes even very hot. Most of the hotels and some restaurants, feel the impacts linked to this situation in terms of occupancy management and slow-down of activity. This turnover irregularity does not help the medium and small businesses, to correctly plan their "working seasons" and invest a long-term goal.

TAT tries to ameliorate this dependency situation in attracting the tourists by launching some promotions, during the "low peak seasons" (May to June and September to October) and offering them "special discounted prices" or other "special holiday packages". The aim is to make the demand equal enough for the professionals to be able to plan, budget and offer the best service to their clients' requests all along the year (TAT, 2001).



### 5.1.3 Tourist Typology

To give an idea of the tourist profile in 2002, more than 70% of visitors are between 25 and 54 years old and the majority is composed of males (60%). On the general occupation of the tourists who come to Thailand, there are 25% of the labor/production employees, 19 % of the commercial employees, 13% of the managers/administrative, and lastly, 10% are students and children. We can also distinguish three major types of tourists: vacationers, transit tourists and business people.

Concerning the travel arrangement, time and purpose, there are 58% of them who travel without any group tour. The purpose of their visit is mostly for holidays, which is composed of 90% of the people and 7% come to Thailand for business. The visitors stay on the average of one week in Thailand (TAT, 2002). Some significant changes that took place in the structure of foreign tourist arrivals during the past decade are noteworthy. Over the ten years, between 1985-1995, the proportion of foreign female tourists, first-time visitors and the middle aged (45-54 years) who tend to be the "big spenders" had increased. However, the average length of stay had increased quite significantly.

Moreover, international tourist behavior is also currently changing. As environmental information increases, there is a proportionally decrease in the mass tourism and a growth in what we call "personalized holiday packages". People are ready to pay more for a good quality service and experience a unique adventure. Tourists want more and more nature-based and cultural holidays. This evolution in terms of tourists' needs represents a serious potential for the rural tourism such as the eco-tourism market.

The TAT is working hard with the government agencies and the Thai private sectors in order to boost the visitor's length of stay in the country. Tourism-related infrastructures and facilities have significantly improved and a variety of tourism products and services have specially been developed (TAT, 2002).

Concerning the expenditure, tourism plays a major role in the Thai economy and was particularly responsible in helping to overcome the impact of the 1997 economic crisis. Earnings in bath from the international tourism have increased steadily since 1990, but not in US dollars or other major convertible foreign currencies. This is due to the baht devaluation after this crisis. Shopping has occupied the highest share and is much higher than the expenditure in accommodation. In 2001, of the total spending per person each day, 30.97% (1,160.86 baht) were spent in shopping and 26.04% (975.80 baht) in accommodation. Tourists spend in the average of 3,860 baht per person each day, which is approximately equivalent to \$96.

Since shopping in Thailand involves local manufacturers more than imported products, we can suggest that the tourism income has spread widely to other areas of the Thai economy, notably, the manufacturing sector. As a whole, it can be said that the structural changes have been in a positive direction (TAT, 2002).

## **5.1.4 Structure of Thailand Tourism Industry**

### ***Regions of Thailand Sharing Capacities***

In the past, tourism in Thailand was concentrated in and around Bangkok but this trend is changing. In 1987, Bangkok is accounted for 76% of the tourism income but in 1994, this proportion was reduced to 37 %.

Nowadays, Bangkok is still considered the most visited city by the tourists. Thailand is also famous for its beaches and fabulous islands inside the Thailand Golf and the Andaman Sea. A lot of places had acquired an international reputation, which include Phuket. Koh Samui, Koh Samet and Krabi had also taken up a comfortable position in the tourism market.

The provinces of Thailand are grouped in three categories: provinces with high tourism potential, medium tourism potential and potential for activities other than tourism. We can classify the famous provinces destination: the one that belongs to the first place would be Phuket, Bangkok, Pattaya and Chiang Mai. Other good potentials for cultural tourism are the ones from the World Thai Heritage such as Ayutthaya, Sukhothai and the ones from the nature-based heritage, which are the Islands from Andaman Sea (TAT, 2004).

### ***Causes of Structural Changes***

The causes of these structural changes are explained by three main reasons. These are as follow:

First of all, Thailand has a lot to offer for travelers who would like to have a visit into this country. It ranges from excellent hotels, beautiful building infrastructures or "wats" to its transportation network, which is well adapted to the tourism demands. Highways are connected to the biggest cities. There are five international airports and 29 domestic ones in the country (TAT, 2004).

Thailand has also eight important ports and a vast railway system. Distances are shrinking with the liberalization of the air transport and the advent of new information and communications technologies. The traveling consumer, nowadays, has more choice and access to a better, swifter and more comfortable transport. Long-haul trips are no longer an obstacle, they once were. All these transports and telecommunication networks provide visitors and local people a big choice to travel easily from the North to the South or even all around Thailand. Information technology and other new tools of communication, such as the Internet, enable the small operators to work and help groups or individual travelers to get their products in a faster and cheaper way. This cuts out the middleman, which results to an increase in the percentage of the cost to travel and tourism-related companies' competition to gain more customers. This kind of scenario would be of great benefits to Thailand.

Secondly, Tourism Authority of Thailand (TAT) is making a lot of effort in terms of communication and marketing. The goal of the government is to bring new tourism activities and to attract high-income people, thus, developing niche markets. TAT is currently making a lot of projects and advertising investments to give visitors the opportunity to see and experience different regions way of life. TAT promotes business

tourism such as MICE and above all the cultural and nature-based attractions, which include the rural tourism and ecotourism.

Finally, this tourism structure in Thailand is also explained by the fact that according to Mr. Maclaren, the Director of International Eco-tourism Society (IES), "the typical international traveler today does not want to spend (too much) time on the beach but he is looking for some real tourism-related experience." This "overseas experience" has to be educational-oriented and the visitor should pay attention and relate to what is going on around him. That is at least the trend for the North American and European travelers. The public has become increasingly aware of the nature-based tourism. This fact increases travelers' curiosity and encourages them to discover more about the Southern, Eastern, Western and Northern parts of Thailand. These new structural trends allow much more of the eco-tourism development.

In conclusion, Thailand is taking advantage of these "stretching area" in the structural changes, which benefit from more opportunities in making business and investing in the different types of tourism infrastructures and activities. This tourism demands and offers evolution, which is actually necessary to the sustainability of both the environment and tourism industry.

#### **5.1.5 Tourism Product**

Tourism Product is composite. It is comprised of a bundle of goods and services, which covers three major groups: attractions, government management and the industry. Attractions include nature-based and historical tourism resources, culture, the taste of local food and the availability of shops selling high quality products. Local people are considered an attraction and can be an important component in the tourism industry.

In the last decade, amusement and theme parks have played an important role in the urban life. Economic and social pressures have heightened the need for relaxation. Leisure and theme parks, which are located near the cities and are more convenient substitutes for far-distant tourist resorts.

At present, Thailand has more than 20 leisure and theme parks, 17 of which are members of the Thai Amusement and Leisure Parks Association (TAPA). They can be divided by sub-themes as follow: (Source: TAT)

- Historical and Cultural parks, such as the wax museum, the Ancient City, Miniature City, etc.
- Nature or wildlife-based parks, such as Safari World, Crocodile Farm, etc.
- Fantasy and technology-based parks, such as Dream World, etc.

Most of the leisure and theme parks are scattered around Bangkok and adjacent provinces. A TDRI survey revealed that the number of visitors to these parks could even reach twenty million people per year. About 40% of the visitors in the larger parks are foreign tourists, each spending an average of 400 baht per person each day, when inside the park. A conservative estimation of the gross income of all the parks is about 3 billion bahts per year. Services in some of these parks can be considered one of the bests in Asia.

## **5.2 National Development Plan**

### **5.2.1 The Review of 8th National Social and Economic Development Plan (1997 - 2001)**

The **National Social and Economic Development Plan** is the master plan of the human resource development as basis for sustainable development. Development of physical potential of people, be it in economics, politics, society and natural resources, can be achieved via people's participation, being committed in planning the development, as well as, for their own psychological development.

This plan supports tourism, directly and indirectly, as stated below:

1) Development of the human resources for tourism industry is based on the development of human potential and the human awareness on the preservation of natural resources and local culture.

2) Development of local physical conditions reflects the aim of the 8th National Plan, which is to have the people take part in the sustainable development.

3) Development of the infrastructure necessary for tourism is based on the development of physical and social infrastructures, as stated in the 8th National Plan.

### **5.2.2 The Socio-Economic Development Plan (2002 - 2006)**

The direction of Thailand's economic and social development is set out every 5 years, in a five-year National Economic and Social Development Plan. The current plan, the Ninth Plan, has been developed based on a shared vision of the Thai society in the next 20 years. This reflects the views of the Thai people from all the social sectors at the provincial, sub-regional, regional and national levels. It was also adopted from the Eight Plan, which advocates in a more holistic people-centered development approach. In the Ninth Plan, major emphasis is given on the balanced development of the human, social, economic and environmental resources. The priority goal is in pursuance of good governance at all levels of the Thai society, in order to achieve a real sustainable people-centered development (NESDB, 2002).

*The objectives of the 9<sup>th</sup> plan are as follow:*

1) **To promote economic stability and sustainability**, by strengthening the financial sector and fiscal position of the country along with the economic re-structuring so as to create a strong and self-reliant economy at the grass root level.

2) **Establishment of a strong national development foundation to enable the Thai people in meeting the challenges that arise from the globalization and other changes.** People's participation in the communities and rural areas will be heightened to enhance the sustainable urban and rural development networks. It will also improve the management of natural resources and the environment.

3) **Establishment of good governance at all levels in the Thai society.** The emphasis will be placed on the government reform, the promotion of good corporation

management in the private sector, public participation in the development process, as well as, the creation of a political system that will be accountable to the public and will not tolerate corruption.

4) **Reduction of poverty and empowerment of the poor Thai people** so that they can equally have access to education and benefit from the social services the same way as those who has a better living conditions in the Thai society. The employment creation scheme should be improved in order to increase the below average people's income and upgrade their quality of life.

### 5.2.3 Target of the Ninth Plan (Source: NESDB, 2002)

#### 1) **Balanced Economic Development Target**

It strengthens the overall national economy to achieve sustainable quality growth. The Thai economy should grow at an annual average rate of 4-5 percent. Income from tourism should increase with the growth of expenditures by foreign tourist at an annual rate of 7-8 percent and by domestic tourist, of at least 3 percent.

#### 2) **Quality of Life Target**

It focuses in maintaining a balanced demographic structure and appropriate family size. Community empowerment will create an enabling environment that fosters people's participation in the development of livable cities and communities, as well as, the sustainable management of the natural resources and environment.

#### 3) **Good Governance Target**

A more efficient bureaucratic system will be established, appropriately sized and structured. Transparency in the local government, based on accountably decentralization, is a priority.

#### 4) **Poverty Alleviation Target**

The pro-poor economic measure will be taken into account together with the creation of enabling environment that enhances the quality of life to the lower income groups and empower the poor people. The target is to reduce absolute poverty to less than 12% of the total population by 2006.

### 5.2.4 Development Strategy of the Ninth Plan (Source: NESDB, 2002)

To carry out the foregoing development objectives, the major development targets in the Ninth plan are set. These comprise of balanced macro-economic and quality of life improvement targets. The income from tourism is one of the main targets, which sets to increase with the growth of expenditures by the foreign tourists at an annual rate of 7-8% and by the domestic tourists, of at least 3%.

### 5.2.5 The National Tourism Development Plan (1997 - 2003)

Thailand is facing with the administration system reform. The new Ministry of Tourism and Sports has just been established in 2003 to acquire the main responsibility of tourism management and development from the Tourism Authority of Thailand (TAT). Since the new National Tourism Development Plan in the period of 2004-2008 has not yet

been adopted by the cabinet, the old tourism development plan prepared by TAT remains currently valid.

The TAT has determined the policies for tourism development and promotion for the year 1997-2003 (TAT, 1997) as follow:

1. To promote the conservation and rehabilitation of culture, arts and tourism resources and their surrounding environment. This will contribute to sustainable tourism development by increasing the country's carrying capacity and enable it to attract a higher number of tourists in the long term. It will also help to maintain the country's unique national heritage.
2. To promote public and private sector co-operation, including the local people, in order to share in solving or preventing tourism problems and participate in developing and managing tourism resources to maintain their attractiveness, indefinitely.
3. To support the development of services which facilitates the tourist' travel within the country. New information technologies, such as the Internet, should be widely adopted.
4. To promote co-operation with the neighboring countries in terms of tourism development and marketing promotion, these include the development of regional transportation network system and various tourism services, in order to develop Thailand as a regional tourism center.
5. To promote the development of Thai citizens so that they will love, cherish and maintain their tourism and environmental heritage and act as responsible hosts with a reputation for being hospitable.
6. To promote the production of Thai tourism industry personnel, who possess a quality of international standard, and thereby, making the supply to be in harmony with what the market demands.
7. To supervise the travel and tourism industry entrepreneurs so that the tourism are fully protected according to the 1992 Tour Operation and Guideline business Act. Various standard should strictly be enforced to ensure the safety of the tourists.
8. To promote tourism so that it will play an important role in developing the people's quality of life.
9. To promote Thailand to high-quality foreign tourists so that they will make more in-bound travel visits, stay longer, increase their expenditures and pay visits throughout the region. Carrying capacity or limitation of each tourism resource will always be taken into account.
10. To encourage Thai people to travel and spend their money within the country and the region throughout the year, in order to disperse tourism and re-

distribute the wealth to various rural regions, thus, contributing to the country's overall economic development in the future.

11. To consider the sentential and appropriate conduct of tourism business, in terms of investment, joint ventures or investment promotion for the collective benefit of the country and organizations.

***The tourism development strategy (Source: TAT,1997)***

The tourism development strategy of 1997-2003 has been designated as follow:

1. Emphasizing the proper maintenance of tourism resource as well as their development in a proper and suitable direction by means of joint public and private sector cooperation to consider and find common guidelines.
2. Holding campaigns to increase the awareness of the people, especially in the following: vicinity of the tourism sites, the importance of tourism, participation in maintaining and developing their tourism resources and also, by providing information, services and other necessary assistance to tourist who visit their regions.
3. Seriously penalizing those who break the regulations or damage tourism resources and the environment.
4. Emphasizing ecotourism, by providing proper knowledge of its principle and good practices to all.
5. Cooperating with related agencies by holding the "keep clean" campaign in the tourism areas, especially, in the areas where the main tourism resources are located.

### **5.3 Actors and their responsibilities in the Tourism Planning**

Due to the bureaucratic reform in 2002, most of the organizations were adjusted to decrease the bureaucratic system and transfer the power from the central to the local administration by providing the budget. Most of the government organizations act as advisors that provide suggestions. It is necessary to understand the role of the following organizations, which are involved in the tourism development.

#### **5.3.1 Ministry of Tourism and Sports**

The Thai government has just reformed the tourism system by creating and establishing the new Ministry of Tourism and Sports, that has the authorization in controlling the tourism industry management and development substituting the state enterprise, TAT.

##### ***Office of Tourism Development***

The Office of Tourism Development is structured under the Ministry of Tourism and Sports to be directly responsible in the planning, management and development of the

tourism industry. The missions of the Office of Tourism Development deal with the development of standards in tourism service and tourist sites, as well as, the promotion of a standardized tourist business and guides for the purpose of economic, social, cultural benefit and sustainable tourism (MoTS, 2004).

### ***Scope of the work***

The Office of Tourism Development's duties and authorities are:

1. To study analyze, research and collect data and statistics on tourism and practices in developing tourism, in accordance with the National Tourist Policy and Development plan.
2. To formulate the Tourism Service Development Plan, as well as, to coordinate, encourage and promote the implementation, in accordance with the plan.
3. To formulate the development plan on the registration of tourism business and guides.
4. To implement the law of tourist business and guide and other related laws.
5. To encourage and promote the business of movie production, services and other related activities.
6. To operate any other activities stated by the laws or assigned by the ministry and or the cabinet.

### **5.3.2 Tourism Authority of Thailand (TAT)**

The Tourism Authority of Thailand or TAT was created in 1960 to promote the tourism industry of Thailand. Indeed, during that time the tourism industry began to influence the economy of Thailand and had encouraged the country to increase its tourism potential. Step by step, the Thai government and TAT both played a major role in the tourism industry's decisions. TAT supplied many information and statistics on tourism areas to the public and visitors. It promotes Thailand to attract both international and local tourists (TAT, 2004).

Moreover, TAT conducts studies to help in developing plans around the country. It also assists and supports the training of hotels, parks and restaurant employees as well as the tourist operators. TAT, nowadays, has more than 22 local offices in different parts of Thailand and about 16 worldwide (TAT, 2004).

Since its establishment, TAT conducted many promotional campaigns. Firstly, TAT tried to establish a consistent tourism program to build a real and attractive image of Thailand. Since the end of the 90's, TAT worked on short-term international promotions to diversify its visitor's network. The campaign "Amazing Thailand" created in 1997-1998 and the "Thailand Grand Sales" had started a new marketing policy that considers the monetary competitive advantage of Thailand. Later in 1995, the shopping started to become the first expenses from the international tourists. The advertising "Be my guest" in 2002-2003 is also very ambitious. This time it attracts the higher income tourists and



insists on the “land of smile” image of Thailand and its developed infrastructures (TAT, 2004).

### ***Role of TAT***

The first and foremost responsibility of TAT is to promote a better understanding of the tourism issues within TAT and among the state agencies and the private sector.

TAT then assumes a leadership role in developing a clear statement of the vision and mission for the overall Thai tourism industry along with state agencies and private sector representatives.

- TAT's role as a key coordinator is essential to ensure that there is indeed a common direction and goal in the implementation of the national policy by the parties involved in the government, as well as, the private sector.
- TAT is also the orchestrator of all the joint tourism-related activities and the efforts that were undertaken to achieve broader goals as defined in the national policy.
- TAT is also a key facilitator in the implementation of various initiatives and is responsible for identifying the resource needs, matching these with the resources available at its disposal and initiating the negotiations with other entities to mobilize such resources.

Nowadays, TAT has an international recognition as a dynamic marketing enterprise. Thailand is centrally situated and takes advantage of the connections to other neighboring countries. These factors enable the tourism industry to expand efficiently worldwide. In addition to that, the TAT facilitates tourists' visits through the revision of the immigration roles, the formalities for greater convenience, the lengthening of tourists' visas from fifteen to thirty days and visa exemptions for fifty-six countries (TAT, 2004).

#### **5.4 Andaman Triangle Cluster development**

Thailand development has been erected through the strategy of cluster development. Three or four provinces have been grouped in one cluster, which have been located in the same region with similar development strategies. The purpose of clustering is to involve all of the stakeholders among the region, in the process of the development, both interactively and systematically (Vanichseni and Tiasiri, 2002).

The **Andaman Triangle Cluster (ATC)** is one of the clusters in the southern part of Thailand. It comprises of Krabi, Phang Nga and Phuket. With the provinces' different, yet, complementary attraction, the Andaman Triangle governors had decided to market this bloc as Thailand's ultimate health and spa destination.

*The cluster has specific visions in the development and these are as follow:*

1. The Center of world-class marine tourism
2. The Gateway for the economic link to Southern Asia

With the vision to develop the provinces as world-class tourism center, the cluster sets out the target of tourism development to increase the number of tourists up to 10 percent. It is expected that this move would increase the tourism income to 12 percent every year. The enhancement of the marine tourism is the main strategy of the provinces. Sixteen projects have been set up with a budget of 3,496,805 million bahts. The main focus of the projects is to set up and position the area in the tourism development as World Class Tropical Paradise – Premium, Exclusive, Exotic, Hospitality and Courtesy. Another project is the development of capacity competition among the three provinces by the differences of the tourism attractions being offered in each area.

Phuket has good infrastructures and high-quality medical services for tourists, while Krabi is a draw card for adventure-loving tourists, who are in search of diving and climbing pursuits. Phang Nga, on the other hand, has long beaches and is surrounded by beautiful isles that have prime diving sports on beds of coral. So far, Phuket and Phang Nga will be the ones responsible in providing the medical services for all the tourists. Phuket will serve the international travelers while Phang Nga is for Thais. On the other hand, Krabi will become the area's adventure tourism hub (ATC, 2004).

#### **5.5 Provincial Development Plan**

After the government introduced the CEO the style of remotely governing its province in 2003, the governors across the country focus on tailored and unique methods in marketing their provinces. For Phang Nga province, the governor has set up their visions following the National Economic and Social Development Plan as follow:

1. The outstanding place for ecotourism in Asia
2. The progressive-agricultural place in Andaman coast
3. The gateway for economic link to South Asia

*Several objectives on the development have been set up. These are as follow:*

- Increasing the tourist for 10 percent per year from the 2,328,190 people in the year 2002.
- Increasing the income from tourism by 12 percent per year from the 6,838 million bahts in 2002.
- Increase the tourist's length of stay from 3.84 to 4 days.
- Increase the tourist expenditures by 3 percent per year from 1,711 bahts in 2002.

A number of projects for the development of Koh Yao Island have been raised by Phang Nga province. This is mostly focused on the basic construction of the area. This infrastructure is consist of 5 to 6 meters width of concrete road construction through out the island, which will then connect all every villages and the tourism attraction sites.

### **5.6 Local Development Plan**

Currently, Koh Yao district and other related organizations already have the programs and projects concerning with tourism, especially, the ones for the road improvement, telephone line junction construction, water supply system establishment, boat pier for tourism activities, conservation and improvement of tourism resources, etc.

## CHAPTER VI

### RESOURCE UTILIZATION AND PERCEPTION ON THE TOURISM DEVELOPMENT

#### 6.1 Resource utilization

This part presents the utilization of the natural resources, which mainly focuses in the three types of natural resources: the mangroves, the seagrasses and the coral reefs. The current situation of each reserve is also discussed here. The levels of resource use, opinion of the community on the natural resources, as well as, the participation of the local people in the resource management are carefully assessed. These are altogether analyzed in finding out the relevant influential factors.

##### 6.1.1 Community Resource Utilization

###### 6.1.1.1 Mangroves

Although the present status of mangroves is gradually recovering, even, improving, unsustainable practices are still being continued through the small-scale family utilization. This use can be considered as a part of the negative impacts due to the natural resources' unsustainable extraction and poor management.

There are several causes that resulted to the mangrove degradation in the past, such as the conversion of some coastal forests into shrimp farms and fishponds, human settlements, paddy fields and crop farms, as well as, for charcoal exploitation. When the respondents were asked about the mangrove resource use, they seemed to be reluctant to provide a direct "right or wrong answers" since most of the people are aware of the laws for the illegal activities in the mangrove forests. However, the key informant, such as the village heads, is the one who could provide credible information on this subject matter.

The alteration of mangrove forests into shrimp farms and fishponds has been the main cause in the mangrove destruction for many years. The mangrove forests in Koh Yao district have severely suffered as a result of the land clearance. Particularly, mangrove forests have been encroached for settlements and agricultural activities. According to the survey, 4% of the respondents had converted the mangrove area into their shrimp farms and fishponds.

##### *Economic value of the mangrove products*

The economic value of mangrove products comprises of the "direct" and "indirect" use values. The "direct use" value includes firewood collection, charcoal production, constructing materials (such as poles and leaves), hunting, fishing and non-consumptive uses of mangroves services.

Direct use value could involve both commercial and non-commercial activities. Non-commercial uses are often very important for the subsistence needs of the coastal communities.

Non-consumptive use value includes the services provided by the mangrove community without destroying or even removing any of its part.

However, according to the PRA discussions indicated that the direct use value is mostly related to small-scale household activities.

Indirect use value depends upon the mangrove functions that offer environmental services i.e. natural sewage-treatment plant, coastal protection, eco-tourism and education.

### *Mangrove product use*

Only 29% of the respondents have been using mangrove flora for household purposes. Other types of the utilization on the mangrove flora include food, woods, building materials, fishing equipments, medicines and herb as shown in Table 6.1

Table 6.1: Mangrove Flora Utilization

Items	Number of respondents	Percentage
1. Utilization from mangrove flora	(n=100)	
No	71	71
Yes	29	29
2. Purposes of using mangrove flora		
For household purposes (n=29)	29	100
For creating income (n=29)	0	0
3. Type of product from mangrove forest		
Food and Woods (n=29)	3	10.3
Building materials (n=29)	18	62.1
Fishing equipment (n=29)	6	20.7
Medicine and herb (n=29)	2	6.9

Source: Field survey-2004

Note: Respondents could select more than one choice

According to the PRA and the table above it is learned that there are several reasons why the majority of the villagers did not use the mangrove flora for its main purpose (71%).

Only a few villagers uses it for other purposes, such as, firewood for cooking, heating and processing product and as a timber for constructing scaffolds, bridges, flooring or paneling, boat and fence posts.

Furthermore, some of the villagers utilize mangrove as fishing poles for fish trap and fishing floats, household items for furniture and toys, while some others, use it as a medicine or herb.

The villagers use both the leaves and the fruits of the Nipa trees for obtaining some useful products.

Furthermore, the frequencies of using each product from the mangrove flora by the villagers vary depending on the need of each family.

Based on the result obtained from the survey, it reflects that most respondents are exploiting less mangrove flora in almost every way they can. They are mostly taking advantage on the convenience of using the current available technologies. For example, some of the respondents use gas in place of firewood or they use modern medicines in place of the old remedy from herb, etc.

Concerning with the tourism-related business, the result shows that respondents who has tourism-related business tend to use less mangrove product for their household needs. The respondents who have tourism-related business (36% of all respondents) only 8% are engaged in using the mangrove forest product. This may be due to the high-income generated from the tourism-related business. With this income, it enables them to easily gain access for more comfortable technologies as mentioned above.

**Table 6.2: Mangrove use and tourism related business**

		Mangrove product use		Total
		No	Yes	
<b>Tourism-related business</b>	Yes	28	8	36
	No	43	21	64
<b>Total</b>		<b>71</b>	<b>29</b>	<b>100</b>

**Table 6.3 Tourism related business and income group cross tabulation**

Tourism related-business	Income group				Total
	1-10	10-20	20-30	30-up	
Yes	13	13	2	8	36
No	53	11			64
<b>Total</b>	<b>66</b>	<b>24</b>	<b>2</b>	<b>8</b>	<b>100</b>

From the cross tabulation obtained by using the Chi-square test, the result shows that there is some association at a significant level,  $0.02 < 0.05$ , for those respondents who engage with tourism business relative to their income groups. It can be assumed that the respondents who involved in tourism related business have a different income. It can be seen in the table as high-income group (See Table 6.3).

#### **6.1.1.2 Seagrass bed**

Based on the scientific investigations in both the tropical and temperate areas, it is known that seagrass beds provide several numbers of ecological functions. The trapping and stabilization of bottom sediments and the consequent increase in water clarity are only two of these important ecological functions. Sediment trapping contributes to coastal

accretion, while sediment stabilization helps to prevent coastline erosion, especially under storm conditions.

Seagrasses invariably support more fish than those found in the bare areas. It is known that seagrass meadows might have a nursery function. It can also be a permanent habitat of the *epibenthic* fish species. In addition, seagrasses may provide food and shelter for other migrating pelagic species. Obviously, environmental changes that threaten the vitality and persistence of the seagrass beds, also, indirectly endanger the ecological functions that seagrass meadows may have for fish.

From the study of Phuket Marine Biological Center (PMBC), seagrasses in Koh Yao Island were found in many locations adjacent around the island. Seagrasses in Thailand were classified into 3 types (See Figure 6.1) based on the general characteristics of location, coverage and sediment type (Chansang et al., 1994). PMBC mentioned that seagrasses, which dominate the bigger island of Koh Yao belong to the Type 2 namely, Grass Beds on Shallow Sandy Bottom. The species composition varies according to the type of substrate - from a very fine to medium sand.

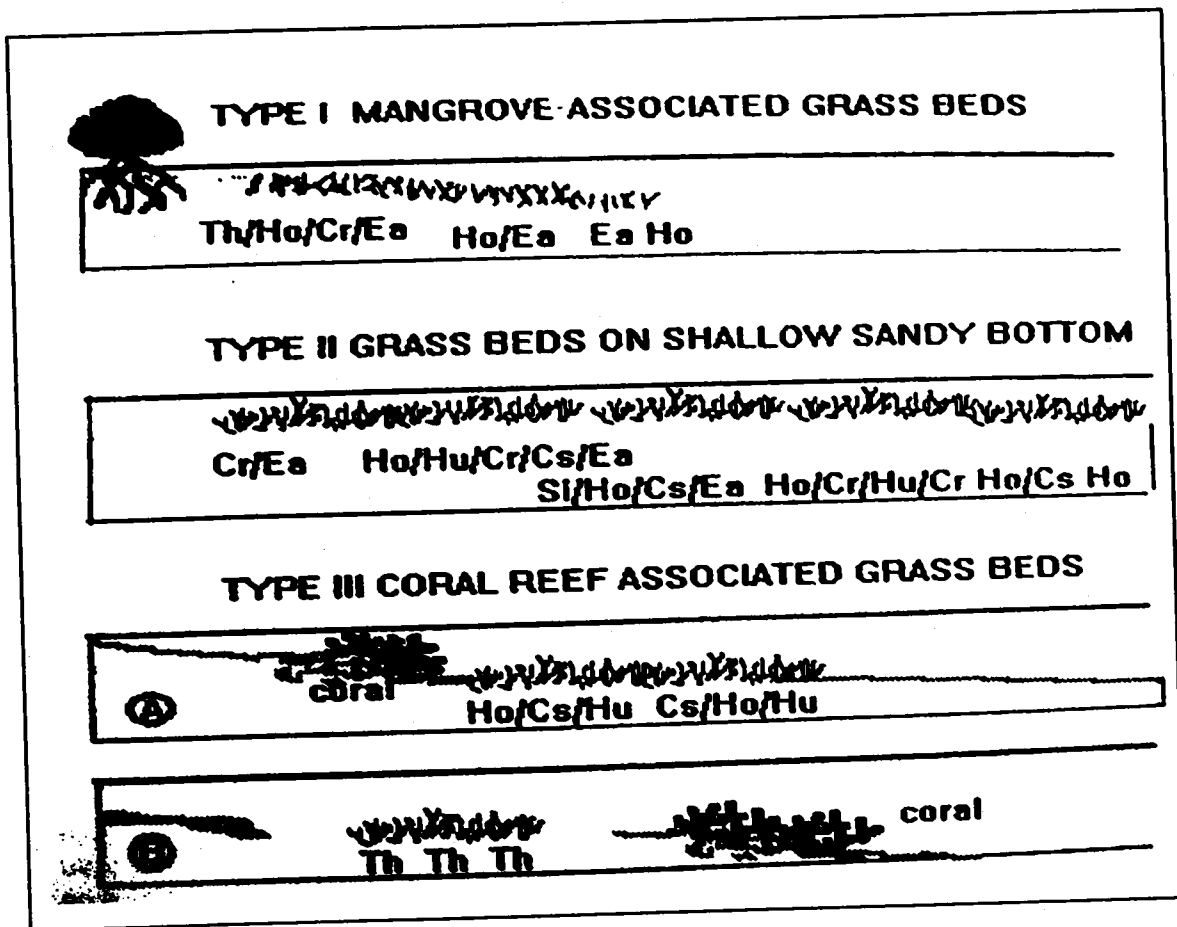


Figure 6.1 Type of seagrass  
Source: PMBC, 1994

There are eight species found covering several areas around Koh Yao Yai. These are *Halophila beccarii*, *Halodule uninervis*, *Halodule pinifolia*, *Cymodocea serrulata*, *Cymodocea rotundata*, *Thalassia hemprichii*, *Enhalus acoroides* and *Halophila ovalis*.

*Enhalus acoroides*, *Halophila ovalis* and *cymodocea rotundara* were dominant among these species.

Information from PRA dialogues suggests that the seagrasses beds have been less disturbed. However, the illegal shallow water fishing activities is still a great significant factor on their depletion and destruction. Some big trawlers and motorized push nets carry out these activities as motorized cockles are drag in the shallow water. Conversion of terrestrial forest to rubber plantation on the hill adjacent to shores and mangrove clearance are also major visible causes for seagrasses damage in the island.

At present, a measure has been taken to set a strategy in protecting seagrasses beds against illegal fishing activities. These activities would certainly disturb the growth of the seagrasses beds, which are found both in the shallow and near the shore water area. The effectiveness of this measure is not yet shown.

The result of the conducted field survey shows that there are no respondents who use seagrasses directly. Only one third of the respondents (31%) use seagrass bed as part of their fishing ground. Different fishermen, use different fishing gears and methods in the seagrass area. It was found out that among the respondents who use seagrass bed as their fishing ground, half of them (48.9%) use gill net for fish and crab while the other 37.9% use the crab traps. It seems that since the measure on conservation of seagrass have been tighten, only a few fishermen respondents use the motorized and manual push net for their fishing practices. Their perceptions were found contradicting to the environmentalists. (See Table 6.4)

Table 6.4: Seagrass utilization

Items	Number of respondents	Percentage
1. Direct utilization of seagrass	(n=100)	
No	100	100
Yes	0	0
2. Fishing in seagrass area	(n=100)	
No	71	71
Yes	29	29
3. Types of fishing	(n=29)	
Manual push net (n=29)	2	6.9
Motorized push net (n=29)	2	6.9
Gill net (n=29)	14	48.3
Crab Trap (n=29)	11	37.9

Source: Field survey 2004

According to the questionnaire survey and PRA, although seagrasses have not been used directly by the villagers, some fishing practices, such as manual and motorized push nets, were found. This fishing practice is a major cause to destroy seagrasses beds that will indirectly affect the livelihood of the people whose fishing ground was there.

As mentioned in the previous discussion, seagrasses function ecologically to increase the water clarity and stabilize the coastline. This function contributes in the sustainable tourism development while maintaining the overall component of the coastal



ecosystems. These two concepts are interactively dependent to each other. Its existence indicates the good quality of coastal water.

### 6.1.1.3 Coral reefs

Coral Reefs are the "rainforests" of the ocean. Reefs are ecologically important ecosystems and have a high biodiversity that serves as a storage bank of rich genetic resources. They are a source of food and medicine and protect the coast from wave erosion.

Generally, coral reefs in Koh Yao Island are found scattered in some parts of the island. There is no comprehensive study about the species and distribution of coral reefs in this area. Based on the PRA information and the author's discussion with the chief of sub-districts, the present status of coral reefs in Koh Yao is damaged. They observed that the coral reefs have gradually died, mainly due to the natural phenomena, such as sea temperature rise and wave surge. The villagers mentioned that it is the difficulty of fishing within the coral reefs areas that is why these have been less disturbed by the fishermen.

Construction along coasts, logging and farming along the coastal hill upland can all lead to erosion. As a result, particles end up in the ocean and cover the coral reefs. The particles smother corals and deprive the light, which is actually, needed for them to survive. Mangrove trees and seagrasses, which normally act as filters for sediment, were also rapidly destroyed. This has led to an increase in the amount of sediments reaching coral reefs. Mangrove forests are often cut for firewood or cut to create open beaches.

Since there is no comprehensive information about the coral reef location and management measures, the fishermen have not been concerned about coral reefs resulting to the misbehavior in fishing practices near the coral reef areas. These practices involve anchoring the boat, stepping on corals and emptying trash.

The survey shows that few of the respondents admit that they are fishing in the coral reef areas. It was observed that most of the fishermen go fishing near small islands around Koh Yao Island, such as Koh Hong, Koh Bo and etc., as they have their own fishing boats. The table below shows that only 8 percent of the total respondents are fishing in the coral areas. Half of them use gill net and another half use crab trap (See Table 6.5).

Table 6.5 Coral reef utilization

Items	Number of respondents	Percentage
1. Direct utilization of coral reefs	(n=100)	
No	100	100
Yes	0	0
2. Fishing in coral reef area	(n=100)	
No	92	92
Yes	8	8
3. Types of fishing	(n=8)	
Gill net	4	50
Crab Trap	4	50

Based from the PRA, most villagers were aware on the importance of coral reefs as the major attraction for tourism. Villagers mentioned that the purpose of the visitors to go to Koh Hong, a famous island located not far from Koh Yao, are snorkeling and diving to the coral reef areas where beautiful reef fishes are can also be found. There is no clear information on how long the coral reefs in Koh Yao have been destructed. Misbehavior in the fishing practices of the fishermen was assumed to be one of the contributing factors in the depletion of these valuable reserves. There should be an immediate measure to conserve and replenish this resource for the sustainable tourism development in Koh Yao.

### 6.1.2 Opinion on the natural resources

Natural resource is the main livelihood components for the villagers, while their subsistence and income is gained from resource exploitation. According to the PRA and discussion with the tourists, natural resources have been recognized as the prime attraction to the tourists. Since there is no clear information on the coastal natural resource condition in Koh Yao district, the opinion of the local people about these is essential. This allows the researcher to determine these conditions and be able to measure up the villagers' awareness on the resource.

It is illustrated that all mangrove resources have decreased, both in quantity and diversity. The decline on the quantity of mangrove forest is more than the decline on its diversity (See Table 6.6). There are a higher number of respondents which is about 42% who had stated that there was depletion in the quantity of mangroves. While 21% said that the mangrove forest had decreased, another 37% felt that the mangrove forest had remained the same.

Aquatic animals also declined in their quantity and diversity. 50% of the respondents felt that there is a decrease and about 24% said it increased. However, regarding with coral the reefs and seagrasses, a great extent of the respondents stated that the condition is still same.

Table 6.6: Opinion on the natural resources

Resources	Condition of resource		
	Increase	Same	Decrease
<b>a. Mangrove Forest</b>			
1. Quantity of Mangrove forest	21	37	42
2. Diversity of Mangrove forest	16	58	26
<b>b. Aquatic Animal</b>			
1. Quantity of Aquatic Animal	24	26	50
2. Diversity of Aquatic animal	13	40	47
<b>c. Coral reef</b>			
1. Quantity of Coral reef	28	52	20
2. Diversity of Coral reef	20	62	18
<b>d. Seagrass</b>			
1. Quantity of Seagrass	30	60	10
2. Diversity of Seagrass	25	63	12

The overall level on the condition of resource was assessed by giving the index number to measure each resource condition from decrease (-1), same (0) and increase (+1), respectively.

Decrease	Same	Increase
-1.0	0	+1.0

The computational formula for calculating the resource condition is given by this formula:

$$I = (1.0 * f_i + 0.0 * f_s - 1.0 * f_d) / N$$

where: I = condition index such that  $-1 \leq I \leq +1$   
 $f_i$  = frequency of responses indicating as increase  
 $f_s$  = frequency of responses indicating as same  
 $f_d$  = frequency of responses indicating as decrease  
N = total number of observations

Table 6.7: The condition of resources

Resources	Index
<b>a. Mangrove Forest</b>	
1. Quantity of Mangrove forest	-0.21
2. Diversity of Mangrove forest	-0.1
<b>b. Aquatic Animal</b>	
1. Quantity of Aquatic Animal	-0.26
2. Diversity of Aquatic animal	-0.34
<b>c. Coral reef</b>	
1. Quantity of Coral reef	0.08
2. Diversity of Coral reef	0.02
<b>d. Seagrass</b>	
1. Quantity of Seagrass	0.2
2. Diversity of Seagrass	0.13
<b>Overall Level</b>	<b>-0.06</b>

The negative index (WAI= -0.06) implies that the condition of the resource had, at some extent, decreased. (See Table 6.7)

In assessing the general condition of the natural resources, it should be realized that the naturalness of setting and combination of habitats might have an influence in the degree of interest and attractiveness. Thus, the current situation of the natural resource indicates the condition of the management and conservation behavior of all the stakeholders, including the local community, local governments and other related institutes.

### 6.1.3 Perception on the importance of the natural resources

In this section, the research study assesses the perception on the importance of the natural resources through two main aspects: the assessment on the awareness of the respondent through identifying their perception once the resource had disappeared and the assessment on how they would rate the overall level of the selected coastal natural resource.

#### 6.1.3.1 Awareness on the environmental benefit of the resources

The researcher assesses the awareness of the respondents' on the environmental benefit of the resources by giving a multiple-choice type of questionnaire. In order to determine the importance of these reserves for them, the respondents were asked about their perception once each natural resource disappears. The numbers of response were counted and had been given an equivalent score, accordingly. For instance, the respondent who chooses one response was given with one point, two responses with two points and three responses with three points.

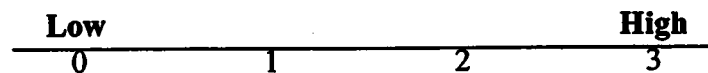
For mangroves resource, three options were given to the respondents. When answering the question about the respondent's perception about the disappearance of the mangrove, the following options were given:

1. Fish catch would decrease
2. The community would susceptible to storm surge
3. There would be coastal erosion

For seagrasses and coral reefs, another set of choices were given such as:

1. Fish catch decrease
2. Coastal erosion
3. Water quality decrease

In the assessment, the scale is constructed as shown below. The higher the scale value the better is the awareness.



The computational formula for the calculation of the awareness is given below:

$$I = (0.0 * f_0 + 1.0 * f_1 + 2.0 * f_2 + 3.0 * f_3) / N$$

where: I = condition index such that  $0 \leq I \leq 3$   
 $f_0$  = frequency of responses who chose no response  
 $f_1$  = frequency of responses who chose one response  
 $f_2$  = frequency of responses who chose two responses  
 $f_3$  = frequency of responses who chose three responses  
N = total number of observations

Table 6.8 shows that the awareness of the respondents on the mangroves was relatively high (WAI=2.58) compared to their awareness on the seagrasses and coral reefs, which is only at the medium level (WIA=1.54 and WAI=1.51, respectively). The

difference in the level of awareness in each resource may result from the experience of the respondents who lives much closer to the mangrove areas. These respondents utilized mangroves more than the other resources. The overall level of awareness was 1.88, which is above the medium level.

Table 6.8 Level of awareness on the environmental benefit of resources

Resources	Frequency of responses				Index
	0	1	2	3	
Mangrove Forest	4	6	18	77	2.58
Seagrass	2	58	24	16	1.54
Coral reef	4	47	43	6	1.51
<b>Total WAI</b>					<b>1.88</b>

### 6.1.3.2 Perception on the importance of the natural resource in the community's livelihood

The level of importance of each resource to the community's livelihood was set to the value which ranges from 0 to 4 and for being "not important" to "very important".

None	Very little	Little	Much	Very much
0	1	2	3	4

The computational formula for the calculation of the awareness is:

$$I = (0.0 * f_n + 1.0 * f_{v1} + 2.0 * f_l + 3.0 * f_m + 4.0 * f_{vm}) / N$$

where: I = condition index such that  $0 \leq I \leq 3$

$f_n$  = frequency of responses indicate not important

$f_1$  = frequency of responses indicate very little important

$f_2$  = frequency of responses indicate little important

$f_3$  = frequency of responses indicate much important

$f_4$  = frequency of responses indicate very much important

N = total number of observations

Table 6.9: Level of importance of the resources in the community livelihood

Resources	Frequency of responses					Index
	0	1	2	3	4	
Mangrove Forest	0	0	10	82	8	2.98
Seagrass	2	12	36	50	0	2.34
Coral reef	2	0	8	90	0	2.86
<b>Overall WAI</b>						<b>2.73</b>

Table 6.9 shows that most of the respondents perceive mangrove forest (82%) and coral reefs (92%) as more important for their community livelihood. It is likely seen that the respondents were not giving much importance to the seagrasses. Half of the total numbers of respondents perceive the importance of seagrasses compared to the other

resources. The overall level of importance of the natural reserves perceived by the respondents was WAI = 2.73 and is interpreted as nearly "much important" to their community.

#### 6.1.4 Participation of the local people in the resource management

This part examines the pattern and level of people's participation in the local community. This participation was explained through the community development and management process. There are varieties of group created in Koh Yao due to different purposes, such as income generation and resource conservation.

The pattern of participation to be explained in this part is what Uphoff et. al (1979) called "*what kind of participation?*" There are four steps of activities under consideration in the management and development. These steps were people's participation in planning, implementation, benefit sharing, as well as, monitoring and evaluation.

In this study, other aspects of participation were examined with the help of the question "*what is the characteristic of participation?*" These were considered in the form and level of their involvement in these activities. Only certain activities, both direct and indirect participation, were considered. The form of people's participation varies according to each activity. The level of participation was rated into different scales, which was already discussed in the research methodology.

The results in this study reveal that the majority of the respondents were aware of the established groups in the community (84%) but there were only 74% of the respondents who actually participated in the group. Half of the participating respondents have the status in the group as a general member (46%), as a member of the committee (22%) and as a chairman (6%). The results regarding the characteristics of the participation in the group or community are shown in Table 6.11

About 68% of the respondents had participated in the planning process of the group. Most of them had partaken by listening (32.5 %), while others had just offered their opinions (34%). The remaining 18% of the respondents participated by expressing their opinion.

The actual percentage of the respondents who joined in the implementation process was about 66%. Out of which, two-thirds of the respondents had participated by providing labor (60.4%). Only a few respondents donate money (5.7 %) and the other 1.9% are supporting for the materials.

In response to the recognition of participation, whether the respondents receive benefits or not, about half of the total number of the respondents revealed that they never received benefits from participating in the group or community. While 24% receives high benefit, 28 % receives medium benefit and only 4 % receives a low benefit.

Furthermore, there were about 60% of the respondents who joined in with the evaluation process. Regarding the mode of participation: by listening (34.7 %), by providing suggestions (24%) and by monitoring (14.7%).

Table 6.10: Participation of local people in the group or community

<b>Participation</b>	<b>Respondents</b>	<b>Percentage</b>
<b>1. The number of people who know about the existence of group in the community</b>		
No	16	16.0
Yes	84	84.0
<b>2. The number of people who had participated in group</b>		
Never	26	26.0
Participated	74	74.0
<b>Position of participation in the group</b>		
General member	46	62.5
Committee	22	29.1
Chairman	6	8.4
<b>3. Participation in the planning process</b>		
Never	32	20.0
Listening	52	32.5
Thinking and offering	54	33.8
Expressing opinion	22	12.8
<b>4. Participation in the implementation process</b>		
Never	34	32.1
Providing labor (Frequency 2 times/year)	64	60.4
Supporting materials (Frequency 1 times/year)	2	1.9
Donating money (Frequency 2 times/year)	6	5.7
<b>5. Participation by receiving benefits from the activities</b>		
Never	44	44.0
Received in low level	4	4.0
Received in medium level	28	28.0
Received in high level	24	24.0
<b>6. Participation in the evaluation process</b>		
Never	40	26.7
Listening	52	34.7
Providing suggestions	35	24.0
Monitoring	22	14.7

*Note: Respondents can select more than one choice.*

The level of participation is also assessed in each activity. As seen in Table 6.12, the WAI on the level of participation, that the participation in every activities was very low. In details, participation in: planning the process was WAI=1.41, implementation process was WAI=0.81, benefit sharing was WAI= 1.32, and evaluation process was WAI=1.27. The overall participation of the respondents in the group or community was

1.2, which is interpreted to be low. This may affect the tourism development. The local participation is recognized as the key factor in the success of sustainable tourism development.

Table 6.11: Level of participation

	Never	Listening	Thinking	Expressing idea	Index	
<b>Planning</b>	0	52	108	66	1.41	Low
	Never	Force	Material	Money		
<b>Implementation</b>	0	64	4	18	0.81	Low
	None	Low	Medium	High		
<b>Benefit sharing</b>	0	4	56	72	1.32	Low
	Never	Listening	Suggesting	Monitoring		
<b>Evaluation</b>	0	52	72	66	1.27	Low
<b>Overall participation</b>					<b>1.20</b>	<b>Low</b>

Moreover, the result from the analysis shows that there is a significant relationship between participation of local community, with the age group and education level of respondents at 95 % confidence level. From table 6.13, the respondent who are in middle adult (36-50) participate more than young adult (16-35) and maturity adult (more than 50).

Table 6.12 relationship between participation and age group of respondents

Participation	Age group of respondent			Total
	16-35	36-50	More than 50	
No	10	8	10	26
Yes	15	45	12	74

Test	Value	Approx. Sig.
Contingency Coefficient	.291	.026

Table 6.4 shows those respondents who have higher education tend to participate more in the local community.

Table 6.13: Relationship between participation and education of respondents

Participation	Education level of respondents			
	Illiterate	Primary	Secondary.	Bachelor
No	2	16	6	0
Yes	2	38	34	2

Test	Value	Approx. Sig.
Contingency Coefficient	.298	.021



## 6.2 Community Perception on the tourism development

This section presents the attraction of tourism resources, impact of tourism development on community, organizations involved in the tourism development, which are assessed through the community's perception.

### 6.2.1 Attraction of tourism resources

Koh Yao has many kind of tourism attraction. The natural resources are characterized as coastal resource, which is very diverse in terms of ecosystem that ranges from the top of mountain to the deep sea. These include terrestrial forest, mangrove forest, beach, mud flat, seagrass, coral reef, etc. Apart from offering a unique charm of their own, Koh Yao Noi and Yao Yai are well situated for exploring the islands that are scattered around Phang Nga Bay. From the tourists' point of view, the island is a very tranquil place and a haven for those who would like to hide from their normal everyday life. Major tourists are attracted to Koh Yao because of the traditional life style and the chance to personally experience the way of life with and of the local people. Koh Yao serves as a waiting area for the tourists at the same it gives them the access to have a view of the small but beautiful surrounding islands.

The perception of the local people was recognized as an important factor in assessing which resources support tourism activities. According to Table 6.13, all respondents stated that the natural view is the major attraction resources for tourist to visit Yao Island (100%). Apart from this activity, most respondents also stated that seeing the islands around Yao Island (92.0%), beaches (92.0%) and seawater (90.0%) are also an attraction worth to see while in Koh Yai. In addition, two third of the respondents said that coral reef, inland forest and local people are also to be considered as a "bonus attraction" in visiting the island. Mangrove forest and their unique culture also contribute to attract the tourists to visit Koh Yai. This is according to half of the respondents who had participated in the conducted survey.

Table 6.14: Attracting resources for tourist to visit Yao Island

Resources	Number of respondents	Percentage of responses	Percentage of case
Natural view	100	15.3	100
Islands around Koh Yao	92	14.1	92
Beach	92	14.1	92
Sea water	90	13.8	90
Coral reef	64	11.3	64
Inland forest	60	9.2	60
Local people	59	8.3	59
Mangrove forest	55	7.7	55
Cultural	40	6.1	40

*Note: Respondents can select more than one choice.*

It is found out that, the local people's perception about the resource attraction and the point of view from the tourists are quite similar. In other words, the local people are aware of what kind of product that would fit in to market tourism.

### 6.2.2 Perception on the impact of tourism development

This part reflects the perception of the local people on how do they aware of the impact of tourism development on their community. Four main aspects were considered in tourism impact. They are social and cultural, economic, environmental and institutional aspects. Moreover, the impact is found to be both negative and positive.

In conducting the study, the impact was measured by using the Weighted Average Index (WAI), while the responses were scored as follow:

No	Low	Medium	High
0	1	2	3

The computational formula for the calculation of the awareness is:

$$I = (0.0 * f_n + 1.0 * f_1 + 2.0 * f_m + 3.0 * f_h) / N$$

- where: I = condition index such that  $0 \leq I \leq 3$   
 $f_n$  = frequency of responses indicate No impact  
 $f_1$  = frequency of responses indicate low impact  
 $f_2$  = frequency of responses indicate Medium impact  
 $f_3$  = frequency of responses indicate High impact  
N = total number of observations

Table 6.14 presents the impact of tourism development in the community through the measurement of the local people's perception. The result shows that the respondent's perception on the impact of tourism development in their community has two different aspects to consider: the social and cultural aspect. Social aspects include conflict (0.94 WAI), congestion caused by tourism (0.81 WAI), crime and prostitution (0.58 WAI). All of these aspects indicate a low impact. Commercialization of culture was found relatively near medium (WAI=1.28), since most of the respondents are quite conservative on their culture and religion.

However, positive impact as tourism supports their culture also was found out in some extent to be medium (WAI=1.73). In the economic aspect, seasonal employment caused by tourism was found to be low (WAI=0.82), as most of the respondents have many alternative jobs, such as fishing and agriculture.

Respondents rate the level on the positive effect of tourism, such as providing additional income (2.69 WAI), increasing more employment (2.68 WAI) and resulting more economic opportunities for income generation (2.75 WAI) to be relatively high.

Through observation and suggestion from the respondents, garbage disposal was the highly- prioritized problem on the island since the urban has become more developed at the same time more crowded. It is notably seen that the island tends to face more garbage problems as tourist arrival increases and as long as there is no existing effective measures on garbage management.

Losses of biodiversity, increasing solid wastes, increasing sewage, are other negative environmental impacts caused by tourism development. The results from Table 6.14 reflect that the loss of biodiversity is felt to have a low impact (1.07 WAI), solid waste (1.69 WAI) and sewage (1.83 WAI) was shown to be of medium levels. In contrast, the respondents feel that the tourism development building resource conservation is positively high (2.72) and improving of the environmental scheme in the island to be in the medium level (1.66).

It is seen that the respondents will believe in tourism development by improving the management institution. The improvement in organization (2.29 WAI), in the community leadership (2.31 WAI) and authority performance (2.29 WAI) has a high positive impact due to tourism development.

Table 6.15: Level of impact of tourism development perceived by community

Impact	Level of Impact				WAI
	No	Low	Medium	High	
<b>Social and cultural aspect</b>					
Social conflict	51	17	19	13	0.94
Congestion in the area	50	27	15	8	0.81
Commercialization of culture	28	21	46	5	1.28
Crime and prostitution	58	32	4	6	0.58
Tourism support culture	1	36	52	11	1.73
<b>Economic Aspect</b>					
Seasonal Employment	52	17	28	3	0.82
Additional income	0	4	23	73	2.69
Increase in employment	0	2	28	70	2.68
Economic opportunities	1	2	18	79	2.75
<b>Environmental aspect</b>					
Loss of biodiversity	25	35	16	24	1.07
Solid waste increased	22	23	19	36	1.69
Sewage increased	6	18	63	13	1.83
Build resource conservation	2	3	16	79	2.72
Environmental scheme improved	12	30	38	20	1.66
<b>Institutional aspect</b>					
Organization improvement	4	12	35	49	2.29
Community Leadership improvement	0	13	43	44	2.31
Authority performance improvement	0	19	33	48	2.29

### 6.2.3 Perception on the organization involved in the tourism development

From this survey, the results show that the major involvement for tourism management were of the local people (85%), while most respondents also stated TAO (82%), head of the village (80%), tourist agencies (79%) and district officers (6%) involving in tourism management.

The respondents selected TAO (53%), local people (24%) and head of village (10%) for the second choice for the organization who's involved in the tourism management.

Table 6.2.3 Agency involved in tourism management

Agency	Number of respondents	Percentage
<b>1. Agency that takes care about tourism (N=100)</b>		
- Local people	85	85
- TAO	82	82
- Head of the village	80	80
- Tourist agencies	75	75
- District offices	16	16
- Forest officers	16	16
- TAT officers	11	11
- Police	8	8
<b>2. The first rank for taking care of tourism (N=100)</b>		
- TAO	53	53
- Local people	24	24
- Head of the village	10	10
- District offices	8	8
- Tourist agencies	5	5
<b>3. The second rank for taking care of tourism (N=100)</b>		
- Head of the village	38	38
- TAO	21	21
- Local people	15	15
- Tourist agencies	13	13
- Forest officers	6	6
- TAT	5	5
- District offices	2	2

*Note: Respondents can select more than one choice.*

## CHAPTER VII

### POTENTIAL OF TOURISM DEVELOPMENT

This chapter covers two main parts. The first part is the determination of the potentials and constraints for the tourism development in Koh Yao. The SWOT analysis has been used on the existing situation to sort these out. The second part, the SWOT Matrix Strategy, was used to figure out and identify what constraints can be overcome so that the development of tourism in Koh Yao can be sustainable.

#### 7.1 SWOT Analysis

In this study, the SWOT analysis is defined as a tool used for determining the potentials and constraints to the tourism development in Koh Yao. It involves internal and external factors. The internal factors examine the local "Strengths and Weaknesses" on the development of tourism and the relationships between the tourism development, the environment and the communities of the area. The external factors examine the "Opportunities and Threats" to the development of tourism which originated from the outside of the local area.

These are the forces affecting tourism that can be controlled and influenced by the authority through the implementation of the policies in the development of potential attractions, tourism investment capital and others. The SWOT analysis takes into account the integration of the social, economic, physical aspects of the island based on the result of the review in policies and plans for the tourism development. Moreover, it also checks the current situation for resource utilization through the perception survey analysis, which has been discussed in the previous chapters.

#### 7.1.1 Strengths for Sustainable Tourism Development

##### 7.1.1.1 Social Aspect

- **Friendly and Peaceful:**

Most of the residents in Koh Yao are warm and friendly to the tourist. From the interview, most of the tourists usually stay in Koh Yao for a long time and visit Koh Yao more than once. Koh Yao has a peaceful atmosphere and is good for relaxation. There is not much residents in the island. The island is inhabited by 98% of the Muslim community, resulting to the strictness of drinking alcohol. This is one refreshing aspect of a simple closely-knit community that surprises and delights people from a more aggressive culture. Everywhere in Koh Yao, it can be observed that most of the motorcycles are parked with the keys in its ignition. Tourists who have stayed there say that they routinely leave their cameras or wallets in unlocked rooms without being worried that these items will be lost or stolen.

Table 7.1: Potentials of Sustainable Tourism Development

Strength	Weakness	Opportunities	Threats
<p><b>7.1.1.1 Social</b></p> <ul style="list-style-type: none"> <li>• <b>Friendly and peaceful:</b> The local people warmly welcome the tourists. There is a tranquil atmosphere and the feeling of being safe is everywhere.</li> <li>• <b>Strong community or groups:</b> Strong social network and women groups exist.</li> <li>• <b>Awareness of the coastal natural resources:</b> Awareness of environmental benefits. People give high importance to the natural resources.</li> <li>• <b>Perception on tourism development:</b> The locals know what products are fit to market the tourism in their area. There is low social impact. The local people believe in the improvement of the organization by tourism development.</li> </ul>	<p><b>7.1.2.1 Social</b></p> <ul style="list-style-type: none"> <li>• <b>Conflict on the same type of business:</b> There's a good relationship within the group but not with the other groups.</li> <li>• <b>Limited education level of the local people</b> is considered to be a hindrance for them to participate in forums or discussions.</li> <li>• <b>Low participation of the local community:</b> Limited capability to establish a virtual civil society and the lack of cooperation between the government and the private sector.</li> <li>• <b>Limited in human resources for tourism development:</b> Inadequate number of trained tour operators and English-speaking staff. Officials have limited concern on the environmental issues.</li> </ul>	<p><b>7.1.3.1 Social</b></p> <ul style="list-style-type: none"> <li>• <b>Change of tourist visiting behavior:</b> Decrease in the mass tourism but growth in personalized holiday packages. Tourists look for a more nature and culture-based tourism destination.</li> <li>• <b>Consistent with the national policy and plan:</b> Encourages local community to conduct nature-based tourism, promote community's participation and fair distribution of benefits, directs the locals for conserving and rehabilitating natural resources. TAT builds up tourism in the rural area and fosters local people's economic improvement. The province support tourism development in Koh Yao and promotes the whole province, as outstanding ecotourism place in Asia.</li> <li>• <b>Opportunity from the Cluster:</b> Located in the middle of the three provinces of the Andaman triangle cluster. It is envisioned to promote Koh Yao as the Andaman Link, so as to contribute for the success of having a symbiotic relationship with the other two neighboring islands aiming for the same purpose – tourism.</li> </ul>	<p><b>7.1.4.1 Social</b></p> <ul style="list-style-type: none"> <li>• <b>Socio-economic impact:</b> Lower income from agriculture compared to tourism business. Rapid transformation on the economic structure and more competition between the outsider and local entrepreneurs.</li> </ul>
<p><b>7.1.1.2 Economic</b></p> <ul style="list-style-type: none"> <li>• <b>Increase on the number of tourists:</b> transformation of agriculture to tourism, population flows in and out. The number of tourist increased.</li> </ul>	<p><b>7.1.2.2 Economic</b></p> <ul style="list-style-type: none"> <li>• <b>Business competition:</b> outsiders have better chance to dominate tourism business than their local counterparts</li> </ul>		

Table 7.1 (Continued)

<p><b>7.1.1.3 Attraction and facilities</b></p> <ul style="list-style-type: none"> <li>• <b>Natural Resources:</b> Sea, sand, sun and nature, mangroves, sea grasses and coral reefs for nature-based tourism and exploration of the scattered islands in the bay.</li> <li>• <b>Abundant fresh seafood:</b> Best fresh seafood in Thailand, such as crabs, squids and shrimps.</li> <li>• <b>Cultural Event:</b> festivals or fairs with displays of locally hand-made products.</li> </ul>	<p><b>7.1.2.3 Attraction and facilities</b></p> <ul style="list-style-type: none"> <li>• <b>Fresh water shortage:</b> Fresh water is fetched from the wells and rain. Shortage in dry season.</li> <li>• <b>Garbage and wastewater:</b> Limited garbage collection, people discharge wastes directly into the sea.</li> <li>• <b>Inadequate tourism infrastructures and facilities:</b> Incompatible and low-standard tourism infrastructures. Limited water supply and electricity system. Unsafe roads and inadequate danger signs.</li> </ul>	<p><b>7.1.3.2 Attraction and facilities</b></p> <ul style="list-style-type: none"> <li>• <b>Ecotourism award:</b> The TAT and World Legacy Awards honored the community with the "Destination Stewardship Award". The Conservation International and the National Geographic Travel magazine had sponsored this award.</li> </ul>	<p><b>7.1.4.2 Attractions and facilities</b></p> <ul style="list-style-type: none"> <li>• <b>Distance from the mainland:</b> Far from its provincial mainland.</li> <li>• <b>Deterioration of marine resource:</b> Unwise use of the community in the natural resources, forest conversion, erosion, damage of corals and sea grasses</li> </ul>
<p><b>7.1.1.4 Local government and people</b></p> <ul style="list-style-type: none"> <li>• <b>Local vision and support:</b> TAO, envisions and supports the tourism development and awareness of the importance of the natural resources and environment for tourism.</li> </ul>	<p><b>7.1.2.4 Local government and people</b></p> <ul style="list-style-type: none"> <li>• <b>Limited management ability and personnel.</b> Restricted efficiency in the power to control. Locals were not motivated for initiating the tourism planning.</li> </ul>	<p><b>Local government and people</b></p>	<p><b>Local government and people</b></p>

- **Community or group:**

Koh Yao community has several groups that are responsible in preserving the culture, natural resources and generating the income, etc. The communities in this island share a strong network, where the local people are considerably dependent from one another, both economically and socially. People reveal their potentials for being organized, especially, if they see that there are economic and development opportunities which hold their interest. The group leader and all the housewives have established the women organization in Koh Yao. This is to encourage all the housewives to have part-time jobs. The organization is composed of the project leader, who's responsible for creating jobs to its members and other interested residents, such as the local handicraft souvenirs, Thai herbal medicines, etc. This is one of the many ways to distribute the increased revenue to the local people.

- **Awareness of the Coastal Natural Resources**

It was found out that the awareness of the local community on the coastal and natural resources is relatively high. The analysis in the previous chapter shows that the local people are aware of the environmental benefits of these resources in the medium level. Moreover, people have given the overall importance of the natural resources at a high level. This is a strong potential that the environment and coastal resources will be expected to be well managed and preserved, as long as there, is a possible measure to get the attention of the local people regarding the sustainable utilization of these resources. At the same time, it would result in gaining indirect benefits from the sustainable tourism development in the island.

- **Perception on Tourism Development**

The local people saw the nature's beauty and the smaller islands scattered around Koh Yao as its major tourist attractions. Apart from the natural scenery, the local people also perceive that their traditional lifestyle is an attraction for the tourist as well. Tourists can join the villagers in experiencing their traditional ways of living. The locals tend to preserve this cultural image as their purpose of existence. Meanwhile, it also matches the demand of the tourists.

It can be concluded that the local people's perception on the resource attraction and the point of view from the tourist are quite similar. In other words, the local people are aware of what product that would fit to market their tourism.

Furthermore, the local people have perceived the low social impacts, thus, it indicates that they are capable in achieving the sustainable tourism development, for which they preserve their strong socio-cultural aspect. On the other hand, the local community believes that the improvement of the organization by tourism development will fulfill their vision that will encourage their involvement and acceptance of the tourism development.



#### 7.1.1.2 Economic Aspect

- **Increase in the number of tourists**

Since the tourism had been introduced to Koh Yao, the transformation from agriculture to tourism and other trade and services will cause the population to flow either in or out, as the number of tourists increase at the same time.

#### 7.1.1.3 Attraction and Facilities

- **Natural resources**

Koh Yao is located in the middle of Phang Nga Bay, there exists an abundance in of natural resources that matches their imagination of sand, sea, sun and nature. People there are proud of the beauty of its surrounding, the soft white sand beaches, the fish which are visible in the clear water, the dolphins and the dugongs. Apart from offering the charm of their own, Koh Yao Yai and Yao Noi, are well situated for exploring the scattered islands in Phang Nga Bay. There are some other attractive resources, such as mangrove forests and coral reefs that are famous for sea kayaking and snorkeling.

- **Abundance in fresh seafood**

Plenty of the islanders still work as fishermen, however, the wonderful thing about Koh Yao is that they have the best fresh seafood in Thailand, including crabs, fish, squids and shrimps. Fishermen on the island mentioned that most of the seafood sold in Phuket originated from Koh Yao.

- **Cultural event**

There is one major festival in the island, the *Khong Dee Sri Koh Yao* (Good Things of Koh Yao) festival, which is held every end of March. During the festival, there is a fair, which displays locally hand-made products such as batik painting, flowers made from fish scales, dried fish and etc. There are also fishing boats races.

#### 7.1.1.4 Local government and people

- **Local vision and support**

The local government (TAO) envisions and supports tourism development in the area while being aware on the importance of natural resources and environment as the major components for tourism. Local people perceive that the attributes of the natural and cultural resources in their community serve as an attraction for both local and foreign tourists. The local people's perception harmonizes the tourists' view about the tourism attraction, resulting in readiness that is appropriate for the development of tourism, particularly by producing the right tourism market products.

## **7.1.2 Weaknesses for Sustainable Tourism Development**

### **7.1.2.1 Social aspect**

- **Conflict on the same type of business**

Although the local people depict high solidarity and reliance on each other, particularly in activities, which result in collective action and communal benefit, still, there exist some conflict of interests originating from the same type of business opportunity. People tend to have a good relationship within the group and not with the other groups.

- **Limited education level**

Most people drop from their school at the primary level due to the insufficient number of secondary schools in the island and the difficulty in accessing the school to their far-distance located villages. Moreover, fishing and rubber plantation become the inherited occupation for the next generation. They've found out that it is really not a necessity to attain a higher education to survive and find ways in improving their livelihood. Consequently, this factor becomes a hindrance to those people who are willing to participate in group discussions and forums.

- **Less participation of the local community**

It is recognized that the best approach to protect and conserve natural resources, while the economic development takes place in the community, is the active participation of the local people. There are four steps of activities under consideration in the tourism management and development where the local community is required to be involved in an appropriate level. The study reveals that there is a low participation of people in any group or organization. However, a community has a weakness in performing this approach. The problems that occurred are stated as follow:

- Having a limited capability in establishing a virtual civil society, since there is not much of awareness and sense of belonging within the people in the community.
- Lacking of cooperation between the government and private sectors in the locality. Particularly, in the locals active participation during the decision making process while formulating the policy or in the design planning for tourism development and following up the policy implementation.

- **Limited in the human resource for tourism development**

Human resources is said to be the catalyst of development. They are the essential elements, in carrying out the management and development practices. Tourism sector requires responsible individuals with the knowledge, understanding, attitude and behavior that would help and ensure sustainable development of very sensitive-fragile resources. The human resources in tourism development, that is mentioned in this study focuses with the tourism operators and service providers, officials and local people. There's only a few numbers of trained tourist operators and service providers who could speak foreign languages.

The officials in various government sectors such as the municipality, TAO, fisheries, etc. have limited concern on the environmental issues, protection of natural resources, wrongful construction and waste discharging. A part from a very few local people with some understanding on the need to care and protect the tourism resorts and their local areas, most of them were not aware about their responsibility in taking care of the tourism resources.

#### **7.1.2.2 Economic aspect**

- **Business competition**

There is a lot of competition between the foreign and local entrepreneurs in the different business activities since an enormous amount of money and better managerial skills are involved. Foreign investors have a better chance to dominate the tourism business than their local counterparts. The economy of Koh Yao may fall in the hands of the big capitalists.

#### **7.1.2.3 Attraction and Facilities**

- **Freshwater shortage**

Every year, Koh Yao residents face the problem of water shortage. There are a certain number of wells that were set up with drainage systems for each small village. Major parts of the fresh water were supported from the mountain flow through the water canals. Only in the rainy season that the existing wells and water reservoirs are adequate to provide water supply to the residents and tourists. The watershed, capable of retaining the water for dry season consumption can be set up, but has not been taken into account. Water supplied system is also found inadequate for the island community. This will even be worse when the population size and the number of visitors increase.

- **Garbage and wastewater**

In Koh Yao, there is an uncontrolled garbage discharge everywhere. Resort and bungalows, some by shops and households, produce most of this garbage. During the tourist season, the volume of waste is increased with some being buried in the island and the rest being burn. Only part of the garbage has been collected while leaving behind another big part not to be collected. When it rains, garbage can be seen floating into water. Moreover, the community directly discharges waste into the sea without any treatment.

The seawater around the pier is very dirty but the volume of the discharged water is quite small. The two daily tidal cycles help dilute the dirt in the seawater of Koh Yao. However, a wastewater treatment system with suitable technology has not been set up.

There is still no solid waste and wastewater treatment system that will cause health and environmental problems, as well as, water pollution in the near future.

- **Inadequate tourism infrastructures and facilities**

Current tourism infrastructures and facilities in the area are observed to be incompatible with the necessary standard when tourism industry is being developed. These aspects need to be upgraded to a certain level according to the scope of tourism planning. The electricity and water supplied are not yet spread into the whole area, particularly the area where the tourism development is a potential. Many roads are not safe, notices or warning or danger signs are inadequate.

#### **7.1.2.4 Local government and people**

- **Limited management**

Local government units such as the municipality, district office, TAO has to perform many functions but with certain limitations in the budgets, management ability and personnel, as well as, the power to control which results to a slow development and lack of enough support for the projects.

Planning is made through the local's participation by accessing the need and solution from the people. Unfortunately, the tourism development idea seen on the development plan has not been introduced to the locals and their active part in the tourism planning has likely been promoted.

#### **7.1.3 Opportunities to Sustainable Tourism Development**

##### **7.1.3.1 Social aspect**

- **Change of tourist visiting behavior**

International tourist behavior is currently changing. As the environmental information increases there is a proportional decrease in the mass tourism and growth in the demands of personalized holiday packages. Tourists are ready to pay more for a good quality service and adventure. Tourists ask for more nature-based and cultural holidays. This evolution, in terms of tourists' needs, represents a serious potential for the rural tourism, such as the eco-tourism market. This will fit to Koh Yao tourism market where the local people are ready to sell their lifestyles' image and welcome the long stay holiday by offering nature and culture-based tourism products.

- **Consistent with the national and provincial policy and plan**

The national and provincial development plan supports and emphasizes the tourism industry, which generates increased revenues and employment opportunities for Thai people. Moreover, it also encourages local communities to conduct nature-based tourism so as to provide better community economies and more opportunities for the local community's involvement in the natural resources and environmental management. The national economic and social development plan emphasizes in improving the well being of the people, re-distribute income and decentralizes the development activities to the remote rural areas. Besides, the plan also directs the local people in conserving and rehabilitating the natural resources that can promote balance in the ecosystem, maintain and upgrade environmental conditions in order to enhance the quality of life and systems for the natural

resources and the environment. This is to ensure proper supervision, efficient utilization, and fair distribution of the benefits to the community and society.

The TAT has a policy to promote the tourism in the rural areas so as to develop a sustainable national economy and people's quality of life. It will also make Thailand to be the nature-based tourism center of South East Asia. TAT has set its strategy by providing proper knowledge sustainable tourism principles and good practices to all. Moreover, TAT's strategy has promoted the cooperation between the public and private sector that include local people. In this way, the locals share ideas and participate in the creation of legal and economic measures to control environmental and resource use. Such measures include the setting up of a management system that can foster the economic development and upgrading of the people's quality of life.

Furthermore, there are the provincial and local development plans that have supported the tourism development in Koh Yao. The development plan of the island and the Phang Nga province has a policy that states the vision in the development of Phang Nga, as the outstanding place for ecotourism in Asia. This, in turn, will promote the tourism of Koh Yao as the place for nature-based tourism. As education and recreation are provided the natural resources within the islands and coastal area of Phang Nga province have been preserved. Moreover, it had also provided the supervision and coordination by top organizations. This paved the way to promote the cooperation between the public and private sectors and the local population with respect to the tourism development and environmental tasks within the island and coastal area of Phang Nga.

- **Opportunity based on Andaman triangle Cluster**

As Koh Yao is located in the middle of Phuket, Phang Nga and Krabi, the development of the island is rather dependent to these provinces. There is a need to develop Koh Yao, as the tourism link of the clusters. It is because of the reason that these three provinces have already been grouped and called "the Andaman Triangle". Not only that Phang Nga, the owner of Koh Yao but Phuket and Krabi has also been trying to promote the island as an exotic tourism destination. A lot of visitors have been introduced to this island, while they are staying in the other three provinces. The number of tourists increases every year since the cluster sets their strategy in making a difference of being an attractive tourist spot. These islands have a symbiotic relationship to each other in order to absorb the tourist (3 in 1 product). The local governments of these provinces find Koh Yao as a tourist transfer hub for the effectiveness and success of this relationship. This gives more focus on the tourism development on Koh Yao in conforming to this purpose.

#### **7.1.3.2 Attraction and facilities**

- **Ecotourism award**

Koh Yao Noi Eco-tourism Club was established in 1995 through the initiation of the Responsible Ecological Social Tours Project (REST). The club builds the capacity of the local communities to manage and control tourism and also to use it as a tool that will serve to the local needs. REST has contributed to both the local nature conservation and the revival of its cultural heritage. As a result, it increased the income of participating families by 15 percent.

A variety of different tourism activities has been arranged which bring the tourists to experience the locals' lifestyle. It will give them the opportunities to enjoy the local culture and arts. In addition to that, the tourists will experience to participate in the nature-trail trips such as beach and island sightseeing, snorkeling, fishing, trekking, bird watching, cycling and sailing. They could also taste being a homestays or do tent camping or just rent a bungalow for their accommodation.

The Tourist Authority of Thailand (TAT) at the 4th Tourism Industry Contest has made distinctions for the Koh Yao Noi Eco-tourism Club in the two categories: the "Tourism Industry Contest" and the "Tourism Promotion and Development".

In January 2003, the Koh Yao Noi tourism program under the partnership with the Bangkok-based NGO, Responsible Ecological Social Tours Project (REST) had won the "Destination Stewardship Award" from the World Legacy Awards. The Conservation International and the National Geographic Travel magazine jointly sponsor this distinction.

#### **7.1.4 Threats to Sustainable Tourism Development**

##### **7.1.4.1 Social Aspect**

- **Socio-economic impact**

Apart from Koh Yao Noi, that is more active in different business opportunities due to its position as municipality of the Koh Yao district, the area under study has an agricultural economy. It relies mainly on the growing economic crops, such as the rubber, palm, fruit and other perennial trees. Thus, the population's main income, which is not as high as compared to the income from those in working in the tourism industry, comes from the agriculture.

With the growth of the tourism industry in the area of study, more and more land has been used for tourism instead of agriculture. Investors from elsewhere buy big plots of land for big investment while some local investors convert their medium and small-sized pieces of agricultural land for tourism business. Some are even selling their expensive land and then move to another agricultural plots. This may cause the transformation of economic structure from agriculture to tourism. Its effect occurs rapidly and there is a lot of competition between the foreign investors and local entrepreneurs in different business activities. Having an enormous amount of money and better management skills, the foreign investors have a better chance to dominate the tourism business than their local counterparts. The economy of Koh Yao may fall in the hands of the big capitalists.

##### **7.1.4.2 Attraction and facilities**

- **Distance from the mainland**

Koh Yao is located a little bit farther to the mainland of its provincial municipality. Its distance is about 40 kms and can be reached for more than one hour by boat. The island becomes more reliable from Phuket, which is just 15 kms away from it.

- **Deterioration of the natural resources**

The unwise use of the natural resources by the community is possibly the major cause of the marine resources' depletion. Most of the natural forest up to the mountains in the Koh Yao Noi district has been converted to plantation, resulting in erosion and sedimentation in the sea. As a consequence, it contributes in damaging the coral reef and sea grass bed. At low tide, a significant part of the sea grass bed is exposed above the water surface. Moreover, the misbehavior of fishing boats by driving and anchoring in sea grass beds is also visible.

## **7.2 Overcoming the constraints towards achieving the sustainable tourism development**

### **7.2.1 SWOT matrix**

This part explores the possibilities to overcome the above constraints with the SWOT strategies, that were obtained from matching the internal "Strength and Weaknesses" to the external "Opportunities and Threats". The strength factors that are matched with the opportunity factors make use of the external opportunities to enhance and improve the internal strength resulting the formulation of Strength-Opportunities (SO) strategies. This minimizes the weakness and avoids the threat, which is developing in the industry. Similarly, Weaknesses-Opportunities (WO) strategies, Strength-Threat (ST) strategies and Weakness-Threat (WT) strategies were also formed to use strengths so as to take advantage of the opportunities and overcome constraints (Table 7.2)

- SO strategies use "Strengths" for taking advantage of "Opportunities".
- WO strategies take advantages of "Opportunities" by overcoming "Weaknesses"
- ST strategies use "Strengths" to avoid "Threats"
- WT strategies minimize "Weaknesses" and avoid "Threats".

Source: Modifications by Sukanya, AIT-HS-98-8

Table 7.2: SWOT Matrix of Sustainable Tourism Development of Koh Yao

<p><b>Internal</b></p> <p style="text-align: right;"><b>External</b></p>	<p><b>Strength (S)</b></p> <ul style="list-style-type: none"> <li>• Friendly and peaceful island.</li> <li>• Strong community or group.</li> <li>• High awareness of the local people in the importance and benefit of the coastal natural resources.</li> <li>• Good perception on the tourism development with low negative social impacts and positive impacts on the improvement of the organization by tourism development.</li> <li>• Increase in the number of tourists.</li> <li>• Abundance in natural resources, fresh seafood, cultural events.</li> <li>• Local government envisions and supports tourism development and awareness in the importance of the natural resources for tourism.</li> </ul>	<p><b>Weakness (W)</b></p> <ul style="list-style-type: none"> <li>• Conflict on the same business type with the other groups.</li> <li>• Limited education level of the local people.</li> <li>• Less participation of the community in the society and lack of cooperation between the government and famous sectors.</li> <li>• Limited human resources for the tourism development (e.g. tour operator, officials, etc.)</li> <li>• Business competition, where outsiders have a better chance than the locals.</li> <li>• Freshwater shortage.</li> <li>• Un-managed garbage and wastewater.</li> <li>• Inadequate tourism infrastructures and facilities.</li> </ul>
<p><b>Opportunities (O)</b></p> <ul style="list-style-type: none"> <li>• The change of tourists' visiting behavior where they demand nature and culture-based tourism.</li> <li>• Eco-tourism award from TAT and National Geographic Travel magazine</li> <li>• Consistent with the national policies and plans in promoting the nature-based tourism, eco-tourism, rural tourism, local involvement, fair benefit sharing and the conservation and rehabilitation of natural resources.</li> <li>• Provincial policy promotes Phang Nga to be the outstanding eco-tourism place in Asia.</li> <li>• Located in middle of the Andaman triangle cluster it envisions to promote Koh Yao as the Andaman link.</li> </ul>	<p><b>SO</b></p> <ul style="list-style-type: none"> <li>• Consider the provincial and national policy to promote Koh Yao as an exotic tourism destination, focusing on nature and culture-based tourism.</li> <li>• Abundance in the tourism attractions of Koh Yao should be widely promoted to all the stakeholders in order to encourage support for participating tourism development and resource conservation.</li> <li>• Take measures to control development with restrictions on the inappropriate tourism activities and resort constructions, which hamper the very sensitive coastal resources.</li> <li>• Encourage more investment on the quality tourism services and resorts in attracting high-end customer.</li> <li>• Responsible agencies cooperate in seeking the tourism market and appropriate products that will improve economic opportunities for residents.</li> </ul>	<p><b>WO</b></p> <ul style="list-style-type: none"> <li>• Strengthen the community's solidarity through organizing the group for a wider, active participation and equal share of benefits in any economic activities.</li> <li>• A general knowledge of environmental awareness in the importance of coastal resources should be further trained.</li> <li>• Human resources such as tour operators and service providers should have more training.</li> <li>• Help to initiate local own business through providing loans or funds and technical assistance in tourism.</li> <li>• Set up projects to develop freshwater sources (watersheds) in order to qualify the island for tourism development.</li> <li>• Effective garbage and wastewater management strategy should be taken into account among responsible agencies.</li> </ul>
<p><b>Threats (T)</b></p> <ul style="list-style-type: none"> <li>• Distance to the mainland</li> <li>• Deterioration of marine resources, forest conversion, destruction of coral and sea grass</li> <li>• Socio-economic impact of the rapid transformation of economic structure from agriculture to tourism</li> </ul>	<p><b>ST</b></p> <ul style="list-style-type: none"> <li>• Enhance the relationship within local communities in taking effective measures to manage and conserve the natural resources.</li> <li>• Promote some type of eco-tourism such as homestays or agricultural tourism in order to help villagers keep working on with their agricultural occupation.</li> <li>• Land use control should be focused, especially the conversion of the natural forest to plantation.</li> </ul>	<p><b>WT</b></p> <ul style="list-style-type: none"> <li>• Consult with and inform the local residents about potential changes induced by the rapid growth of tourism.</li> <li>• Enhance cooperation and strength among the neighboring communities in order to let other communities understand about in the awareness on the importance of coastal resources and its surrounding environments.</li> <li>• Integrate environmental, social and cultural issues in to training programs.</li> </ul>



## **7.3 Proposed strategies towards Sustainable Tourism Development**

### **7.3.1 From Strengths and Opportunities (SO)**

- ❖ As the National Development Plan have policies in making Thailand to be the nature-based tourism center of Southeast Asia, Phang Nga province set up its plan to be developed as the outstanding place for ecotourism in Asia. This will then promote the tourism of Koh Yao as a place for nature-based tourism. Thus, local governments (PAO and TAO) should consider the provincial and national policies to promote Koh Yao as an exotic tourism destination that focuses on nature and culture-based tourism. The proposed tourism activities will be discussed in the next section.
- ❖ There is an abundance of tourist attractions in Koh Yao that have been discovered by villagers and visitors, especially in some places where the road is not assessable. Thus, those pristine resources should be widely promoted to all the stakeholders including residents, tour business, resort owners and government agencies in order to encourage the support in participating to the tourism development and resource conservation.
- ❖ While tourism development has been introduced to Koh Yao, local government agencies should cooperate with TAT and local tourism association such as Koh Yao eco-tourism club in seeking the tourism market and appropriate products which will improve the economic opportunities for its residents. The proposed target markets for Koh Yao are:
  - Nature lovers: travelers who underline the importance of beautiful landscapes and scenery
  - Rest seekers: travelers who are seeking relaxation for a long holiday
  - Discoverers: travelers who are emphasizing on the activities wherein they are exposed to the local people, such as experiencing the locals' arts & culture, taste the villages' exotic delicacies or a direct contact with the local people themselves.
  - Family-oriented: travelers who enjoy the beautiful landscape and scenery so as to have time for each other, hospital reception, good food, holiday attractions for children, the sea and the beach.
- ❖ Koh Yao is recognized as a peaceful and friendly place with a very low negative impact from tourism. The pristine environment with untouched resources such as the beach, hill forests, clean seawater and so on, prompts the island to be applauded as a world class resort. Thus, the responsible agencies in the tourism promotion such as the local government, CDD, TAT, should encourage more investments on the quality of tourism services and world-class resort. This will attract high-end customer who visit the islands but will also ensure to distribute benefits to the resident by consuming local resources and products.
- ❖ In order to ensure sustainable tourism development in Koh Yao, responsible agencies such as the municipality, TAO and CDD, should take measures to control the development with restrictions on inappropriate tourism activities and resort constructions, which will hamper the very sensitive coastal resources.

### **7.3.2 From Weaknesses and Opportunities (WO)**

- ❖ Villager tends to have some conflict of interests, which originated from having the same business opportunity. People tend to have a good relationship within the group but not with the other groups. Perhaps, this may be a factor to bar them from participating in the tourism development. Thus, TAO and the responsible NGOs should strengthen the community's solidarity through organizing the group for a wider, active participation and an equal share of benefits in any economic activities.
- ❖ A general knowledge on the environmental awareness and the importance of coastal resources should further train and disseminated to the local communities, especially, those that are related to mangroves, sea grass, coral reefs, fisheries resources and management plans at the local levels. This strategy should focus in the young adult group.
- ❖ The level of participation of the local people's in-group or community in the resource conservation and development is being affected by the educational attainment of the local people. TAO should support non-formal education to the local people, which would teach them to value the importance of coastal resources and the impact from resource degradation.
- ❖ As a principle, sustainable tourism development requires the establishment of education and training programs to improve the public's understanding and enhance their business, vocational and professional skills. In Koh Yao, the human resources such as tour operator, service provider should be provided more training in the tour operation and communication ability (studying other foreign languages).
- ❖ Tourism development must provide a better employment for the community residents. The provision of fulfilling the jobs has to be seen as an integral part of any tourism development at the local level. Part of the process in ensuring a much better employment is to ensure that the tourism infrastructures (e.g. hotels, restaurants, shops, etc.) are developed and managed by the local people. The local government and responsible NGOs should help in the provision of education and training for the local residents. Access to loans or funds for establishing local business and entrepreneurs are central to this type of policy.
- ❖ Since Koh Yao becomes a favorite destination for the tourists, both Thai and foreign tourists, the number of tourists increases every year. This results to the development of more resorts and tourism accommodations as well as the people's business activities, such as restaurant followed with food shop, etc.

With the discharge of an increased volume of untreated wastewater in the future, the degradation of seawater can be expected. Thus, TAO should propose a project to setup the wastewater treatment system among the urban places. Restaurant, bungalow, resorts, hotel, etc. which are located in the tourism sites should be regulated to have their own wastewater treatment system. Therefore, the wastewater is treated prior to discharging it into the seawaters.

- ❖ One of the major problems in Koh Yao is the garbage. Although garbage management system exists at this time, still, it is insufficient enough to be able to cope up with the present and future garbage production. The efficiency in the collection of garbage needs to be improved and a serious ad or campaign for people

to properly dispose their garbage is needed. Public should strictly follow the public cleanliness and orderliness in order to reach the set goals.

- ❖ Water supply is an annual problem, especially, during the dry season. The tourism potential in Koh Yao is leading to a rapid growth in the community. Tourism resorts are built like mushrooms along the eastern and northern coast of Koh Yao Noi, also, in the north western part of Koh Yao Yai such as Tha Khao, Laem Sai, Loh Ha, Loh Paret, Loh Chak and so on. This creates an increase in the demand for water consumption of the residents and tourism resorts. A number of water sources from the mountains have been found with an appropriate study that expects to support the present and future development. Local governments, such as TAO and PAO, should concentrate more on the appropriate project for the construction of water storage system in order to retain some for the dry season consumption.
- ❖ Road should be constructed and maintained for public's safety. Road lights at night, notice or danger or warning signs should be improved. Water supply system should be setup to provide water to any far-distant located resorts. Electricity needs to be distributed through out the island, especially, to the potential tourism development area.

### **7.3.3 From Strengths and Threats (ST)**

- ❖ Responsible agencies including the local government and fisheries office, should enhance their relationship with the local communities in taking the effective measures in managing and conserving the natural resources such as mangroves, sea grasses and coral reefs. This will achieve sustainable use of the resources and the sustainable tourism development, which is highly dependent on these resources.
- ❖ Local governments should promote some type of ecotourism such as homestays and agricultural tourism, in order to help the villagers to keep working on with their agricultural occupation.
- ❖ Land-use control should be given careful attention, especially, the conversion of natural forest to plantation should be strictly banned. Appropriate way in clearing the plantation on hilly land should be introduced to the owner.

### **7.3.4 From Weaknesses and Threats (WT)**

- ❖ Enhance cooperation and strengthen the neighboring communities in order to let other communities understand about the awareness on the importance of the coastal resources and its surrounding environments.
- ❖ Consult with and inform local residents about potential changes induced by the rapid growth of tourism.
- ❖ Integrate environmental, social and cultural issues into the training programs.
- ❖ One of the most important factors to ensure the sustainable use of coastal resource is evaluation of carrying capacity. Carrying capacity should be evaluated with enough scientific evidence and participation from various sectors.

Table 7.3 Existing Agencies responsible for tourist site management (TAT)

Name of Organization	Duties and Responsibilities	Provincial	District and Sub-district
<b>Central Administration</b>			
1. MoTS	Prepares the country's tourism planning, manages the tourism industry, develops tourism site	Provincial office	-
2. TAT	Responsible for the promotion of tourism throughout the country.	TAT regional office (Phuket)	-
3. Department of Town and Country Planning	Prepares Town and Country Physical Plans Planning	TCP provincial office	-
4. Public Works Department	Responsible for building secondary roads, bridges, rural electricity and water supply, sanitation facilities (such as water treatment and waste disposal) and supervises the construction activities for the local authorities.	PW provincial office	-
5. Royal Forestry Department	Responsible for the conservation of natural forests and marine resources including corals. In-charge with the promotion of environmental education.	Provincial Forestry office	District office of forestry
6. Fishery Department	Controls the fishing activities in the public waters, as well as, the conservation of valuable and rare species of fishes and aquatic animals.	Provincial fisheries office	District office of agriculture
7. Office of Environmental Policy and Planning	Prepares the environment policies and plans. Administers the provincial area.	-	-
8. Department of Local Administration	Supervise the national subsidies to aim for the government's coordination on the district activities.	DoLA Provincial office	District office

Table 7.3 (Continued)

<p><b>Provincial Administration</b> 1. Province (Authority)</p> <p>2. District (Authority)</p>	<p>In-charge with the policy-making, guidance and coordination of promotion activities within the province.</p> <p>Takes control in the policy-making, guidance and coordination of promotion activities within the district.</p>	<p>Province</p> <p>-</p>	<p>-</p> <p>District</p>
<p><b>Local government</b> 1. PAO</p> <p>2. Municipality</p> <p>3. Sanitation District</p>	<p>Responsible for the construction and maintenance of infrastructures, including piers, sewerage systems, public places, parks, etc. waste collection and disposal outside the urban area, promotion of occupation and income, public health and sanitation.</p> <p>In-charge with the construction and maintenance of infrastructures, including piers, sewerage, public places, parks, etc. In-control for admonishing the public cleanliness, waste collection and disposal Administers the public health, sanitation &amp; water treatment In-charge with the education and career promotion In-charge in building the community development and protection of public places Responsible for the occupation promotion, flood protection</p> <p>Responsible for the construction and maintenance of the infrastructures. Advocates public cleanliness, waste collection and disposal, flood protection Implements public sanitation</p>	<p>Province</p> <p>Province</p> <p>-</p>	<p>-</p> <p>District</p> <p>District</p>

<p>4. TAO</p> <p><b>Local organization</b> Koh Yao ecotourism club</p>	<p>Responsible for the construction and maintenance of the infrastructures in the conservation of natural resources and environment.</p> <p>Promotes ecotourism, conserves resource and improves the local economy.</p>		<p>- Koh Yao Noi - Koh Yao Yai - Prunai</p>
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## **7.4 Proposed nature and culture-based tourism activities for Koh Yao**

### **➤ Eco-lodge**

Eco-lodge, such as bungalow, should be provided to the target market. This will be available for those people who would want to take a vacation and experience the beauty of the nature at a very reasonable comfort. New bungalow should be designed and adopt the Thai styles. It should not also destroy the nature so as to create an “exotic and unique ambience” for the guests.

### **➤ Agro-tourism**

Most of the areas in Koh Yao are agricultural areas so they should develop an agricultural–study visits, so as to extend the tourists’ length of stay and educate them. The generated income should also be distributed from the tourism industry to the local people. Some of the activities of agro-tourism are as follow:

- Rubber tree-study: This tour consists of tapping rubber trees demonstration, looking at all the procedures to produce the rubber products and giving chance to the tourists in trying to tap a rubber tree by themselves.
- Fishery-study: This tour will let the tourists experience how to do some small scale fishing such as gill net, trap, line hooks, etc. by illustration, demonstration and experience.

### **➤ Cultural tourism**

Tourists can view Koh Yao resident’s way of life and style of local houses as their attraction. Homestays is one program that tourist can stay with local people, at the meantime, enjoy local culture of life and experience the local food.

There are also some specific sites which tourist, especially Thai, believe as superstitious sites such as holy pond (Bor Saksit) which three freshwater springs exists in the area of tidal flat of An Pao village and Koh Kou Dou (Kou Dou island) which one biggest tree is there. Thai people believe to be Lucky if they could visit the places.

### **➤ Local Handicrafts and Training**

There are some shops selling local handicrafts such as souvenirs made from fish scales, batik painted cloths, re-used and recycled products, etc. A souvenir production-training center led by the women organization should be established in Koh Yao. The objectives of this center are as follow: to create a special task and increase the revenue to Koh Yao residents by attracting the tourists to join while expanding the length of their stay.

### **➤ Sport and Activities**

- **Snorkel Diving:** There are a number of small islands scattered around Koh Yao that are appropriate for snorkeling activities, such as Koh Khai Nai, Koh Khai

Nok, and Koh Rang Nok, Koh Hong. Long tail boat by fishermen is the most ideal way to visit these islands.

- **Sea Kayak:** There are many suitable places for sea kayaking around Koh Yao, that would help tourists who like to visit mangrove forests, capes and rocky coasts along the island. The potential places are Ao Tian, Ao Tikut, Klong Son, Laem Yai, Laem Hua Lan, Laem Pak Klong and so on.
- **Mountain Bike:** Koh Yao is the potential place for biking, since the island is a mountainous area with the tranquility and cold breeze from the sea. Visitors can bike along the coast or up to the mountain with small clay road, which were made for rubber plantation.
- **Hiking with nature study:** Resorts should provide maps, destination of the plants on the island included in the handbook. Guides, as well as, signboards for the directions and plant names should be distributed to the tourists, in order to facilitate hiking and nature study tour. Tourists can travel through out the island, especially in the forest conservation area and the part in the island with national parks.
- **Camping:** Every wild place and beach of Koh Yao is suitable for camping due to the high safety on the islands. Camping tour will be well arranged by the local operators. There are two potential places, Klong Son and Loh Paraed beaches, which is ideal for camping amidst the wilderness and would let the tourists see boars, mouse deer and other various kinds of birds. You can also take a walk on the beach and look for shells or arrange a bonfire at night.

All of these activities may increase the interest of the local people to get involved and actively participate in the tourism development. As a result, it will provide economic benefits to the local residents while maintaining the socio-cultural uniqueness of the area. Moreover, such local people's involvement would certainly help to the preservation of the environment, if and only if, they are trained and educated on how to properly manage it.



## **CHAPTER VIII**

### **CONCLUSION AND RECOMMENDATION**

#### **8.1 Conclusion**

Koh Yao has an enormous potential to become one of Thailand's major tourist spots and revenue-raiser. Its abundant natural and cultural resources, picturesque environment, relatively breath-taking unspoiled environment and almost perpetually calm waters are its major source of tourist attractions.

The Andaman Triangle aims to develop this island as a tourist hub of the Andaman cluster, in which, it will be equipped with a world-class tourism infrastructure. Still, there is a concern for an unsustainable development, which might lead to the negative impacts that have been experienced in the cases of Pattaya and Koh Phi Phi islands.

By a thorough revision on the national, provincial to local policies and plans, it is found out that these support and direct the island to focus on the nature and culture-based tourism with the active involvement of the local communities. The equal distribution of the benefits will be an incentive for the local people to join in cultivating, managing and preserving these sensitive resources for attaining the sustainable tourism development.

Based on the study, it is described that the relationship of the tourism development with the resource utilization as a means of livelihood for the local people is very dependent on these natural reserves. On the other hand, there is also an apprehension for the sustainable utilization of the community. It is believed that with the local people's consciousness on how to properly use these resources, they will be able to conserve and preserve them for the island's tourism development.

Mangroves have a high percentage on its direct utilization compared to seagrasses and coral reefs. Based on the high score garnered by the respondents who are directly using the mangroves since these are "physically close" and used by the people in their daily consumption practices, such as the mangrove firewood that are used for cooking. Despite of this high percentage, the current status of the mangroves in the area of study is now gradually recovering since the utilization has already been lessened.

The lack of effective management is still visible and the participation of the local people appears to be rather very limited. The people are aware on the environmental benefits and give very much importance on these resources in supporting their livelihoods. It is found out that the respondents believe that mangroves and coral reefs are much more important than the seagrasses. In addition, the level of awareness was significantly, correlated with the respondents' age and their educational level as well. People who belong to the age group of middle adults tend to participate more than the other groups. At the same time, environmental education will have to play an important role of any long-term development strategy in order to proactively address the potential long-run impacts on the environment.

Tourism industry is expected to contribute and improve the local economy in Koh Yao island. These economic effects of tourism development tend to be noticed by the residents and researchers alike. This is based on the relatively high percentage on the respondent's perceptions about the economic benefits that will be gained from tourism development.

Another point that needs to be made about tourism development is that it produces much less negative impacts on its social and environmental aspects. The local people believe that tourism help to improve the local authorities, government and organization management behaviors. Local government units and organizations were perceived by the people to take the lead in ensuring that the areas in Koh Yao that are of interests to the travelers are developed in a sustainable manner. Priority is given to the Tambon Administrative Organization (TAO) and followed by the local people, village header, districts offices and tourist agencies.

The SWOT analysis used is of great help in knowing the potentials of tourism development in Koh Yao island. **Strengths** refer to current positive factors, i.e., abundant natural resources, the environmental awareness and/or behavior that promote a sustainable tourism development. **Weaknesses** refer to the negative factors, i.e., lack of infrastructure support, limited education, low participation by the local community, limited number of the human resources and lack of cooperation from the local government and private sectors. **Opportunities** signify to, i.e., consistency with the national and local policy, success of ecotourism management and the potential development of Andaman cluster (Phuket, Phang Nga, Krabi) can significantly benefit to the area in both the present and into the future. Finally, **Threats** relate to the risk or fragile conditions of the socio-economic security, deterioration of marine and costal resources and land conversion, i.e., natural forest to plantation that can be potentially harmful to the utilization of the resources and sustainable tourism development.

Tourism is set to remain the backbone and one of the key producers of hard currency of Thailand's economy in the foreseeable future. However, in the short-term, the country will have to rely on the more mature, traditional destinations that have both the markets and the infrastructure, e.g. Bangkok, Phuket and their environs, to address the country's need for a revitalized tourism industry. In the meantime, all the key players: local government, responsible private industry and local communities, must begin solidifying their ties, cultivating cooperation and lay the foundation for developing emerging and potential destinations, like Koh Yao island, in a manner truly in keeping with the spirit of sustainable development.

## 8.2 Recommendation

This research is generally intended to provide a basic to initiate a sustainable tourism development in the area under study. Since the proposed strategies and tourism activities together with the government and non government agencies, were drawn from the study, the research also needs to recommend some additional preparation in creating the necessary environment to initiate the development process.

- The proposed strategies should be taken into account by the local and central agencies in order to effectively create a specific plan followed by several projects which will seek to implement all those strategies.

- A local tourism management mechanism in the study area should be set up and coordinated by the Tourism Authorities of Thailand. The management board should include representatives from several local relevant agencies which benefit from tourism such as:

1. Local government ( PAO, TAO)
2. Community development department
3. Koh Yao Municipality
4. Office of agriculture and fisheries
5. Police office
6. All communities or groups in Koh Yao, i.e. Koh Yao ecotourism club, fishing group, Housewife group and so on.

The board should advise on how to set up local regulations or guidelines for tourism business, and monitor this process.

- The tourism-supported project should aim to be community-led and community-focused in the long run. However, it is essential that people with experience and knowledge of tourism and conservation are evolved in its preparation at the initial stages.
- Tourism market research, which is crucial to determine the economic feasibility of the development projects, is the most urgent issue that has to be addressed.
- There should be an assessment of carrying capacity of the development area, which is one of the most important factors to ensure the sustainable use of marine and coastal resources. Assessing carrying capacity should include ecological, physical, and environmental parameters.
- It is also recommended to have the investigation of Marine and Land-use Zoning system adapted for conservation of natural resources. A restricted area should be identified for the need of environmental conservation.

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Tourism Authority of Thailand

URL:<http://www.tat.or.th>

**Appendix A: Coordination Schema**

<b>Objectives</b>	<b>Parameter</b>	<b>Variable</b>	<b>Value</b>	<b>Data Sources</b>	<b>Data Analysis</b>
1. Review policies, Plan, implementation guideline, and community level activities in tourism development	National level	<ul style="list-style-type: none"> <li>- Policy</li> <li>- Plan</li> <li>- Implementation guideline</li> <li>- Institutional framework</li> </ul>		Key informant interview, secondary data	Qualitative and descriptive Analysis
	Local level	<ul style="list-style-type: none"> <li>- Policy</li> <li>- Plan</li> <li>- Implementation guideline</li> <li>- Institutional framework</li> </ul>		Key informant interview, secondary data	Qualitative and descriptive Analysis
2. Community resource utilization and perception on impact of tourism development	Community level	<ul style="list-style-type: none"> <li>- Resource Utilization</li> <li>- Participation in planning and management</li> </ul>		Key informant interview, questionnaire survey	Qualitative and descriptive Analysis

	<ul style="list-style-type: none"> <li>• Social</li> </ul>	<ul style="list-style-type: none"> <li>- Support of culture and crafts</li> <li>- Evidence of culture</li> <li>- Conflict</li> <li>- Congestion</li> <li>- Irresponsible visitor behaviour</li> <li>- Commercialisation of culture</li> <li>- Crime and Prostitution</li> </ul>	<p>Qualitative</p> <p>Yes/ No</p>	<p>Key informant interview, questionnaire survey</p>	<p>Qualitative and descriptive Analysis</p>
	<ul style="list-style-type: none"> <li>• Economic</li> </ul>	<ul style="list-style-type: none"> <li>- New investment</li> <li>- Additional income source</li> <li>- Increase Employment</li> <li>- Seasonal unemployment</li> <li>- Neglecting of other economic opportunities</li> </ul>	<p>Yes/ No</p>	<p>Key informant interview, questionnaire survey</p>	<p>Qualitative and descriptive Analysis</p>
	<ul style="list-style-type: none"> <li>• Environmental</li> </ul>	<ul style="list-style-type: none"> <li>- Environmental improvement Scheme</li> <li>- Built Resource conservation</li> <li>- More solid waste</li> <li>- Sewage increase</li> <li>- Degradation of ecosystem</li> </ul>	<p>Yes/ No</p>	<p>Key informant interview, questionnaire survey</p>	<p>Qualitative and descriptive Analysis</p>

	<b>Institutional</b>	<ul style="list-style-type: none"> <li>- Organization</li> <li>- Law and regulation</li> <li>- Leadership</li> <li>- Performance</li> </ul>	<b>Yes/ No</b>  <b>Better/ Worse</b>	<b>Key informant interview, questionnaire survey</b>	<b>Qualitative and descriptive Analysis</b>
<b>3. Potential for tourism development</b>	<b>National level</b>	<ul style="list-style-type: none"> <li>- Policy</li> <li>- Plan</li> <li>- Implementation guideline</li> <li>- Institutional framework</li> </ul>		<b>Key informant interview, secondary data</b>	<b>Qualitative and descriptive Analysis</b>
	<b>Local level</b>	<ul style="list-style-type: none"> <li>- Policy</li> <li>- Plan</li> <li>- Implementation guideline</li> <li>- Institutional framework</li> </ul>		<b>Key informant interview, secondary data</b>	<b>Qualitative and descriptive Analysis</b>
<b>4. Recommendation in the management of natural resource toward sustainable tourism development based on gap analysis</b>		<ul style="list-style-type: none"> <li>-Social aspects</li> <li>-Environmental aspects</li> <li>-Economic aspects, and Institutional aspects, and technical aspects.</li> </ul>		<b>-Secondary data sources, observation, questionnaire survey, key informant, and group discussion</b>	<b>Description</b>



**Appendix B**  
**Household Survey Questionnaire**  
**TOWARD SUSTAINABLE TOURISM DEVELOPMENT IN COASTAL ZONE**  
**Case study in Yao island, Phang Nga Province.**

Name of interviewee.....Household number.....  
 Village .....Sub district.....District.....Province.....  
 Name of interviewer..... Date.....

**Part 1: General Information**

1 Sex

Male                       Female

2. Religion

Buddhism                       Islam                       Other.....

3. Marital status

Single                       Married                       Divorce                       Widow

4. Status in family

Head of household                       Member, please specify.....

5. Occupation

Agriculture.....                       Fishing                       Coastal aquaculture  
 Government/state enterprise official                       Tourism business.....  
 General labor.....                       Other.....

6. Total number of member in household.....persons:    male..... female .....

7. Details of family members (including interviewee) on age, sex, relation with interviewee, education, main and secondary occupation in the past and present (using time period), and health (specify name).

No.	Age	Sex	Relation	Education Level	Occupation -3 yrs ago		Occupation-present		Routine Disease
					Main	Secondary	Main	Secondary	
1									
2									
3									
4									
5									

Remark: First row for interviewee.

8. Income from main occupation, specify.....amount.....Baht/year.

Income from secondary occupation, specify.....amount.....Baht/year.

9. Are you original people of Yao Island?

1. Yes.                       2. No, please specify where did you come from? .....

Reason of emigration.....

10. How many years did you live in Yao Island? ..... years

**Part 2: Impact of Tourism development on community**

1. Is anyone is your family involving in tourism business?

- Yes. How many year.....                       No
- Homestay                       Boat man
- Guesthouse                       Motor Taxi
- Hotel                       Car Taxi
- Restaurant                       Fruit seller
- Resort                       Handicraft
- Tour Operator
- Tour Guide

2. Impact of tourism development on community

Impact	Yes			No
	L	M	H	
<b>Social Impact</b>				
Tourism Supports to your culture and crafts				
Tourism create social mix				
Tourism show your evidence of culture				
Tourism create conflict among local and tourist				
Tourism cause congestion				
There is irresponsible visitor behavior				
There is Commercialization of culture				
Tourism result in Crime and Prostitute				
<b>Economic Impact</b>				
Tourism brings the new investment				
Tourism is an additional income source				
Tourism increase Employment				
Tourism my cause seasonal unemployment				
Tourism neglect other economic opportunities				
<b>Environmental Impact</b>				
Tourism improve your environment schemes				
Tourism built Resource conservation				
Tourism create money for conservation				
Tourism result in more solid waste				
Tourism cause sewage increase				
Tourism cause loss of biodiversity				
Tourism cause coastal ecosystem degrade				

Tourism cause more pollution (air, water)				
<b>Institutional impact</b>				
Tourism help Organization to improve				
Tourism improve Law and regulation				
Tourism improve Leadership of community and authority				
Tourism improve Performance of community and authority				

**Part 3. Information on Resource Utilization**

**Mangrove resource**

1. Do you use the resources of mangrove forest? .....Yes / .....No

2. How do you use the mangrove area and for what purposes and who does it?

2.1 For fishing:

- Manual push net fishing.....
- Motorised push nets fishing.....
- Other kinds of fishing.....

2.2. For aquaculture:

- Crab caging.....
- Crab farming.....
- Shrimp production.....

3. Other purposes (please tick by the row)

Description of Activities	Who does it?
<input type="checkbox"/> Collection of fry/ seed for sale	
<input type="checkbox"/> Food and wood collection for households	
<input type="checkbox"/> Building materials	
<input type="checkbox"/> Materials for fishing equipment	
<input type="checkbox"/> Medicines and herbs	
<input type="checkbox"/> Honey bee production	
<input type="checkbox"/> Other (please specify)	

4. What do you think would happen if the mangrove disappeared? (Please, tick below)

- Rice production low
- Fish catch decrease
- Susceptible to storm surge
- Coastal erosion
- Sedimentation
- Other (specify).....

5. How mangrove forests are important for your community? (Please, tick in the box)

- None     very little     little     Much     Very much

Reason:.....

**Sea grass:**

1. Do you use the resources of Sea grass ? .....Yes / .....No

2. How do you use the seagrass area and for what purposes and who does it?

2.1 For fishing:

- Manual push net fishing.....
- Motorised push nets fishing.....
- Trap fishing .....
- Other kinds of fishing.....

3. Other purposes (please tick by the row)

Description of Activities	Who does it?
<input type="checkbox"/> Collection of fry/ seed for sale	
<input type="checkbox"/> Medicines and herbs	
<input type="checkbox"/> Other (please specify)	

4. What do you think would happen if seagrass disappeared? (Please, tick below)

- Fish catch decrease
- Coastal erosion
- Water quality decrease
- Other (specify).....

5. How Seagrass beds are important for your community? (Please, tick in the box)

- None     very little     little     Much     Very much

Reason:.....

**Coral Reef:**

1. Do you use the coral resource? .....Yes / .....No

2. How do you use the coral reef area and for what purposes and who does it?

2.1 For fishing:

- Manual push net fishing.....
- Motorised push nets fishing.....
- Trap fishing .....
- Other kinds of fishing.....

3. Other purposes

Description of Activities	Who does it?
<input type="checkbox"/> Collection of fry/ seed for sale	
<input type="checkbox"/> Medicines	
<input type="checkbox"/> Selling as Souvenir	
<input type="checkbox"/> Other (please specify)	

4. What do you think would happen if the coral reefs disappeared? (Please, tick below)

- Fish catch decrease
- Coastal erosion

Water quality decrease

Other (specify).....

5. How coral reefs are important for your community? (Please, tick in the box)

None    very little     little     Much     Very much

Reason:.....

**Opinion on resource for tourism**

1. What is the major resource that attracts tourist to visit Yao Island? (Can select more than one choice)

- ( ) 1. Natural view                      ( ) 2. Sea water                              ( ) 3. Local people
- ( ) 4. Inland forest                      ( ) 5. Islands around Yao Island        ( ) 7. Mangrove forest
- ( ) 8. Beach                                ( ) 9. Coral reef                              ( ) 10. History
- ( ) 11. Cultural                            ( ) 12. ....

2. What is the condition of those resource

Resources	Condition of Resource			Reason
	Increase	Same	Decrease	
1. Quantity of Mangrove flora				
2. Diversity of mangrove flora				
3. Quantity of aquatic animal				
4. Diversity of aquatic animal				
5. Quantity of land animal				
5. Diversity of land animal				
6. Quantity of reptiles				
7. Diversity of reptiles				
8. Quantity of coral reef				
9. Diversity of coral reef				
10. Quantity of Seagrass				
11. Diversity of Seagrass				

**Part 4: Participation of Local People in Community**

1. Do your community have any group?

No.     Yes, specify.....

2. Have you been participated in above group?

Never     Yes, specify position

General member

Committee

Chairman

3. Have you been participated in planning process in activity of community?

- Never     Yes, characteristic of participation
- Listen     Thinking and offering     Expressing opinion

4. Have you been participated in operation process in activity of community?

- Never     Yes, characteristic participation and frequency (times/year)
- Force.....     Material.....     Money.....

5. Have you been received benefits from group or activity that you have been participated?

- Never     Yes, level of received benefit
- Low     Medium     High

6. Have you been participated in evaluation process for activity of community?

- Never     Yes, characteristic of participation
- Listening     Offering     Monitoring

7. Who is should to take care tourism in Yao island? (can select more than one)

- Local people     Head of village     TAO
- Travel businessman     Forest officers     TAT officers
- Other.....

Please list the organization that should to have the most role in taking caretourism development in Yao island

1)..... 2)..... 3).....

Why? (for the first rank).....

8. Suggestion and recommendation

.....

.....

.....

## **Checklist for community leader**

1. Name of respondent:.....
2. Location: Village:..... Commune..... District:.....
3. Occupation.....
4. How many people in your village.....
5. How do you think about tourism in your village?
6. How do you think about land use in your area?
7. Do you know of any impact of the development on the coastal natural resource?
8. Can you describe about tourism development on your community?
9. What your suggestion for solution?
10. Who should responsible for tourism development?
11. What kind of resource important to your community and how they are utilized? Do you think that is sustainable? What your suggestion?
12. Do your community need the tourism development?
13. How should those resources be preserved for tourism?
14. Do you think your community has any role in tourism development?
15. What are the problems and constraints your community encounters?
16. Do your community member participating in conservation of those resources?  
Pattern of participation, level, satisfaction of benefit sharing?
17. What your vision of tourism development in the future?

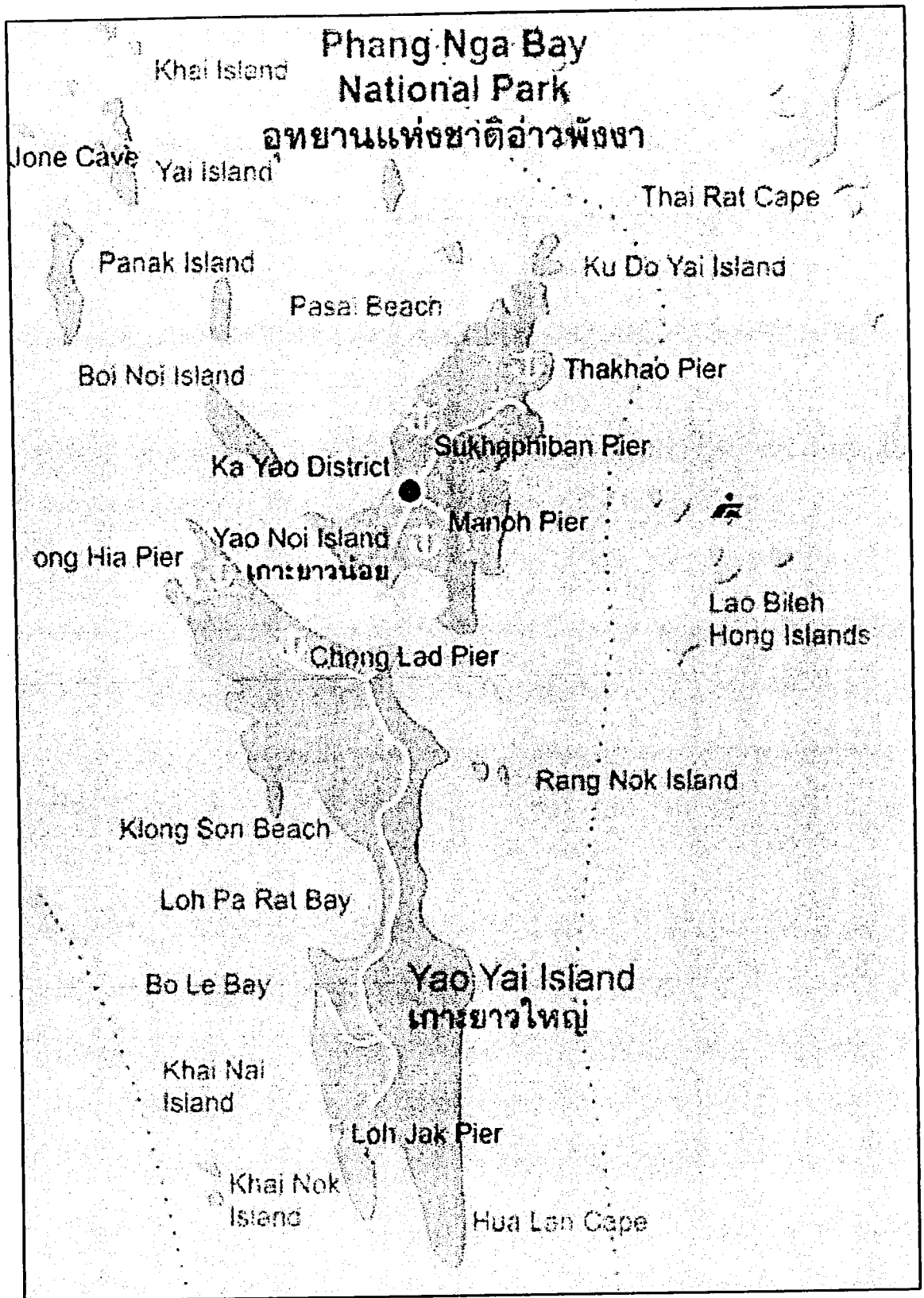
## Checklist for PAO, TAO

1. Name of respondent:.....
2. Position/ responsibility:.....
3. Do you have any plan for tourism development in koh yao ? in what vision?
4. What available tourism resource and facilities?
5. Is there any conflict of resource use between tourism and other local people?
6. What do you know about impact of tourism development?
7. Who should involve in planning and management of tourism development?
8. Koh yao is in Adaman triangle which composed of Krabi, Phang Nga and Phuket,  
How the three province cooperate in tourism development.
9. How the institutional framework should be arranged in cluster to achieve tourism  
development in koh yao (Policy and Mechanism)
10. What should be done to achieve tourism development in koh Yao?
11. Do you give importance to community in involvement of tourism development?  
How?

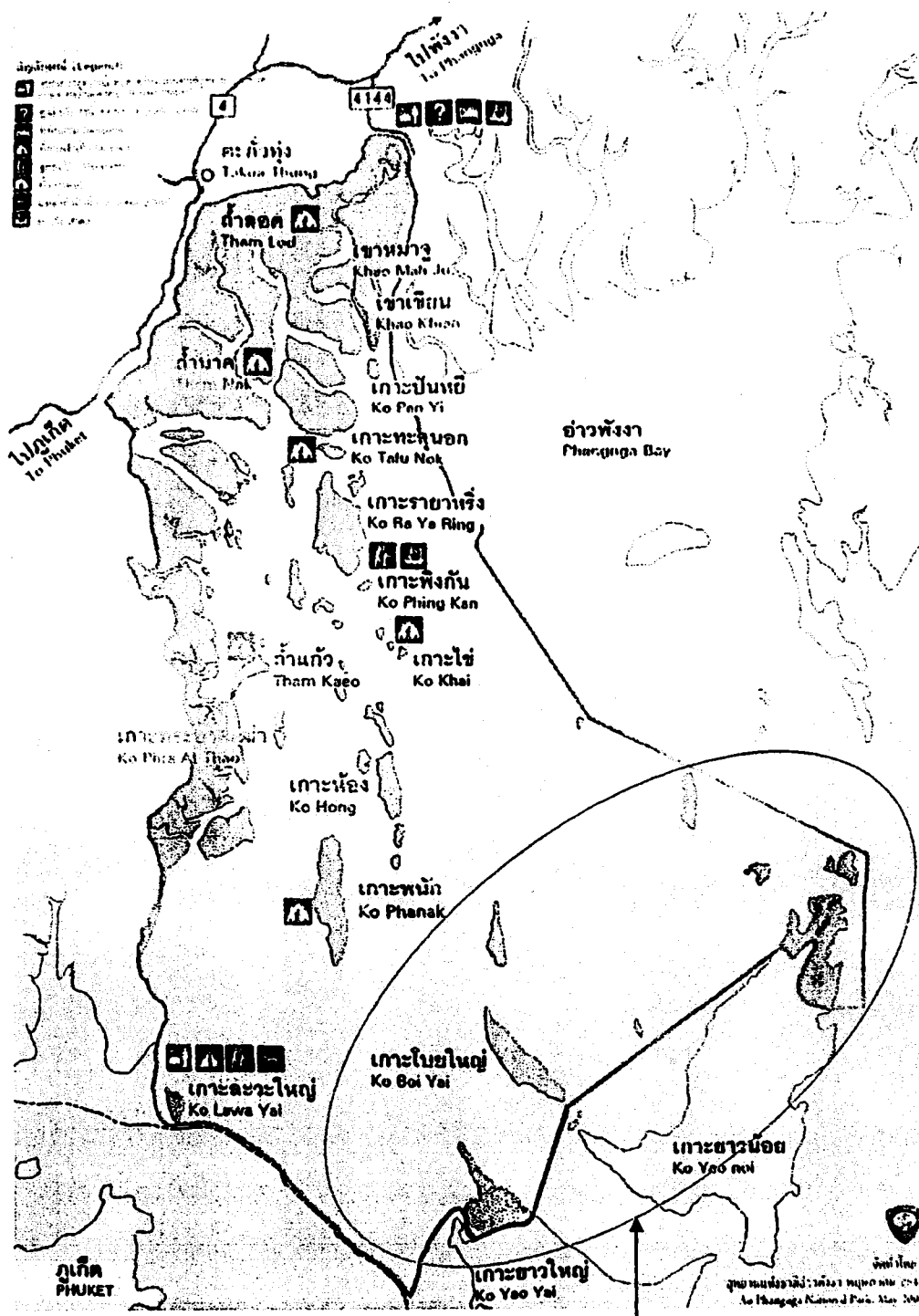


### **Checklist for Relevant Tourism Government Officers**

1. Name of respondent:.....
2. Position/ responsibility:.....
3. Institution/ Agency:.....
4. What kind of relationship does your office have with the tourism? Please specify.
5. How long has this relationship existed?
6. Please identify the significance of relationship between your office and tourism in Koh Yao? ( ) Necessary ( ) Not necessary ( ) Uncertain
7. Do you think the resource in Koh Yao are very important fro community livelihood? How?
8. Do you think tourism would sustain if no coastal resources? How?
9. What are the main type of resource that important for tourism development ? Please list by order.....
10. In your opinion how to make the resource use sustainable?
11. Did you counter any problems / constraints in collaboration with other agencies?
12. What are solution and suggestion?
13. What is your vision of tourism in Koh Yao in the future?

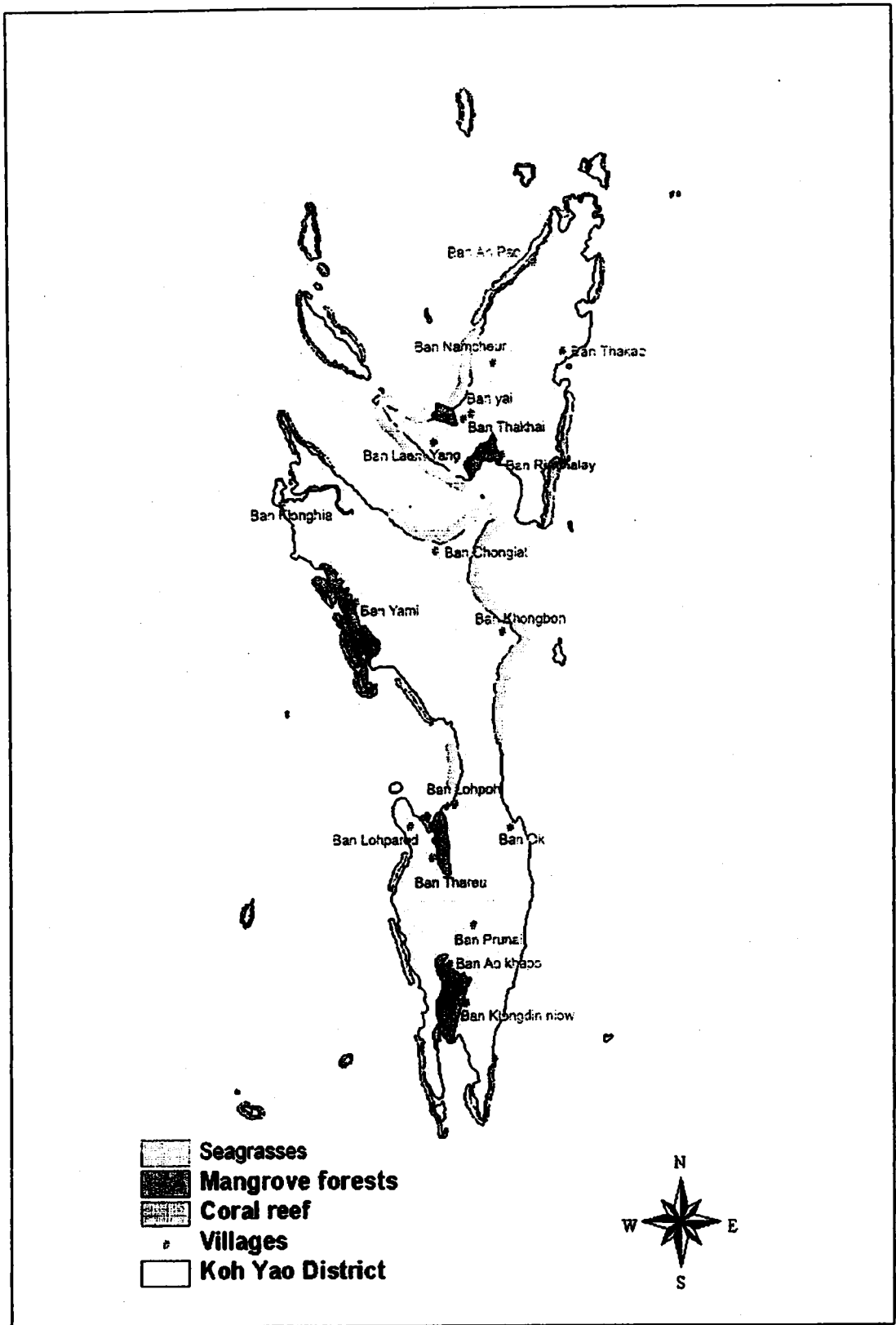


Map of Potential attraction Places in Koh Yao



Part of Koh Yao in  
Ao Phang Nag National

Map of Ao Phang Nag National Park included part of Koh Yao



Map of Some Coastal Natural Resources in Koh Yao



Arial Photograph of Koh Yao



**Ecotourism  
Activities  
(Tourist Come to  
Stay at  
Bunglaow**



**Rubber Dry for  
tourist visiting**



**Tourist enjoying local  
fresh seafood**



**Kayaking at Mangrove forest**

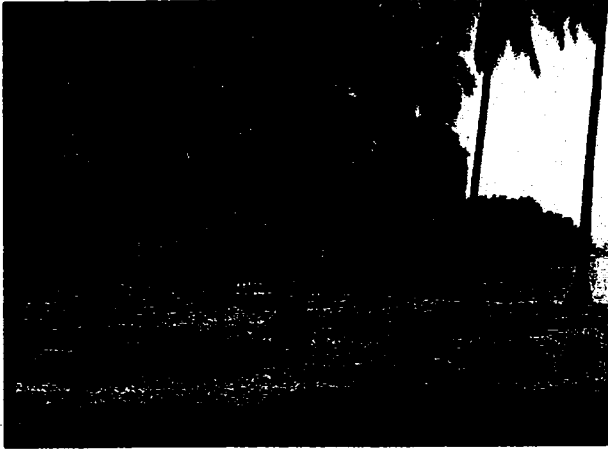


**Traditional lifestyle  
(Raising buffalo)**



**Sunset at Koh Yao**

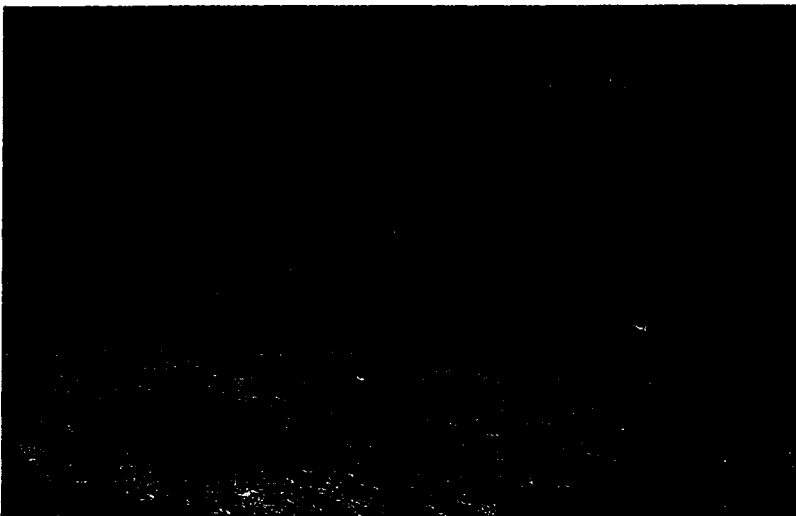
**Autopumping wells in Koh Yao**



**Beach in front of Paradise resort, Koh Yao Noi**

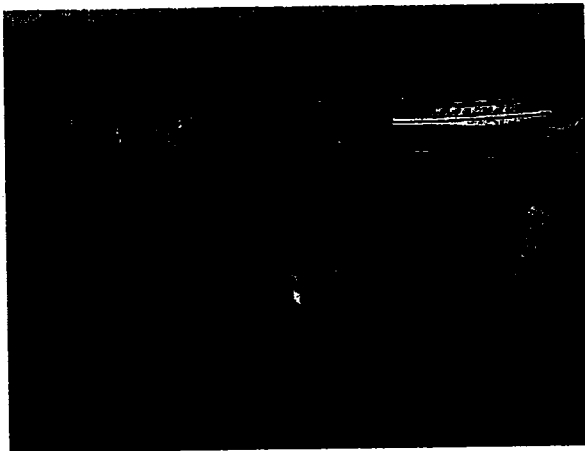


**Passenger Boat from  
Thalane pier in  
Krabi, to Koh Yao**

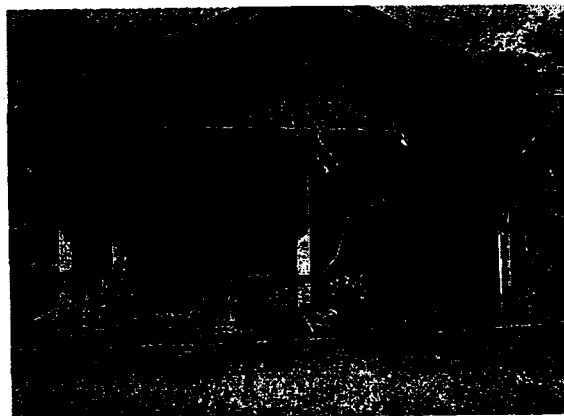


**View of surrounding  
islands of Koh Yao  
(From Klong Bon  
village)**





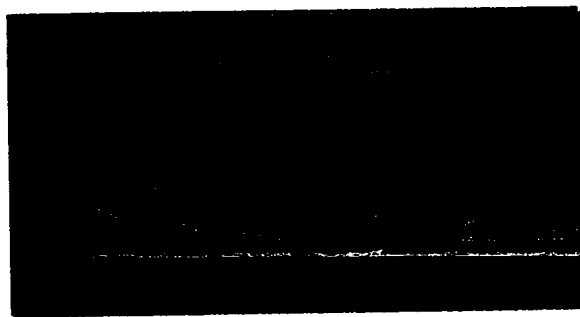
Seagrass bed at Low tide ( Klong Hier pier)



Housewife group center at Tha Khao pier



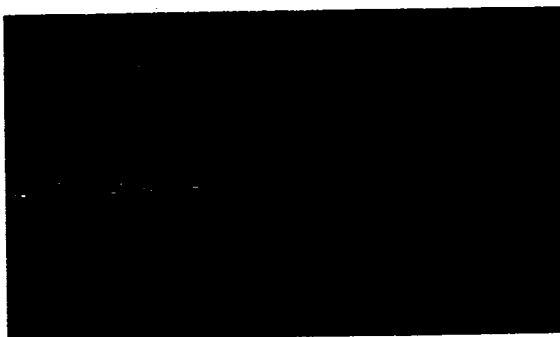
Koh Hong, Popular snorkeling island near Koh Yao Noi



View from the sea of Paradise resort

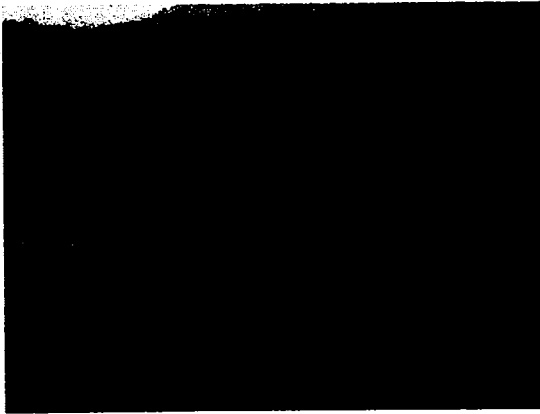


Thamanok Pier (Koh Yao Noi to Phuket)

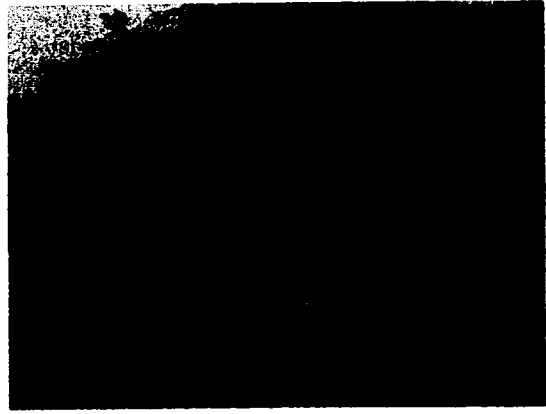


Cage-culture in Koh Yao Yai





**Raising Buffaloes in Koh Yao Noi**



**Rubber Plants in Koh Yao Yai**



**Mangrove forest at Ban Laem Yang**



**Batik Paining in Tha Khao  
housewife group**



**Meeting of tourist and homestay group at  
Koh Yao Noi Ecotourism Club**



**Research Team interviewing the  
villagers**

## DOMESTIC TOURISM IN KRABI (1998-2002)

Type of Data	1998	Δ (%)	1999	Δ (%)	2000	Δ (%)	2001	D (%)	2002	D (%)
Visitor	1,003,742	+ 43.10	1,096,952	+ 9.29	1,236,229	+ 12.70	1,356,960	9.77%	1,458,771	+ 7.50
Thai	507,485	+ 28.23	565,930	+ 11.52	591,149	+ 4.46	591,372	0.04%	575,009	- 2.77
Foreigners	496,257	+ 62.34	531,022	+ 7.01	645,080	+ 21.48	765,588	18.68%	883,762	+ 15.44
Tourist	812,956	+ 24.02	892,325	+ 9.76	1,024,430	+ 14.80	1,133,383	10.64%	1,219,468	+ 7.60
Thai	423,151	+ 16.65	472,068	+ 11.56	496,093	+ 5.09	495,046	-0.21%	478,822	- 3.28
Foreigners	389,805	+ 33.14	420,257	+ 7.81	528,337	+ 25.72	638,337	20.82%	740,646	+ 16.03
Excursionist	190,786	+ 315.48	204,627	+ 7.25	211,799	+ 3.50	223,577	5.56%	239,303	+ 7.03
Thai	84,334	+ 155.56	93,862	+ 11.30	95,056	+ 1.27	96,326	1.34%	96,187	- 0.14
Foreigners	106,452	+ 724.00	110,765	+ 4.05	116,743	+ 5.40	127,251	9.00%	143,116	+ 12.47
Average Length of Stay (Day)	4.30	-	4.74	-	4.22	-	4.38	-	4.50	-
Thai	3.49	-	4.01	-	3.28	-	3.37	-	3.44	-
Foreigners	5.18	-	5.56	-	5.10	-	5.16	-	5.19	-
Average Expenditure (Baht/Person/Day)										
Visitor	1,234.44	+ 3.09	1,963.51	+ 59.06	2,462.05	+ 25.39	2,530.23	2.77%	2,518.31	- 0.47
Thai	1,285.26	+ 7.02	1,651.08	+ 28.46	2,200.32	+ 33.27	2,260.25	2.72%	2,191.43	- 3.04
Foreigners	1,182.46	- 0.88	2,192.20	+ 85.39	2,701.90	+ 23.25	2,738.78	1.36%	2,730.99	- 0.28
Tourist	1,352.37	+ 9.99	2,163.11	+ 59.95	2,637.63	+ 21.94	2,728.88	3.46%	2,711.80	- 0.63
Thai	1,360.80	+ 10.56	1,742.35	+ 28.04	2,283.75	+ 31.07	2,370.06	3.78%	2,316.90	- 2.24
Foreigners	1,343.20	+ 9.39	2,503.98	+ 86.42	2,969.92	+ 18.61	3,007.16	1.25%	2,967.09	- 1.33
Excursionist	731.96	- 1.09	1,093.11	+ 49.34	1,622.54	+ 48.43	1,523.19	-6.12%	1,532.37	+ 0.60
Thai	906.25	+ 3.91	1,192.07	+ 31.54	1,764.85	+ 48.05	1,695.91	-3.91%	1,566.83	- 7.61
Foreigners	593.90	+ 47.83	1,009.25	+ 69.94	1,488.92	+ 47.53	1,392.45	-6.48%	1,509.20	+ 8.38
Revenue ( Million Baht )										
Visitor	4,473.67	+ 45.87	9,372.80	+ 109.51	12,089.93	+ 28.99	14,199.63	17.45%	15,593.33	+ 9.82
Thai	1,982.63	+ 33.98	3,410.14	+ 72.00	3,883.85	+ 13.89	4,117.35	6.01%	3,970.41	- 3.57
Foreigners	2,491.04	+ 56.97	5,962.66	+ 139.36	8,206.08	+ 37.62	10,082.28	22.86%	11,622.92	+ 15.28
ACCOMMODATION ESTABLISHMENTS										
Establishments	108	+ 27.06	105	- 2.78	131	+ 24.76	183	39.69%	290	+ 58.47
Rooms	4,251	+ 17.46	4,143	- 2.54	4,873	+ 17.62	6,024	23.62%	9,088	+ 50.86
Occupancy Rate ( % )	47.59	+ 6.38	48.61	+ 1.02	54.55	+ 5.94	55.42	1.59%	43.22	- 12.20
Average Length of Stay (Day)	2.03	-	1.99	-	2.24	-	2.86	27.68%	2.68	-
Number of Guest Arrivals	674,867	+ 26.69	714,953	+ 5.94	801,032	+ 12.04	907,280	13.26%	983,900	+ 8.45
Thai	285,575	+ 18.88	307,468	+ 7.67	326,821	+ 6.29	329,331	0.77%	317,066	- 3.72
Foreigners	389,292	+ 33.11	407,485	+ 4.67	474,211	+ 16.38	577,949	21.88%	666,834	+ 15.38

## DOMESTIC TOURISM IN PHANG-NGA 1999-2000

Type of Data	1999	2000	Δ (%)	2001	Δ (%)	2002	Δ (%)
Visitor	1,702,929	1,875,404	+ 10.13	2,002,747	6.36%	2,328,190	+ 16.25
Thai	556,591	597,940	+ 7.43	572,953	-4.36%	644,601	+ 12.51
Foreigners	1,146,338	1,277,464	+ 11.44	1,429,794	10.65%	1,683,589	+ 17.75
-----							
Tourist	338,887	369,493	+ 9.03	395,188	6.50%	479,029	+ 21.22
Thai	245,558	229,642	- 6.48	217,254	-5.70%	247,093	+ 13.73
Foreigners	93,329	139,851	+ 49.85	177,934	21.40%	231,936	+ 30.35
-----							
Excursionist	1,364,042	1,505,911	+ 10.40	1,607,559	6.32%	1,849,161	+ 15.03
Thai	311,033	368,298	+ 18.41	355,699	-3.54%	397,508	+ 11.75
Foreigners	1,053,009	1,137,613	+ 8.03	1,251,860	9.13%	1,451,653	+ 15.96
-----							
Average Length of Stay (Day)	2.77	2.59	-	3.64	-	3.84	-
Thai	2.81	2.47	-	2.50	-	2.56	-
Foreigners	2.66	2.79	-	5.03	-	5.21	-
-----							
Average Expenditure ( Baht/Person/Day )							
Visitor	1,119.14	1,697.10	+ 51.64	1,662.48	-2.08%	1,711.23	+ 2.93
Thai	1,352.21	1,595.99	+ 18.03	1,590.48	-0.35%	1,604.12	+ 0.86
Foreigners	1,009.41	1,744.43	+ 72.82	1,691.33	-3.14%	1,752.25	+ 3.60
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Tourist	2,242.92	2,050.84	- 8.56	2,023.86	-1.33%	2,027.02	+ 0.16
Thai	1,966.33	1,862.61	- 6.23	1,862.94	1.08%	1,883.55	+ 0.03
Foreigners	2,960.10	2,359.91	- 20.28	2,195.95	-7.47%	2,179.85	- 0.73
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Excursionist	839.95	1,520.20	+ 80.99	1,573.62	3.39%	1,629.45	+ 3.55
Thai	851.58	1,429.74	+ 67.89	1,411.86	-1.27%	1,430.43	+ 1.32
Foreigners	836.52	1,668.77	+ 99.49	1,619.59	-3.04%	1,683.93	+ 3.97
-----							
Revenue ( Million Baht )							
Visitor	3,251.19	4,484.27	+ 37.93	5,517.79	18.73%	6,838.64	+ 23.94
Thai	1,635.47	1,557.04	- 4.80	1,524.89	-2.11%	1,760.07	+ 15.42
Foreigners	1,615.72	2,927.23	+ 81.17	3,992.90	26.69%	5,078.57	+ 27.19
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ACCOMMODATION ESTABLISHMENTS							
Establishments	51	73	- 30.14	51	-43.14%	93	+ 82.35
Rooms	1,065	1,873	+ 75.87	1,636	-14.49%	2,591	+ 58.37
Occupancy Rate ( % )	43.08	49.21	+ 6.13	50.97	3.45%	50.50	- 0.47
Average Length of Stay (Day)	1.75	2.25	-	3.02	25.50%	4.47	-
Number of Guest Arrivals	201,578	225,297	+ 11.77	241,084	6.55%	315,086	+ 30.70
Thai	129,370	125,552	- 2.95	115,278	-8.91%	137,475	+ 19.26
Foreigners	72,208	99,745	+ 38.14	125,806	20.72%	177,611	+ 41.18

## DOMESTIC TOURISM IN PHUKET 1988-2002

Type of Data	1998	Δ (%)	1999	Δ (%)	2000	Δ (%)	2001	Δ (%)	2002	Δ (%)
Visitor	2,660,420	+ 10.78	3,083,208	+ 15.89	3,459,573	+ 12.21	3,789,660	9.54%	3,990,702	+ 5.31
Thai	779,167	+ 4.21	915,406	+ 17.49	961,093	+ 4.99	1,077,275	12.09%	1,164,560	+ 8.10
Foreigners	1,881,253	+ 13.75	2,167,802	+ 15.23	2,498,480	+ 15.25	2,712,385	8.56%	2,826,142	+ 4.19
Tourist	2,629,938	+ 11.01	2,964,327	+ 12.71	3,334,613	+ 12.49	3,656,859	9.66%	3,854,054	+ 5.39
Thai	750,922	+ 4.61	846,463	+ 12.72	890,742	+ 5.23	1,002,186	12.51%	1,087,704	+ 8.53
Foreigners	1,879,016	+ 13.80	2,117,864	+ 12.71	2,443,871	+ 15.39	2,654,673	8.63%	2,766,350	+ 4.21
Excursionist	30,482	- 6.53	118,881	+ 290.00	124,960	+ 5.11	132,801	6.27%	136,648	+ 2.90
Thai	28,245	- 5.45	68,943	+ 144.09	70,351	+ 2.04	75,089	6.73%	76,856	+ 2.35
Foreigners	2,237	- 18.30	49,938	+ 2,132.36	54,609	+ 9.35	57,712	5.68%	59,792	+ 3.60
Average Length of Stay	4.30	-	5.07	-	4.90	-	4.96	-	4.95	-
Thai	2.85	-	3.51	-	3.57	-	3.63	-	3.72	-
Foreigners	4.88	-	5.70	-	5.38	-	5.46	-	5.43	-
Average Expenditure ( Baht/Person/Day )										
Visitor	3,408.06	+ 18.97	3,630.67	+ 6.53	3,645.60	+ 0.41	3,671.42	0.71%	3,641.74	- 0.81
Thai	2,335.18	+ 16.62	2,540.69	+ 8.80	2,750.12	+ 8.24	2,742.40	-0.28%	2,704.25	- 1.39
Foreigners	3,852.43	+ 18.38	3,920.51	+ 1.77	3,990.07	+ 1.77	4,040.41	1.26%	4,028.04	- 0.31
Tourist	3,439.48	+ 18.78	3,690.09	+ 7.29	3,655.80	- 0.93	3,736.72	2.21%	3,704.06	- 0.87
Thai	2,396.96	+ 16.34	2,581.49	+ 7.70	2,841.92	+ 10.09	2,829.06	-0.45%	2,782.24	- 1.65
Foreigners	3,856.12	+ 18.33	3,958.73	+ 2.66	4,029.34	+ 1.78	4,079.39	1.24%	4,066.52	- 0.32
Excursionist	697.38	+ 14.70	2,148.95	+ 208.15	2,060.79	- 4.10	1,873.32	-9.10%	1,883.61	+ 0.55
Thai	692.65	+ 13.91	2,039.80	+ 194.49	1,587.90	- 22.15	1,585.72	-0.14%	1,600.40	+ 0.93
Foreigners	757.07	+ 22.07	2,299.65	+ 203.76	2,233.15	- 2.89	2,247.53	0.64%	2,247.63	+ 0.00
Revenue ( Million Baht )										
Visitor	42,692.48	+ 43.09	55,714.36	+ 30.50	62,248.70	+ 11.73	69,669.34	11.92%	72,599.42	+ 4.21
Thai	5,034.38	+ 22.34	7,810.46	+ 55.14	9,148.88	+ 17.14	10,410.98	13.80%	11,380.69	+ 9.31
Foreigners	37,658.10	+ 46.41	47,903.90	+ 27.21	53,099.82	+ 10.85	59,258.36	11.80%	61,218.73	+ 3.31
ACCOMMODATION ESTABLISHMENTS										
Establishments	293	0	303	+ 3.41	344	+ 13.53	510	48.26%	510	0
Rooms	17,952	- 5.31	20,150	+ 12.24	19,574	- 2.86	26,759	36.71%	26,637	- 0.46
Occupancy Rate ( % )	58.87	+ 4.87	63.40	+ 4.53	67.14	+ 3.74	58.86	-12.33%	57.00	- 1.86
Average Length of Stay	3.25	-	3.25	-	3.31	-	3.53	6.65%	3.20	-
Number of Guest Arrivals	2,343,772	+ 10.90	2,753,330	+ 17.47	2,971,211	+ 7.91	3,275,669	10.25%	3,492,324	+ 6.61
Thai	498,252	+ 1.65	675,907	+ 35.66	709,131	+ 4.92	799,940	12.81%	884,949	+ 10.63
Foreigners	1,845,520	+ 13.69	2,077,423	+ 12.57	2,262,080	+ 8.89	2,475,729	9.44%	2,607,375	+ 5.32