

**Locations of Old Villages**

- On Rawi:  
 ① Talo (Pa)Lian
- On Adang:  
 ⑬ Talo Nipabudsaw  
 ⑮ Talo Leelae  
 ⑯ Talo Jung-ngan (Aow Mae Mine)  
 ⑰ Talo Puya  
 ⑱ Talo Aye (Talo Nam)
- On Lipe:  
 ⑲ Na Ko

**Locations of *bagad* Sites**

- On Rawi:  
 ① Talo (Pa)Lian  
 ② Talo Ta-ngodalab  
 ③ Talo Ta-ngoluwo  
 ④ Talo Puloi  
 ⑤ Talo Naka  
 ⑥ Talo Guyae (Aow Kamin)  
 ⑦ Patai Yawa  
 ⑧ Patai Bawoi  
 ⑨ Patai Payad Somchai  
 ⑩ Talo Raya
- On Adang:  
 ⑬ - [ Talo Nipa Dummi  
 Talo Nipabudsaw  
 ⑭ Talo Lancha  
 ⑮ Talo Leelae  
 ⑰ Talo Aye (Talo Nam)
- On Tong (Bu Tang/Bu Tuang):  
 ⑪ Patai Dalab  
 ⑫ Patai Layer

**Locations of Current Villages**

- On Rawi:  
 -
- On Adang:  
 ⑯ Talo Jung-ngan (Aow Mae Mine)  
 ⑰ Talo Puya  
 ⑱ Talo Aye (Talo Nam)
- On Lipe:  
 ⑲ Na Ko

Figure 4.3. Locations of Old Villages, *bagad* Sites, and Current Villages

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THE URAK LAWOI AND THE COMPLEXITY OF SUSTAINABLE  
RESOURCE USE: THE POLITICAL ECOLOGY OF CHANGE IN THE  
ADANG ARCHIPELAGO, ANDAMAN SEA, THAILAND

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION  
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+

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## ABSTRACT

This dissertation examines changes in resource use and culture in the Adang Archipelago. The archipelago has been a home of the Urak Lawoi, a group of sea people who were semi-nomadic in their subsistence practice of food foraging, and became a part of Tarutao Marine National Park in 1974. With the status of a national marine park, increasing contacts with outsiders, integration into market economy, and modernization, the local ways of coastal and marine resource use have changed rapidly. The resource user groups in the Adang Archipelago include the Urak Lawoi, *taukay*, large-scale commercial fishers, governmental officers, and tourists. The relationships among them are based on highly unequal power relations with the Urak Lawoi being the one with the least power but the most affected by the ways the other groups use or manage the local resources. Despite the park status, the resource uses are becoming more competitive and conflicting. Powerful global forces linked to world market economies and mainstream modernization result in situations that are not favorable for the sustainability of the healthy ecosystems and the local culture. The problems of the resource degradation and cultural disintegration are difficult to solve and sustainable development of the Adang Archipelago is very difficult to realize because 1) low impact development alternatives require resources that are currently non-existent. 2) political structures and conflicting resource interests hinder the effective execution of the park concept, collaborative management, and empowerment of the local people, and 3) global forces are uncontrolled and unsolved by local solutions, such as the local park and people.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Problem Statement

The Urak Lawoi, a formerly semi-sea nomadic<sup>1</sup> people, have lived in the Adang Archipelago of Thailand since the beginning of 1900's. Fieldwork findings show that the relative isolation of the archipelago had general effects on low-pressure, diverse marine and coastal resource use, that was strongly linked to semi-nomadic subsistence lifestyle. However, with increasing accessibility to the archipelago and contacts with outsiders, modern technologies, the establishment of Tarutao Marine National Park, and outside economic interests are greatly accelerating the pace of change in the region. The Urak Lawoi are now facing multiple challenges. Their relationship with the local resources and their ways of life are increasingly influenced by outside forces. With the establishment of the Tarutao Marine National Park, access to and the rights to use local resources have become limited such that the nomadic way of living has been severely constrained. Large scale, organized modern fishing and the developing tourism industry have changed past patterns of resource use and perception, bringing participation in the world market economy, rapid integration into the mainstream of the 'modern' society, and causing degradation of the immediate island and marine environments. Of the several stakeholders in marine and coastal resources, the Urak Lawoi have the least negotiating power. They are often tools who serve large-scale resource extraction and exploitation by outsiders.

## **1.2 Objectives of the Study**

The coastal and marine resources of the Adang Archipelago have been variously defined and used by different groups of people. The main groups include the Urak Lawoi, *taukay* (boss or middleman in Chaochow, a dialect of Chinese), large-scale commercial fishers, governmental officials, and tourists. This dissertation research project intends to: 1) examine the traditional and present relationship of the Urak Lawoi with their coastal and marine resources; 2) investigate the relationship of other resource user groups with the resources and their actual resource use practices; 3) discern the wider impact of the user groups on the environment, relationships of the Urak Lawoi with the other groups, and the ways in which the Urak Lawoi have accommodated, adapted to, or resisted the new situations, and 4) analyze potentials and difficulties in sustaining local resources and culture in the Adang Archipelago.

## **1.3 Reason for Research Site Selection and Significance of Research**

Four years ago, I traveled to different islands and archipelagos in the region to decide upon a field research site. Typically, development planning—whether it be tourism or fishery development—begins only after adverse impacts on the environment and culture became obvious, and, in some places, irrevocable. When I came to the Adang Archipelago, I was attracted by the richness of its natural resources and the



distinctiveness of its cultural heritage. I chose it as my research site because I had hope that its natural and cultural resources could still be sustained despite the fact that in the past decade, the archipelago has become integrated into the bigger world and been affected by many outside forces. Potentials, challenges, and conflicts arise as issues of conservation and forces of economic development intersect.

The situation in the Adang Archipelago may be considered an example of the changing relationships of people and natural resources induced by economic development and meeting the new challenges of sustaining both natural resources and local culture. The process of environmental change in the Adang Archipelago is closely linked to transformations in the ways natural resources are used and managed as increasingly affected by outside influences. This research studies the relationship of the Urak Lawoi, whose livelihood until quite recently relied solely on locally available marine and coastal resources. It examines changes in this relationship, the forces of change, and the results of such changes evident in both the way of life of these people and the environment they have lived in for many decades.

On the theoretical level, this study intends to contribute to the application of the political ecological framework to marine and coastal resources, and thus differs in some important ways from studies using this framework to address the use and conservation of terrestrial resources. It also contributes to research on patron-client relationships, in particular, one in which the relationship is interdependent and voluntary. Empirically, this research

attempts to add to the knowledge of the southern coastal and maritime regions of Thailand, on which published research is scant, especially research related to developmental issues and the processes of social change (Ruohomäki 1999:196). The study is also intended to contribute to better understanding of the Urak Lawoi about whom little research has been conducted. Practically and specifically, this study aims to shed useful light on the development options that support the sustainability and integrity of local cultures, environments, and economies of the Adang Archipelago. More generally, however, this dissertation makes a contribution to knowledge of how local people's livelihood and environment in a developing society are shaped by the challenges posed by the state, modernization, and world-economy. It is hoped that the study of the processes of adaptation and resistance to the modern world by the Urak Lawoi will provide insight into the struggles of other minority groups fighting to maintain their relationship with valuable resources and the identities that depend upon such a relationship. Finally, it is hoped that studying conflicts over resource use among different groups of people, and the ways in which these conflicts have resulted in resource degradation, will point out problems of implementing the national marine park concept and sustainable development in rural areas of developing countries.

#### **1.4 Location, Geographical and Ecological Characteristics of the Research Site**

Adang and Tarutao Archipelagos make up Tarutao Marine National Park. They are located in Tambon Sarai, Amphoe Muang, Satun Province of Thailand. Tarutao, the biggest island in the park, is 26 kilometers southwest of Pak Bara Harbor in Satun

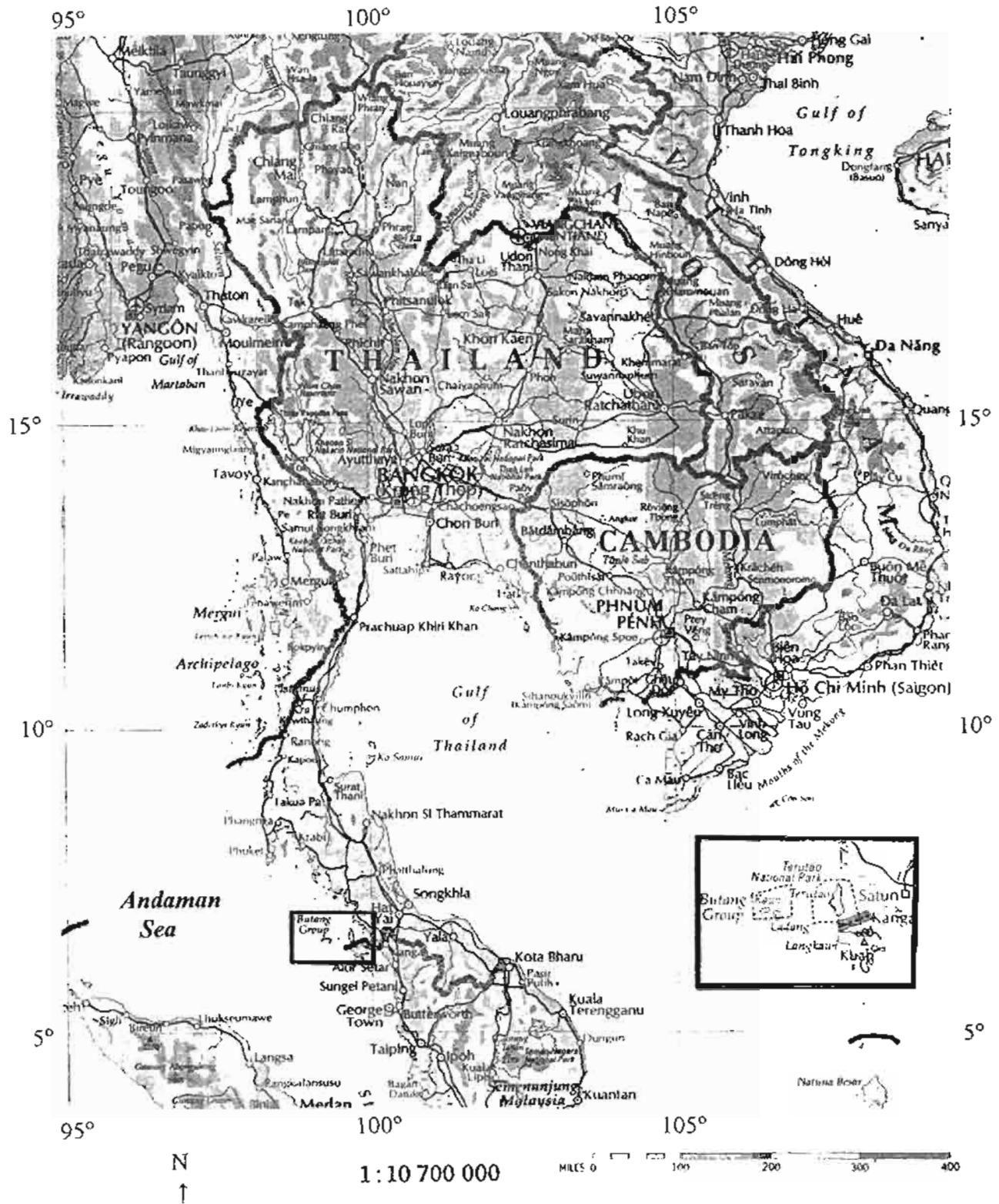


Figure 1.1. Location of Tarutao National Marine Park, Thailand

Province and 4.8 kilometers from Langkawi Island of Malaysia. The Adang Archipelago is 45 kilometers west of Tarutao Island in the southern part of Andaman Sea, a part of the Bengal Bay in the Indian Ocean, approximately 6°30'N 99°15'E (Ochieng et al. 1997:17). Tarutao, the second largest island in the Andaman Sea, is the location of the main park office. Besides the well-kept area around the park office and visitor bungalows, the island is mountainous and covered with semi-evergreen forest. “The west coast is characterized by long sandy beaches, mangrove swamps and thickly forested hills which plunge to the sea. The southern tip and the east coast, on the other hand, display craggy limestone rocks, many of them little islands standing offshore and rising as spectacular pinnacles and cliffs from the sea” (Gray et. al 1994:82-83). Tarutao offers hiking trails as well as caves to explore.

The Adang Archipelago (referred to as Butang Group on some maps) consists of two larger islands (Adang and Rawi), three moderate-sized islands (Tong/Butang/Ba Yuang, Lipe, and Bitsi), and some fifteen small islands of only a few hundred meters across (Phuket Marine Biological Center 1998:n.p.). Looking at Adang or Rawi from a boat, visitors see mountainous islands covered almost entirely with thick forest, adorned intermittently with stretches of attractive and undisturbed small beaches and little bays where the mountains meet the sea. Deep gorges mark waterways carved into the hills by monsoon rains, exposing the bare rock skeleton of the islands on some steeper slopes. Some beaches are located beneath relatively high sheer cliffs, creating particularly spectacular sites. Two adjacent beaches on the East side of Adang, separated by a rocky

area, are occupied by a small Urak Lawoi village. Mangrove areas, brackish swamps, and fresh water streams and little pools can be spotted on the coastlines. All the islands of the Adang Archipelago are surrounded by water that is crystal clear during the dry season and a large variety of corals and reef fish. The sea around the islands can have amazing variation of color shades ranging from pastel aquamarine to deep blue by the reefs.



Figure 1.2. Forest on the North Side of Adang Island

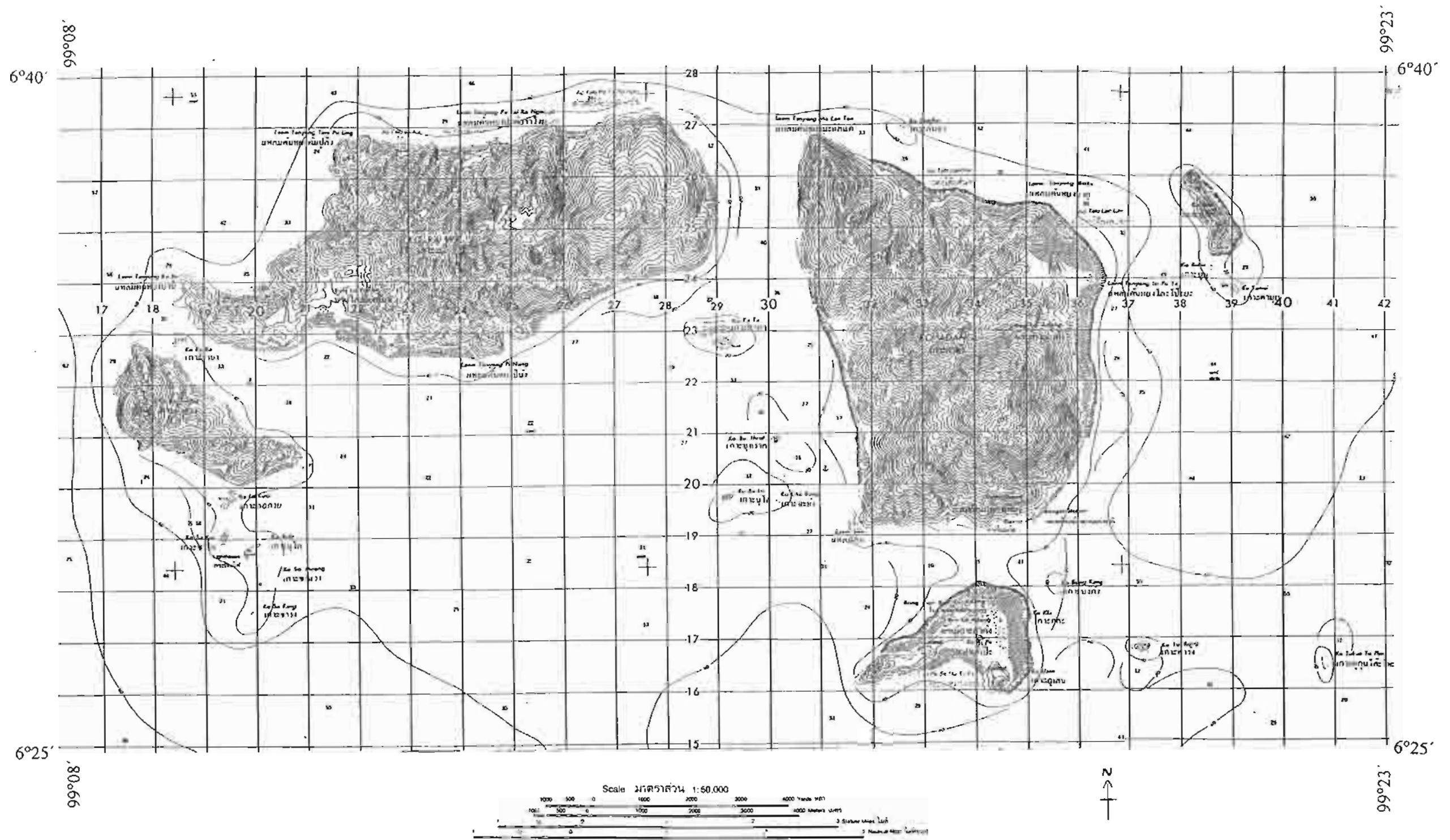


Figure 1.3. Topographic Map of Adang Archipelago

Table 1.1. Sizes of Important Islands in Tarutao Marine National Park

Island	Length in km	Width in km	Highest Point in m	Area in km <sup>2</sup>
Tarutao	26.5	11	712	151
Adang	8.7	5.1	703	29.8
Rawi	10.6	5	443	28
Lipe	3.1	1.6	110	4

Source of information on Tarutao: Dobias (1982:11) and Office of Academic Services, Chulalongkorn University (1992:2-5).

Source of information on Adang, Rawi, and Lipe: Royal Thai Survey Department (1987).



Figure 1.4. Lipe Island

Lipe, a small island located to the South of Adang, is highly populated. Human impacts have given the island a feeling or atmosphere that is different from other islands in the archipelago. The sounds of motorboats, the smell of wood burning for charcoal or garbage incineration, and the sights of villagers and visitors in the tourist areas are common scenes on Lipe. The east side, locally referred to as the “front side” of the island, is full of houses and simply built tourist bungalows. It is also the landing site of fishing boats and the location of public buildings such as the school, health center, and stores.

The islands of Tarutao National Park are geologically part of the Sunda Shelf, and once stood as hills on dry land. Rising seas, fed by the melting icecaps, cut them off from the mainland about 8,500 years ago (Gray et al. 1994:82). Geologically, the islands in the Adang Archipelago are completely different from Tarutao. Islands in the Adang Archipelago consist of rugged granite hills, with some quartzite, and shale (Department of Anthropology and Social Sciences 1992:23), with no limestone, while Tarutao consists of only limestone and sandstone (Gray et al. 1994:83). The granite mountains in Adang Archipelago originated in Cretaceous Period. The sandstone mountains in Tarutao, covering 70-75 % of the island, are from the Cambrian Period and the limestone from Ordovician Period (Office of National Environmental Board n.d.). Compared to other islands in the Adang Archipelago, Lipe has the most flat land and had the original name of Pulau Nibi (pulau = island, and nibi = flat, thin in Malay language). The beach on the east side of Lipe, where a village is located, once used to reach Kla and Usen Islands, has been receding over the years.



The archipelagos are affected by the monsoons from the northeast and southwest. The rainy season is from May through October when southwest monsoon brings rains from the Indian Ocean. During the dry season, which is from November to April, the northwest monsoon prevails, making the area suitable for tourism. In general, the annual fishing cycles coincide with the two seasons: trap fishing with the dry season, and hook and line with the wet season. Most often, the wet season is more productive with at least double the dry season harvest. In 1996, Tarutao National Park recorded an average rainfall of 2,627.9 mm per year with an average of 195 days of rain, and daily maximum and minimum of relative humidity of 90 and 62% respectively. In Satun Province, the average relative humidity is 77.86 % with the highest in October (84.22%) and lowest in February (66.52%). The hottest season occurs in March/April when the monsoon winds change direction. The average temperature is 27.74°C, with the highest temperature at 32.44°C in March, and lowest at 23.74°C in February (Office of Academic Services, Chulalongkorn University 1992:2-7). Tarutao, Adang, and Rawi have fresh on-land water sources all year round, while Lipe has only underground water.

The flora of the two archipelagos differ, most likely due to variant soils and topography, with taller, more species-rich forest growing in the deep, rich soils of the Adang and Rawi lowlands (Gray et al. 1994:82). Eighty-six percent of Adang and Rawi are covered with tropical rainforest, and important trees include those in the genus *Dipterocarpus* (Office of Academic Services, Chulalongkorn University 1992:2-10). On Lipe, residents reported that dense forest was cleared over 30 years ago to plant crops and create rice fields.

On land, wild boars, mouse deer, crab-eating macaques, dusky langurs, and monitor lizards are common. White-bellied sea eagles, ospreys, and reef egrets are often seen along the coasts. Hornbills, white pelican, giant ibis, woodpeckers, hawks, doves, herons, and wagtails are among the more than 100 resident and migrant bird species common to these islands (Gray et al. 1994:3-84).

The sea area, including open soft bottoms of the Adang Archipelago, covers over 310 km<sup>2</sup>. It is remarkable for the diversity of marine species, and is receiving growing interest from the scientific community, which is concerned with measuring and monitoring biodiversity. In the fish survey of the Phuket Marine Biological Center in February 1998 (Phuket Marine Biological Center 1998:n.p), a total of 288 species belonging to 54 families were identified. About 70% of a total number of species consisted of Pomacentridae or damselfishes (42 species), Gobiidae or gobies (38), Labridae or wrasses (37), Serranidae or groupers (14), Apogonidae or cardinalfishes (13), Blenniidae or blennies (12), Searidae (12), Chaetodontidae or butterflyfishes (11), Lutjanidae or snapper (10), Caesionidae or fusilier (7), and Nemipteridae or breams (7).

Over 210 coral species have been identified in Thailand, 137 species from 47 genera can be found in the Adang Archipelago (Phongsuwan and Chansang 1987:142). Typical reefs<sup>2</sup> in the area are generally found along coastlines that do not directly face the southwest monsoonal wind. Reefs in the Andaman Sea are subject to semi-diurnal tides

(Phuket Marine Biological Center 1998:n.p). Most typical reefs are found within 50-300 m range from shorelines, in a depth of 3-12 m (Phongsuwan and Changsang 1987:152). From a coral reef survey conducted in 1994 (*Appendix 1*) and February of 1998, *Porites lutea* was the most abundant species, with the average cover of 17%, while each of the other coral species hardly exceeded 1% of each transect line (Phuket Marine Biological Center 1998:n.p.). The Report on Conditions of Coastal Resources, Satun Province (Coordinating Division of National Resource and Environmental Management 1995:59) rated the condition of coral reefs at most spots in Tarutao Marine National Park as medium to degraded and very degraded. Natural phenomena, such as heavy monsoon storms in 1986 and recent infestation of star-of-thorn sea stars, have contributed to the degradation of the coral reefs and marine nursery and habitat in the area. Even though a coral reef monitoring study in 1994 showed some evidence of improved condition of the reef, when compared to a previous study in 1989 (*Appendix 2*), the most current study of 10 reefs of the Adang Archipelago reports the average ratio of live to dead coral cover of 1:1:1 on the reef flat and 1.3:1 on reef slopes<sup>3</sup> (Phuket Marine Biological Center 1998:n.p). The only reef classified as pristine is a small community of soft corals in the deep waters between Adang and Hin Ngam Islands (Rowchai 1991:414).



Figure 1.5. Reefs at Low Tide on Lipe Island

In addition to fishes and corals, there are many different kinds of arthropods and mollusks, including pearl oysters such as *Pinctada* sp. and *Pteria penguin*. *Pteria penguin*, that feed on planktons abundant in the area because of the strong current and constant exchange of water. These are often found growing on nets of traps laid in the Adang Archipelago. Three species of giant clam are commonly found in the Adang Archipelago: *Tridacna crocea*, *T. maxima*, and *T. squamosa* (Phuket Marine Biological Center 1998:n.p). Sea mammals found in the park area include manetees (*Dugong dugon*), dolphins (*Delphinus delphis*, *Stenella malayana*, *Orcaella brevirostris*, and *Sotalia* spp.) and whales (*Phueter catodon*, and *Balaenoptera acutorostrata*). Turtles include *Dermochelys coriacea*, *Chelonia mydas*, *Eretmochelys imbricata*, and *Lepidochelys olivacea* (Office of National Environmental Board n.d.: n.p.). Green turtles lay their eggs

on Son Bay of Tarutao, Kai, Adang and Rawi from September to December. According to a former school official in the Adang Archipelago, fish and turtles were very abundant in the 1950s, so that during the turtle egg-laying season, his tent on Laem Son Beach on Adang was practically surrounded by turtles at night. Today, dolphins, sea turtles, giant clams, and lobsters are among the protected species in the Adang Archipelago.

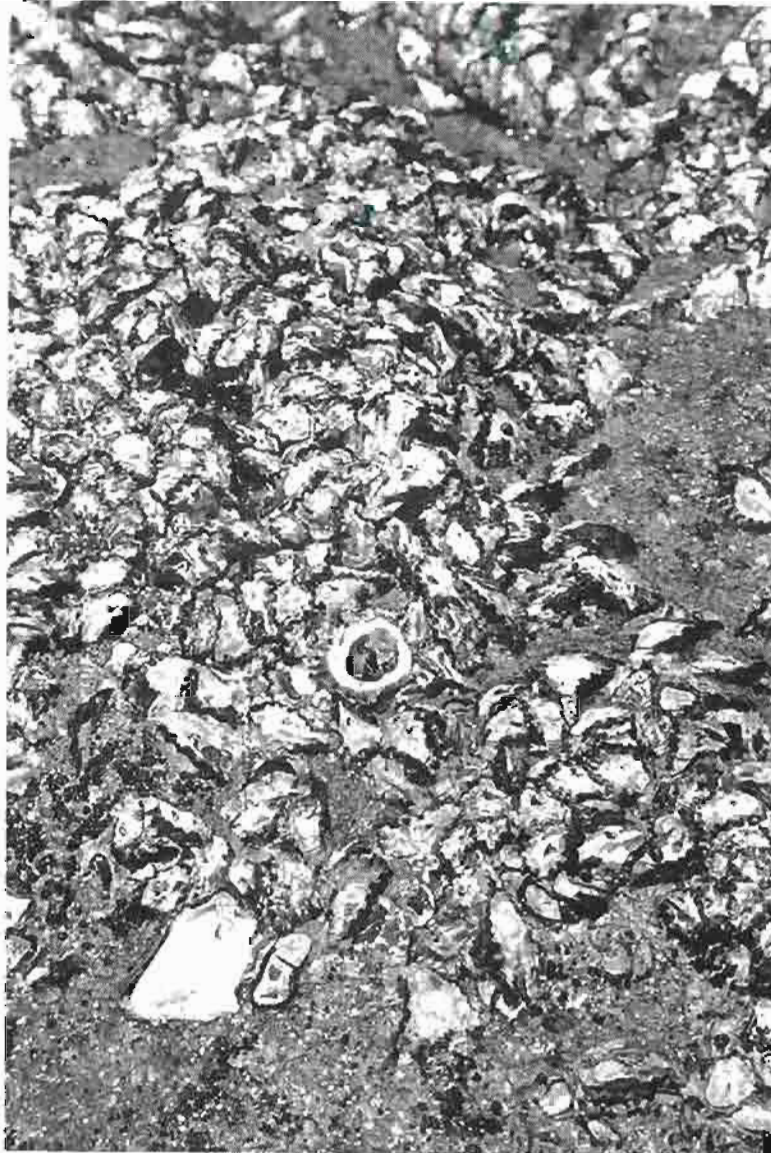


Figure 1.6. Oysters on Rawi Island

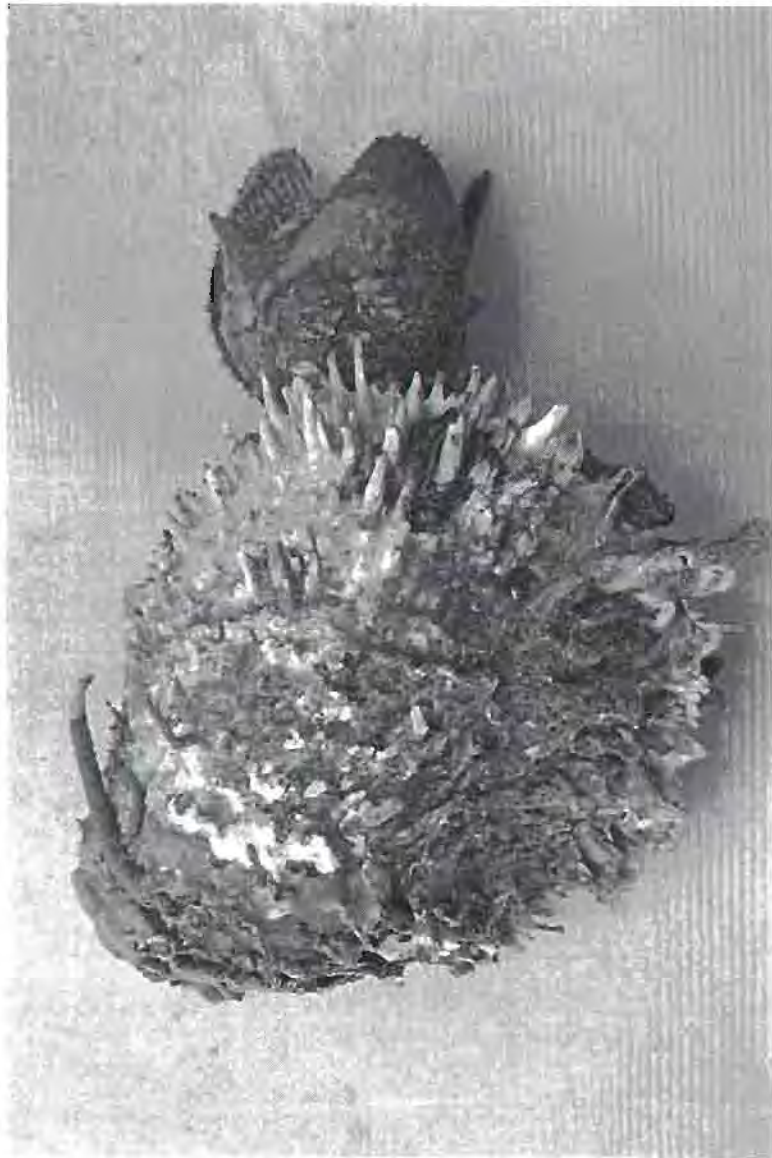


Figure 1.7. Pearl Oysters  
Top: *Pteria penguin*  
Bottom: *Pteria maxima*

As mentioned above, the Adang Archipelago is rich in marine resources. Without baseline data and comparative studies, it is difficult to determine how the coastal and marine resources in the Adang Archipelago have changed. However, with improved

transportation and technology, the resources have become increasingly accessible to different groups of people who recognize their potential for different uses. Consequently, human pressures on the coastal and marine resources have been *significant*. Severe damage of coral reefs from blast fishing, alarming decreases of the turtle population, and shortage of fresh water on Lipe island are some of the apparent examples.

### **1.5 Cultural History of Tarutao Marine National Park**

The islands in Adang and Tarutao Archipelagos used to belong to Saiburi, a Thai province that was given to Britain in 1909 and later became a part of Malaysia. In 1938, the islands were placed under the jurisdiction of Satun Province (Mahidol University: 1974, n.p.). According to the Report of Preliminary Survey of Tarutao Marine National Park (Mahidol University 1974:5, 97-98,101), the Urak Lawoi have lived on Lipe Island since the 1910's. The remote Tarutao and Adang Archipelagos were not occupied by any other people until 1939 when a penal colony was founded on Tarutao. The word tarutao comes from the Malay word meaning "old and mysterious" (Gray et. al. 1994:81) and its fame is closely related to its history as a remote penal colony from 1939-1946, and as a base of murderous sea pirates attacking commercial ships passing through the Straits of Malacca in 1944-1946. In 1939, 70 Thai political prisoners, many of whom were important politicians and military leaders of the country, were sent there. Their life stories during imprisonment and the successful escape of a group of them contributed to the fame of Tarutao. In 1941, the number of the prisoners peaked at 3,000. Many died of

malaria while some finished their sentences and left, and by 1945, only 1,200 prisoners remained (Department of Anthropology and Social Sciences 1992:48). During World War II, Tarutao prison was insufficiently supported from the mainland, leaving the wardens and prisoners to suffer from lack of food, medicine, and other supplies. To survive, some of the wardens and prisoners turned into sea pirates attacking commercial ships. It was not until 1946 that the British Royal Navy finally rid the area of pirates. After that, Tarutao was a deserted island belonging to the Department of Corrections.

In 1972, officials of the Forestry Department under the Ministry of Agriculture and Cooperatives surveyed the area and recognized high potential of Tarutao and Adang Archipelagos as a national marine park. On April 19, 1974, it became the eighth national park of Thailand and the biggest national marine park in the country, with a total of 51 islands, covering a total area of 1,490 km<sup>2</sup>, of which 1,260 km<sup>2</sup> or 85% was marine (Rowchai 1991:413). Being rich in both terrestrial and marine resources, and given its historical fame, Tarutao National Park was selected as one of the ASEAN Heritage Parks and Reserves in 1982 (Division of National Marine Park 1995:13).

## **1.6 Organization of Dissertation Chapters**

In Chapter 2, an overview of political ecology and patron-client theory is given. The chapter critically assesses the relevance of these frameworks to the dissertation research in investigating changing patterns of coastal and marine resource use and management,



ways of life of the local people and environment in the Adang Archipelago, and in evaluating the relationship among and inter-impact of different resource users.

Data collection methods for the study are described in Chapter 3. A brief overview of the fieldwork is given. Key field informants are introduced. Limitations of fieldwork are discussed. Personal experiences in the field and their impact on the research focus are presented.

In Chapter 4, the Urak Lawoi sea nomads are described. This chapter presents a review of the literature on the Urak Lawoi and relevant findings from field research. It highlights their cultural history and sedentarization in the area, their changing relationship with coastal and marine resources in the Adang Archipelago, and their economic situation.

Chapter 5 gives an overview of the coastal and marine resource users from the outside and their relationship with the coastal resources and the Urak Lawoi. These users include: 1) *taukay*; 2) large-scale commercial fishers; 3) governmental officers from the Forestry Department, Fishery Department, and the provincial government; and 4) tourists and tourism-related entrepreneurs. The chapter presents perceptions of resource use and management held by the different groups and explores complementary or conflicting uses among them. Dynamic interactions of accommodation, adaptation, and resistance of all parties, and impacts on local culture and resource use are discussed. Political ecology provides a framework to study the effect of outside forces on local human-nature

relationship, changes in their resource use, the imposition and impacts of state and private property regimes, their complete sedentarization, and their adaptation to (or resistance against) new situations. Patron-client relationships between the *taukay* or the State and the Urak Lawoi in the past and present are examined in view of the change of Urak Lawoi's subsistence economy through commercial fishing and tourism industry, leading to increased dependency among some and continuing self-reliance among others. It tells the history of the struggles among the Urak Lawoi in meeting the park rules and regulations, and the challenges of the local park officials in finding balances between executing park rules and allowing for local livelihood.

Chapter 6 uses these theoretical frameworks to analyze the local situation, and the potentials and difficulties in sustaining local resources and cultures. It examines the impacts of foreign concepts on local resource use and management, as well as problems of implementing park rules and regulations. It discusses reasons why the centralized resource management and conservation approach of a national marine park, and implementation of non-communal property regimes in the area have had little impact on sustainable resource use among the Urak Lawoi. Conflicts of park policies with economic interests, which limit the effect of the park's policies, are critically discussed here. This chapter also discusses problems of the Urak Lawoi as a food foraging<sup>4</sup> minority group, with an “in between” kind of life, as they are increasingly integrated into the modern world and adapt to modern life styles. The chapter examines the lack of Urak Lawoi participation in local leadership and community institutions and the difficulties in

participatory management in time of increasing resource competition. This section also deals with the conflicts and competition for local resources between the Urak Lawoi and the outsiders, primarily the large-scale commercial fishers and tourism developers.

Chapter 7 summarizes key findings of the research. Suggestions on how sustainable resource management and cultural conservation would ideally be realized in the Adang Archipelago are presented. Following this, a synoptic discussion of present realities in the Archipelago and how they affect the likelihood of ideally realized cultural and environmental conservation in the region is provided. Finally, the chapter ends with specific lessons learned from the research.

## **1.7 Conclusion**

The Adang Archipelago is rich with diverse coastal and marine resources and has a unique cultural history. With its recent status as a part of Tarutao Marine National Park and with increasing accessibility, changes in the local environment and the lifestyle of the local people are accelerating. In this dissertation research, I study the relationships of different resource user groups with coastal and marine resources, among themselves, and their impacts on the environment. Potentials and challenges in doing so will be analyzed to the hopeful end of conserving the natural and cultural resources of the Adang Archipelago. Political ecology and patron client theory—the theoretical frameworks used in this study-- will be introduced in the next chapter.

## CHAPTER 2 THEORETICAL FRAMEWORK

### **2.1 Introduction**

Two theoretical perspectives are used in this study: political ecology and patron-client theory. This chapter includes an overview of the theories and critical assessment of the relevance of each framework to the dissertation research. The theoretical perspectives are used in investigating changing patterns of coastal and marine resource use and management, changes in the way of life of the local people in the Adang Archipelago, and in evaluating the impacts of such changes on the local environment. In the study area, the relationships between the Urak Lawoi and the marine and coastal environment are closely intertwined with a complex discourse of power, state authority, and the growing influence of outside middlemen and the tourism industry.

### **2.2 Political Ecology**

#### **2.2.1 Principles**

Blaikie and Brookfield (1987:17) defined ‘political ecology’ as combination of “the concerns of ecology and a broadly defined political economy”. Political ecology has been used as a theoretical framework for a study to provide integrated analysis of

interdependent factors (for example, Gezon 1997; Peluso 1992c; Ciccantell 1999; Steinberg 1998; Chapman 1989; Jarosz 1993; Moore 1993; Neumann 1992).

Cultural ecology preceded political ecology and has been used by geographers and anthropologists to study the relations between a cultural group and its natural environment. It is most closely associated with the work of Julian Steward (1955) and with the study of the Third World peasants, hunter-gatherers and tribal people (Johnston et al., 1994:110). The approach is based on the fact that environment and resources are cultural appraisals and, as such, cannot be disengaged from their cultural context.

Through culture, environments are perceived and conceptually constituted, and the means and controls of resource use are organized. However, cultural ecology became the subject of growing criticism by the early 1980s as more people emphasized the need to put the anthropological insights of a given locality into a wider context of political and economic structures. The anthropological-style local research about human-environmental interaction with political and economic structural analysis is termed 'progressive contextualization' by Vayda (1983 in Bryant 1998:81). Such analysis thereafter became a key concern of political ecologists.

Prior to the development of political ecology, the focus of environmental studies was frequently on inherent natural conditions or reflection of policy failure, as frequently suggested in previous mainstream literature (Pearce et al 1990, World Bank 1992 in Bryant 1997:8). Environmental problems were expected to be solved by 'technical' policy

unrelated to social dimensions or management approaches that recognize the practices of local resource users. As a reaction to the neglect of 'the political dimensions of human/environment interactions', political ecology appears to have begun in the 1970s and 1980's (Vayda and Walters 1999:167-168).

According to the political ecology framework, "politics and environment are everywhere interconnected" (Bryant 1997:9). For its proponents: "Neither the quest for sustainable development nor the process of environmental change itself can be understood without reference to political processes" (Parnwell and Bryant, 1996:4). Politics pervades the activities of each group as well as relations between groups. Political ecology suggests that 'putting politics first' adds explanatory power to other possible interpretations of environmental change. According to this view, the sources of environmental problems, especially in the Third World, are outcome of political interests and struggles, and are embedded in political and economic structures that influence social and environmental conditions (Bryant 1997:8, 9). Environmental problems are considered too complex and deep-rooted to be solved by any technical solutions alone. The process of problem definition, and associated plans for the resolution of the problem, is itself a highly political act that may or may not be grounded in scientific 'fact'. At the same time, human-environmental interactions cannot be understood in terms of selected social concerns, such as poverty or population growth alone, without the need to grasp the nettle of political and economic interests and conflicts that are typically associated with those concerns (Bryant 1997:6).

Blaikie and Brookfield (1987) suggested that a 'chain of explanation' should be constructed, in which relationships between resource users and the physical environment are considered in their 'historical, political and economic context' (Blaikie and Brookfield, 1987:239). They wrote : “. . . we found it necessary to move not only ‘upward’ from the land manager to the social and political system, but also backward in time to understand the antecedents of modern conditions. . .” (Blaikie and Brookfield 1987:100).

Political ecology examines the resource-related actions of local people and the immediate social forces, structures and processes, which influence their every day practices. Then it links the local relations to the broader political-economic forces beyond their immediate environment, which can be found on regional, national, and global levels. Political ecologists emphasize that the Third World's environmental problems are manifestations of broader political and economic forces associated notably with the global spread of capitalism (Bryant 1998:8). Some studies adopting a political ecology framework examine the link between dependency of the Third-World economies on the integrated world market system, and describe the spatial and temporal impact of capitalism on Third World peoples and environments (eg Watts 1983; Hurst 1990; Moody 1996 in Bryant 1997:8). The development of the core countries--allegedly based on unequal exchange in marketing and trading, for instance-- has been criticized as being at the expense of Third-World peoples and resources. Other research (such as Hirsch 1993) investigates costs of development on humans and ecological systems as the economy of a country is growing rapidly.

### 2.2.2 Social Construction of Ideas, Power and Control

Among geographers, the term perception tends to be used in the sense of how things are seen by people (White 1945). Environmental perception refers to our awareness of the environment and the beliefs we have about them. It involves our feelings, reasoned or irrational, about the complex of natural and cultural characteristics of an area. The decisions people make about the use of their lives are based not necessarily on reality but on their perceptions of reality. The action resulting from a decision, on the other hand, is played out in a real environment (Getis et al 1985:407; Brookfield in Johnston 1987).

In relation to social construction of natural resources, environmental problems and solutions, Schminck and Wood (1987:51 in Bryant 1997:12) comment that ideas “either reinforce or challenge existing social and economic arrangements”. Truth and the meaning of the resource are socially and culturally constructed and can become political tools, justifying actions of a certain group in the way they use the resource. Blaikie and Brookfield (1987) note that environmental problems and solutions reflect the perceptual habits and interests of involved parties. Degradation, for example, is a perceptual term that reflects norms and values and that can be defined differently by various involved parties. For Bryant (1997:14), actors typically seek to legitimate their individual interests over the interests of other actors through an attempt to assimilate the former to ‘the common good’, a socially accepted version of events. He illustrates this with forestry resources. In addition to exerting physical control over subsistence or commercial forests



at the expense of other actors, states have also often justified their move in terms of the 'ecologically bad' practices of the latter compared with the 'ecologically good' practices of the state (Bryant 1994 in Bryant 1997:12, Peluso 1992c). At the same time, powerful non-state actors may seek to justify their actions on grounds other than self-interest, for instance, in part in terms of an 'obligation' to protect the interests of marginal members of the community, especially during times of dearth (Scott in Bryant 1997:14).

Political ecology focuses on unequal power relations. Power itself can be interpreted differently and is multidimensional, as Alford and Friedland (1985:7 in Ciccantell 1999:294) have argued:

For the pluralist perspective, power is situational and is measured by influence over the outcomes of conflictual participation. For the managerial perspective, power is structural and is observed in the capacity of politically biased state and corporate organizations to dominate each other. For the class perspective, power is systemic and is inferred from the reproduction of exploitative social relations.

For Cloke et al (1991 in Moeliono 2000:33), power might be "both authoritative meaning having power over people and allocative as having power over objects. The line between the two might become fuzzy since power over objects might lead to power over people." In the political ecological framework, power incorporates both natural and social processes. Most research with this framework is concerned with social and environmental conditions constituted through the interplay of diverse socio-political forces and unequal power relations, which determine natural resource rights, access, use, distribution,

management, and environmental change. Control over the natural and social environments is the essence of power. Some of the ways reflecting the ability of one actor to control the environment of another include attempts to control or to have power over access of others to environmental resources, to affect influence on management priorities so as to favor the allocation of financial and human resources to those environmental projects of most concern to themselves, or through indirect discursive means linked to the attempted regulation of ideas (Bryant 1997:11-12; Bryant 1998:86).

### 2.2.3 Political Ecology and the State

*Many societies and their patterns of relating with the natural environment existed long before the formation of the states under which they are now being administered. Some of these societies (including nomadic peoples) live in the areas that, until recently, have been described by Scott (1998:186) as non-state spaces. In these spaces, population was sparsely settled, typically practiced shifting cultivation, maintained a more mixed economy, and was highly mobile, thereby severely limiting the possibilities for reliable state appropriation.*

States therefore confront patterns of settlement, social relations, and production, not to mention a natural environment, that have evolved largely independent of state plans. The result is typically a diversity, complexity, and unrepeatability of social forms that are relatively opaque to the state, often purposely so. (Scott 1998:183-184).

From the vantage point of the court, such spaces and their inhabitants were the exemplars of rudeness, disorder, and barbarity against which the civility, order, and sophistication of the center could be gauged...Contemporary development

schemes, whether in Southeast Asia or elsewhere, require the creation of state spaces where the government can reconfigure the society and economy of those who are to be 'developed.' (Scott 1998:187)

The roles of states and their policies in converting non-state spaces into state spaces constitute one of the popular subjects of studies within a political ecology framework. Some studies (Johannes 1984; Peluso 1992a and 1992b; Chapman 1989; Neumann 1992) look at how the state tries to control and regulate land use and management by changing property regimes, for example, from common to state or private property, and problems arising with such change. These problems include the breakdown of pre-existing institutions, marginalization of the poor, difference between *de jure* and *de facto* property rights, and decline of resources. Some focus on the roles of the state on human-environment interaction (Guha 1989 in Bryant 1997:8; Peluso 1992c), while others investigate the vulnerability of local people and local environments to the immense power of outsiders who are driven by a desire to capitalize on short-term economic opportunities and the incentives provided by state policies (Lohmann in Shiva et al 1991; Parnwell and Bryant 1996; Homer-Dixon et. al. 1993; and Bodley 1994). According to Bryant (1992:15), the contextual sources of environmental change are related to state policies and interstate relations.

#### 2.2.4 Political Ecology, Social Justice, and Equity

Political ecology emphasizes the analytical importance of social justice and equity issues (Hecht and Cockburn 1992 in Bryant 1997:8). The pursuit of social justice is intimately

connected to rights to resources and the environment. While economic and political factors can cause the scarcity of renewable resources, scarcity can also cause powerful actors to strengthen, in their favor, an inequitable distribution of resources (Homer-Dixon, 1993:38). The distribution of resources between different uses and users is closely linked to economic and political power between classes and social groups. The unequal resource distribution is closely connected with inequalities in the society and competition for the scarce resources. The human impact of environmental change is unevenly distributed in that poor and marginalized groups usually experience most forcefully its detrimental effects (Watts 1983a). The poor are particularly vulnerable to ecological degradation and they are also threatened by changes that, superficially, might be considered environmentally beneficial (Bryant 1992:24). Stott and Sullivan (2000:4) emphasize that people in 'the South' were not degrading 'natural resources' through irrational and carelessly destructive behaviors. While both Blaikie (1985) and Blaikie and Brookfield (1987) identify the political circumstances that force people into activities causing environmental degradation because of the absence of alternative possibilities.

In Southeast Asia as elsewhere, politics plays a crucial role in the environmental transformation. In the Philippines, Indonesia, and Thailand, studies have been conducted on how *economic deprivation of the landless agricultural laborers and poor farmers* motivates them to rebel against coercive landlords or the government (Homer-Dixon 1993; Ekachai 1992).

### 2.2.5. Critique of Political Ecology

Peet and Watts (1996) accept that political ecology offers a sophisticated extension of previous efforts to integrate questions of access and control over resources. However, they argue that political ecology is a “broad and wide-ranging approach” whose theoretical coherence is questionable (Peet and Watts 1996:6). At the same time, they criticize the lack of politics in political ecology in the sense that there is “no serious attempt at treating the means by which control and access of resources or property rights are defined, negotiated, and contested within the political arenas of the household, the workplace, and the state” (Peet and Watts 1996:12). Peet and Watts (1996:37) propose a richer political ecology calling it “liberation ecology” that raises “the emancipatory potential of environmental ideas and engages directly with the larger landscape of debates over modernity, its institutions, and its knowledges”. In other words, “Liberation ecology is a discursive area rather than a doctrine, a site where the broad issues of politics and thoughts that shape and mark our time are freely and audaciously discussed in terms of their environmental applications” (Peet and Watts 1996:38).

Contrary to Peet and Watts (1996), Vayda and Walters (1999) observed that some political ecologists overemphasize political influences in such a way that other important factors and the complex and contingent interactions of factors that produce environmental changes are missed, while others focus on politics itself instead of how resources are affected by political controls or contests (Vayda and Walters 1999:168-169). They

criticize Bryant and Bailey (1997), whose book entitled Third World Political Ecology, argues for the primacy of politics in analyzing environmental change, and other political ecologists who ignore the ecological part (e.g., physical or biological parts) of political ecology. As an alternative to political ecology, Vayda and Walters (1999:168-169) suggest eventemental or event ecology, in which research is guided by open questions about why events occur rather than by restrictive questions about how they are affected by factors privileged in advance by the researcher. The investigator works “backward in time and outward in space...to construct chains of causes and effects leading to those events and changes” (Vayda and Walters 1999:169). As a precaution, Bradnock and Saunders (2000:67) argue that ‘politics’ cannot itself be seen as either self-explanatory or uncontested. There are as many ‘politics’ as there are institutions and social groups—for example states, agencies, NGOS, corporations, pressure groups and lobbyists; elites, peasants, and the landless.

In Neuman’s (1992:96) opinion, the main area of improvement for political ecology lies in its exploration and analysis of day-to-day village politics and the political meaning of peasant actions. He cites the work of Scott (1985, 1986) on “everyday forms of resistance” as offering compelling possibilities for enriching research on the social origins of environmental degradation. Scott documents the silent and anonymous actions of a subordinate class or long-term residents who are disenfranchised from their ancestral lands, include poaching or encroachment on state forest lands. These are characteristic forms of everyday resistance, aimed not at reforming the legal order, but at “undoing its

application in practice”, and represent an attempt to reclaim or maintain customary rights (Scott 1987:447).

#### 2.2.6 Application of Political Ecology in Dissertation Research

According to the preceding discussion, political ecology is a theoretical framework that has been developed to respond to the lack of consideration of politics in analyses of environmental change or problems. The theory has been developing as new “political ecologies” are proposed. The underlying concepts of the different political ecologies include examinations of time (history) and space (outside factors), unequal power relations among different resource users, plurality of meanings and truths, marginalization and equity, and the interconnection between humans and their environment. Political ecology allows for a wider perspective on environmental patterns and causes, as well as the possibilities and constraints on solutions.

In Thailand, political ecology is a popular approach in studying the relationship between environmental and political activities. Local concerns over resource depletion and threat to livelihood of marginalized rural poor in the Northeast, North, or South, and their involvement in environmental movement underlie many current debates (Hirsch, 1993; Ekachai 1990 and 1994; Lohmann, in Shiva et al, 1991; TDSC, 1991/92, 1993, 1995). Many environmental questions are played out as a conflict between the urban and industrial interests versus subsistence and other agricultural needs. Ekachai (1990)

investigates environmental degradation in the coastal areas and social problems of the landless local fishers who were evicted to develop tourism industry in Thailand. Other researchers studied the degradation of tourism destinations in relation to the demand in the international market and the broader development of national economy and polity (Hirsch 1993; Ramitanondh 1989; Lohmann in Shiva et al 1991).

In the Adang Archipelago, the relationship between politics and the change of the resource use makes political ecology an appropriate theoretical approach. The establishment of Tarutao Marine National Park involved a political process of redefining the use and management of local natural resources. Such processes involve the introduction of new *social structures for controlling access to resources, causing a change* in the relationship between the people, who have resided for generations in the areas, and their environment.

In this study, I use the political ecology framework to first understand the relationship of the local people with the physical environment in their historical, political, and socio-economic context. Then, the framework is used to examine the impacts of the park policies and their implementation on the relationship of the Urak Lawoi to the marine and coastal resource use and their way of life. The Adang Archipelago is no longer an isolated area, and in this research it is seen within the larger political-economic framework of the region. Similar to other parts of the Andaman Sea and other coastal areas throughout Southeast Asia, it has been caught up in development, as the region is integrated into the



world-economy, and rural society is transformed. The framework is used to analyze the links of political-economic forces beyond the archipelago with particular reference to the way the environment is becoming a commodity in contemporary Southern Thailand. Primarily involved are the capitalization of fisheries and tourism industries and the participation of the Urak Lawoi in the world market economy, introducing new ways of resource use and management, and competition for local resources. The commodification of subsistence economies and incorporation into the global market are closely linked to resource exploitation in the Adang Archipelago. Environmental degradation and cultural disintegration, especially on Lipe Island, are symptoms of outcomes of social change and indicate complex social conflicts over resource rights, distribution, and access.

In this dissertation, I attempt to respond to the critiques of political ecology in different ways. In relation to the critique of Peet and Watts (1996), broader issues of politics are discussed when I examine the definition, negotiation and contest of resource control and access. Moreover, modernization and its impact on both the local environment and culture are investigated. To address the concerns of Vayda and Walters (1999), instead of limiting the research focus only to the issues of politics itself, I examine the interaction of different actors and other factors that produce environmental and cultural changes. Lastly, I address the comments of Neumann (1992) by not only studying the impacts of unequal power relations on environmental and/or life change, but also by emphasizing the actions and reactions of the Urak Lawoi in their everyday resistance against, adaptation to, and accommodation, with the outside forces.

## 2.3 Patron-Client Relationships

In studies of relationships among different groups of people in rural areas of many developing countries, patron-client systems have been a pervasive feature, particularly in Asia and Latin America (Platteau 1995:768). In the Adang Archipelago, the framework is used to study the relationship between the Urak Lawoi and their patrons (both the taukay and, to a certain degree, the local governmental officials).

### 2.3.1 Characteristics of Patron-Client Relations

The interaction on which such relations are based is characterized by the simultaneous exchange of different types of resources in some combination —“above all, instrumental and economic as well as political ones (support...protection) on the one hand, and promises of reciprocity, solidarity, and loyalty on the other” (Eisenstadt and Roniger 1984:48). Patron and client ties help to insure securities in unpredicted situations as well as to include symbolic exchanges of personal favors and obligations. Platteau (1995:767) described this relationship as follows:

...these relations are mainly motivated by the need to insure against unforeseen or random fluctuations, such as fluctuations in labor requirements for the patron or fluctuations in income for the client. More precisely, by establishing clientage relations, the patron secures access to a readily available, trustworthy, and compliant workforce, which enables him to economize on a variety of transaction costs. As for the client, by entering into such a relationship, he obtains a guaranteed access to the necessities of life through regular employment and/or various kinds of flexible assistance provided by the patron when special (emergency) needs arise.

In Thailand, the clients often call themselves *luknong* (subordinate or follower). *Luknong* usually work under or provide services exclusively to their *taukay*. They are supposed to pay full respect and are loyal to their *taukay*, while the *taukay* is supposed to protect and take good care to them. Such relationships are fluid and change in accordance with the mutual convenience and benefit of both parties. It is possible for the client to terminate the relationship depending on the benefit coming from the patron. The relationship of patron and client accords with the concept of Thai society as being “loosely structured” as proposed by Embree (1950). Instability seems to be inherent in this sort of relationship, and love and respect become important for mitigating this instability (Hank 1972:1257 in Shigetomi 1998:8).

### 2.3.2 Power and Patron-Client Relationship

Generally, patron-client relations are based on a very strong element of inequality and of differences in power between patrons and clients (Eisenstadt and Roniger 1984:48-49). Such a relationship can be linked with the potential for oppression, which “appears to be especially high when there is complete asymmetry in the power to initiate the terminating move and when there are almost no restrictions on the patron's rights” (Platteau 1995:767). Bodley (1982:37-38) found that an exploitative system of debt peonage has existed between isolated small-scale tribal people and civilized traders as follows:

...traders concerned primarily with their own advancement have been quick to take advantage of tribal peoples in their unfamiliarity with money and their desire for certain kinds of trade goods. Following a remarkably uniform

pattern everywhere, traders advance goods to the natives on credit in exchange for furs, rubber, lumber, fish, nuts, labor, or crops, to be delivered in the future. The trick is that by continually advancing more goods, the trader or patron manages the transactions so that the debt is never fully paid, and an extravagant profit is reaped by the simple expedient of overcharging for the goods he advances and grossly undercrediting for the articles he takes in exchange. The tribal individual is gradually drawn into a relationship of total dependence on the trader and is forced to work harder as he finds himself further in debt and more attracted by increasing more expensive goods. His difficulties are often complicated by other rules of the system by which debts are inherited, and that discourages the use of cash, or prohibit a debtor from transferring to other traders. All of these features of the system open it to flagrant exploitation, and in many cases the result is a situation resembling slavery.

Rent capitalism is found in patron-client relationships (Fegan 1981, Goss 1990). It is not uncommon that patrons have monopoly over the means of production. Clients often find it difficult to use these means since they cannot independently access products and/or are unable to effectively compete with those who have such means. Indeed, it is typically the case that the means of production can only be advanced to new users by current patrons, thus reinforcing the patron-client relationship. Such effective monopolies ensure that the patron is able to claim a portion of the product and client is required to pay “rent” at the end of the productive period. “The classic form of rent-capitalism in Southeast Asia links peasants with world economy through debt to (urban) entrepreneurs” (Goss 1990:87).

### 2.3.3 Patron-Client in Small-Scale Fisheries

Small-scale fishermen are very much like other people engaged in subsistence land-based activities. “Fishing communities, like agrarian communities, possess the definitive criteria

of peasant society, including the household as the basic-all embracing unit of social organization, dependence on external markets, multiple patron-client relations, factional modes of political competition and highly developed risk-sharing procedures” (Ruohomäki 1999:156). However, fishing is unlike many agricultural sectors where patron-client ties disappear with the advent of capitalism and where laborers can leave their employers only when their debt is repaid. Platteau (1995:768) states that in small-scale fishing communities, “when a fisherman is unable to clear his debt in order to move to another crew, the new employer usually takes it over by paying the amount due to the previous employer: debts are then shifted at the same time as the laborers”.

#### 2.3.4 Application of Patron-Client Relationship in Dissertation Research

As far as an Urak Lawoi in the Adang Archipelago can remember, a patron-client relationship between taukay and luknong has always been present. Understanding this relationship is crucial to understanding how the Urak-Lawoi’s culture shapes its conception of the natural world and how it provides the means to use, manage, and solve problems of the coastal and marine resources. Throughout the history of the Urak Lawoi in the Adang Archipelago, the ways they adapt to and modify their ways of life and livelihood, how they organize, structure, and give meaning to the natural world, and how they regulate and manage resources, both living and non-living, are closely related to their relationship with the taukay. The environment, society, and culture are studied as parts of

continuous human-ecological systems that are maintained and changed by internal and external factors (Nietschman, 1984:334).

## **2.4 Conclusion**

Political ecology and patron-client theoretical frameworks are used in this dissertation. Both allow for studying relationships among different groups of people with unequal power, and the impact of these relationships on natural and cultural resources in the Adang Archipelago. Indeed, while both theoretical frameworks afford significant analytic leverage in examining the complex relations centered on resource use in the Archipelago, neither stands alone as a sufficient means of doing so in this study. The patron-client framework is specifically suitable for studying the relationship between Urak Lawoi and taukay, while the political ecological framework is more appropriate for studying other relationships, such as one between the state and other resource users, or the market economy and the environment. Together, they provide the needed leverage to uncover and critically engage a complex situation that, on the surface, appears rather simple and straightforward. In the next chapter, I will briefly describe my field work and methods used to collect data for this study. Key informants who have greatly contributed to this research will also be introduced.

## CHAPTER 3 METHODOLOGY

### 3.1 Introduction

To understand past and present relationships between the Urak Lawoi and marine resources in the Adang Archipelago and their interaction with other resource user groups (local Thais and tourists) within their real life context, a case study approach was adopted. This approach allowed me to deal with multiple sources of data, that explicitly link questions asked, the data collected, and the conclusions drawn (Yin 1994:78).

Secondary data collected includes a review of literature and research material in the relevant areas, in both English and Thai. Data related to the Urak Lawoi and Adang Archipelago were largely gathered in Thailand. Primary data collection was undertaken during fieldwork, primarily in the Adang Archipelago, from the fall of 1997 through the summer of 1998. Participant observation, including informal interviews, and everyday conversation, was conducted among the Urak Lawoi throughout that period. Semi-structured interviews were used to obtain data from governmental officials, *taukay*, large-scale commercial fishing operators, and tourist resort owners. A questionnaire survey was conducted among visitors to Lipe Island and analyzed using the SPSS 8.0 program.

In addition to the brief description of my fieldwork and data collecting methods I used in the field, this chapter also introduces key informants, discusses limitations of the

fieldwork research and important incidents in the field. Some of the field incidents strongly influenced and changed the directions of my research. This applies in particular to the investigation of changes in the Urak Lawoi's relationship with marine and coastal resources as new ways of resource use were introduced by outsiders, and issues related to difficulties in empowering the Urak Lawoi and marshalling their participation in collaborative resource management.

## **3.2 Fieldwork**

### **3.2.1 Pre-Fieldwork**

A year before my fieldwork began, I took a trip to Southern Thailand to explore possible sites for my research. The Adang Archipelago was the most attractive site for several reasons. It is home to a formerly nomadic maritime people on whom little study had been done; the archipelago has a high potential for development as well as conservation; and it is a place full of conflicts and complexities related to marine and coastal resource management among different groups of users. As development in the Adang Archipelago was relatively limited, there was hope that this study would be able to provide input for future development decisions aimed at sustaining the local culture and environment.

A few days before I left Honolulu for my field trip, a friend who had just returned from her fieldwork in rural Nepal suggested that I get a solar lamp, a small solar collecting



panel, and a battery to run my notebook computer, a printer, and small electrical appliances I may need in the field. I followed her suggestions and the solar energy turned out to be extremely useful in the field.

### 3.2.2 In the Field

My fieldwork started with visits to relevant governmental offices and institutions that were related to resource management or research in the Adang Archipelago. These included National Marine Park Division of the Royal Department of Forestry and the Fisheries Department in Bangkok, provincial and local offices of both Forestry and Fisheries Departments in Satun Province, Andaman Sea Fisheries Development Center in Phuket Province, Phuket Marine Biological Center, and Prince of Songkla University in Had Yai.

I resided free of charge in the Sea Life Conservation Unit of the Fishery Department on the West side of Lipe Island during my fieldwork in the Adang Archipelago.

Infrastructure was undeveloped on the island. At the Sea Life Conservation Unit, electricity was produced by a generator for only a few hours in the evening. Water was periodically pumped up from a well and distributed to the houses in the unit. Rainwater was gathered in big tanks for cooking and drinking. The rest of the island was without telecommunications, roads, and land transportation. For most houses, electricity was produced by small generators. A solar power generating system was installed on school

grounds a few years ago, but has not become popular. Well water was commonly used for washing and cleaning while most drinking water was collected from fresh water sources on neighboring Adang Island. With the exception of tourist resorts, toilets were not common in the village.

The solar energy set-up I had allowed me to work during the daytime when no power was generated at the Conservation Unit, or at night after the generator was turned off. I was able to input all my notes and transcribe interviews and conversations into the computer while I was in the field. I was also able to develop, revise, and print copies of questionnaires used among tourists in the field.

### 3.2.3 Methods

#### *3.2.3.1 Direct and Participant Observation*

One of the major data collecting methods in the field was participant observation. I quote from a friend's recent dissertation: ". . . knowledge in rural areas. . . is often not gained through asking a series of explicit questions but implicitly through absorption" (Moeliono 2000:20). As I had little control over events in the field, getting closer to different resource users to observe and record information on their relationships with the coastal and marine resources seemed appropriate and useful as a means of data collection. I alternated observing the daily activities in the villages and the harvesting activities at sea.

I found most Urak Lawoi friendly but indifferent to outsiders. They went on doing their “things” without paying attention to me. I first felt ignored, but the overall indifference of the Urak Lawoi to me became positive because they did not give me a feeling that I was intrusive or disturbing to them. Short notes from my observations were taken during or right after the activities and full notes were usually written in the evening or on the following day.

### *3.2.3.2 Everyday Conversation/Informal Interview*

Everyday conversations and informal interviews turned out to be one of the most valuable data collecting methods. However, making people feel at ease and motivated to carry on casual conversations is a skill that requires a lot more time than more formal methods like survey or structured interview. Much time in the beginning period of my fieldwork was spent on building rapport with the local people.

For many Urak Lawoi, it was not uncommon to simply shake one’s head and reply, “I don’t know what to say when questioned”. It soon became apparent to me that if I asked them to talk about a subject they had never thought about or talked about before in their life, they had difficulty saying anything about it. On the other hand, many times valuable information came out indirectly in casual conversation, often through hanging out with a group of people for a long time and talking about daily life and events. Landing sites, school ground, local stores, stair steps and porches of houses became my regular places.

The informants occasionally gave different information, so, I usually cross-checked information with several informants before drawing a conclusion. It also happened that the same informant gave different information at different interviews, necessitating triangulation with the data from other informants. Conflicting information was mostly related to conflict over rules and regulations, for example, dynamite fishing and harvesting of prohibited species such as sea turtles or giant clams. In my first interview with a local fisher who collects shells, he told me that nobody collects giant clams today. However, during my visit at a shell factory and shop in Satun, I saw some giant clamshells. So, in the following interview, I asked Mr. Klom why the shop had those shells. It was then that he admitted he sold some to that particular place. He pointed out that the meat of the clams is still eaten by the villagers, although they no longer dry the meat for selling because the park forbids it.

Conversations and informal interviews were also conducted with people of other resource user groups, including governmental officials, tourists, *taukay*, and resort owners. For example, in addition to a questionnaire survey with visitors to the Adang Archipelago, informal interviews with visitors were conducted from December 1997 through May 1998. The results of the interviews were used to supplement findings of the survey.

Extensive informal interviews were conducted with selected key informants on a range of topics related to the research questions. Most of the time, I wrote down the main points of the conversations and informal interviews right afterwards and sometimes I used a mini-tape recorder.

#### *3.2.3.3 Semi-Structured Interview*

I conducted semi-structured informal interviews with governmental officials of the National Park and Fishery Departments, *taukay*, and resort owners. Most commonly, the interviews were of an open-ended nature, in which I could ask the respondents for the facts of a matter as well as their opinions. Their resources were often used as the basis for further inquiry. For instance, I asked the officials to give me their definition of conservation. Then I further checked with them to see the extent to which such a concept has been practiced in the local situation, as well as opportunities or difficulties involved in implementation. Such questions usually led to conversations related to local practices and important incidents. Another example is when I asked *taukay* about different fishing methods and tools used in the local fishing practices. As quite a few of the methods have been banned or discontinued, we further talked about the reasons for this and their opinions about them. Most of the time, I recorded the interviews with a tape recorder and transcribed them within the following days.

#### *3.2.3.4 Questionnaire Survey*

Two questionnaires were developed. The first one was to collect socio-demographic data from all 159 households on Adang and Lipe Islands (*Appendix 3 and 4*). Two local teenage girls were hired to help collect the demographic data from the local families. As

assistants were familiar to the villagers, they received cooperation and were able to work efficiently. All demographic data were collected in April and May 1998.

The other questionnaire was designed to collect data from the visitors to the Adang Archipelago (*Appendix 5*). The first draft of the tourist questionnaire was in English and was tested with 10 tourists of different nationalities in December 1997. Then, the questionnaire was revised according to the feedback from the tourists and comments from my committee chairman and a social science researcher from Payap University, Thailand, who visited Adang Archipelago. The final version of the questionnaire was developed in the field in three languages: English, Thai, and German.

A total of 662 questionnaires<sup>5</sup> were distributed among visitors to Lipe Island with a non-random intercept survey conducted between January 4 and April 25, 1998. A total of 445 completed questionnaires<sup>6</sup> were returned, representing a 67.7 per cent return rate. One hundred eighty-one questionnaires were answered by Thai and 264 by non-Thai visitors, representing 41 and 49 per cent respectively. The answers were then coded, entered, and analyzed using the SPSS 8.0 program.

### **3.3 Field Key Informants**

Much of the insight into the history and present situation of the field came from the key informants. The Urak Lawoi key informants were identified by the villagers as those who

were long-term residents and/or knew a lot about the subjects of my research. I usually conducted a series of interviews with the informants to understand traditional ways of the local life, changes in their relationship with the coastal and marine resources, and the ways in which local culture had accommodated or resisted the changes.

The key informants were selected according to a purposive method, to assure that each of the local groups was represented by at least one key informant. The following section of this chapter briefly introduces 15 key informants, including park and fishery officials, a school teacher, village leaders, former and current *taukay*, Urak Lawoi men, and women of different ages. They will be referred to and cited throughout the dissertation by invented names to preserve confidentiality.

#### Mr. Siti

Mr. Siti is originally from a Southern province on the mainland. He is one of the supervising park officials and has worked for over a decade in Tarutao Marine National Park. He witnessed the discontinuation of *bagad* (staying overnight at another place in order to forage products of the sea), the resettlement on Lipe Island, tension between the park officials and the local people, as well as the improvement in their relationship over the years. His current work is involved with implementing the park rules and regulations and making local decisions that directly affected the life of the Urak Lawoi in the Adang Archipelago. He is well informed on the way of life of the local people, their problems,

and legal and illegal activities in the area. Being very straight and candid, Mr. Siti has no hesitation in talking about 'sensitive' issues. Some data are considered 'confidential' by him and not included in this dissertation. However, the information helps me to have a better understanding of local conflicts.

#### Mr. Sing

Mr. Sing was born and raised in a plantation in South Thailand. He has worked with the Fishery Department since 1985. His wife and children live on the mainland. Most of his work has been related to patrolling in search of illegal fishing activities in the vast area of the Andaman Sea. During my field study, he was the Head of the Sea Life Conservation Unit on Lipe Island. Mr. Sing is considered fearless, shrewd, and a duty-bound official. He is well respected by both his subordinates and the villagers.

#### Mr. Yai

Mr. Yai comes from the mainland in the South. He has taught in schools in the rural areas in Southern Thailand and became the schoolmaster in the Adang Archipelago in 1992. Being seriously involved in community activities, he is well respected by most villagers not only as a teacher but also a leader of the village. The school itself is the center of the community and the place where all its activities are held. Under his supervision, the school expanded from primary level to junior high level in 1998. He personally visited



parents to urge them to send their children to the junior high level. Mr. Yai was responsible for the installment of a solar power generating system on Lipe Island. When I left the field, he was working on a satellite TV connection for the school as a way to expose the students and villagers to the outside world.

### Mr. Roaj

Mr. Roaj is in his 40's and was born and raised on Lipe Island. His parents were Urak Lawoi who moved from Lanta to Lipe to better their life. He is married to an Urak Lawoi woman. Similar to other Urak Lawoi men, he has used different methods of fishing and fished in foreign waters, and was arrested and imprisoned for a few years in Myanmar. A few years ago, Mr. Roaj sold the boat he once owned and is now fishing for a *taukay* and running taxi boats for tourists. Mr. Roaj is one of the assistant village heads.

### Ah Pae and Wife

Ah Pae was one of the first *taukay* living on Lipe and one of the wealthiest. Being a half brother of a former village head, he came to Lipe with his wife in the mid 1950's and moved back to Satun Province on the mainland in the early 1980's. He now owns over a 100 *rai* (2.5 acres) of para rubber and oil palm. Both he and his wife remember their days in the Adang Archipelago quite vividly and are talkative about their past. However,

dynamite fishing is a subject they did not want to discuss. Ah Pae taught the Urak Lawoi different methods of fishing and fishing in foreign waters.

### Taukay

There are 4 groups of *tau kay* on Lipe Island: Son, Pee, In, and Kiti. Each *tau kay* group consists of a father and a son, or brothers. Throughout the period of my fieldwork, all *tau kay* were important and very helpful key informants. The older Urak Lawoi *tau kay* (Son, Pee, and In) are also highly experienced fishermen and sea life gatherers who themselves once worked for *tau kay*. Interestingly, except *tau kay* Son, all others have some Chinese ethnicity. *Tau kay* Kiti and his 2 brothers are non-Urak Lawoi. They have families in Satun Province on the mainland and take turns working on Lipe for about 6 weeks at a time. They now have the highest number of *luknong* at 82, followed by *tau kay* Son with 50. Besides the fishing business, *tau kay* Son and *tau kay* In started a tourist resort together in 1994/1995. It should be stated that all current *tau kay* emphasize the interdependent relationship with their *luknong* and feel responsible for their livelihood.

### Mrs. Jaidee

Mrs. Jaidee was one of the most valuable key informants. She was born on Lipe and is the granddaughter of To Kiri, the person who first brought the Urak Lawoi to settle in the Adang Archipelago. Her father, Banjong, or *kamnan* Jong, was the most well-known and

influential *kamnan* (an official title for the head of a sub-district, consisting of smaller villages). She is married to the current village head, who owns the first and the largest tourist resort on Lipe. A public health officer on the island, Mrs. Jaidee was 48 years old when I met her. Despite her struggles with cancer treatment, she was always excited and talkative about the history, development, and people of the Adang Archipelago.

### Chompu

Chompu is the youngest daughter of *taukay* In. She has two brothers and two sisters. She is 28 years old, married to a local Urak Lawoi and has one son. Chompu works with her sisters and relatives in the restaurant of her father's resort. Chompu used to collect sea cucumbers with her family. She was sent to attend a school in Satun but stayed for only one month. She once ran away from home to work in a fish cannery on the mainland, but finally returned home. She accompanied her husband, who did dynamite fishing in Ranong for one year. He is currently a fisherman and runs taxi boats for tourists in the dry season. At the end of my fieldwork, he was attracted by the idea of earning a large sum of money by fishing in Ranong and left Lipe despite Chompu's disapproval and worries.

### Mrs. Malee

Mrs. Malee is 40 years old and married to an assistant village head. She was born and raised in a family of 9 children. She has 4 children herself, 3 in Lipe (two sons working

with *taukay* Kiti and an unmarried daughter) and the youngest son tends mollusks in Surat Province. She used to collect shells, fish with hook and line, and once worked at a resort. Now she mainly stays at home and helps take care of her grandchild.

### Ngam and Kam

Ngam and Kam are 15-16 year-old girls and two of the five local children who attended the first year of junior high school. They were my field assistants, primarily helping to collect demographic data from the villagers in the Adang Archipelago. Ngam's paternal grandfather was an Urak Lawoi from Lanta Island who married a Muslim woman from Bulon Island. Her maternal grandfather was a Moken (another group of sea nomad) who married an Urak Lawoi in Phuket. She was born and raised on Lipe. She has 7 sisters and brothers who are involved in fishery and/or tourism. Ngam herself works part-time at a tourist resort. She plans to continue studying. When I first met her, she wanted to become a rural developer. Nine months later, she changed her mind and would like to become a medical doctor to serve her community.

Kam is originally from Sireh Island in Phuket. Her paternal grandparents are Urak Lawoi of Sireh. Her maternal grandfather came from Lanta and married a Lipe woman. Her parents are divorced. Her father remarried and lives in Phuket. Her 32-year old mother is also remarried, has 2 additional children and lives on Adang. Kam also wants to continue

studying. She wants to study business, even though it may not be relevant to her island community, and may eventually live on the mainland

#### Mr. Klom

Mr. Klom was born on Rawi Island and moved to Lipe at the age of 6. His father was a Chinese descendant from Satun. Klom is now 37 years old, and is married to a woman from Adang and they have 3 children and they all live there. Unlike most Urak Lawoi fishermen today, Mr. Klom does not work for a local *taukay*. He collects seashells and part of his income comes from selling them to a *taukay* on the mainland. He uses small rattan traps to catch live groupers, which he sells to a mainland *taukay*.

#### Mr. Somkid

Mr. Somkid was born in Koh Po Or on the mainland of Satun Province. His Chinese father worked as a bodyguard for *kamnan* Jong, the most known village head of Lipe. His mother is an Urak Lawoi from Lanta Island. His family came to Lipe before he started school. He is now 41 years old and married to Chanya, who worked as my interpreter in the field, with three sons aged 13, 9 and 3 years old. His elder brother is a local *taukay*. His elder sister owns a small store on Lipe and his younger sister is married to an officer of the Sea Life Conservation Unit. He works as fisherman and also at the Sea Life Conservation Unit.

### Mr. Gla

Mr. Gla is 50 years old. His father was from Lanta and mother from Langkawi. His parents met on Lipe where Gla was born. He is married with 4 children. After primary school education on Lipe, he was sent to Penang in Malaysia to tend a garden and study Malay. He ran away after only 3 months and went dynamite fishing and collecting shells in foreign waters as far as India. Later he worked in a Japanese pearl culture company in Phuket for 3 years. Together with many other Urak Lawoi men, he went to Ranong and did dynamite fishing in Burmese waters, where he was arrested and imprisoned for nearly 3 years. Today, Mr. Ard does hook-and-line and net fishing, as well as taking care of charging solar batteries for the villagers at the school.

### Mr. Dam

He is 46 years old and married with 3 children. Mr. Dam lived on Adang Island until he started school in Lipe. Similar to many Urak Lawoi of his age, he did a lot of *bagad* trips in the past. Working for over 10 *taukay* on both in the Adang Archipelago and on the mainland, he has a wide experience with different harvesting methods. He used to be an assistant to the current village head. Mr. Dam is one of the few Urak Lawoi fishers who has his own boat and is no longer dependent on a *taukay*. In addition to fishery, Mr. Dam also runs taxi boats for tourists.

### Mr. Loong

Mr. Loong is in his early 70's. His father was from Rawai and his mother from Sireh in Phuket. He is the third son of 9 children, and was born and raised in Lipe. Mr. Loong has 9 children himself, with 7 sons who are fishermen. He, too, worked for *taukay* in the past and fished in foreign waters. He was once a landowner but sold his 18 *rai* of land to a capitalist from Phuket over 10 years ago because he was convinced that Lipe Island would be taken over by the Park and he would automatically lose his land. This turned out not to be true, and his children seemed to be more upset about the lost land than he himself. Mr. Loong was also a shaman of the village and the lead singer of the local *rammana* group (percussion music accompanied by men's singing and often women's dancing).

### **3.4 Limitations of Field Research**

Because I stayed at the outpost unit of the Fishery Department, in the beginning many Urak Lawoi thought that I was a fishery official. This may have had some impact on me taking a longer time to gain trust and being accepted by the Urak Lawoi as someone who only came to study and not to 'spy' for the governmental officials. It took effort to explain to them that I was a student who could not afford to pay for tourist accommodation and only stayed there because the fishery unit had many empty houses and I was able to stay

there for free. The fact that the station was on the West of the island also limited my participation and observation of the life in the evening in the village on the east side as I usually returned to the station before it was dark.

The concept of a student doing research or fieldwork was rather incomprehensible for most villagers. Until a year before I started my fieldwork in 1997 the school in the Adang Archipelago offered only primary education and it was common for children to stop going to school at the age of 12 or 13 years old. The villagers, therefore, thought that it was very unusual that someone in her 30's was still studying. Later on I found out that it was more acceptable and easier for them to understand that I was there to gather information to write a book.

Breaking the ice and making friends with the Urak Lawoi was not easy. The Urak Lawoi of the Adang Archipelago did not show interest or curiosity about my life and background. Common questions that the Thais would ask (for example where I am from, how many brothers and sisters I have, what my parents do, whether I am married and how many children I have) were rarely posed to me. Many times, especially in the first few months in the field, I felt frustrated that it was difficult to carry a conversation and to get closer to them. Some Urak Lawoi, especially women who in general had less contact with outsiders, were not keen to speak to me. Apparently, some of them had been interviewed before by researchers from governmental agencies, and were reluctant to be asked again.



During the first phase of my fieldwork, I was under the pressure of wanting to establish relationship with the local people quickly and felt that a day would be wasted if I did not talk to someone and get some 'information'. From time to time, I struggled to win the attention and cooperation from the Urak Lawoi in speaking or showing things to me. As time passed by, I realized that there was hardly any day in the field when I did not learn something new, and this did not depend on whether someone answered particular questions on that day. As I became familiar with more people and started to identify key informants, our conversations became more relaxed and yet more informative.

Although most Urak Lawoi communicated with me in the central Thai language, some older Urak Lawoi spoke mainly Urak Lawoi and were not able to understand or speak central Thai well enough for a conversation or an informal interview. In addition, when the Urak Lawoi spoke with each other, they used the Urak Lawoi language, which I did not understand. Therefore, Chanya, a 32-year old local woman who was fluent in both Urak Lawoi and central Thai, was hired as an interpreter. As a member of the community, who was born on Adang and now lives on Lipe, my interpreter knew the local families and most of the members in the village well enough to take me around for spontaneous visits and friendly conversations. She not only was helpful in interpretation but also became the person who opened many families' doors to me. As she was familiar with many local situations, though, she sometimes started to answer my questions by herself instead of interpreting my questions to the person I asked. I usually had to insist that she translate my questions and remind her of her duty.

As a field researcher, I hoped that people I spoke to in the field would be able to provide me with data related to my research interests. However, it was noticeable that they were secretive about certain issues and became evasive when I spoke about them. For instance, older *taukay* involved with dynamite fishing were not willing to speak about their practice of this fishing method. Villagers were very secretive about their catch of turtles or harvest of giant clams, both of which are forbidden by the Park.

Being a woman imposed limitations in certain situations. These included accompanying fishermen on their fishing trips. Some men felt uncomfortable in taking me along with them. One time after I waited for several days for a hook-and-line fishing trip with two men who had agreed to take me with them, they left without me. One of the men told me before their departure that his partner did not want me on the trip because it would be a hard long-day trip and they would not know what to do if I needed to go to the toilet. My confirmation that I would be able to manage a full day of hot sun on a small rocking boat did not seem to change their mind. Slowly, I figured that the fishing crew would not decline my participation on their fishing trip if I first spoke to their *taukay* and had him tell the crew that I would be joining them. Another incident was related to my attempts to accompany a net fishing trip overnight. Even though the *taukay*, who in this case was also the captain, agreed to take me with them, they always left without me. Only when I told them that it was my last month of being in the Adang Archipelago did they finally take

me out. Furthermore, the investigation of commercial fishing boats would have been impossible for me without being accompanied by male governmental officials.

The Urak Lawoi use events and experiences for temporal records and references.

Representation of time by a Western calendar was not very useful in the field. To find out when an event happened in the past, by numbers of years past or by a calendar year, was difficult. Many times, only a very rough estimate or ranges of years were given as answers. The lunar calendar, seasonal differences, and other important historical events were more useful points of temporal reference. For instance, it was easier to find out whether something happened before or after the school was founded than trying to get the year of the event. Appointments were also better made according to the conditions of the tide or the moon cycle than the clock time, day and date.

There has been no baseline study on the natural resources of the Adang Archipelago and this made it difficult to evaluate the present status of its resources. There are a few studies on coral reefs, which are not directly comparable (e.g. Geater et. al. 1987, Phongsuwan et. al. 1991, Office of Academic Services 1992, Ochieng et. al. 1997, and Phuket Marine Biological Center, in printing) and a study on giant clams (Chantrapornsyl 1996). In the field, my evaluation of the present status of key resources was necessarily limited and based primarily on the long-term observations of the local people.

During my fieldwork, I used an existing map of the Adang Archipelago prepared by the Royal Thai Survey. As the map only had a few place names, I tried to work with some informants to find locations relevant to my research, such as old villages and former *bagad* sites. This was a difficult process because the Urak Lawoi were not accustomed to using maps and were not able to pinpoint exact spots on them. At the same time, I did not have the mapping technology to find precisely fix our exact locations when we traveled to different islands in the archipelago. As a result, the site locations on the maps used in this dissertation should be understood as approximate.

I would like to point out that there are limitations in terms of validity and reliability of this research in spite of the best attempts I took during the period of my fieldwork.

Concerning construct validity (establishing correct operational measures for the concepts being studied), we should keep in mind that questionnaires, survey, and interviews may provide limited information about environmental concern and consciousness. The questions I ask may be simplistic and predefine the range of possible answers. The answers may not reflect the complexity of the real life situations or explain decision-making structures and processes, or concerns and consciousness related to environmental problems. I have also experienced that understanding and insight into certain issues do not come with verbal interchange in a conversation or an interview, but require firsthand experience of the situation. A relatively short-term researcher like me may not have an opportunity to experience “unconscious gradual absorption” or “awakening moments”

during the fieldwork, but I attempted to repeat data collection procedures with different groups and conclude with the most common results.

It is also important to recognize that what is presented in this dissertation research is not something static, but it is a limited snapshot because the data were collected at a particular place and point in time by an outsider. There is no single way of life of the Urak Lawoi. Their livelihood and its strategies vary and change across time and space.

### **3.5 Personal Experience in the Field/Impact of Fieldwork on Research Focus**

When I chose Adang Archipelago as the site of my dissertation research, I hoped that there would be feasible ways to conserve the natural environment and the culture of the Urak Lawoi. I intended to approach it as a “problem-solution” resource management case study, and believed that, with the right resource management method, presumably a type of collaborative management with the participation of the Urak Lawoi, degradation of coastal and marine resources and disintegration of the local culture could be slowed or even prevented. I expected to understand the local situation in order to be able to find the right problem-solving methods.

Being in the field gave me insights into the complexity of the situation. The history of the place and the people, their development to the present, and the interconnection with political and economic forces on the outside contributed greatly to the natural resource

degradation and cultural disintegration in the Adang Archipelago. I went to the field with a definition of, and belief in, collaborative management to see how the local situation would measure up to the possibilities. However, even though collaborative management seemed a useful concept, it would be very difficult, if not impossible, to achieve in the present situation. At the local level, I believe that the Urak Lawoi would need to be empowered before they would feel ready to participate in a co-management of their surrounding resources and to see the importance of maintaining their cultures.

The oppression of the Urak Lawoi is a subconscious part of their life—a fact that would probably have not become evident but for a personal experience in the field. Five months after my fieldwork, I unintentionally came into conflict with one of the biggest local landowners, a son of the late village head, on whose land many Urak Lawoi had built their houses. The conflict came from the fact that Ngam and Kam, two part-time student workers at his resort, took a second part-time job with me during their summer vacation. Even though time conflict was not an issue, the fact that I, an outsider, managed to get 'his' people to work for me without asking for his approval angered the man. He fired his workers at once, and physically assaulted me a few days after. "Nobody here has ever stepped on me," were the first words he uttered after delivering a punch to my head which threw me to the ground and temporarily deafened one of my ears.

Although the physical injury was minor, I was very shaken and no longer took personal security in the field for granted. Within a couple of days, the villagers learned about the

assault, and the incident immediately brought about sympathy and unexpected welcoming and openness among them. The fact that I was hurt by one of the most powerful local people, who was not respected but feared, turned me into a person who was as vulnerable and weak as they were. The assault marked a positive turn for my field research. It broke the ice I had felt with some local people and apparently made more Urak Lawoi feel free to share their experiences with me. The time after the incident became the most fruitful period of my fieldwork, not only because the Urak Lawoi became more open and willing to talk, but also because important issues related to the oppression and problems of the local people and their strategies in dealing with them were brought out in conversation.

The longer I was in the field, the more I became aware that security in life, particularly in relation to a place and means of livelihood, are uncertain for most Urak Lawoi. Such securities would be fundamental to empower the Urak Lawoi, and are indispensable to gain their true participation in managing the coastal and marine resources in the Adang Archipelago and to create a possibility for a collaborative management. In the field, my focus on problem-solution methods gradually switched to understanding the problems the Urak Lawoi face and their connections with the socio-political forces outside.

### **3.6 Conclusion**

I have just described the data collecting methods, the situation in the field, and the field key informants. Primary data collection was indispensable because little research was

available on the Urak Lawoi of the Adang Archipelago. In addition, a longer period of fieldwork, eight months in my case, seems to be necessary in situation like that in the archipelago if an outside researcher hopes to gain substantial insight into the local history, present circumstances, and locally prevailing perceptions of key problems. Superficially, the Adang Archipelago looks like a peaceful place where life is simple and conserving natural and cultural resources presents little problem. On the contrary, research in the field reveals the complexity of the situation and the difficulty of sustaining local resources. In the following chapter, I will talk about the Urak Lawoi, who I considered the indigenous people<sup>7</sup> of the Adang Archipelago. I will lay out their cultural history and give an overview of their present way of life.



## CHAPTER 4 LOCAL PEOPLE: URAK LAWOI

### 4.1 Introduction

Among all resource users in the Adang Archipelago, the Urak Lawoi are the local people who have resided longest in the area and who have the most diverse use of the local resources. This chapter lays out their cultural history, settlement and sedentarization processes in the Adang Archipelago, the character and the dynamic of the Urak Lawoi community, their surrounding land and infrastructure, and their relationship with the coastal and marine resources in the past and how and why it has changed. This chapter illustrates how broader socio-political and economic forces and technological development have regulated the use and management of local resources and influenced the Urak Lawoi's ways of life.

### 4.2 Cultural History of the Urak Lawoi

#### 4.2.1 Name

The Urak Lawoi were referred to by a few writers at about the turn of the century under the name *orang laut* [from the Malay words *orang* (people), and *laut* (sea)] meaning "sea people" (Hogan 1972:206). This phrase, however, was generally used to refer to all sea-faring populations, including nomads, fishermen and pirates, in contrast to those living

inland. In their own language, *urak lawoi* (sea people) is equivalent to the Malay *orang laut*. Many of them call themselves in Thai *chaao lay* or *chaao talay* (*chaao* = people, and *lay*, or *talay* = sea), *chaao nam* (*nam* = water), *chaao ko* or *kon ko* (*chaao* or *kon* = people, and *ko* = island), and *thai mai* (*mai* = new), meaning new Thai, an introduced word to integrate the Urak Lawoi into the Thai society. The Moken Pulau, another group of sea nomadic people, refer to the Urak Lawoi as Orang Lonta or Orang Papae (meaning people of half land and half sea because they live on land, but make a living in the sea) (Ukrit 1989:15). All of the boat nomads have been referred to as 'sea gypsies' by English writers, a term which appears to have been coined by Thomson (1851:41 in Sopher 1977:51). The word 'sea gypsies' has become popular and has been adopted by writers in other European languages and is commonly used in the tourism brochures. The term 'sea nomads' has been used with the same meaning as 'sea gypsies', particularly by writers in German and Dutch (Sopher 1977:51).

In Thai literature, the Urak Lawoi are often grouped together with other nomadic sea peoples, such as the Moken and Moklen, despite differences in origin and culture (Kruahong 1998, Archeology Division, Department of Fine Arts 1983; Southern Thai Studies Institute 1986). Some of the past literary works on the *chaao lay* in Thailand inaccurately identified one group with another (Hogan 1972, Eitel 1994). Only few studies have treated the Urak Lawoi as a separate and unique group of people. These include cultural anthropological studies of the Urak Lawoi on Lanta Island (Ukrit 1989),

Phi Phi Island (Mayachiew et al. 1984), and the Adang Archipelago (Anthropology and Sociology Department, Songkla Teacher College 1992; Eitel 1994).



Figure 4.1. Urak Lawoi

#### 4.2.2 Origin

The origin of Urak Lawoi has been much disputed. Some believe that *chaao lay* are descendants of the Sea Dyak of Borneo, who traveled through Malaga Strait to the Andaman Sea in the southwest of Thailand and Myanmar (Johnjud 1982). Some say they migrated to the Malay Peninsular in ancient times before the Malays started to live there, and, therefore, they were indigenous tribes of Malaysia (Thai Royal Academy 1969:6225). Some relate them to the Melanesians coming from the South Pacific or the Melanesian islands (Chumpol 1981:25), and others have a theory that the Urak Lawoi originated from the Moken, another group of sea nomads also living in the Andaman Sea (Ivanoff 1986, White 1922, Pegler 1979). The Moken-related theory, however, has been strongly refuted by Pattemore and Hogan (1989), who pointed out that with few exceptions, the Urak Lawoi have always maintained their identity without a sense of being a "hybrid" people (1989:75). In the research of Sopher (1977:62,67,82), the Urak Lawoi seem to be the strand<sup>8</sup> folk called *Orang Laut Kappir* (*kafir* = 'unbeliever' in Arabic), whose original home was Langkawi Island, which was conquered by the Malays, forcing them to become sea nomads as they refused to convert to Islam. The Orang Laut Kappir ended up living on Lanta Yai Island in Thailand and have been described as cultivators as well as fishermen who appear to have made the transition from nomadism only in the late 19<sup>th</sup> century. In general, it is accepted that *chaao lay* in Thailand ethnically belong to the Malay Groups. The language of the Urak Lawoi is a Malayo-

Polynesian language, and can be considered a dialect of Malay (Ukrit 1989:19). There is no written form for the language.

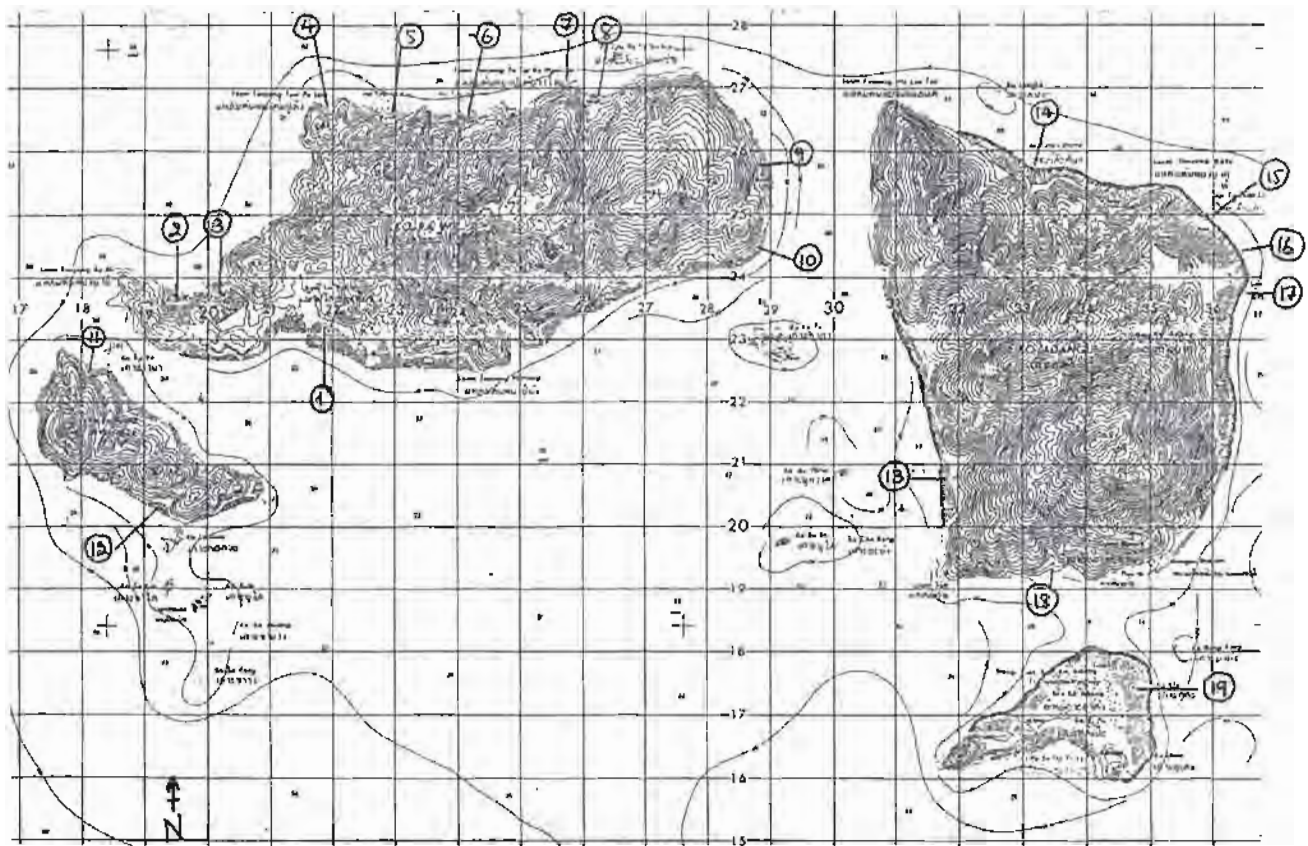
#### **4.3 Settlement and Sedentarization Processes in the Adang Archipelago**

Urak Lawoi live mainly on the Andaman Sea, in Satun Province (Adang Archipelago), Phuket Province (Sireh Island, Sapum, Ban Nua, Laem La, Tha Chatchai, and Rawai Beach), and in Krabi Province (Bulon Island, Chum Island, Poo Island, Ngai Island, Phi Phi Don Island and Lanta Island). Lanta Island is referred to as the original home of many Urak Lawoi in the Adang Archipelago. To Kiri was a Muslim traveler and adventurer from Gunung Jarai, Kedah Peak on the coast of Kedah, north of Penang in Saiburi State of Malaysia (Ukrit 1989:13). He was married to an Urak Lawoi on Lanta Island in North Andaman Sea and started the Urak Lawoi settlement in the Adang Archipelago in 1909. He was supposed to have developed a close relationship with the Governor of Satun Province, Pracha Pomnarpakdee, and was encouraged by the provincial government of Satun, under the Ministry of Interior, to bring Urak Lawoi from Lanta Island of Krabi Province and Sireh Island of Phuket Province to the Adang Archipelago at the end of Rama V reign (Ukrit 1989; Head of Tarutao Marine National Park, pers. comm.) At that time, for political reasons, markings were created for the new borders between Thailand and Malaysia, and the settlement of the Urak Lawoi was to prove to the British Colonial Administrators that the Adang Archipelago was the territory of Thailand, having been occupied by a Thai population. Additional territorial marking happened in 1958 when a

Thai school was opened on Lipe Island. According to a former educational administrator of Satun Province, the founding of the school was initiated by Praya Samanratburin, a former long-term governor of Satun, who was concerned about the affiliation of the islanders to Malaysia because they had received better treatment from the Malay officials (Chaisak, pers. comm. 1998).



Figure 4.2. Homes of Urak Lawoi in Thailand



**Locations of Old Villages**

On Rawi:  
Talo (Pa)Lian

On Adang:  
Talo Nipabudsaw  
Talo Leelae  
Talo Jung-ngan (Aow Mae Mine)  
Talo Puya  
Talo Aye (Talo Nam)

On Lipe:  
Na Ko

**Locations of *bagad* Sites**

On Rawi:  
Talo (Pa)Lian  
Talo Ta-ngodalab  
Talo Ta-ngoluwo  
Talo Puloi  
Talo Naka  
Talo Guyae (Aow Kamin)  
Patai Yawa  
Patai Bawoi  
Patai Payad Somchai  
Talo Raya

On Adang:  
Talo Nipa Dumni  
Talo Nipabudsaw  
Talo Lancha  
Talo Leelae  
Talo Aye (Talo Nam)

On Tong (Bu Tang/Bu Tuang):  
Patai Dalab  
Patai Layer

**Locations of Current Villages**

On Rawi:

On Adang:  
Talo Jung-ngan (Aow Mae Mine)  
Talo Puya  
Talo Aye (Talo Nam)

On Lipe:  
Na Ko

Figure 4.3. Locations of Old Villages, *bagad* Sites, and Current Villages

There is no existing research on how many Urak Lawoi moved from Lanta to the Adang Archipelago. The population of Lipe increased during the World War II when more families fled the Japanese into the area (Mahidol University 1974:73-74). *Taukay Ah Pae* estimated 40-50 houses on Lipe in the 1950s. A study by Mahidol University (1974:83) found that 33.3% of household heads used to live on Lipe and 50% immigrated there between 1949-1954. Informants said that Lipe became more crowded after the area was declared a National Marine Park in 1974, through immigration from other islands in the archipelago and new birth. A total of 329 people on Lipe and 58 people on Adang were recorded in that year (Mahidol University 1974). In 1998, a household survey during my fieldwork yielded a total population of 665 people in 159 households (130 on Lipe, and 29 on Adang). According to the records kept by the Public Health Center on Lipe, 14-21 births have been registered annually from 1978 to 1987.

According to informants who were born or have resided in the Adang Archipelago for several decades up to the establishment of the park, there were several villages on different islands, all of which were located on the strand. The locations include Talo (Pa) Lian on Rawi Island; Talo Aye (Talo Nam), Talo Puya, Talo Jung-ngan, Talo Nipabudsaw and Talo Leelae on Adang Island, and Lipe Island. *Bagad* beaches include Talo (Pa)Lian, Talo Raya, Patai Payad Somchai, Patai Bawoi, Patai Yawa, Talo Guyae or Aow Kamin, Talo Naka, Talo Puloi, Patai Pulick, Talo Ta-ngodalab, and Talo Ta-ngoluwo in Rawi; Talo Nipa Dummi, Talo Lancha, Talo Nipabudsaw, and Talo Leelae, (mainly for longer fishing trips) on Adang; Patai Dalab and Patai Layer on Tong; and Koh



Yang where the spring water is available all year round. Adang Island, with plenty of fresh water sources and fertile land for growing of food plants and fruit trees, was a popular place to live or visit.

The national park had a policy of moving the people out of the area for purposes of nature conservation (Mahidol University 1974:123). However, the park realized the difficulties in relocating the local population of over 300 people whose families had lived in the area since 1910's and, therefore, the Urak Lawoi were allowed to stay under certain rules and regulations. Living under park rules and regulations resulted in a shift in degree from semi-nomadism toward sedentism. In the 1970's, being pressured by the park, all Urak Lawoi from Rawi and most families from Talo Nam in Adang moved to Lipe. The old villages have been deserted and fully overgrown with vegetation. They can, however, still be detected today by markings of big trees, especially coconut trees, that were planted then.

The Urak Lawoi from Talo Puya and Talo Jung-ngan on Adang resisted the move. A key informant said their leader did not want the park to confiscate the land they had lived on and cultivated, and was not interested in moving to the crowded Lipe or to the mainland. The park has finally accepted the occupation of the Urak Lawoi on Talo Puya and Talo Jung-ngan as long as no new houses are built in the area. Unlike some nomadic groups, the sedentarization process of the Urak Lawoi did not have anything to do with migration into other ecological zones favoring agriculture or changes caused by ecological reasons.

In fact, their sedentarization was rooted in historical and socio-political functions and took place in the area in which they were once (semi-) nomadic. It was as an adaptation to a new social environment in the Adang Archipelago and along the Southern border between Thailand and Malaysia.

#### **4.4 Community**

Engelhardt (1989) considers the Urak Lawoi one of the few hunter-gatherer peoples still found in Thailand. Oysters were a principal item in the diet and sea cucumbers were a chief article of trade. Until a decade ago, the lifestyle of the Urak Lawoi of the Adang Archipelago may be regarded as a "traditional lifestyle", which is defined by Clad (1988:322) as follows:

The ways of life (cultures) of indigenous people which have evolved locally and are based on sustainable use of local ecosystems; such lifestyles are often at subsistence levels of production and are seldom a part of the mainstream culture of their country, though they do contribute to its cultural wealth.

A report by the Anthropology and Sociology Department of Songkla Teacher College (1992:211) asserts that 72% of Urak Lawoi families have made the transition from an extended family type to a nuclear family type. The Urak Lawoi like to be among themselves, living in a "face-to-face" type of community (Hogan 1972:215), close to their brothers, sisters, and relatives. Although many Urak Lawoi groups consider themselves to be kin, they have few obligations to each other and are not bound by commitments. This

can be considered as a major source of their strength. At one time, everyone had direct access to valued resources and food was shared when another party needed it, and this provided a basic security for all. A great deal of autonomy, independence, and freedom was a part of the Urak Lawoi way of life. This is not unique, as Berman (2000:53) states: “this relative lack of sustained reciprocal load-bearing relationships is widely characteristic of the social organization of nomadic hunter-gatherers”.

Sharing of food and work is still common among the Urak Lawoi of the Adang Archipelago. Sharing harvests among relatives and other people in need within the community is practiced even today. Those who go fishing do not mind sharing their harvest with those who do not go or who fail to catch anything on that day. The Urak Lawoi of the Adang Archipelago are proud of their food sharing practices that are no longer common in other Urak Lawoi villages. Many often said, “here brothers and sisters can ask from each other, no need to buy *gab kao* (things to be eaten with rice)”. The equal division of earnings from the catch among crew members of a boat working for a *taukay* is also common, despite the different work loads of the individuals involved. For example, in trap fishing where teamwork is generally a crucial determinant of success, crew members of a trap boat usually consist of people from different age group and strength. The strong young men dive, while the youngest or smallest of the group takes care of the tail motor, with the oldest one watching the compressor and the air hoist.

In the Adang Archipelago, the sense of being Urak Lawoi is strong even among those who have mixed background. A German man who is married to a local woman and lived on Lipe for many years observed that the *chaao lay* identity did not seem to be lessened by the integration of other ethnicities. He gave the example of his wife who has never been considered anything else but *chaao lay* even though her father is a Thai from Nakornsrithammarat Province and has returned to become a Buddhist monk on the mainland. My field observations confirm that people with just a single Urak Lawoi parent do not think of themselves as mixed, and never hesitate to say that they are *chaao lay*.

Similar to other *chaao lay*, the Urak Lawoi seemed to fear outsiders and lack interest in contacting them. This may be explained by negative past experiences of nomadic peoples, such as the Mokèns, with sea pirates (Hinshiranan, 1996:41). The Urak Lawoi have been described as enjoying freedom of life (Kruahong 1998:6). As Mrs. Jinda said, apparently they do not like to tie themselves to a wage-earning job, and cannot be coerced by money. They are considered peaceful, timid, “lacking ambition”, subject to authority, and anxious to avoid trouble of any sort (Hogan, 1972:207). They are tolerant and forgiving, managing to live peacefully side by side with people they have had trouble with, including those who violently forced them off their property, or those who make their livelihood difficult.

In terms of religion, during the beginning of human settlement, the leader of the Urak Lawoi, To Kiri, was a Muslim who encouraged Islamic belief among the Urak Lawoi during the time he was alive. However, the lack of religious institutions in the archipelago

seems to have resulted in lack of formal religious practices. When asked, the Urak Lawoi commonly say they are Buddhist. In practice, the majority believe in animism and shamanism. They pay respect to their ancestral spirits and believe in spirits associated with different parts of nature (such as spirits of the cave, mountain, island, bay, cove, water, or sea animals) and in the supernatural (Ukrit 1989:90). The belief that ancestors and spirits influence their catch is prevalent among the Urak Lawoi even today. Some fishers ask for permission for or blessing on their harvest from *jaao ti* (guardian spirit of the place) or their ancestors by making an offering before beginning their harvest<sup>9</sup>. Some older people would wait for a “lucky” time before they go out with a boat. Black magic and witchcraft are believed and feared. Many illnesses and mishaps are explained by supernatural powers. The only arts being regularly performed today, *rammana*, (a style of music with percussion instruments and singing, performed by men) are often performed to repay ghosts when wishes come true.

In terms of local education, a school with grades one through four was open in 1958, extended to grade six in 1978, and to grade nine in 1997. In 1998, there were 72 preschoolers, 150 students in primary school, and five in secondary school. Four of the secondary school students were girls. The schoolmaster makes great attempt to convince the parents and the children to continue higher education. However, most Urak Lawoi do not see the necessity and for most boys, furthering studying simply means postponing becoming a fisher and making money on their own. On average female household leaders

in the Adang Archipelago have a higher number of years of education than that of males (4.5 to 2.6 years). Most Urak Lawoi get married in their mid-teens.

#### **4.5 A Day in the Life of Lipe**

A typical day in the village starts a few hours before sunrise. A hook-and-line fisher may leave as early as 4 am to look for small fish as fresh bait. They go alone, or in a group of two or three people. Women get up and prepare food for their men to be taken out to sea. Noises of long-tailed boats leaving for fishing are a daily signal of the beginning of the day. Before school, some boys go out for a short fishing trip or to check traps they have set up the days before. Children in the school aged 6-12 leave home to go to school at about 8 o'clock. During the day, the village is pretty quiet. Some men who do not go to sea spend their day making new traps. Occasionally, they get together in a group to cut rattan or wood for trap making. Some women wash their clothes at a well close to their houses or make charcoal, which is the main cooking fuel. In the late morning, small groups of women gather together all over the village to play cards. Some use the cards to gamble with real money while others use sticks or other small objects to represent the stake and play for fun. Card playing is commonplace and usually lasts for several hours. The group dissolves as the children return home from school and men from fishing.

At the landing site, fish brought back by hook-and-line or trap fishing is sorted, weighed, and recorded by the *taukay*. Then they are kept in iceboxes on delivery boats, waiting to

be shipped to the market. A few people who do not have fish for the dinner hang out around the landing site to solicit some dinner fish. Men bring the fish home for dinner, and women start preparing the food. In the late afternoon, some men gather at the landing site to chat or play soccer on the ground in front of the school. Women prepare dinner. The electrical generators are started at dusk. Some families watch television after dinner while others go to bed early.

#### **4.6 Land and Infrastructure**

Before land titles were introduced in 1940, the Urak Lawoi communally owned resources in the Adang Archipelago and all individuals had access to them for subsistence purposes. There was no concept of private or state ownership of resources. Lipe is the only island in the Park where private ownership exists since land titles there had been assigned<sup>10</sup> before the park was established. However, for most Urak Lawoi, land titles are irrelevant and they are content simply to have a place to build a house. One of the long term *taukay* said the Urak Lawoi only need a boat to go around, can simply sleep on a beach, and do not care about having land of their own.

In the 1970's and 1980's when outside land speculators and investors came to buy land and promised that the local people could continue living in the area, most Urak Lawoi were eager to quickly sell their land even for a small amount of cash. Some believed that Lipe was going to be taken over by the National Park and so sold their land to make some

money before it was taken away. Later they found out that the land did not have to be returned to the Park. In the past, people of Lipe pawned their land with a *taukay* or village head for little money. Some villagers sold their land on a contract even though they did not yet have an official paper stating that they had the rights on the land they sold. A survey conducted with all households in the Adang Archipelago reveals that today over 85 percent of the Urak Lawoi no longer have a land title. According to the information from the Satun's Land Office in 1998, the only local people who still have titles for 20 or more *rai* (a land size measurement equal to 2.5 acres) of land are the family members of a former village head. According to the Tarutao Park head, private land constituted 500 of the total 2,400 *rai* of Lipe land.

Contacts with outsiders in the 1960's brought about small-scale agriculture as well as tree planting. This was particularly true with coconut planting<sup>11</sup>. The harvest was not sufficient to feed everyone, and supplements from outside were still needed. According to several key informants, people on Lipe gradually stopped agriculture in 1973, even before its banning by the National Park, because there was no land left to be effectively slashed and burned.

Houses in the Adang Archipelago used to be built in a very simple way with materials that were not long-lasting, such as small pieces of wood or woven leaves. A key informant said that both men and women used to make handicrafts such as bamboo walls for houses, mats, and woven rattan or bamboo baskets used for shell collection. In the





Figure 4.4. Old Style Urak Lawoi House



Figure 4.5. New Style Urak Lawoi House

past, every house had a basket, but now it is more convenient to buy a plastic one. At present, corrugated metal sheets and cement are increasingly used. Toilets at home are not common. Only 3% of houses on Adang and 54% on Lipe have a toilet. Most Urak Lawoi keep their house and the surrounding area clean. Garbage is gathered, with shore and sea serving as waste disposal sites cleared with each rising tide. They use well water for cleaning and washing, and fetch spring or waterfall water from Adang for drinking.

Since the end of the 1970's, electricity has been generated by privately owned generators. One of the shop owners said that ten years ago, kerosene lanterns were still common. Today, groups of a few households share an electricity generator. The school also had a solar panel installed a few years ago, and offers battery-charging service at a minimum cost to the villagers. However, the solar energy does not seem to be as popular as the generator. Among the local infrastructures, electricity service was ranked as the most desirable for support (66%) from the government. In 1990, a pipe water system was installed on the east side of Lipe Island where the village is located. Because of a lack of coordination on water distribution, a lack of interest for its usage among the Urak Lawoi, and their unwillingness to contribute to its operating and maintenance costs, the system remains unused by the villagers and has served only the tourist resorts on that side of the island. In 1998, no road existed in the Adang Archipelago and none was desired by the Urak Lawoi, who seemed to be content with small, cleared walking paths connecting various parts of the island. However, the provincial government has planned to build roads connecting different resorts on Lipe Island.

## **4.7 Relationship with Marine and Coastal Resources**

As the meaning of their name “sea people” indicates, the Urak Lawoi have centered their life on marine and coastal resources. The following section of the chapter describes their past nomadic way of food foraging in the archipelago, traditional methods of harvesting, and their subsistence way of life. It discusses how their past relationship with the coastal and marine resources allowed them to exploit the diversity of marine and coastal resources in the Adang Archipelago without harming the sustainability of their resources, and why unlike many indigenous peoples, the Urak Lawoi of the Adang Archipelago did not need to develop conservation ethics. This section will then present the changing relationship of the Urak Lawoi with local resources. Limited access by the park brought about the sedentarization process and made them concentrate their resource use in specific areas, while their involvement in commercial fishery has increased their catches of valued species. The participation of the Urak Lawoi in tourism industry has introduced recreational resource values and created awareness of the importance of conservation.

### **4.7.1 Nomadic Food Foraging**

Hogan (1972:206, 213-215) showed that the Urak Lawoi culture is based on the gathering of sea produce, such as sea cucumbers, shellfish, fish, lobsters, coral, and shells of different types. Although the Urak Lawoi have been referred to as sea nomads, those in

the Adang Archipelago are nomadic only in their food foraging practices and always have permanent houses on land. *Bagad* usually took place during the dry season. It was a way of the Urak Lawoi to optimize their use of different resources in the archipelago. They foraged widely in the archipelago for the marine lives for their own consumption and sale, and for woods needs for making cooking charcoal, fish traps, or constructing houses and boats. Sometimes a considerable number of people from a village moved to a more favorable location for a period to gather sea produce. The period of *bagad* ranged from a couple of days to several months, depending on the distance from home, weather, and harvests. It was common that the whole family went *bagad* together. In addition to fish, sea harvesting included a wide variety of shellfish and sea cucumbers. While men harvested sea products, women helped with hook-and-line fishing, harvesting of mollusks in the inter-tidal zone, and after-catch processes. Giant clams, for example, were boiled and then grilled or laid in the sun to dry. During *bagad*, simple shelters for sleeping and cooking were built on the shore where fresh water was easily accessible. During the monsoon rainy season, travelers returned to their houses. During this time, near shore fishing and collecting sea products in the inter-tidal zone were common.

With their semi-nomadic, foraging lifestyle, the Urak Lawoi utilized their mobility to make maximum use of the productivity of their natural ecosystems. Foraging allowed them to subsist with no outside assistance. Because foraging and fishing are dependent on natural circumstances, they require a vast store of local and situated knowledge to be successfully practiced. Such knowledge can be best acquired by daily local practice and

experience. To forage successfully, Urak Lawoi fishermen must have profound knowledge about the geography and the natural conditions of the area (such as the tides, cycle of moons, features of local wind and wave patterns and their seasonal changes, and time of the day), the nature of the animals they harvest, fishing-and-gathering skills, and specialized food-processing techniques. Hinshiranan (1996:171) considers that the Urak Lawoi are no longer 'opportunistic foragers' because their opportunity to forage for forest resources is limited and the successful extraction of marine resources is only possible with the use of complex fishing equipment supplied by *taukay*.

#### 4.7.2 Tie with the Sea

The Urak Lawoi display resourcefulness and ingenuity in sea-related activities, are good boatmen, excellent divers, and skilled fishermen. Kruahong (1998:37) described their comfort with the sea by noting that, "They walk and swim in the water like us on the land", while Hogan (1972:213-214) praises their "eye for the weather and the ability to navigate to off-shore islands beyond the horizons". Early writings since the turn of the century held high regard for the diving and fishing skills of the *chaao lay* (Gerini 1986 and Ekachai 1991 in Eitel 1994:29). They were called brave fishermen with great capacity for holding air in the lungs for long periods of time and diving to catch fish with their bare hands (Bangkok Post 1992 and Ekachai 1991 in Eitel 1994).



Figure 4.6 Fishermen Rolling up Air Hose after Diving

In the past, divers did not use any kind of equipment, except a small pair of tailored goggles made of carved wood and glass. Without a breathing apparatus, they dived up to 20 meters to place and recover traps, collect shells and the prized sea cucumbers. Breathing apparatus, such as scuba and hookahs, were provided by *taukay* for collecting fish caught by dynamite or surrounding net fishing in the 1980's. Today, on-board air pumps are the most common, allowing the divers to go up to 40 meters. Since the ability

of the Urak Lawoi to undertake deep dives is well renowned, they are often hired to recover sunken boats. These are sometimes located as dangerously deep as 80m. Unaware of the danger from deep diving, a few Urak Lawoi men have suffered decompression sickness.

The tie of the Urak Lawoi with the sea is obviously strong. Hogan (1972:206, 215) described the sea nomads in Thai waters, including the Urak Lawoi as animistic strand-dwellers living in houses near the beach. As one of the local woman said, “They need to see the sea and their boat to live.” Their houses are built on the beach where they are close to their boats and able to see the ocean. On warm, full moon nights, many simply sleep on the beach. Some Urak Lawoi say that they cannot sleep if they cannot hear the waves (Hogan 1972:213-214). For them, time is based on the cycle of the moon<sup>12</sup>, in which one month is composed of two *nam* (water), each of which lasts for 15 days, covering the period of the waning and waxing of the moon.

As indicated in Ukrit's study (1989:175), Urak Lawoi ceremonial songs mainly contain descriptions of nature and scenery, with many references to the tide, seashore, traveling by boats, and fighting with the wind and currents. The men work with great endurance on the sea, but feel restless and anxious to return to the ocean if they have to be on the land for more than a few days. One of the *taukay* said the *chaao lay* life depends on the sea and it is impossible for *them* to do anything unrelated to the sea.

#### 4.7.3 Conservation of Coastal and Marine Resources

Some traditional practices of the Urak Lawoi help to sustain local resources and the environment. These include harvesting of only the amount needed (no excessive storage), harvesting of sizable fish (juvenile or small ones are freed), sharing among the community members, and nomadism (which served to reduce the human exploitation pressures on a particular area in the archipelago for a long period of time). Engelhardt (1989:138) has described the Urak Lawoi practice for maintaining the ecological balance of the intertidal zone: they 'fertilized' the area by using the intertidal zone as a toilet facility, but when the pollution level threatened to become toxic to the oysters, the community switched to use the mangrove; they monitored the size and quantity of oysters gathered by depositing the refuse shells in carefully stratified middens; when the daily take fell below the usual harvest, as shown by a visual comparison of midden lenses, the Urak Lawoi interpreted this to mean that the carrying capacity of the oyster population had been exceeded and the band prepared to move to a new camp site. However, the traditional practices have been or are being discontinued due largely to the sedentarization in the park area and integration into the market economy. The monitoring of oysters, for example, was not evident during my fieldwork when groups of women from Lipe island occasionally went by boat to collect oysters on another island.

Among the Urak Lawoi of the Adang Archipelago, concepts of sea tenure or taboo areas for harvesting of sea life do not exist. Informants unanimously agreed that the concept of



'genuine conservation' did not exist in the past. Ellingson 2001:350) defined “genuine conservation” as requiring deliberate and self-conscious sacrifices of immediate self-interest to long-term preservation of potentially endangered species and environments. According to Smith and Wishnie (2000:515-516), conservation of biodiversity for its own sake, and preservation of wilderness for recreation or aesthetic admiration appear to be alien concepts for subsistence-based societies, particularly small-scale ones. This is confirmed by Little (1994:350 in Smith and Wishnie 2000:516) who said “cases in which local communities in low-income regions manage their resource bases with the prime objective of conservation—rather than improved social and economic welfare—are virtually nonexistent.”

Instead, members of such societies are likely to pursue enhancement of the resources needed for livelihood, safeguarding of homelands from exploitation by outsiders, and allocation of subsistence effort to the most rewarding areas and resources currently available. These choices will often have the effect of conserving habitats and biodiversity, but they will not necessarily be designed to do so and may at times have the opposite consequence (Smith and Wishnie 2000:516).

The closest word to conservation in the Urak Lawoi language seems to be *brabarakdilawoi* (feeding or taking care of sealife). The importance of biodiversity and interrelationships between different species does not seem to be commonly appreciated. The only time I heard an Urak Lawoi mention such a relationship was when an old couple in their 70s who originated in Lanta and moved to Lipe when they were young talked about what their grandparents told them: “if all the trees die, fish and mollusks will die too; if the trees grow well,

fish and mollusks will be abundant". They believed that this is true because the fish are abundant during the rainy season.

The lack of need for conservation may be due largely to the fact that, traditionally, the small number of the Urak Lawoi foraging in the large area of the archipelago did not face severe scarcity of the coastal and marine resources. In addition, their nomadic food foraging practices made it possible for them not to depend on particular resources in a particular area. In contradiction to Ukrit's (1989:24-25) report that the Urak Lawoi who moved from Lanta Island to Adang Island faced famine, and so moved back to Lanta, my key informants, who came from Lanta, said they were attracted by the abundance of the sea life and the ease of harvesting in the Adang Archipelago in the older days. The only time the Urak Lawoi seem to have suffered food scarcity was when rough monsoon weather persisted for a long period, making harvesting in the sea or getting rice from the mainland impossible. In those years, there were only few big motorboats of *taukay* going to Pakbara to bring back rice. The small rowboats used by the Urak Lawoi did not allow for long distance traveling on rough seas. The Report on Preliminary Survey of Tarutao National Park (Mahidol University 1974:77) says that during the time of scarcity, people ate only rice because they did not know how to preserve foods--even salting fish. However, according to the key informants, it was rice that became severely scarce in a rough season. Root plants, such as wild yams, and young coconuts had to be used to supplement rice. The lack of preserved sea foods could be due to traditional culture of sea nomadic groups who do not preserve the catch (Sopher 1977:292), the impracticality of

drying sea produce during the rainy season, the lack of salt (Kruahong 1998:34), or availability of fresh foods, either by harvesting and getting a share from others.

Today, incidents supporting conservation seem to be based on individual concern rather than common practices in the community. Some fishers release by hand trapped fish or sea life that do not have economic value or are of small size; however, others use puncture tools (commonly a long nail fastened onto a stick) to handle and throw unwanted sea life back in the ocean. The only sea animal commonly prohibited from being caught is the dolphin, as the Urak Lawoi believe it will bring a poor catch for hook-and-line fishing.

According to informants, the idea of conservation was introduced by government officials when the park was established about 20 years ago. An Urak Lawoi man in his late 20's said that when he was going to school in the end of the 1970's and early 1980's, teachers never taught about conservation. Teachers went together with students or sent students to collect shells or corals some of which were used to make decorative pieces to sell and generate income for the school. Today, the Urak Lawoi are exposed to conservation primarily by television, then by governmental officers and teachers.

Conservation has resulted in contradictory views among the Urak Lawoi as well as conflicts with other groups. In general, the view is that conservation makes living difficult. Interviews with older members of the Urak Lawoi revealed that even today they

understand neither the concept of conservation nor the need for it. They strongly believe that marine and coastal resources cannot be depleted, and do not think that conservation is needed: in their words “no depletion and no need for conservation”. When asked whether fish and mollusks in the area would disappear one day, an older man replied they wouldn't because they laid thousands of eggs, and his wife told me they are similar to grasses which keep on growing back no matter how often you pull them out. Among people of the younger generation, conservation seems to have become a more familiar concept. Ngam, a junior high-school student, defined conservation as "keeping it in the same condition". For her, "environment" means "everything existing in the nature", and natural resources are parts of the environment most useful for human beings. Another informant, an 18-year old fisher, described conservation as "letting small and decorative fish go and not stepping on corals". He thinks that conservation is good for the children and grandchildren. Some Urak Lawoi think that collecting giant clam shells is not good because the mollusks die and it is destructive for the corals, leaving the area less attractive for the tourists.

Needs for conservation depend on the types of sea life. For most Urak Lawoi, although fish are most important for their livelihood, there is no need for conserving them because they are still abundant. Sea cucumbers are also considered plentiful, and the need for their conservation does not seem to be accepted. As *taukay* Son said, "Depending on water, sometimes there are few, but other times we can collect 400-500, or 1000 cucumbers per night". Turtles were considered abundant in the past, but have been diminishing so

rapidly that theoretically the need to conserve them is now accepted by many Urak Lawoi. However, turtle meat is specially favored food among the Urak Lawoi, and as scarce as turtles may get, most Urak Lawoi fishers would not hesitate to catch them. Some types of seashells such as pearl oysters have also obviously become scarce.

For scientific communities, coral reefs are one of the premier natural treasures in the Adang Archipelago. For the Urak Lawoi, they are a common part of the local environment that does not traditionally merit much attention or concern. Informants used the word “so-so” to describe their feelings for coral reefs. Some of them said that it would be no big deal if they were gone and only sand bottom was left. While some younger people have started saying that coral reefs are important as places where fish live and that it takes time to grow them back, others still refuse to believe this. The only widely accepted and understood value of the reefs is the fact that they attract tourists. The Urak Lawoi themselves have little aesthetic appreciation of corals or shells and do not collect these as decorative pieces. For many Urak Lawoi, it is strange that tourists would come so far to see coral reefs. The attitude towards coral reef conservation among the Urak Lawoi can perhaps be most effectively summarized in Janzen's motto about biodiversity: "You've got to know it to use it, and you've got to use it to save it" (Janzen 1992). Chompu who works in a tourist resort on Lipe Island, gave the following reason why the Urak Lawoi do not conserve:

They do not know conservation. They do not know how beautiful nature can be. Like me, I did not know it either. I asked tourists why they came here. I thought there was nothing beautiful to see here. They said they came to look at corals. I said I did not look at them. So a *farang* (western person) asked me to go to see corals with him. Then I realized this is it. This is what they say is beautiful. This is what they like. All the women are similar to me. They do not go and dive at work like men and have no chance of seeing the beauty of corals. Now I think they are beautiful.

#### 4.7.4 Fishery

When Adang Archipelago was isolated in the past, the Urak Lawoi subsisted on fishery in the area. They possess very intricate knowledge of their environment that has accumulated through generations. Traditional means of harvesting in the Adang Archipelago included spears, hook-and-line, bamboo traps, shell collection, and beach seining. Although some other literature has mentioned cyanide as one of the fishing methods (Anthropology and Sociology Department, Songkla Teacher College 1992; Eitel 1994), *taukay* and Urak Lawoi key informants insisted that it has not been commonly practiced in the area. In the old days, catch size used to be dependent on uncontrollable factors, including the supernatural. The unknown and unseen were respected. Contact with *taukay* started the commodification of the subsistence economy and incorporation into the global market. The Urak Lawoi became important local labor for commercial

fishing. Today the local fishing fleets are organized in a way similar to large-scale commercial fishing with more advanced technology. The catch goes beyond subsistence needs. A very small part is for home consumption while the rest is for the market. In the past, the Urak Lawoi practiced small-scale fishing which, according to Platteau (1989:568) and Torell (1984:106), is characterized by relatively low capital input, labor-intensive, a decentralized and scattered pattern of settlement, easily adopted appropriate technologies, and small average catches per fishermen. They are bound to the near coastal zone and areas not far away from the home of the fishers. The fish are used to subsist or delivered to local markets. Common treatments of the catch rely on traditional methods like drying and salting. Torell (1984:106) sees many similarities between traditional fisheries and small-scale fisheries, except that while traditional fisheries are more dependent on old-fashioned gear and methods, small-scale fisheries can be modern in nature but small in scale. Today, the fishery of the Urak Lawoi is moving toward an industrial character, with a much higher investment in fishing gear that is not commonly accessible to most Urak Lawoi, and the fishing is organized by *taukay* who own the fishing gear. In the past, when there were only rowboats and a trip to the mainland and back could take up to a week, harvests were preserved by salting or drying. Fresh fish supplies started with the beginning of regular passenger boats in 1986 and long-tailed boats that brought in ice. Current catch is concentrated on fish and market-valued species. The efficiency and size of the fishing operation has increased over the years.

The Urak Lawoi start to fish at a very young age. Boys as young as seven years old often go fishing before and after school in small groups. Their catch is usually for house consumption, except for high-priced items, such as lobsters (purplish spiny lobster/*Panulirus longipes* and painted spiny lobster/*Panulirus versicolor*), which are sold to a *taukay*. In 1998, more than 80% of Urak Lawoi household leaders have fishing as their main occupation. However, fishing is not just a way of finding food and earning income for the Urak Lawoi. Their relationship with the sea and their involvement in fishing have been the main focus of their entire culture. Only 19% of Urak Lawoi family members work outside the archipelago, and 60% of those in fishery. Mr. Roaj said that people choose to be fishermen because they like it. It is difficult for them to think of doing something else that they will like. The next part of the chapter describes main fishing tools and methods that Urak Lawoi have used from the period of their settlement in the Adang Archipelago till today and their relationship with them. It describes how and why certain traditional fishing methods have been discontinued while others have been maintained and modified to serve commercial fishing. Today, half of all fishers use a combination of hook-and-line, and trap fishing. Sixteen percent use hook-and-line alone, and 11 percent only traps.

#### *4.7.4.1 Boats*

The material possessions of the sea nomads of Southeast Asia are relatively few. However, boats are at the center of the Urak Lawoi's life and the most essential part of their material culture. Kruahong (1998:41) once said, "whoever does not have a boat is



like not having hand and feet". Without boats, they could not exploit the diversity of resources around the archipelago. In the past, resources and much labor were invested in the production and maintenance of boats (Engelhardt, 1989:137). Today, very few Urak Lawoi men are still involved in boat construction, even though many of them can do minor repair and maintenance jobs. Most boats are ordered from outside and owned by a *taukay*, and only 27% of the households in the Adang Archipelago have their own boat. According to Mr. Somkid, when islanders have money, the first thing they think of buying is a boat.

In the 1940's and 1950's, rowboats with two to three people were commonly used for fishing, often in combination with a sail. These boats took a long time to travel long distances. For example, with good weather it took a whole day for a one-way trip to or from the mainland Satun. At that time, a boat that could take seven people was already considered big. The rowboats started to disappear when motorboats were introduced. Today there are only two rowboats left on the entire archipelago, both on Lipe. Most of the boats are *rua haang yau*<sup>13</sup>, wooden boats equipped with a long-tail motor engine at the end of the boat. According to a finding of a senior marine biologist working in the Adang Archipelago, in 1985, there were approximately 37 *rua haang yau* and the number increased to 63 by 1998. The long-tail engine allowed the Urak Lawoi men to do a daily fishing trip at any point of the Adang Archipelago or to the mainland within the same day. While a place like Rawi Island was considered far for the people on Lipe who used

rowboats, it can be reached within 2 hours by a long-tailed boat. Staying overnight away from home during a fishing trip has become unnecessary.



Figure 4.7. *rua haang yau*

The Urak Lawoi have a close relationship with their boats and this can clearly be observed in their *loi rua* (floating boat) festival<sup>1</sup>, toys, and the choice of places to stay in different seasons. For instance, during the east wind season of 1997/1998 on Lipe Island, 13 households set up temporary shelters and moved to stay on the west side of the island where it was more wind-protected and better to park the boats. Although the parking area is less than 10 minute-walk from the village on the east side, the Urak Lawoi prefer living close to their boats there for 3-4 months every year.

#### 4.7.4.2 Spears

Spears were once a popular tool used to hunt turtles in the water and catch fish. A turtle spear had a metal hook and a rope attached to it, whereas a fish or cuttlefish spear had 3 spikes without the rope. A spear can be thrown from a boat or used in an intertidal zone at low tide. In the past, people also went spear fishing with small custom made wooden goggles. Today, aside from being occasionally used to catch turtles from a boat, spears are no longer used.

#### 4.7.4.3 Hook-and-line Fishing

From 1950's to 1980's, long lines were one of the fishing methods introduced by *taukay*. Ah Pae and his wife explained that there were two kinds of long lines, one with baits and the other without. He said that they used many coils of rope and some lines could be as long as 2,000 meters. The interval between the hooks was about 2 feet. Long lines required intensive preparation, especially the type without baits, because the hooks have to be sharpened individually. The line was tied with a buoy, which in turn was tied to an anchor, to allow about a meter from the sea bottom in the area where fish like to cross. The long line was placed in the early evening when the tide was going up or down and possibly when the water was still. When the tide changed and the current got swifter, fish were hooked. The line was collected the next morning. Similar to spears, this method has been discontinued and replaced by other fishing methods.

Hook-and-line fishing, or *tokbed* in Thai, is one of the oldest fishing methods and is still practiced till today. As a matter of fact, it has become one of the two most common methods for local commercial fishing. According to the 1994 statistics from the Provincial Fishery, there were as many as 162 hook-and-line fishers. Today hook-and-line fishers seem to be older and it is common that younger fishers who use hook-and-line also do trap fishing.

In the past, people used hook-and-line to catch demersal fishes, such as *tama* (*Lethrinus spp.*) and *mong* (*Caranx spp.*) in the evening. They left at 3 pm to look for bait and returned before sunrise. Today, bottom dwelling fishes are no longer prime target of hook-and-line fishing. Fishers go after more economically valuable fish, including the barred Spanish mackerel (*Scomberomorus commerson*) as primary target, spotted king mackerel (*Scomberomorus guttatus*) during the monsoon season especially in September and October, barracudas (*Sphyræna spp.*) and longtail tuna (*Thunnus tonggol*). In addition, it is more common to fish with hook-and-line during the day. Catches from hook-and-line are known to be higher around the full moon period when commercial light-luring vessels do not operate.

The Urak Lawoi fishers leave for their trip as early as the tide allows the boat to get out. On the 14th and 15th days of the moon, they may get up at 4-5 am to get the boat out before the tide is too low. Leaving early also allows them to catch bait fish. Bait fish, such as Indian

mackerel (*Rastrelliger kanagurta* and *Rastrelliger faughni*), are kept alive in a container with constantly exchanged fresh sea water. The waters west of Adang, Lipe and Kata (Yang) are popular hook-and-line fishing spots. The fishers usually anchor their long-tailed boat and spend the day at one spot. During fishing, they keep checking the tightness of their fishing line to make sure that the bait is alive. Dead bait is replaced immediately.

During the dry season, it is not uncommon for fishers who went out for mackerels to return without fish or with very few fish. Monsoon season is more favorable for hook-and-line fishing. People who primarily use other fishing techniques, such as trap fishing, also go hook-and-line fishing at the time when mackerel are abundant. Despite the strong winds and currents of the monsoon season, if a fisher notices sea birds hovering in the ocean, a sign of schooling mackerel, he heads out immediately. When mackerel are plentiful in the area, hook-and-line fishers also go out at night. On nights when the moon is bright, they may go at different times; when the moon is dark, early evening seems to be more common. Hook-and-line fishing on the days when there are many mackerel is probably one of the most popular activities among the Urak Lawoi fishers. With this method, the catch of each individual fish is a fight between the fisher and the fish, with a valuable reward for the fisher at each successful catch. Where there is a large number of mackerel, a fisher continuously pulls one fish after another out of the water, an experience so rewarding and enjoyable that no other activity or fishing method can replace it.

#### 4.7.4.4 Trap Fishing

##### 4.7.4.4.1 Traps

A trap is called *loob* or *sai* in Thai or *bubu* in the Urak Lawoi language. Trap fishery of the Urak Lawoi demonstrates their profound knowledge of fish behavior and expertise in fishing. Fishes are completely undisturbed by a trap which is usually placed on a reef slope or a rocky area. Once being placed underwater, it becomes a part of the environment for the fish. The trap is a constant self-baiting device. The fish trapped inside automatically function as bait for larger fishes. The trap keeps the fish alive until emptied by the fishers. It can be repositioned or brought to a preferred location to increase the catch.

In the past, small traps approximately one meter long were made of bamboo, while very big traps were made of rattan. The big rattan traps could be as big as 12 m long, 7 m wide, and 2.5-3 m high, and cost about 7,000 baht to make. Floating bamboo pieces were used as buoys. Placed at rock piles, a trap could last for up to a year and catch perhaps a thousand kilograms of fish at a time. According to a key informant, the total weight of the largest catch was over 4,000 kg. Such a trap needs to be pulled up and unloaded by cranes. Otherwise, fishers chased fish into a regular trap under water and brought it up to unload several times. Because of their expense and the risk of losing them, the gigantic traps were discontinued.

Even though small bamboo traps attracted more fish than a rattan one, they did not last as long and were discontinued over 20 years ago. Today, rattan is the most popular material for trap building. It is readily available in the Adang Archipelago, strong, and pliable. This lasting quality makes it particularly useful for building frames of semi-cylindrical traps. Small tree trunks or branches are used for the bottom and rattan for the rest of the trap frames<sup>15</sup>. The rattan trap is on the average 38"high x 68"wide x 100"long (see Table 1). For trap netting, steel wires are used for lower part on the sides, and plastic ropes for the top and bottom. An opening for the fish is on the front side and a door for emptying the fish is in the middle of the bottom left side. A trap can be made in one to three days by two to three men. People on Adang make smaller rattan traps, and can make up to three traps a day. Trap building is almost exclusively done by men. Occasionally, some women and children help coiling wires for the nets. According to *taukay*, the material for making one trap costs about 600-1,000 baht (US\$ 15-25).

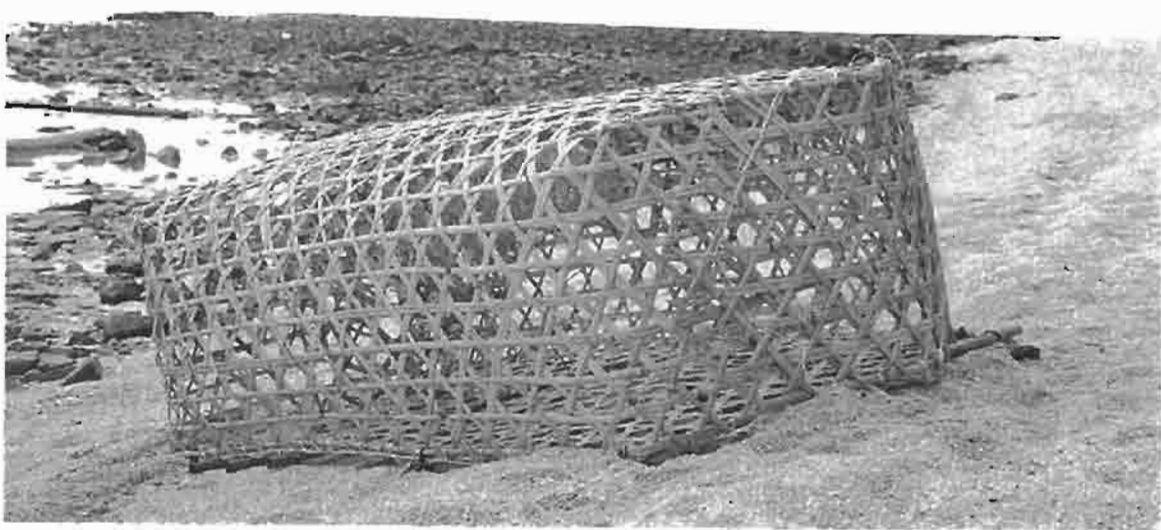


Figure 4.8. Bamboo Trap

Table 4.1. Examples of Rattan Trap Sizes in the Adang Archipelago

(Traps measured between May 20 - 31, 1998)

<b>Location and Size</b>	<b>Height in Inches</b>	<b>Width in Inches</b>	<b>Length in Inches</b>
<i>Adang (small)</i>	24	33	55
<i>Adang (medium)</i>	31	39	47
Adang (regular)	32	66	94
Na Ko, Lipe (regular)	38	67	117
Na Ko, Lipe (regular)	41	68	98
Na Ko, Lipe (regular)	35	69	71
Sri Keng, Lipe (regular)	36	63	106
Sri Keng, Lipe (regular)	43	66	105
Go Huad, Lipe (regular)	40	76	112
<i>Average size of regular trap</i>	37.8	67.8	100.4
<i>Go Huad (big)</i>	51	89	121

#### 4.7.4.4.2 Trap Placement and Recovery

The traps are placed on the sand bottom, coral reefs, and rock piles all over the archipelago. Most of them are concentrated on the fringing reef slopes. The areas of placement are categorized as 'deep' or 'shallow', with larger traps for deeper water. Traps are usually placed at a depth between 5-20 meters. The traps may be tied to rocks or small



rocks are put on certain parts of the trap to weigh it down and keep it from moving. They are emptied every 4-5 days until they fall apart, typically after a few months, when they are simply abandoned and left on the bottom of the sea. According to *taukay*, traps get lost easily and new ones are made constantly. Fishermen spend intervening days on land making new traps. In 24 scuba observations at different spots in the archipelago, fishing traps were found at 20 sites, 14 were active, and 10 abandoned. The number of traps per fishing boat/group ranges between 20 and 40. Working efficiently, some groups may be able to recover more than 40 traps a day. When there are many fish, a trap can catch as much as 600 kg, but when there are few, there might be only 50-60 kg.



Figure 4.9. Rattan Trap Being Placed

The majority of fish caught by traps during the period of my field work included red-belly yellowtail fusiliers (*Caesio cuning*), parrots (*Scaridae*), and streaky spinefoot rabbits (*Siganus javus*). Emperors (*Lethrinidae*), snappers (*Lutjanidae*), and groupers (*Serranidae*) seemed to represent a much smaller fraction of the catch. The caught fish are stored at the bottom of the boat under a bamboo mat until arrival at the landing sites. There, they are transferred to a storage longtailed boat, preserved by ice, and kept for transportation to mainland buyers. Only groupers and ornamental fishes are kept alive in one of the floating cages until the number is sufficient for a transport to Pak Bara Harbor in Satun.

According to the 1994 statistics from the Provincial Fishery, there were 40 people engaged in fishing with traps. During my fieldwork in 1998, the number had at least doubled. In 1996, the Provincial Fishery loaned 180,000 baht (US\$ 4,500) for trap materials. Trap fishing has become more efficient and the number of trap per group increased from 20-30 to 30-40. A senior marine biologist conducting research in the Adang Archipelago estimated that the amount of catch is up to 23-25 tons/km<sup>2</sup>/year. He estimated that the total catch from traps is at least 624 tons per year.

During my fieldwork, I accompanied four different groups of fishers on their trap fishing trips. Three of the trips were to place and empty traps in 'shallow' water, and one in 'deep' water. Each of the groups belonged to a different *taukay* and permission to join them was either given to me by the *taukay*, the fishers, or both. The size of deep water traps is

slightly larger than the shallow water ones, and the deep water sites I went to were several miles offshore from Lipe. While the teams for shallow water traps worked on their own, the deep water trap team was accompanied by two other boats. All three boats parked at the same spot and the divers worked in the same area at the same time. The deep dives took longer. My overall impression was that the deep water traps caught more fish than the small one, and there were very few decorative fish. The sizes of the fish were larger on average and there were more fish of the same kind. The catch included more high-priced fish such as groupers and snappers. On Adang Island, trap fishers use smaller traps to catch groupers. Certain species of groupers are highly valuable if sold live in Hong Kong. As mentioned earlier, the groupers are kept in netting containers placed in the sea until the number of fish is worth a delivery or those wounded during the catch are kept until they are healed.



Figure 4.10. Economically Valuable Malabar Grouper, *Epinephelus malabaricus*

#### 4.7.4.4.3 Trap Fishing Trip

The way Urak Lawoi fish is not always an easy thing to picture. A narrative of one of the trips is included below in order to illustrate a slice of daily life of the Urak Lawoi fishers. Similar to all trap fishing teams and boats, the team I accompanied had four members and the boat was equipped with a long tailed engine, an air compressor, and two sets of air hoist or hookah to allow the divers to work under water without having to hold their breath for a long time. I mostly sat and observed the fishers from the very front end of the boat, the only place the fishers did not need to use or pass by during the trip. I was equipped with snorkeling gear and, depending on the clarity of the water, I went in the water and observed the fishers working underwater. Conversations between me and the fishers usually were limited and only took place during the time when we drove from one fishing spot to another or during the return trip after all the work underwater was finished.

We Left Lipe Island at 7:30 am. Each fisher came with their lunch box. Somchai, a man in his 40's, was the tailman. Tommy, an 18-year old man, and Dej, a man in his 20's, were the divers. The last team member-- someone I will refer to as the 'watcher'-- was a man in his late 50's who kept an eye on the compressor, air hoists, and the two diving men. Our first stop was on Adang Island to fetch fresh drinking water, which would be used during the trip as well as for home. It seemed that Dej was a more experienced diver, as he was almost always the first who jumped in the water and the one who wrapped things up before leaving the water. The divers always accompanied each other, except in the last

dive to empty a trap at an island close to Koh Kla. There, Dej went by himself. Both divers worked very fast and efficiently. The fishers use triangulation of prominent landmarks to locate their traps. They always got ready as soon as the boat approached the location where a trap was to be emptied or placed. Before each dive, a small air hoist was tied with a small rope around their waist. The hoist ran up their back and its end was connected to their diving mask by a small hole on the top right side. The divers took off the air hoist and rolled it up after each dive. The mask had one round glass and a ventile in the middle close to the nose to let the air out.

The fishers went to Koh Wualan and placed two traps. Each placement took approximately 10-15 minutes. The first one was placed on sand bottom in shallow water of about five to seven meters, and I could see the divers swimming on the sea floor, trying to find rocks to tie the trap down. We went to Koh Rawi, Koh Tong, Koh Pai, Koh Ling Kao, Koh Adang and Koh Ugang. A total of 14 traps were emptied, eight before the lunch break. I was very impressed by the extremely short time they needed to locate a trap. Despite the lack of a buoy, it took the divers a maximum of two minutes to locate a trap. Only in one instance were they gone for three to four minutes, forced to come up, and then dive again for a few minutes to find the trap. When a trap had fish, one of the divers tied a line onto the top front part of the trap. The other diver came on board and helped the watcher to pull up the trap. The diver in the water helped position the trap as it came up. Sometimes an empty plastic bucket was used to help bringing up a trap. When a diver signaled to the watcher that there was fish in the trap, the watcher threw the bucket in the

water. A diver brought down the bucket and tied it in an upside-down position with a rope on the top front part of the trap. He then placed his head under the bucket and filled it with air from his mask. The bucket soon started to float and the trap was quickly brought to the surface by the rising bucket. On one of the dives, fish from 2 nearby traps were put together underwater. The two divers moved one trap next to the other, opened the door of one, and chased the fish into the other, which was then brought to the surface to be emptied.

After the trap was brought on board, the fish were quickly taken out of the trap, almost one by one, by hand. Fish that were too small (I saw a couple of small painted sweetlip/*Daigramma pictum*) and decorative fish that cannot be eaten (such as butterfly fish/*Chaetodon spp.*, feather-finned butterfly fish/*Heniochus acuminatus*, and Moorish Idol/*Zanclus cornutus*) were set free. Some of the fish that were put back in the sea showed a shock symptom of lying sideways or upside down for a couple of seconds, but they finally recovered and swam away. The fish that were selected were placed in the bottom of the boat. A strong bamboo mat was placed on the boat floor to give the fish some shade.

When we drove from one spot to another, the fishermen often rolled their own cigarettes and smoked one. Close to noon, we stopped and had lunch on the boat. The lunch was grilled fish, some hot and sour fish soup, and rice. It was interesting to see the fishermen acting so differently at different moments. They were very fast and efficient during the

trap placing and recovery, but totally laid back and relaxed during the lunch break or the ride to the next spot.

No traps were lost on that trip. About every other trap had fish inside. Ice was not used to preserve the fish and some fish were still alive when we returned to Lipe in the afternoon at 3 pm. Fishes that were caught included redbelly fusilier/*Caesio cuning* (which is the majority), streaky spinefoot/*Siganus javus*, parrot fish/*Scarus spp.*, unicorn file fish/*Alutera monoceros*, and Goatfish/*Mullidae spp.* Fish were sorted into different species and/or price categories before weighing. The *taukay* wrote down the weights on his record book. The boatmen did not even glance at the scale when the fish were weighed. The total amount was about two and a half baskets, or about 212 pounds. Each fisher took a few fish home for their dinner.



Figure 4.11. Fishermen Unloading Fish to be Weighed at Landing Site

Another boat of the same *taukay* came back when we were unloading. They emptied only 3 traps and got big fish including emperor red snapper/*Lutjanus sebae* and groupers/*Serranidae spp.* One of the groupers was the most expensive kind--brown-marbled grouper/*Epinephelus fuscocuttatus*. A hook-and-line fisher of the same *taukay* came back with 2 narrowed-barred king mackerel/*Scomberomorus commerson*.

After hanging around to observe other boats returning to the landing site, I started to walk home. As I was passing the school ground, I saw men playing football. One of them was Tommy, one of the divers. The dive and the full day in the hot sun did not seem to wear him down at all. There he was running barefoot, chasing the ball, getting his moments of relaxation from the day of work.

#### 4.7.4.5 Dynamite Fishing

According to one of the *taukay* and key informants, Malay and Hai Lam Singaporeans originated dynamite fishing in the area about 40-50 years ago. The method was introduced to the Urak Lawoi by *taukay* from Satun and Malaysia, and rapidly became a very popular fishing method. In the beginning, dynamite fishing was done from big boats and further away, such as at the border of Thailand, Malaysia, and Indonesia. At that time, there was no fish transporting boat and the big boats returned to the port when the ice room was filled. In the neighborhood of Lipe, dynamite fishing was practiced between Ko Tarutao and Ko Klang. As the big boats were replaced by smaller long-tailed boats,



dynamite fishing was done at coral reef areas closer to Lipe Island. For fish collecting, scuba tanks were used and later replaced by air hoists with compressors on board. In the 1980's, the informants were able to see water plumes from explosions at Hin Takon Jed or in front of Lipe Island. The beach in front of the school on Lipe, which was full of colorful coral reefs, was a daily dynamite fishing ground. It was normal to hear the explosion many times a day, and children were excited to help collect the blasted fish. Mr. Uyak Harntalee, an Urak Lawoi man in his 60's and known for his precision in placing dynamite, told his story about dynamite fishing as follows:

I worked with several *taukay* in Satun and Phuket. I went to Koh Gao (Similan) and Ko Surin to do dynamite fishing. Before the (national marine) park came in, I did dynamite fishing at Koh Racha in front of Phuket. We could not do dynamite fishing in this area (Adang Archipelago) because water police would arrest us. The boat we used for dynamite fishing was as big as today's trawlers. A small rowboat was tied to or transported on the big boat to look for fish and place the dynamite. On the rowboat, there were 3 people. The first one rowed. The second one looked for fish. The last one scooped water out of the boat and dropped the dynamite. The dynamite was packed in a plastic container of 5, 10 or up to 30 liters. In the container, there were uria fertilizer, dynamite powder, and stones to make it sink. When the container was dropped in the water, we had to back out in time. Otherwise, the boat might be destroyed by the explosion. When the people on the big boat heard the explosion, they came to the spot to collect the fish. The rowboat left to look for more fish at another place.

Dynamite fishing was preferred because it was convenient, fast, and generated high yields. The yield might be as high as 10,000 kg of fish per catch. Monthly income for the crew member was about 4,000-10,000 baht in the 1980's. The large sum of money from dynamite fishing lured some Urak Lawoi men to work with an outside *taukay* and fish in other waters, such as the North Andaman Sea, the Gulf of Thailand, and the waters off

Myanmar and India. In the 1980's, nearly 100 Urak Lawoi went to work for a *taukay* in Ranong. The *taukay* built row houses to accommodate the fishers and their families. Their work involved high risks, such as danger from dynamite explosion, deep diving, and being arrested or shot by foreign officials for invading their waters. Quite a few Urak Lawoi men, including one of the village heads, lost their lives in dynamite accidents or suffered from decompression sickness while others were imprisoned for illegal fishing. In 1989, 24 Urak Lawoi were arrested in Burmese waters and imprisoned for over 2 years in Rangoon. Ten other people were put in jail in India. Now there are only a few Urak Lawoi from Lipe working in Ranong. Many Urak Lawoi intended to save a sum of money and return. But most shared the experience of earning a lot, not wanting to return too soon, and ending up spending either most or all of their earning on goods and services that were not available in the Adang Archipelago, even though the *taukay* took care of the housing and other necessities.

Dynamite fishing was banned at the beginning of 1990's. Many Urak Lawoi accepted that the fishing method involved high risks and was detrimental to coral reefs, They were not concerned, however, about the condition of the reefs as long as there were fish available. For them, dynamite fishing was a convenient and fast method that yielded a big, reliable catch. Few thought that it would decrease the number of fish. The fear of being arrested for doing an illegal activity seems to deter most Urak Lawoi from continuing blast fishing. However, as a few local people suggested, dynamite fishing is still secretly practiced in the area.

#### 4.4.7.6 Net Fishing

Beachseining was commonly done during low tide in the 1950's and 1960's. As *taukay* came in, different kinds of fishing nets were introduced, including submersible nets, drive-in nets and purse-seine nets. In 1977, a drive-in net fishing method, or *uan laum* in Thai, was introduced by the people from Phuket and it became very popular after dynamite fishing was banned. The drive-in net usually required 9-12 people, with a minimum of 5 people, for one boat. Fishers chase fish out of rock piles or coral heads towards the nets by hitting water surface and used metal rings to make noises underwater. According to different *taukay*, drive-in net fishery was done at the water depth of 20 meters and more. The net size ranged from 40 to 120 m long, 15-20 m wide and the stretched diagonal mesh size was one inch. The drive-in net fishing took relatively short fishing time of one to two hours underwater and the catch ranged from 50-1,000 kilograms, with an average of 200-500 kg at a time. In a letter from the Fishery Office to the Governor of Satun Province in July 1994, a survey on the job types of people in the Adang Archipelago showed that fishing with drive-in net represented 60% of employment (despite its ban by the Department of Fishery as a reef damaging method in 1991), compared to only 10% in trap fishing, 5% in hook-and-line, 5% in diving for mollusks, and 20% in service work.

The Patrol officials of the Fishery Department consider the drive-in net fishing harmful to the coral reefs because of the use of fishing nets close to the coral reefs and the ways

people chase fish out of corals and rocks. The banning took a complete effect in 1997, and all the metal rings and fishing nets confiscated. The Urak Lawoi had different opinions on the potential harm of the method and it seems to depend on how careful individual fishers are. Fishers who did not perceive drive-in net fishing as a harmful method did not agree with the ban and would be ready to continue this fishing method if allowed. This is different from dynamite fishing, about which many Urak Lawoi recognized the danger.

Today the only kind of net fishing used by few older fishers involves submersible nets. The boat usually leaves late afternoon. The nets are placed at night during the period of neap tides between the 5th and the 12th nights after the full or new moon, when the water is calm and the difference between the tides is the smallest. The net used on my observation trip was 300 m long, 3 m wide and had approximately 3" diagonal mesh size. I accompanied *taukay* Pee and Gla on one of their net fishing trips. During the trip, the reasons of the fishers for continuing this fishing method became clear to me. This was not a dependent method of fishing, and the catch did not seem to yield more than other existing methods. What drove them to continue this method seemed to be the added value of this type of fishing, which can be practiced only during the calm period of water and gave them opportunities to enjoy the moment when day turns to night, and night turns to day, and to stay overnight in their boat in the sea. In short, the fishing trip offered them things that were not less valuable than the fish they caught. After we laid the nets in the sea, the fishers drove the boat to a small bay to wait and have dinner. A little bit of rice

liquor was poured into the sea to pay respect to the spirits of the place and the ancestors. The sun was setting. The breeze was light and refreshing. The dinner prepared by *taukay* Pee's wife and the salted fish of Gla were delicious. The fishers told me stories of the old days and laughed as they recalled little funny incidents in their past. The sea was peaceful and the fishers felt fully at home. At one point, *taukay* Pee looked at me and asked whether I remembered I had often asked him the question, "Why do you still fish this way?" It was right then and there that I found the answer to my own question when he asked, "Do you now know why?"

#### 4.7.4.7 Harvesting of Non-Fish Sea Life

To describe their activities in the past, many Urak Lawoi like to say: "diving for mollusks in the dry season, hook-and-line fishing in the monsoon season". Unlike today when harvest almost exclusively consists of fish, non-fish species, such as mollusks (giant clams, pearl oysters, and trochus), lobsters, and sea cucumbers were commonly harvested during the dry season. The fresh meat of non-fish harvest was consumed locally, while the dried meat and the shells were sold to *taukay*. At that time, fresh fish was considered difficult to deliver because there were only rowboats. Mr. Dam described the way people collected *hoi muk kong* (a type of pearl oyster found close to the shore) as follows:

Shells were especially abundant around Rawi and Tong islands. We collected them at night. We used a kerosene lantern or a torch made of a piece of bamboo wrapped with thick cotton material soaked in kerosene. The light source was attached to the side of the boat or carried by hand if the water was not deep. One man paddled and 2-3 other fishers swam by the boat. The pearl

oysters stayed on top of the rocks. At a right spot, many oysters could be found in groups. A boat just needed to anchor and the fishers kept on collecting them until the boat was full.

The Urak Lawoi harvest mollusk for meat consumption and shells are collected only for sale. Giant clams and oysters are popular foods. Abductor muscles and shells of the giant clams were extracted and sold to local traders on the island, and other parts of the meat were consumed locally. The dried muscles were sold to Taiwanese traders at a high price of more than US\$ 10/kg. Shells were usually sold to shell traders in Phuket, and then to tourists as ornaments or materials for crafts. Today, only a few older Urak Lawoi women are still harvesting mollusk meat at low tide on Lipe. Rarely, younger women spontaneously go in a group to collect oysters on another island for home consumption and selling to other villagers. A man usually drives the boat for them.

Sea cucumbers were also abundant. After the death of To Kiri, the first village head who forbade the collection of sea cucumbers, the Urak Lawoi started to collect sea cucumbers in 1949. In the 1970's and 1980's *pling kamad*<sup>16</sup>, a species of sea cucumber, was popular. They were dried, then boiled in water to produce a liquid used as medicine for burns and internal injuries. *Taukay Pee* stated: “in the past, the whole island produced *kamad* liquid”. Besides *pling kamad*, there were a few other sea cucumber species that are collected and dried for meat. Today very few people collect the sea cucumbers.

According to a *taukay*, when he came in 1985, mollusks and sea cucumbers already represented a very small percentage of what the fishers caught. Now many non-fish species have become scarce. These include different mollusk species whose shells were collected for commercial purposes, sea cucumbers, and turtles. *Taukay* In said that in the past, people collected 100-200 *hoi muk kong* before they stopped for the night. Now if they could find two or three, they are satisfied because already they would have earned the same amount they earned with 100 *hoi muk kong* in the past. According to those who collect *pling kamad*, there are now only a few of them around Lipe and during the dry season they have to travel to islands outside the Adang Archipelago to collect them. *Taukay* In, who has collected sea cucumbers all his life, said that a big boat that could carry 12 people was once too small to carry *pling nom* (a white sea cucumber collected for dry meat) they found in one day. Now, it takes one month to find enough to fill three to four sacks. The same applies to turtles that have been caught for their meat and eggs as one of the favorite traditional foods among the Urak Lawoi. With the increase of trawlers, turtles have become increasingly scarce. In the past, people caught a turtle every one to two days on average but now that may happen once a month or even less frequently. Because of the park prohibition, the catching of turtles is very secretive. The meat is shared among families and friends, and is not for sale.

The catch of non-fish species has declined ever more over the years for different reasons. These include the Park prohibition of catch of certain species such as giant clams and lobsters. For instance, *T. Squamosa*, a species of giant clam that lives in deeper water, has

been heavily exploited because of its large size shell and beauty. It is now considered an endangered species, and collecting and exporting them are illegal (Chantrapornsyl et al 1996:199). Another reason for the declining of non-fish harvesting is related to the increasing difficulty of finding local buyers for non-fish products. Moreover, with the introduction of modern tools, large-scale fishing becomes easier and in comparison to fish, non-fish species require much more time and labor for processing (shelling, cleaning, drying, etc.) before they can be sold.

Compared with the villagers on Adang, those on Lipe have less diversified harvests of sea life. While almost all fishers from Lipe concentrate on fish, more than sixty per cent of those on Adang collect shells and/or sea cucumbers in addition to fish. Mr. Klom from Adang who collects shells said that he also fishes because the income from shell collecting alone is not enough to feed the family.

#### **4.8 Economic Situation**

The past economy of the Urak Lawoi was a subsistence economy where production and distribution are carried on at the local community level, primarily for local consumption. The subsistence of the Urak Lawoi was an immediate-return system that did not normally require storage because production occurred daily without special advance labor input. The habit of "what is gathered during the day, you eat in the evening" seems engrained (Hogan 1972:213-214). Hence, there was hardly any resource accumulation for future



use. The same principle applied to material possessions, which in the past consisted of only a small boat and simple fishing tools such as hooks and spears (Ukrit 1989:49).

The economy of the Urak Lawoi in the Adang Archipelago has been almost exclusively dependent on fishing. Although income based on fishing can be highly volatile, it is considered the most dependable job among the Urak Lawoi. During my fieldwork in the dry season of 1997 and monsoon season of 1998, the fishing yield was much higher than the past few years for both trap and hook-and-line fishing. Most Urak Lawoi were able to pay back their accumulated debt and ended with a plus of a few thousands to 10,000 baht (US\$ 250) in a quarter year. According to a senior marine biologist who kept records of the amount of fish landing, the yield dropped substantially the following season. One hook-and-line fisherman said he can get by if he catches one or two king mackerels a day. One kilogram of barred Spanish mackerels is 30 baht (US\$ .75). If he gets 10-20 kg (300-600 baht or US\$ 8-15) a day on the average, it is enough for him and his family to live. Even if he may not get anything on a “bad” day, on a “good” day, he may catch up to 60-70 kg of the mackerels (1,800-2,100 baht or US\$ 45-53).

It has not been until recently that a few Urak Lawoi started to be involved with non-fishing related jobs and diversified the sources and patterns of their livelihood. For these people, we can no longer talk about a fishing way of life. In the Tarutao Marine National Park Management Plan 1990-1994 (Office of the National Environment Board, n.d.:43), 90% of the local population said that they did not want to change their type of work. In a

household survey I conducted in 1998, while 57 % of the parents did not have a particular idea what their children should become, 22% mentioned fishery as a desired job for their children. The Urak Lawoi's opportunities in other sectors of the economy are limited by their low educational level, lack of necessary skills, and disinterest in certain lifestyles. Tourism jobs, such as running taxi boats for men and service work at a resort for women, are the few alternative jobs and income sources. In fact, non-fishing jobs can yield a much higher income during the tourist season. In 1998, nearly 7% of the household leaders were involved in tourism. A combination of fishing and tourism produced an average monthly income for these families of about 6,410 baht (US\$ 160), compared to 2,050 baht (US\$ 51) of those without a member working in the tourist industry. People with their own boat could earn up to 10,000 baht (US\$ 250) per month by offering taxi service to the tourists. However, besides a good boat, one needs at least a rudimentary knowledge of English in order to serve the tourists. As many consider the necessary language skills too difficult to master, the job is limited to only a few fishermen. For many other Urak Lawoi, fishing is still their first choice. As one fisherman said, "The income from tourist is only good when you find them". According to a resort owner, if there are king mackerels to fish, nobody would be interested in taking tourist around because the money earned from the mackerel fishing is better and they have more fun.

Beyond local jobs, 23 % of all households have had at least one family member working outside the Adang Archipelago. Of these, 60% are in fishery and 20% are household workers. In 1998, the average yearly income of such families was 53,899 baht (US\$

1,347), compared to 33,661 baht (US\$ 842) of the families without a member working outside.

The Urak Lawoi of the Adang Archipelago are considered economically better off (Kruahong, 1998:96) when compared to other Urak Lawoi groups or other small fishing families in the developing world, whose poverty persists despite decades of remarkable overall fisheries development and national economic growth (Platteau 1989:571). Most Urak Lawoi say that the living situation has improved over the years: fish may not be as abundant but it has a higher price; it is easier to work; and money is easier to earn. The gross annual income of the Urak Lawoi increased from 950 baht (US\$ 24) on Adang and 750 baht (US\$ 19) on Lipe in 1974 (Mahidol University 1974) to an average of 13,000 baht (US\$ 325) in 1992 (Department of Anthropology and Social Sciences 1992:35), and to 37,474 baht (US\$ 937) in 1998. Although their absolute income may be low, 3,125 baht (US\$ 78) on Lipe and 2,624 baht (US\$ 66) on Adang in 1998, compared to 16,918 baht (US\$ 423) in Bangkok or 6,920 baht (US\$ 173) on the mainland Satun Province in 1996 (Satun Provincial Statistical Office, 1996:98,101), the simple way of living on the small, relatively remote island contributes to very low living expenditures. An older Lipe villager, said, "There is no rent, no electricity or water bills to pay. You don't have to buy fish. We live much better than the poor fishermen or people who do rubber plantation work on the mainland".

Although the Urak Lawoi do not have many needs for their daily life, it is known that they earn only for today and do not save money for later use, a characteristics called *tam kao sarn krog mo* in Thai (pounding rice grains to remove the husk only enough to fill a pot). Most informants admitted that they spend money fast and if they have a lot, they spend a lot. They do not like to save. Most islanders do not plan or save for the future. It is a common practice for men to give their wife all the money and ask for an allowance when they need it. In addition to being in debt to their *taukay*, many women are in debt among themselves by borrowing money to play cards. The Urak Lawoi have a positive attitude towards credits and those who have more debts are considered to be more “able”. Indeed, some are even boastful if their debt amount is higher than that of the others. An Urak Lawoi former shop owner complained to me that she did not have money to reinvest and her business was a losing enterprise because the Urak Lawoi preferred buying dry goods on credit, even for sweets that cost only 1-2 baht (2.5-5 cents). They are only willing to pay cash for freshly prepared goods, such as noodle soup and sweet drinks. Buyers commonly said they would pay in the evening or when their husband got paid, which was every 3-6 months. This, however, is not the case with an outside shop owner.

In the socio-economic situation of the Urak Lawoi, it is difficult for a family without a man. Fishing and wood cutting for fuel, which are fundamental for the subsistence way of life in the Adang Archipelago, are primarily men's work, and most married women do not work. It is therefore rare to find a woman who is single or who does not remarry when the husband dies or is not able to support the family. The community does not show aversion

against women who do work, most of them in the tourism sector. However, when the tourist season is closed during the rainy season, they have to earn a living from the sea or get support from men. A young female informant whose husband died and now lives with her mother and a young brother said that she and her mother can both work at a resort during the dry season. However, in the rainy season, the mother needs to go hook-and-line fishing or they have to ask others for fish for their meals. For the fishing trip, the mother is only allowed to participate if the men think that the boat is not too full.

#### **4.9 Conclusion**

The way of life of the Urak Lawoi in the Adang Archipelago has changed tremendously since their settlement in 1910's. With the establishment of a national marine park, their way of life has changed from being semi-nomadic towards being fully sedentary, as many Urak Lawoi or "people of the sea" are now calling themselves "people of the island" or using the terms interchangeably. The introduction of modern fishing technologies and methods changed their way of sea life harvesting from one that was small-scale, diversified, and mainly for subsistence purposes to commercial fishery where harvested species are concentrated mainly on valued fishes. At the same time, the development of the tourism industry in the archipelago has introduced recreational and touristic use of marine and coastal resources. While the exploitation of sea life is common in large-scale fishing, conservation of the local resources became apparently crucial for attracting

tourists who generate an alternative income for the Urak Lawoi, and self interest becomes an incentive and motivation to conserve their environment and resources.

Throughout the last decade, the Urak Lawoi have learned to adjust to new ways of life introduced by outsiders. While they still cherish the strong tie of their life with the sea and freedom, their dependency on outsiders, especially the *taukay*, for their livelihood has become so strong that it would be difficult for most Urak Lawoi to imagine leading their own lives without one. Till today, the Urak Lawoi share and help each other to subsist; however, authority and power over their lives are mostly in the hands of those who are from outside and reside temporarily in the archipelago. This relationship has become a common feature partly as a consequence of economic forces acting with considerable pressure in recent times on the Urak Lawoi. In the next chapters, the groups of outsiders, who have had major influences on the changing way of life of the Urak Lawoi, will be introduced and the relationship of the Urak Lawoi with these people will be discussed.

## CHAPTER 5 OUTSIDERS AND THEIR RELATIONSHIP WITH COASTAL/MARINE RESOURCES AND THE URAK LAWOI IN THE ADANG ARCHIPELAGO

### 5.1 Introduction

In the past decades, *taukay*, large-scale commercial fishers, governmental officers, and tourists have been the main groups of coastal and marine resource users from outside the archipelago. This chapter examines the roles of these groups in the Adang Archipelago, how they perceive local resources, and their relationship with the Urak Lawoi. It looks at influences these groups have had regarding changes in resource uses and ways of life of the Urak Lawoi, and in particular, the Urak Lawoi's adaptation or resistance to newcomers.

### 5.2 *Taukay* and Commercial Fishing

*“More important than a father.”*

(A local policeman's description of what *taukay* means to the Urak Lawoi.)

#### 5.2.1 Introduction

Among all groups of outsiders, *taukay* have had the longest, the closest, and the most important relationship with the Urak Lawoi. Before the park was established, they were also most influential on how the Urak Lawoi used marine and coastal resources in the

Adang Archipelago. Today, approximately 80 percent of the male household leaders have a fishing job and 85 per cent of these people work as *luknong* of a *taukay*, some their entire life. While the park restricts certain types and methods of sea life harvesting by forbidding their catch and uses, *taukay* explicitly and implicitly direct the harvesting by their interest in purchasing. *Taukay* have become an important part of the community, and the relationship between them and Urak Lawoi *luknong* can be considered a long-term patron-client one, around which local social, economic, and political structures and institutions have developed. In the following part of this chapter, I will give a historical overview of *taukay* in the Adang Archipelago, discuss their roles in the community, and present different views of the relationship between the Urak Lawoi and the *taukay*. In doing so, I would like to emphasize the interdependence of both parties on each other, despite the fact that such a patron-client relationship has been viewed in both positive and negative ways. I will also address groups of Urak Lawoi people who choose to be independent of *taukay* or to become *taukay* themselves, and the reasons for their decisions.

### 5.2.2 History of Taukay

Due to the remoteness of the Adang Archipelago and the limited means of transportation to the mainland until quite recently, the main outside contacts of the Urak Lawoi were only a small number of *taukay* who functioned as traders and middlemen. The first *taukay* arrived at the Adang Archipelago in the early 1950's. Originally, *taukay* were of Chinese origin and came from the mainland peninsula, such as from Satun Province of Thailand and Palis of



Malaysia. It has been said that *chao lay* were known to be afraid of outsiders and did not enjoy contact with them (Kruahong 1998:35). *Taukay*, therefore, became handy as they took over contacts between the Urak Lawoi and other outsiders. *Taukay* facilitated the exchange of goods between the Adang Archipelago and the mainland. They traded goods, such as rice, clothes, and liquor, with sea products caught by the Urak Lawoi. The products, including fish, mollusks, sea cucumbers, and turtles' eggs, were then sold to both Thai and Malaysian markets. According to Ah Pae, now in his 80's and for whom almost all Urak Lawoi men of the Adang Archipelago have worked for, the Urak Lawoi were enthusiastic about *tau kay* coming to live on Lipe. They believed that with *tau kay* on the island they could live comfortably. Some of the *tau kay* brought their families with them and lived in the Adang Archipelago for a few decades. Through *tau kay*, the Urak Lawoi became involved in different fishing methods and fishing in outside waters, both in Thailand and foreign countries such as Myanmar and India.

### 5.2.3 *Tau kay* at Present

Today, there are no real 'outside' *tau kay*. In 1998, three out of the 4 *tau kay* of Lipe Island were at least partly of some Urak Lawoi origin, and became *tau kay* in the past decade (Table 5.1). Generally, the non-Urak Lawoi *tau kay* do not consider the Adang Archipelago as their permanent home, regardless of the number of years they have lived in the area. Most did not plan to be a *tau kay* for the rest of their lives. The main reason for being a *tau kay* in the Adang Archipelago is the profitable nature of sea life harvesting. Today, half

of the *taukay* have a house with their families and live part-time on the mainland. The families of the biggest *taukay* group, for example, have diversified their business into shrimp farming and commercial purse seining outside the archipelago. Even though some *taukay* do not think of fishery in the Adang Archipelago as their only possible long-term source of income, all *taukay* said that they prefer the smaller profits that are sustainable to high catch and exhaustion of their fishery resources.

In many ways, a *taukay* fishing operation is similar to commercial/industrial operations. Even though the fishers used small scale fishing tools and boats, they are owned by the *taukay* and not the Urak Lawoi who operate and need them for their livelihood. At present, the only fishing equipment allowed by the park are the traditional ones, consisting mainly of fish traps and hook and line. Superficially, these methods may create an impression of traditional or small-scale fishery. However, the fishing fleet has combined traditional fishing gear with the modern technologies of motored long-tailed boats. They are outfitted with air compressors for hookahs to optimize the efficiency of sea-harvesting, and the fleets have been well-organized in a manner similar to that of large-scale industrial fishing. Some *taukay* are involved in manual operations at sea while others are not; however, all are in charge of direct supervisory or coordination tasks on the beach, especially at the landing sites. One of the *taukay* estimated that the average total delivery of Lipe from all *taukay* is about 10,000-20,000 kg per month. The catch during the monsoon season is about double that of the dry season, except during my fieldwork in 1997/1998 when the dry season was

exceptionally good (*Appendix 6*). The fishermen are generally paid in the 2<sup>nd</sup>, 6<sup>th</sup>, 8<sup>th</sup> and 11<sup>th</sup> months of each year.

Table 5.1. Information of *taukay* on Lipe Island 1998

<b>Name of <i>taukay</i></b>	<b>Pee</b>	<b>Yos</b>	<b>Son</b>	<b>Kiti and Brothers</b>
<b>Years of business</b>	6	Since father In, total of over 20 years	7-8	13
<b>No. of long-tailed boats</b>	6 (2 for trap fishing and 4 for net fishing)	8 (7 for trap fishing 1 for storage and delivery)	13 (7 for trap fishing 4 for hook and line, 2 for storage and delivery)	33 (12 for trap fishing 19 for hook and line, 2 for storage)
<b>Approximate Number of <i>luknong</i></b>	10	18	50	80
<b>Approximate number of traps</b>	60	210	150	360
<b>Frequency of delivery to mainland</b>	2-3/mo for small catch 4-5/mo for big catch	1/wk	1/wk-3/2wks	3/2weeks
<b>Weight of each delivery in kg</b>	<1,000-1,300	1,400	1,000-2,000	1,000-2,000

The catch is delivered to the mainland. The most popular ports include Koh Sarai and Pak Bara of Satun Province in Thailand and Palis of Malaysia. With the advent of growing tourism in the Adang Archipelago, there is an increased demand for high-quality fresh marine produce for the local resort restaurants that cater to tourists during the season.

According to the *taukay*, conflicts among them are rare. *Luknong* usually stay with the same *taukay* for a long period of time. Stealing of fish and traps by other groups happens rarely. Mr. Yai, the school headmaster, observed that the *taukay* do not really get along with one another. He speculated that this happened because of the conflict of interests after dynamite fishing was banned. At that time, the method continued secretly, and different groups got upset if they were caught but not the others. It is not uncommon for *taukay* to run into a problem with the park or fishery officials because of their violation of rules and regulations.

#### 5.2.4 Life Story of a *taukay*

*Taukay* Kiti and his two brothers are the *taukay* group with the highest number of *luknong* and boats. Their mother was a niece of *kamnan* Jong, the first-generation *taukay* and the village head. She and her husband came from Tambon Ko Sarai of mainland Satun Province to Lipe in 1968, and since then have had a small store selling foods, grocery and other necessities. *Taukay* Kiti and his brothers partially grew up on Lipe Island. When Kiti finished a college education in agriculture on the mainland in 1975, there were no interesting openings for a governmental position for him. He then returned to the island and started a business venture collecting sea cucumbers for dry meat. He collected about 1,000 cucumbers per day. Within the first month, his sea harvesting became profitable. For him, work at sea seems more rewarding than a job on the mainland, and suitable for people like him who are willing to take a big risk on the investment. Soon, he expanded his business

into fishery. He bought a 25 *gong*-boat and hired Urak Lawoi to do *uan yeepon*, a drive-in net fishing introduced by Japanese soldiers during WWII. As older *taukay* were leaving the archipelago or going out of business, more Urak Lawoi came to work for him. His business expanded and his brothers joined him.

Like all *taukay*, Kiti has used different fishing methods, a few of which brought him into conflicts with officials as the methods became illegal. Problems with park and other officers are not unusual for a *taukay*. Some forbid certain activities while others demand bribes to be able to continue. He did dynamite fishing for about 1-1.5 years, but finally stopped because even if the profit was large, the bribe he had to pay became unbearable. He admitted that dynamite fishing is destructive, but in the past he did not care because he was poor and wanted to make money. Today, he does not feel good to earn money in such a way. After dynamite fishing, he tried drive-in nets, which, similar to blast fishing, required low investment and yielded high profit. In 1996, drive-in net fishing was banned, and the fishery officials gave him 6 months to find alternative ways to fish. Trap fishing seemed to be the best alternative, but the period was too short for him to get a sufficient number of boats to accommodate all his *luknong*, as a drive-in net fishing boat could take over 10 people but a trap fishing boat needs only 4 people. He continued drive-in net fishing and was finally arrested. At that point, he did not want to quit the fishing business because he had boats, *luknong*, and no other job to fall back to on the mainland without having to invest. Kiti was fined and his drive-in net fishing tools were confiscated, but he stayed on as

a *taukay*. At present, his main fishing methods are trap fishing and hook and line. Traps require rattan and its cutting is becoming problematic in the park area.

*Taukay* Kiti understands that his fishery depends solely on the park officials. He himself admits that his fishing activities around Lipe could be considered illegal as they happen in the park area. He sees the park status as beneficial in that it prohibits outside people from overexploiting the local resources. He believes that if the officials patrol the area in such a way that people from outside cannot fish here, the number of fishes in the area would grow and the future fishery of the local people will be bright. For him, conservation means 'not to destroy'. He thinks the area in the archipelago should be divided into, for example, a conservation area where everything is really conserved and no taking is allowed, an area assigned only for viewing and studying, and areas for fishing.

*Taukay* Kiti sells his fish to a Malaysian capitalist in Palid, whose prices determine his own buying prices with the Urak Lawoi. He is not interested in comparing his prices with those of other local *taukay*, which he believes may be higher for some fishes and lower for others. He estimates that his profit is about 30,000 - 40,000 baht (US\$ 750-1,000) per month on the average. He said some months he has no profit at all because of expenses. He prefers small and sustainable profits to large but short-time ones. He did not think that the villagers could live if he went after big profits.

In 1998, he, together with his brothers, had about 80 *luknong* and the number grows as their *luknong*'s sons join the fishing fleet. He feels a big responsibility as their livelihood depends strongly on him. He said that the governmental officials considered *taukay* like him a capitalist and that if they get rid of them, they could stop the activities that are not allowed in the park. However, he felt that they never ask how the *chaao lay* would survive without them. Similar to other local *taukay*, his role goes beyond that of comparable bosses in the fishing business. For instance, when a fisher or his family members need medical treatment on the mainland, his *taukay* often pays parts or all medical expenses. In the past, when scuba diving was practiced, *taukay* Nguan used to bring people who had dive accidents to the hospital by himself. Today he covers the normal sicknesses of his *luknong*, and their family members. He also provides boat rides to his *luknong*'s families for official registration on the mainland.

Among his *luknong*, *taukay* Kiti is considered a fair man. He is willing to discuss problems and reason with his *luknong*, but does not tolerate those he considered 'problematic'. As he himself once put it: "It is not worth quarrelling or fighting with my *luknong* because if I win, I do not gain anything. If I lose, I lose a lot".

*Taukay* Kiti does not plan to live in the Adang Archipelago for good. He said, "It is not a place to be when I am old". If he could, he would like to stop his business on Lipe now because of the big responsibility for his *luknong* and the marginal profit during the dry season. *Taukay* Kiti considers himself a businessman, and is saving money for a business

he could run on the mainland in the future. He has had a profitable shrimp farm on the mainland for a couple of years and is interested in investing in big fishing boats.

### 5.2.5 Relationship between Urak Lawoi and *Taukay*

The relationship between *taukay* and *luknong* is best described as a patron and client type of relationship. However, their relationship is multi-faceted and can be viewed in different ways, both in positive and negative aspects. In the following section, I attempt to describe these aspects and illustrate how such relationships influence the Urak Lawoi's way of life, and in turn, their relationship with the coastal and marine resources. The section also presents cases of Urak Lawoi who have become *taukay* themselves and those who decide to be independent of *taukay*.

#### 5.2.5.1 Positive Relationship

##### 5.2.5.1.1 Mutual Benefits

Positively viewed, the relationship between the Urak Lawoi and their *taukay* is based on reciprocal concessions, a sort of social agreement with mutual benefits. Here, the emphasis is not on a one-sided dependency, in which the Urak Lawoi solely depend on their *taukay*. Interviews with *taukay* show they considered their relationship with the Urak Lawoi essentially interdependent. As a *taukay* brother of *taukay* Kiti put it: "if they cannot live, we



cannot live". The *taukay* acknowledge their fishing business cannot continue without the contribution of the Urak Lawoi, and the Urak Lawoi would have difficulties surviving without them. *Taukay* provide boats and fishing supplies, and advance necessities to the Urak Lawoi. The Urak Lawoi trade their labor, skills and knowledge in harvesting sea products, and occasionally provide other services to their *taukay* when requested. *Taukay* have exclusive rights for the catch at the price they offer. At the same time, the Urak Lawoi have a guarantee of a buyer who takes their highly perishable catch without delay and arranges for further shipping of the commodity to the outside market.

My conversations with *luknong* showed the majority are satisfied with their *taukay*. Even though they depend on *taukay*, they do not feel that they are exploited. To a certain degree, trust is established between *taukay* and the Urak Lawoi. During my fieldwork, it was obvious that the Urak Lawoi do not show any interest when the *taukay* weighs and records the amount of their catch. Often, the Urak Lawoi take loans from their *taukay* and use credit for purchases, and neither party seems to wish to settle the running debts or to worry about financial transactions.

#### 5.2.5.1.2 Security

The majority of Urak Lawoi prefers working for a *taukay* to being independent fishers because of security-related reasons. Working for *taukay* has become connected with having someone to rely on. *Taukay* perform an essential economic service, for which no other

agency exists at present. *Taukay* function as a source of credit, an economic insurance, protection from insecurities, and assistance in time of hardship or shortage of necessities. As the Urak Lawoi have limited possibilities to diversify their activities into alternative non-fishing opportunities, they inevitably face the risk of income fluctuations from fishing. Having a *tauokay* is having a hedge against such a risk. In the past, it was *tauokay* who gave them rice at the end of the day for their subsistence despite the result of their catch. Today, it is still *tauokay* who advance them a sack of rice when needed. It is not uncommon for an Urak Lawoi *luknong* to ask their *tauokay* to get and initially pay for them products that are not available locally. During my fieldwork, the generator of Mr. Roaj was broken. A new generator, which cost 8,000 baht (US\$ 200), was not affordable for him. However, it was not a problem for him to borrow the money from his *tauokay*.

During my fieldwork, I observed that most Urak Lawoi feel inferior to people from the mainland and insecure in dealing with authority figures. Having a *tauokay* seems to give them a feeling of having a leader who helps to represent their position, protect their interest, and negotiate with strangers. The Urak Lawoi prefer having governmental officers, such as fishery and park staff, speak with their *tauokay*, even in their presence. To cite another case, when commercial fishers from outside came to Lipe to hire Urak Lawoi to recover a sunken fishing boat, *tauokay* Nguan helped his *luknong* who were interested to negotiate the pay, even though he did not have any share in it. A staff member of an EU sustainable development project in the Adang Archipelago captured the function of *tauokay* as a protector quite well:

*Taukay* Kiti is openly talking about leaving the Lipe trap business to invest in purse seines. He offered his longtailed boats to his *luknong* to manage on their own, but (it is) curious, isn't it? *Chaaolay* refused. They prefer to be his workers. This is not surprising. You cannot survive in rural Thailand if you are not part of a protection ring. (Montaldi, pers. comm.)

#### 5.2.5.1.3 Convenience

From the beginning of their arrival, *tauokay* facilitated the link between the Urak Lawoi and the outside world, especially the outside market. They continue to play a very important role in the Urak Lawoi's participation in the world market economy by connecting the Urak Lawoi--as the producers of the sea products, and the distributing buyers, who in turn sell the products to retail buyers who sell to consumers. The process of marketing fish and communicating with those involved in the marketing may be difficult, even impossible, for the Urak Lawoi themselves to perform. For example, Mr. Dam, an Urak Lawoi fisher with his own boat, explains that even though he does not work for a *tauokay*, he sells his fish to one because it is not worth it for individual fishers like him to ship a small amount of fish to the mainland. *Tauokay*' boats go to the market on the mainland on a regular basis. The delivery is well organized, and people who take care of it are skilled in handling the product in wider markets.

Investing in things for their future returns does not seem to be a prevalent concept among the Urak Lawoi. Working for a *tauokay* takes care of fishing tools and eliminates the need

for investing in them. Mrs. Jaidee described the Urak Lawoi's lack of interest in investment as follows:

The Urak Lawoi want to work for *taukay* because they are not interested in investing or further investing. If they earn 1,000 baht (US\$ 25) from selling fish, they would want to have or to spend it instead of buying new hooks or tools. If the *taukay* subtracted the money to buy the tools they need, I bet they would start selling a part of their fish to others.

Working with a *taukay* also reduces the responsibility for maintaining the boats and fishing supplies by themselves. Mr. Roaj, an Urak Lawoi who used to have a long-tailed boat for 3 years, said that it was a big burden to have his own boat because he always had to watch it and park it at different places in the different seasons. He finally sold his boat to someone else because he was tired of taking care of it.

Fishers and families who work for *taukay* get some financial incentives if they watch out for the boats, and such a task is done in a group, instead of by individuals. For instance, the temporary shelter spot on the West side consisted of 13 shelters for families of *taukay* Kiti's *luknong* who watched out for up to 30 boats during the east wind season in 1997/1998. In 1998, 27% of Urak Lawoi owned a boat while the rest used *taukay*'s boats. When asked what they wish for if they had money, less than 5% of the household leaders answered that they want a boat or a boat motor, compared to 43% for improvement of their house and 35% for saving.

#### 5.2.5.2 Negative Relationship

The relationship between *taukay* and the Urak Lawoi can be viewed as a negative patron-client one in which the client, the Urak Lawoi, is exploited and kept in virtually perpetual indebtedness. The high costs of investment in fishing<sup>17</sup> make it unlikely that the Urak Lawoi fishers could become independent. In other words, the exploitation is hidden in rent capitalism and unavoidable as many Urak Lawoi have become used to working for a *taukay* and completely dependent for their means of production on him. As Mr. Roaj has put it: “*kon ko* are used to having a *nai tun* since the ancient time”. According to this view, the Urak Lawoi are trapped in the situation where they cannot afford to have their own boats or technology for fishing gear and are forced to work for *taukay* and receive low prices for their catch because they are not able to bring them to the market by themselves or sell them to others (Mahidol University 1974:89; Office of the National Environment Board, n.d.:42).

In a bad harvesting period, the Urak Lawoi become indebted from the advances they cannot pay off and often stay indebted. In a good harvesting quarter, the Urak Lawoi may manage to pay off their debt, but the patron, *taukay*, extends credit for goods to the client who is intentionally kept in a debt relationship. As Ward (1960:152), who studied relationship between peasants and middlemen once said, “The uglier word for “credit,” of course, is “debt””. The strong debt bondage is criticized as leading to a permanent exploitative economic relationship, which result in the Urak Lawoi being dominated and increasingly

poor (Mahidol University 1974). According to Mr. Klom, when an Urak Lawoi works for a *taukay* and is in his debt, he cannot afford not to go fishing. As I found out from other Urak Lawoi who work for a *taukay*, a minus of 100-200 baht (US\$ 2.5-5) per day would be entered in their record on the day they do not work, unless they are sick.

#### 5.2.5.3 No Relationship

Although working for a *taukay* has earned some Urak Lawoi a proportionately larger economic reward and assistance in difficult times, a small number of the local population have chosen to resist external definition and work to maintain their self reliance, pride, and autonomy. On Adang Island, 8% of the fishers are independent and 31% work with a *taukay* on the mainland, compared to 6% and only 3% on Lipe respectively. The independent fishers on Adang work in small groups and sell their products directly to the distributing buyers on the mainland. These fishers specialize in particular products such as live grouper or shells. The group of Mr. Klom has received support from a trader on the mainland in equipping themselves with a boat and fishing equipment. *Taukay* Porn on Lipe thinks that the people on Adang may not be interested in working with a *taukay* on Lipe because their leader, Mr. Lamsa, used to be a *taukay* on Adang. Mr. Lamsa, however, refused to be referred to as a *taukay*. His explanation for why fishers on Adang prefer not working for a local *taukay* is that prices offered by the *taukay* are low and they resist by delivering their products by themselves to the buyer who offers a better price. An Adang independent fisher, Klom, likes to work independently even when he has to pay for the

expenses because he can fish when he wants. As he said, “If the weather is bad, I don’t need to go out because of my *taukay*”.

#### 5.2.5.4 *Becoming Taukay*

In, Pee, and their families are examples of Urak Lawoi who broke their role of being *luknong* for outside *taukay* and successfully became *taukay* themselves. Both of them are specialized in a niche: In on sea cucumbers and shells; Pee on live grouper. With his children, In also diversified into the tourism industry and became an owner of a small, popular tourist resort. For In, it is better to work for oneself and not be controlled by other people. In his opinion, the *taukay* get rich from the islanders and it is stupid of the islanders to not do things on their own. He believes that if more Urak Lawoi were to do what he has done, the outside *taukay* would not be able to stay.

The fishing fleets of the Urak Lawoi *taukay* are smaller than that of the non-Urak Lawoi. Their total catch is therefore smaller and their delivery to the mainland is not as frequent. Some Urak Lawoi *luknong* believe that an Urak Lawoi *taukay* gives a better price for their catch as he understands their situation and shares their background. The Urak Lawoi *taukay* themselves have different opinions about how the local people think of them. While Pee feels that the villagers support him well as a *taukay*, Klom feels that most local people would rather work for an outside *taukay* than having another Urak Lawoi be their boss. In

has a mixed feeling of getting support but, at the same time, being the focus of gossip that he only made it to where he is today because he cheated other villagers.

### **5.3 Large-Scale Commercial Fishers and Exploitation of the Andaman Sea**

*“They suck everything, even the sea worms.”*

(An Urak Lawoi fisher describing how light-luring boats  
for commercial fishing attract sea life)

#### **5.3.1. Introduction**

During my fieldwork, when I traveled by boat, regardless of the distance of the trip, there was not one trip without spotting a commercial fishing boat in the Adang or Tarutao Archipelagos. During the dark moon nights, it was common to see the oceanic horizon lit by the strong lights of the light-luring boats. It is obvious that the Adang Archipelago is no longer a remote, isolated place, and its resources are not utilized only by the local people. As a matter of fact, commercial fishers are harvesting many times the quantity caught by the residents of the archipelagos. The following part of the chapter examines this matter and the view of the Urak Lawoi on the commercial fishery.



### 5.3.2 History of Commercial Fishing

In Thailand, government incentives, private investment, and new fishing technologies including motorized vessels and trawling and purse seine nets, have supported large-scale fishing fleets<sup>18</sup> to expand operations rapidly from the 1950's. Since the introduction of German-built fishing trawlers in 1961, Thailand's fishing industry has grown tremendously, from slightly over 220,000 tons in 1960 to 2,900,320 tons in 1998 (Table 5.2), making it one of the top ten principal producers in the world. Of the total catch in Thailand, 93% is represented by the catch in marine fishing areas (FAO 1971:8; FAO 1998:99,111). In 1990, fishery products represented 12 percent of all exported commodities, compared to rice at 8 percent (Handbook of Nations 1990:306 in Ruohomäki 1999:12).

Thailand's National Economic and Social Development Plans (NESDP) set out the objectives, policies, and strategies for fisheries development in Thailand. They are summarized by Ruohomäki (1999:26) as follows:

The objective of the First Plan (1962-66) and the Second Plan (1967-71) was to increase total marine fisheries production for domestic consumption. Support was given to trawl fishing for demersal resources (fishing for bottom-dwelling species by using trawls) by offering investors income tax exemptions for five to eight years by reducing import and export duties. The maritime catch increased from 270,000 metric tons in 1962 to 635,000 metric ton in 1966. The third plan (1972-76) emphasized fisheries production for export and the first signs of the development of coastal aquaculture, in the form of shrimp farming, are seen. The Fourth Plan (1977-81) stated the need for conservation of marine natural resources and habitat and set out the regulations to preserve them. The Fourth Plan also

expressed continued support for shrimp farming. The Fifth Plan (1982-86) expressed the need for the expansion of the Thai fishing fleet by obtaining fishing licenses from neighboring countries. By this time there were clear signs of the over-exploitation of demersal resources within the 50-metre depth in the Gulf of Thailand. The Sixth Plan (1987-91) was much the same as the previous one. Over-fishing in the Gulf of Thailand had become a serious problem and the objective was to increase production of marine fish from outside Thai waters. The Seventh Plan (1992-96) is very similar to the previous one. The state supports fishing technology projects on the high seas by building new research vessels and co-operating with high-seas fishing nations. The plan mentions, for the first time, sustainable development in marine fisheries, both in the Exclusive Economic Zone (EEZ) of Thailand and neighboring countries and on the high seas (Ruohomäki 1999:16).

The primary source of the marine catch has been the Gulf of Thailand in the East; however, the amount of the catch has been stagnating. In contrast, the catch in the Andaman Sea on the West has been on a rise, with the annual production increasing from 229,100 tons in 1978 to 855,000 tons in 1998 (FAO 1981:279; FAO 1998:564). However, catch per unit of effort (CPUE) rates have been declining steadily in both the Gulf of Thailand and the Andaman Sea. In the Gulf of Thailand, the average CPUE decreased from 279 kilograms per hour in 1961 to 54 kilograms per hour in 1985, while in the Andaman Sea, the CPUE in Phangnga Bay dropped from 160 in 1969 to 38 kilograms per hour in 1988 (Johnson 1997:22-23).

In the 1950's and 1960's, there were few big commercial fishing boats in the Adang Archipelago. The majority of the boats were from Singapore and Malaysia catching fish with long lines or dynamite. Torell (1984) concluded that the Thai fisheries have been affected in negative ways by the establishment of EEZ's<sup>19</sup>, and pressure from other

non-fishing sectors in the coastal zone as well as from its own quick expansion. As the fish stock in the Gulf of Siam decreased even more because of overfishing, commercial fishing operators have sought new territories in the Andaman Sea, which for most operators is considered an alternative, rich fishing ground in Thailand. The number of commercial fishing boats in the Adang Archipelago increased over the years despite the status of marine national park of the area.

### 5.3.3 Commercial Fishing at Present

The vast and highly productive fishing ground, including the area of 1,400 km<sup>2</sup> of Tarutao Marine National Park of the Andaman Sea, attracts fishing fleets from both Satun and outside provinces. According to the National Statistical Office (1996), in 1994, fisheries represented nearly 23 % of the gross product of Satun Province, and constituted by far the largest industry.

Now trawlers, purse seines, and squid castnets from different provinces are abundant and common in the Adang Archipelago. According to different captains of trawlers, most of the sea bed of the area is especially suitable for trawling as it free from natural obstructions such as rocks and reefs. Efficiency of fishing methods has been improved with technology. Many trawlers and purse seines are equipped with high-tech, capital-intensive fishing devices. Radars and sounders to view the sea floor and detect schools of fish are common. Purse seines and squid castnet vessels are equipped with strong electric lamps and

generators to produce bright light<sup>20</sup> (50-60 kilowatt per boat) that attracts pelagic fish at night.



Figure 5.1. Harvests of a Trawler in the Andaman Sea

Commercial fishing boats involve high investment and operating costs. Anyone with capital can develop local fleets and landing sites. Investors from other Thai provinces, such as Trang and Samut Prakarn, and from Malaysia are common. According to two big

commercial fishing operators in La-Ngu of Satun Province, their investment on commercial fishing ranges from several 10,000,000 (US\$ 250,000) to several 100,000,000 baht (US\$ 2,500,000). Each has a buying site, boat repair station and 30-40 commercial fishing boats with different fishing methods. Each hire between 500-700 people at the monthly income of 2,000-5,000 baht (US\$ 50 -125) (Office of the National Environment Board, n.d.:44). The daily operating cost of a trawler with 10 people is about 15,000 baht (US\$ 375) while the cost of a purse seine with 30 people can be as high as 20,000 baht (US\$ 500).

The high operating costs of the commercial fishing boats make many of them go after quantity of fish despite the low value, and the crew commonly works around the clock. Trawls and push nets make it very easy to pull in large quantities of fish, most of which are “trash fish” (small demersal fish, scads and other food fish), which are small in size, low in price, and commonly used for production of animal foods. In 1990, the annual marine catch was composed of food fish (41 percent), trashfish (41.4 percent), shellfish (5 percent), cephalopods (5.7 percent), crabs (1.8 per cent), and others (0.6 percent) (Phasuk 1993:37 in Ruohomäki 1999:13). According to a DOF survey of 37 marine fish landing places in 1994 (DOF in Johnson 1997:25), trash fish account for roughly 33.2% of all landings (measured by tonnage), which is more than any other species of fish. By contrast, the economic value of trash fish is only 6% of all fish landings. According to fishery officials, surveys at landing sites in Satun Province showed that at least half of the trash fish was composed of juveniles of economic species.



Figure 5.2. Commercial Fishing Boat in the Adang Archipelago



Figure 5.3. Light-Luring Boats in front of Adang Island

Table 5.2. Thailand Fishery Capture Production 1960-1998

Year	Thailand's Nominal Catch* in 1,000 Metric Tons	Thailand's Catch in Marine Fishing Areas	Catch in the Indian Ocean (Andaman Sea)	Catch in Western Central Pacific (Gulf of Thailand)
1960	220.9			
1961	305.6			
1962	339.7			
1963	418.7			
1964	582.5			
1965	626.7			
1966	732.6			
1967	846.6			
1968	1,088.9			
1969	1,269.9			
1970	1,447.7			
1971	1,571.6			
1972	1,678.3	1,550.2		
1973	1,678.6	1,540.0		
1974	1,515.5	1,355.5		
1975	1,552.8	1,392.1		
1976	1,659.4	1,512.1		
1977	2,188.5	2,066.1		
1978	2,099.3	1,957.8	229.1	1,728.7
1979	1,946.3	1,813.2	254.3	1,558.8
1980	1,792.9	1,648.0	187.6	1,460.3
1981	1,650.0	1,500.0	176.2	1,323.7
1982	2,120.1	1,986.6	313.9	1,672.6
1983	2,260.0	2,104.6	307.5	1,797.1
1984	2,134.8	1,973.0	326.5	1,646.5
1985	2,225.1	2,057.7	312.6	1,745.1
1986	2,536.3	2,348.3	403.4	1,944.8
1987	2,779.1	2,601.9	427.0	2,174.9
1988	2,642.1	2,445.3	338.0	2,107.3
1989	2,443.9	2,324.6	406.9	1,917.6
1990	2,498.2	2,362.8	442.2	1,920.6
1991	2,618.7	2,480.6	658.6	1,822.0
1992	2,875.5	2,740.2	656.2	2,084.0
1993	2,927.7	2,752.5	823.7	1,928.9
1994	3,012.3	2,818.3	770.6	2,047.7
1995	3,013.3	2,826.6	816.1	2,010.5
1996	3,004.7	2,790.7	868.3	1,922.5
1997	2,877.6	2,694.4	859.1	1,835.3
1998	2,900.3	2,709.0	855.0	1,854.0

Source: FAO Yearbook of Fishery Statistics

A large number of trawlers in the Andaman Sea are based in Kantang Harbor of Trang Province, which is the trash fish capital of the southern Andaman Sea. With an exception of the catch from purse seines which target pelagic species, most of which have a better price in Thailand, and are landed in harbors of Satun where the fleet owners also operate local cold storage facilities and are in charge of marketing, most catches end up in other sites where sales prices are higher. These sites include Perlis and Kedah in Malaysia.

The long hours of commercial fisher crews are notorious. For example, a trawler I visited had 10 members working day and night in continuous shifts for 1.5 months at sea. Their supplies and fish are brought in and out by a transit boat every few days, or when it is called by radio. On another purse seine I visited, the crew had already worked without a real break for four months. Even though their boat landed every few days to unload fish, it departed immediately for the sea again. Some kinds of net fishing boats are used in conjunction with light-luring boats or fishing aggregating devices (such as coconut leaves) to catch sea life on dark nights. These boats operate with 20-30 person crews staying at sea about 22 days a month, with a one-week break during the brighter nights. Captains and crews of larger commercial fishing boats are usually people from outside. Nowadays, many crewmembers come from neighboring countries such as Myanmar. Unlike Thai fishers who may quit after a fishing trip, the foreign fishers are known to stay longer to save a larger sum of money before they return home. Similar to some of the *taukay*, for them the Adang Archipelago is a place where money can be made from fishery resources.



Some of the fishing boats in the Adang Archipelago have a double license that allows them to fish in both Thai and Malaysian waters. While parts of Malaysian waters are considered more abundant than the Thai's, the fishery rules and regulations of Malaysia are stricter and more effectively enforced. As a captain of a double license fishing boat described the situation to me, Malaysia has a very clear classification for different fishing boats according to their sizes, allowing them to fish in different zones, i.e. bigger boats fish in waters further away from the shore. Additionally, light fisheries are banned within 12 nautical miles from the coast in Malaysia. While such rules do not exist in Thailand, there are other rules to follow. For example, according to Fishery Regulations of the Ministry of Agriculture and Cooperatives, Fisheries Act, B.E. 2490 (1947), no fishing tool with a mesh size smaller than 3.2 centimeters can be used with a light-luring device. Fishing tools with a mesh size smaller than 2.5 centimeters are not allowed to be used at night. Trawling devices combined with a motored boat are not allowed within 3000 meters from the high water mark on shore, and for Tarutao Island of the Park, they are not allowed within 1000 meters between October and February. Collecting of sea turtles and their eggs, corals, and dolphins are prohibited.

Park and fishery rules that exist in the Adang Archipelago, however, are often violated. Illegal methods and tools and invasion of prohibited areas, including Park areas and foreign waters, have become common practices. The most common incidents are trawlers fishing within the forbidden area of 3 km from shore and purse seine fishing with nets that are finer than 2.5 cm mesh size. Insufficient patrol, corruption, and the advanced

communication systems of the commercial fishing boats make it easy for them to get away with their illegal activities.

#### 5.3.4 Relationship with Urak Lawoi

On one hand, fully mechanized commercial trawlers and purse seine fishing in the Adang Archipelago have practically no links with the small-scale fishing communities of the Urak Lawoi. The only common contacts are for the exchanges of ice, tobacco, or liquor from the commercial fishing crew with coconuts from the Urak Lawoi. Very few Urak Lawoi have worked on these commercial fishing boats. Those who have, found the work horrifyingly hard and are not interested in going back.

On the other hand, large-scale commercial fishing has a strong impact on the Urak Lawoi's fishery. The Urak Lawoi often complain about the ever-encroaching trawlers and the light-luring boats. When the commercial fishing boats operate in shallow waters, they inevitably threaten the small-scale fishermen by over fishing their customary fishing zone, damaging or destroying their small-scale gear, and disturbing the breeding and nursing grounds of valuable species. Trawlers, in particular, are considered by many Urak Lawoi as the most damaging for coral reefs and turtles, and are often held responsible for the loss of their fish traps. Many trawlers come inside the prohibited 3-km area from shore, especially at night, and are not arrested. Some Urak Lawoi feel that their fishing methods are rendered futile by the trawler methods that basically scrape the ocean floor clean, or by the

light-luring boats. The Urak Lawoi fishers complain that if the light-luring boats are present at night during mackerel season, there is nothing left for their hook and line fishing on the following day. Even though samples collected from big commercial fishing boats during my fieldwork were very different from the fish the villagers catch, fish caught by trawlers did include some of those that are caught by the Urak Lawoi. Despite all the complaints, the *taukay* and Urak Lawoi fishers seem to believe that they cannot do anything but live with the commercial fishing of “their” waters.

#### **5.4 Governmental Officers and Establishment of Tarutao Marine National Park**

*“When I was young, when the people heard that the governor was coming, they would be shaking from fear. They were very afraid of being arrested even though they did not do anything wrong.”*

(Mr. Gla describing the relationship between the Urak Lawoi and government officials in the past.)

##### **5.4.1. Introduction**

With its park status, most of the area in the Adang Archipelago is state property. The area includes two national park offices (one on Adang and the other on Rawi), a marine life conservation unit of the Fishery Department, a public health office, a school, and a police station. In the present day to day life, services offered by the public health station and the

school, both located on Lipe Island, are most used by the Urak Lawoi. Among the officers, those working for the park and fishery departments seem to have the strongest impact on the changing relationship between the Urak Lawoi and the coastal and marine resources. Their execution of the rules and regulations, eviction of the Urak Lawoi, and the banning of traditional or accustomed activities have been accommodated as well as resisted by the Urak Lawoi over the years. The following part of the chapter will focus on the policies of the park and fishery department in the Adang Archipelago, the perspective of officials on how to manage the natural resources and the area, and their relationship with the Urak Lawoi. It will also discuss perspectives of the Urak Lawoi on the park status, government officials and the regulations, and how they have dealt with their living in a national park.

#### 5.4.2 History of Establishment of National Marine Park and Marine Life Conservation Unit

Adang Archipelago became a part of Tarutao Marine National Park when the park was established in 1974; however, it was not until 1993 that the Marine National Park Division of the Forestry Department was established to achieve the following objectives (Interpretation & Recreation Subdivision, Marine National Parks Division, the Royal Forestry Department):

1. To manage the marine protected areas in accordance with the National Parks Protection Act 1961<sup>21</sup>;

2. To continually revise and update marine park management strategies for natural resource conservation and rehabilitation of marine ecosystems in the Marine National Parks;
3. To provide recreation, education, and research opportunities within the parks in a sustainable fashion;
4. To undertake and utilize research to update management plans for each Marine National Park independently.

According to the above objectives, park personnel primarily manage and protect the natural environment in the Adang Archipelago. The National Park Division has no general policy toward local residents in the park. As a matter of fact, natural resource management in Thailand has been centralized and policies are top-down. The decision to establish the area as a part of Tarutao Marine National Park, as well as the rules and regulations had been made in the central office. Surprisingly, as late as in the 6<sup>th</sup> Social and Economic Development Plan of Thailand (1987-1991) national marine parks were not considered in management and development plan of a conservation area. Tarutao National Park Management Plan 1990-1994 was finally developed by the Office of the National Environment Board, with an approval of the Forestry Department. In the plan, land and water areas are divided into six zones, each of which should be developed under rules and regulations of the park. (Office of Academic Services, Chulalongkorn University 1992:2-25):

1. Intensive use zone, including tourist accommodation and service areas and future development projects;
2. Outdoor recreation zone, including recreational and sightseeing areas that are easily accessible and activities and necessary man-made that have low impact on the natural environment;
3. Special conservation zones for historical areas or special ecological systems, e.g. turtle nesting ground;
4. Primitive zone for forests and protected areas, such as watersheds;
5. Special use zone for human-related purposes such as villages;
6. General use zone for building construction and other uses such as piers, fishing grounds.

The area where the local park office has room for power and decision-making is implementation. Because any decision of major importance for the park must be approved by the Bangkok office, the process of approving an initiative generated at the local level takes a long time. According to Eitel (1994:44), a process involved in appropriation of park funds for even a relatively small task takes about one year even though Tarutao Marine National Park is comprised of Tarutao and Adang Archipelagos. The park office in Adang is considerably smaller. There is no separate budget for this part of the park and the Adang park head has no input on the allocation of the budget to this part. In an interview with Adang Park heads, Eitel (1994:45) described distribution of funding for the park as follows:

His (Adang's Park Head's) annual budget is a mere 800,000 baht (US\$ 20,000) per year, the equivalent of (US) \$32,000. Of this, 500,000 (US\$20,000) budget goes to pay employees their yearly salary and the remainder is all that is allowed for the daily operation. Operating on US\$ 12,000 the park must protect one of the world's last remaining areas containing such an enormous amount of biodiversity. This money is expected to cover construction, maintenance, gasoline for boats, as well as enforcement, educational extension etc.

The Urak Lawoi only learned about the park's claim of the area from their village leaders (Mahidol University 1974:88). As there is no management plan or emphasis on what to do with the Urak Lawoi, the implementation of the park rules and regulations depend mainly on individual park authorities, especially superintendents. In the case of the Adang Archipelago, the Park decided to leave the Urak Lawoi, who had resided on the island since 1910's, in the area for the following socio-economic, environmental, and political reasons (Mahidol University 1974:5, 97-98, 101).

1. Because of the high number of population (329 people in 42 families in 1974), emigration would be difficult and it would be hard to find a new home for them as they are fishers and not agriculturalists.
2. Lipe is a small island. Most of the natural environment has already been degraded, and it would be difficult to restore it to its original condition. Taking the problems into consideration, it is considered better to leave it as a place of residence for the villagers and those who migrate from other islands in the Adang and Tarutao Archipelagos.
3. When the park is developed and number of tourists increases, services will be required and should be taken care of by the local people. Allowing Lipe to be a residential area

not only will be beneficial to the operation of the Park but also can provide services to the visitors, for example, allowing for selling of consumer goods and local products of the islanders. The visitors can also view the culture and traditions of the *chaao lay* which are hard to find today. (Mahidol University 1974:16).

4. People on Lipe Island have closer connection with Malaysia. If they were to move, they would most probably move to Malaysia and may cause problems between Thailand and Malaysia.

In addition to the park, a marine life conservation unit of the Fishery Department was founded on Lipe in 1995. Its areas of responsibility include Amphoe Gantang, Amphoe Palian in Trang Province, and Satun Province, covering 4,920 sea mile<sup>2</sup> or 16,875.60 km<sup>2</sup>.

Its responsibilities include:

- patrol areas and arrest wrongdoers according to the Fisheries Act, B.E. 2490 and other laws related to fishery;
- build up awareness among the local population to conserve marine animal resources and environment;
- consider effective measures for patrolling, including measures for prevention;
- give suggestions to the people about conserving marine animal resources;
- cooperate with province and district about solutions of conflicts related to fishing tools among fishermen;
- help fishermen by studying conflicts and proposing ideas for problem solving related to conserving marine animal resources.



When compared to the park, the fishery staff seems to have more interactions with the local people in their areas of responsibility as patrollers, educators, and problem solvers. The personal opinion of the head of the conservation unit is that it works like a patrolling station. Most Urak Lawoi agree with this view. Because the outpost on Lipe is responsible for a very large area, most of the time, the head is not present on the island. During his presence, patrolling in the area is common and the commercial fishing boats are alert. At other times, the outpost seems quiet and the personnel remaining at the station, who do not have a license to arrest wrongdoers, are more involved with the maintenance of the outpost area than patrolling or conserving sea life.

#### 5.4.3 Relationship between Governmental Officials and Urak Lawoi

The relationship of the Urak Lawoi with governmental officials has been one of tension. A former official from the Education Department who was in charge of opening the school on Lipe said that in the 1950's when the first Thai officials started to visit Adang Archipelago, the Urak Lawoi were considered "primitive" people and treated in an oppressive way. Some officials took away their fish or sent them up the trees to pick coconuts. Older Urak Lawoi informants remembered that they were afraid of being arrested even when they did no wrong. Today, their constant violation of park's rules and regulations that restrict their traditional ways of life make them fear being arrested. *Taukay* Pee described the relationship between the Urak Lawoi and park officials as one in which

the Urak Lawoi are only there to be arrested. During my fieldwork, it was clear that the Urak Lawoi do not voice their concerns to outsiders, especially to governmental officials. For example, when I asked an old couple whom I visited regularly, what kind of problems they would like outsiders to help solve, they often stayed quiet. After several meetings with them, they finally said that they might be shot if they say something. Some informants said they do not dare to make their problems public, while others said they avoid getting into trouble. As one of the assistants of the village head said, they fear for their life when they go to the mainland.

The relationship between the park staff and the villagers started off peacefully. According to *taukay* Pee, in the beginning only two to three park officials stayed in huts, and they got along well with the villagers. They did not ban dynamite fishing and even asked for dynamited fish for their meals. The tension started with the relocation of the Urak Lawoi from other islands in the Adang Archipelago to Lipe. Some residents on Adang refused to move away from the land they had long cultivated even though they were offered the chance to move to Amphoe Kuankalong in Satun Province on the mainland. In the 1980's, conflicts between park officials and the Urak Lawoi got more intense with the banning of the traditional way of the Urak Lawoi's life, the *bagad*. For park officials, taking natural resources within a park is inappropriate, especially when the mobility of the users is high. The history of the park establishment was quite turbulent with many violent conflicts. In 1976, a ranger trainee was killed during an attempt to stop pirates from hunting on Tarutao. Sources are unclear whether the pirates were local people or hired hands of notorious Lipe

village head, *kamnan* Jong (Eitel 1994). The park office on the Adang Island was established in 1985, and violent measures against the *bagad* practice began. Three years later, there was a violent conflict in a dynamite fishing case, and three park officials were killed during the investigation. In that year, five different park heads were assigned. Ngam's mother, who is now in her 40's, and her friends recalled how park officials chased them away at gunpoint from the beaches where they stayed during *bagad*. At the same time, park officials dealing with dynamite fishing became sharp and accusative. As an 11-year old boy, Mr. Yos saw a park official slap his father after they were arrested during a trip to recover fish traps and wrongly accused of dynamite fishing. Even though they were innocent and let go, most of their fish were confiscated. The mistrust and ill feelings between park officials and the local people escalated and led to a violent confrontation during a dynamite fishing control in 1988 when two park rangers (Office of the National Environment Board, n.d.:63) lost their lives. In 1987 and 1988, the park head position at the Adang Office was held by six different people.

From my interviews with different park personnel, the main conflict in their relationship with the Urak Lawoi is that while they accept the rights of the Urak Lawoi to reside in the Adang Archipelago, they do not believe that this could coincide with conservation. The park believes that local residents still lack understanding and awareness of the importance and role of a national park and of natural resource conservation. In Eitel's interview (1994:45) with Sutmit, a former assistant of Adang Assistant Superintendent, Sutmit said it would be 'inappropriate' to chase the *chaao lay* out of the park because they are inheritors.

At the same time, he is convinced that the Urak Lawoi are indifferent to preservation and that it would be impossible to involve them in any aspect of the park as they only care about "today's food and half of a bottle". The current head of the Adang office has a view similar to Mr. Sutmit's. He experiences difficulties in talking with the villagers about conservation because they are not concerned about the long-term future.

For the current Head of Tarutao Marine National Park, for whom conservation means using a resource in a reasonable manner so that it can be sustained, private land ownership on Lipe Island is problematic to the management of the park. Private ownership and high population density on Lipe Island make it inevitably as the site in the park most affected by human development, both in terms of villages and recent tourism development. Personally, he did not believe that humans and forest can be together, and would be happier to have Lipe excluded from the park's territory. For him, it is impossible to conserve natural resources the villagers need for their livelihood. For example, he does not see a solution to woodcutting by the villagers because they need wood regularly to make traps, charcoal, or build houses. He predicted that Lipe would be totally degraded within ten years.

In the opinion of many Urak Lawoi, park status has not been beneficial to them. They feel pressured and frustrated living in a park area. Those I spoke to during the fieldwork unanimously said that the time before National Park status allowed for better livelihood. As *taukay* Una summarized: "the way of living before the Park came was *sanuk* (fun)". With the presence of the park and fishery personnel, the Urak Lawoi feel that their harvesting is

limited, in terms of the tools used, the area of harvesting, as well as the species caught. Some complain that they do not receive help from the park or the fishery staff, and their expectation has not been met. For instance, an Urak Lawoi man in his early 30's said that when the park came, he was told *chaao lay* would make places for tourists to stay, but now the Park is doing it and does not want *chaao lay* to be involved. As a matter of fact, the Park did not employ any Urak Lawoi in the Adang Archipelago during the period of my fieldwork. Another example came from *taukay* Yos and his family, who diversified their fishing business into a small-scale tourist resort and were charged with encroaching on park land. According to him, all that he and his family have tried to do has been banned. When he was doing dynamite fishing, the park banned it. Then he changed to drive-in net fishing, and it was banned again. With the resort business on the land once occupied by his grandparents, he thinks that he could make a living without going fishing any more. However, the park does not accept their land right. In another instance, Mr. Klom had a conflict situation with the former Adang park head because he did not ask for permission to build a small house for his son next to his. For him, it is not comprehensible why he would have to ask for such permission if he builds a house to live, and not a bungalow to make money.

#### *5.4.3.1 Learning to Live Together*

Even though the relationship between the park officials and the Urak Lawoi has been difficult, it would be one-sided to present the relationship only as one full of tension and

dissatisfaction. With the new park personnel and lessons locally learned over the past years, the park has successfully managed to improve relations with the Urak Lawoi.

A few local people see the park status as beneficial because it prevents outside people from overexploiting the resources of the area. Some recognized that dynamite fishing was destructive and its ban has allowed the number of fish to grow again. Today, most park officials understand and accept that some of the park's rules and regulations, if followed strictly, would not allow the islanders to continue their subsistence. These include forbidding taking of marine life and cutting of trees. The Tarutao Park head is willing to compromise and 'gives what can be given'. Local park officials also make necessary compromises about the use of local resources so that the local people can sustain their livelihood. Rattan cutting for fish trap making is a good example. To allow the *chaao lay* to continue their livelihood through trap fishing, the local park official checked how many groups of people depend for their livelihood on trap fishing and "unofficially" allows a very small quota to be cut. Realistically the amount is only sufficient for two traps per three months, but the official believes that the quota helps people cut less and decreases theft. The fact that they risk being arrested or no longer being allowed to cut any at all also helps. In this way, the park official hopes to slow down the depletion of rattan. He admits that the amount of resources the villagers take is relatively small when compared to that taken by people from outside.

While ostensibly complying with park's rules and regulations, the Urak Lawoi have also learned to stretch and circumvent these limitations through everyday forms of resistance. With the small number of park personnel patrolling the large area of the archipelago, opportunities for breaking rules and regulations are extensive and taken advantage of regularly: for example, poaching, illegal wood cutting, and encroaching on park land. As mentioned in an earlier chapter, certain key resources came to be protected by the park, including giant clams and sea turtles and their eggs. The meat of giant clams and sea turtles are valued as special foods, and poaching of them continues to today. This is well known among the Urak Lawoi who often share the resulting, poached meat, but is secret to outsiders. In the first few months of my stay in the field, I almost became convinced that the Urak Lawoi had stopped their consumption of these sea animals because they were banned by the park. It was not until several months had passed that I suddenly got an offer to taste turtle meat cooked by a family I frequently visited and that I was told by others that they buried the shells of giant clams to conceal their having been poached.

Woodcutting has also been prohibited. However, the Urak Lawoi exclusively use wood coals as cooking fuel and fish traps made of rattan that must be replaced every three months. Secret cuttings happen on a regular basis. As I stayed next to the temporary shelters of the Urak Lawoi on the west side, I was able to smell the burning of wood to make cooking charcoal almost daily. The smoky air reminded me of their everyday resistance to the park rules in order to continue their use of this and other necessary resources. On a 'clear' day

(when no official is around to watch out for their rattan taking), fishermen go together in groups to cut rattan

Everyday forms of resistance are more obvious with land encroachment. On Adang, 30 households persisted in staying where they had lived even after the area was claimed by the park and despite attempts by the park to relocate them. On Lipe, over 90% of the households continue to stay on someone else's land. A few Urak Lawoi families have built resort bungalows in areas claimed to belong to their grandparents and practically ignore the warnings of the park that they are encroaching on park land. During my field research, *taukay* In and his partner were arrested after operating a tourist resort for over three years on land that both his family and the park claim to own. Despite several warnings of charges on park land encroachment, In never gave up the resort.

The relationship between the governmental officials and the Urak Lawoi varies with the individual officials, a few of whom are well respected and liked by the villagers. These include a former Fishery Outpost Unit head and the current schoolmaster. The Outpost Head was known to be friendly and generous with the villagers. He taught and encouraged Pee, who later became a *taukay*, to take care of groupers and sell them live. The schoolmaster who has been in the position since 1992, is well respected and liked by the Urak Lawoi. His active involvement in community activities and the fact that he has successfully brought in different projects and help from outside, have put him in a position of a community leader. The Urak Lawoi's trust in him plays an important role in having



their children further their school education. The school ground itself has become a village gathering place, and is used for community activities.

#### 5.4.3.2 *Becoming Governmental Officers*

Besides the three assistants of the village head and the two Urak Lawoi men hired as local workers at the Fishery Unit, all other governmental employees come from outside. All except one village head are mainlanders married to an Urak Lawoi. The position of the village head is permanent, and the current head has been in the position since 1985. He is also the owner of the first and the largest tourist resort on Lipe, and seems to spend most of his time on the island taking care of the resort. Many complaints have been raised among the villagers and his assistants about his conduct as the head of the village. Governmental announcements, including ones that are as important as deadline for a land claim, raises of village head assistants' salaries, or funding, do not always get to the village or come very late. The Urak Lawoi I spoke to in the field expressed dissatisfaction with the officials and some related that they are *kon thai* (Thai people) and not *kon ko* (island people). Most of these people think that they are ready to have a head who is a *kon ko* and that under the leadership of a *kon ko*, they hope things would improve.

Despite their dissatisfaction with officials who are *kon thai*, very few Urak Lawoi are interested in becoming governmental officials. Mr. Harn, an assistant to the village head, said that he accepted the position because nobody else wanted it. In his opinion, most

people are not interested because the position would bring them 'hardship'. A local governmental official is expected to take care of and entertain mainland governmental officers who visit the archipelago, and they are concerned that they are too poor to do this part of the job well. Some are concerned about being mistreated or abused by the head, while others do not want to be obliged to attend regular meetings on the mainland. On the contrary, the village head believes that the islanders do not want to have responsibility for anything and do not contribute. He used an example of the islanders attending a meeting only when free things are distributed.

It should be noted that the local people who work with the government do not have problems with other villagers or being accepted by the community. For example, Mr. Jerd is an Urak Lawoi and has worked with the Fishery for over 10 years and has never had a problem with other Urak Lawoi because of his work. In another example, Mr. Boon came from the mainland to work for the Tarutao Marine National Park from 1984-1991. He married a local woman and became a fisherman since 1991. Mr. Boon has not had difficulty being accepted by the Lipe villagers despite the fact that he used to work for the park and came to Lipe after the violent confrontation between the park officials and the local people. He said it depends on the individual and he has had no problems.

## 5.5 Tourists and Tourism Development

*“More should come so that our island will become progressive.”*

(A standard view of the Urak Lawoi about the tourists.)

### 5.5.1 Introduction

Tourism has been the largest foreign exchange earner of Thailand since 1982, replacing rice, which had been the most important export of the country for many decades. Beach resorts remain the first choice for nearly 30 per cent of the tourists in Thailand (Barnetson in Wong Poh Poh 1998:256). Being ‘away from it all’, with high quality water, a wide variety of marine life, and a home of the ‘sea gypsies’, the Adang Archipelago has become an attractive tourist destination of South Thailand in the dry season from December to April. With the development of accommodation offered by both the park and private people, and regular transportation between the mainland and the archipelago, tourism in the area is growing and has a strong impact on both the activities of the park and the residents during its season. Similar to many beach resorts in Southeast Asia, those in the Adang Archipelago are in the initial stage of coastal tourism development. They are small, rudimentary beach resorts in the form of A-frame beach huts and bungalows built on or near beaches and they have evolved in an unplanned and spontaneous manner.

At present, both hosts and visitors seem to be satisfied with tourism in the area. The Urak Lawoi welcome its development and the increasing number of the visitors. At the same time, a study of the Office of Academic Services, Chulalongkorn University (1992:4-54) and a tourist survey in 1998 showed that both Thai and international visitors who have been to the destination were satisfied with their trip to the Adang Archipelago and would like to return.

### 5.5.2 History of Tourism Development

Tourism development in the Adang Archipelago started with the establishment of Tarutao Marine National Park in 1974. The park embraced tourism in marine protected areas with the reasons well stated in the following:

Tourism is one use which can be encouraged in marine park management plans which are aimed at achieving sustainability, since it is essentially non-extractive and non-degrading if properly controlled. Tourism can provide economic and political incentives for management and conservation, and can provide additional benefits to local communities and regional economies. Tourism is especially important as a component of planning in Thailand where growth and development are important national priorities. The relationship between tourism and marine park protection is bi-directional, such that tourism provides incentives for protection and well managed areas provide incentives for visitation (Interpretation & Recreation Subdivision, Marine National Park Division of the Royal Forestry Department).

It is not surprising that the majority of the first tourists to the Adang Archipelago were governmental officers and their families. These officers knew the area through work or other officials who worked in the area, and could access it by official boats such as those of

the water police. As the number of visitors increased, park accommodations in Adang became insufficient. The first park head of the Adang office encouraged the family of the village head to build accommodations for visitors. With this encouragement and the park's permission to use local woods for the construction, the first resort in the Adang Archipelago was started in 1984 with a row of seven houses and a shared bathroom. In the same year, a hired boat of tour agencies in Satun Province started to run from Port Jepilung of Satun Province to Lipe. In the 1980's passenger boats to Lipe began.

The majority of Thai tourists came on group tours, organized by small-scale tour operators, many of which are located in Satun Province. These group tours were as large as 80 or more people. By contrast, Western tourists have traveled independently. The first few arrived at Lipe in the end of 1980's. A German tourist who has traveled to Lipe every winter since 1987, said that there were about three to five western tourists in that year and the number of the Western visitors seems to double yearly. In the tourist season from December 1990 through April 1991, Mrs. Jaidee, a resort owner, had a record of 700-800 visitors coming with tour boats to Lipe/Adang. Between 1982 and 1991, the average number of visitors to Tarutao National Park per year was 12,713 people, with 95% Thais and 5 % international visitors. The statistics of Tarutao Marine National Park (1990-1994) show that, between 1987 and 1992, the increase in the number of visitors was about 20% per year, from 18,195 in 1987 to 45,275 in 1992. Fifteen percent of Tarutao Thai visitors and 25% of foreign visitors go to Lipe, while 12% Thai and 4% foreign visitors go to Adang (Office of

Academic Services, Chulalongkorn University 1992:3-25). On average, there were 3,260 Thais and 184 foreigners visiting the Adang Archipelago per year between 1982 and 1991.



Figure 5.4. Park Accommodation for Visitors on Adang Island

### 5.5.3 Tourism Development at Present

Today, during the tourist season, visitors can reach the Adang Archipelago by passenger boats running 3 times a week from Pakbara Harbor in Satun Province. The park in Adang offers tents and 2 rows of 10 houses, each of which can accommodate 4 people. During the tourist season, most park facilities and personnel are geared towards accommodating tourists.



Figure 5.5. Tourist Bungalows on Lipe

On Lipe Island, five privately owned resorts, with a total of 153 bungalows, were in operation while two others (10 bungalows each) were under construction (Table 5.3). The prices of the accommodations ranged from US \$3.75 to 7.50 a night. Four of the five existing resorts belong to three children of the former village head. The resorts operate

independently from one another. The last resort belongs to two related Urak Lawoi families.

Table 5.3. Tourist Resorts on Lipe Island in 1998

<i>Resort Name</i>	<i>Years of Operation</i>	<i>No. of Bungalows Start/1998 (plan to add)</i>	<i>Prices per Day in Baht (No. of Bungalows)</i>	<i>Other Services besides Restaurant</i>
<i>Andaman</i>	1+	12/25  (75?)	250-300 (25)	taxi boat small shop tent camp snorkel
<i>Chao Le</i>	8	5/34	150 (9) 250 (16) 300 (9)	taxi boat Camp
<i>Lee Pae</i>	14	7 row houses/70	200 (20), water jar, squad toilet 250 (12), shower, sit toilet 300 (30), shower, sit toilet 1200 (3), 2 bedrooms, 2 toilets, concrete building, tiles	small shop tents camp snorkel+vest
<i>Pattaya Song</i>	4 3	6/9 (11) 3/12 (??)	150 (9) with shared toilet/bath 200 (12)	taxi boat snorkel or fin tent camp
<i>Pattaya Nung</i>	Not available	3/3	100 with shared toilet/bath	
<i>Resort of Mr. Roaj</i>	Under construction	(10)	Not decided	
<i>Andaman Song</i>	under construction	(10)	Not decided	taxi boat



Most resort accommodations are bungalow huts, with a built-in or a shared bathroom. The park accommodations on Adang and all resorts on Lipe have a restaurant. In a tourist survey conducted in 1998, the environmental compatibility of its accommodations was rated above 'average'.

Mrs. Jaidee said that the most common size of a Thai group tour today is between 15 and 25 people. In her opinion, the decrease in the number may be due to the increasing number of tour companies and that fact that individual travelers can access the archipelago by regular passenger boats today. The Park Head at Adang estimated that the number of tourists visiting Tarutao, Adang, and Lipe in the tourist season of 1997/1998, including both those coming with passenger boats and these who came by other means, could be as high as 50,000-60,000 people.

#### 5.5.4 Tourists

##### *5.5.4.1 Tourist Profile*

In a tourist survey conducted in 1998, most Thai respondents came from Bangkok (68%). The majority of the international tourists (81%) were from Western Europe, with 36% from Germany and 10% from United Kingdom. The average age for both Thai and non-Thai tourists was 34 years, with people aged 23-38 years representing 67% of respondents. Sixty-eight per cent of the total respondents attended a university, and 15% a vocational

school. In relation to occupations, business and trade-related jobs were the most mentioned occupations among both the Thai and non-Thai respondents.

The majority of both Thai and non-Thai respondents had traveled abroad, and many international tourists had visited different regions in the world. Seventy percent of international visitors had been to Thailand before. Among these people, more than 75% of them visited other places in Thailand. Of all the respondents, 20% were repeat visitors to Lipe, fifty-eight per cent of whom had been to the island 2-3 times.

On average, respondents agreed with the statement "I consider myself an eco-tourist<sup>22</sup>" in a tourist survey. In informal interviews, most tourists were concerned about the natural environment and were interested in the conservation of the local culture and nature. Even though 84% of all respondents knew that Lipe was a part of a national marine park, only 32% said that the status of a national marine park influenced their interaction with the island's natural environment by increasing their attempts towards conservation. Nearly 40% said that they always supported conservation wherever they were, independently of the status of the destination.

According to the owner of a local convenient store, Western tourists are very environmentally conservative and she does not worry that they will degrade the natural environment. She said they started to conserve already when they depart from the harbor on the mainland. They do not want to throw garbage, as small as cigarette butts, in the sea.

They are worried about oil leaking from boats and do not want to collect and take shells back to home. They said these things are beautiful if they stay in their home environment. In contrast, she is worried about Thai tourists who come in big groups. In her words, "The Thais spoil the island within two days." When 200 of them came at the same time, the water well dried and they left a huge pile of garbage behind. They also came to her shop to ask for shells.

#### *5.5.4.2 Patterns and Activities*

The average stay of Thai respondents was three days, compared to 8.7 days among the non-Thai respondents. Average daily spending of all respondents was 632 baht (US\$ 15.8), with a mean of 530 baht (US\$ 13.25) for the international tourists and 765 baht (US\$ 19.13) for the Thais. For both international and Thai visitors, the natural environment was the most mentioned important criterion for the selection of an island destination. This was followed by the criterion 'convenience and safety' among Thai respondents, but by 'quietness/peacefulness' and 'not being touristic' by non-Thai respondents (Table 5.4). The importance of these criteria corresponds with the main activities during their stay. Water/beach activities were mentioned by over 90% of respondents; relaxation was mentioned more often by international tourists (73%) than by Thais (45%).

Table 5.4. Important Criteria When Respondents Select an Island Destination

<b>Criteria of Island Destination</b>	<b>% of All Respondents (n = 442)</b>	<b>% of Non-Thai Respondents (n = 261)</b>	<b>% of Thai Respondents (n = 181)</b>
Natural environment	83	81	86
Convenience/safety	43	24	69
Quietness/peacefulness	29	43	10
Not touristic	29	43	9
Low development level	22	25	17
Active recreational activities	15	23	3
Local culture and people	14	27	3
Value for money	15	12	20

#### *5.5.4.3 Perception of Tourists on the Destination*

Many tourists perceive the islands in the Adang Archipelago as among the last pristine island destinations in Thailand. In the tourist survey, respondents significantly agreed with the statement "Lipe has potential as an eco-tourism destination". In terms of the natural environment, respondents were most impressed by the quality of Lipe as a "prototypical" tropical island destination and its flora and fauna. Results of ranking statements related to the local environment showed that the visitors ranked Lipe as "good" in terms of the diversity of marine life, quality of seawater, beaches, and marine environment. When comparing Lipe with other small tropical islands that the respondents had visited, 81% of all respondents said that it was unique. The most often mentioned features of its uniqueness were its attractive environment (46%), its sea gypsies (34%), and low-scale development (26%).

Informal interviews with tourists showed their strong appreciation of the low-scale development of tourism on Lipe Island. Already in a 1992, the visitors wanted neither more accommodation nor more tourists (Office of Academic Services, Chulalongkorn University 1992). In 1998, nearly 90% of repeat visitors noticed changes. Most positive changes were mainly related to tourism facilities, while environmental degradation and more development were noted as main negative changes. Thirty per cent of international tourists answered 'nothing' to the questions what they perceived as positive changes. In the interviews conducted with tourists, most of them do not want information of the area to become more widely known, because this may increase visitor numbers to the destination and, consequently, degradation of the local environment. To the question "What kind of change on and around Lipe Island would make you stop visiting?" 65 % of all respondents and 85% of international respondents mentioned further/over-development of tourism and mass tourism. Results of informal interviews pointed out that although they did not think the number of visitors at present was too high, they were worried that this would change. Most often, the history of what happened to Phi Phi islands<sup>23</sup> was given as an example of what could happen to Lipe. In addition to further development of tourism, degraded natural environment (41%) and garbage/dirtiness/pollution (35%) are the other most frequently mentioned reasons why respondents would stop visiting the island (Table 5.5).

Table 5.5. Changes on and around Lipe Island that Would Make Respondents Stop Visiting

<b>Change</b>	<b>% of Total Respondents (n = 421)</b>	<b>% of Non-Thai Respondents (n = 256)</b>	<b>% of Thai Respondents (n = 165)</b>
Further/over tourism development	65	85	34
Degraded natural environment	41	31	56
More garbage/dirtiness/pollution	35	31	41
City atmosphere	12	8	18
Commercialization of the place	9	10	7
Loss of traditional culture	6	5	6

The activities most frequently mentioned by respondents as degrading the environment included waste related activities (e.g. burning of garbage, and lack of waste disposal or sewage treatment), tourism related activities (e.g. littering, harming or taking of shells and corals, large tour groups, more tourism development), boat-related activities (e.g. anchoring on corals, landing during low tide, disposal of motor oil in the sea), and fishing related activities (e.g. overfishing, spearfishing) (Table 5.6). It should be noted that the number of Thai respondents (most of whom come in a tour group) who mention tourism related activities as being harmful to the environment is much higher than that of the international respondents. This may reflect the higher impact of the activities of the Thai group tours, which can be as large as a few hundreds people at a time.

Table 5.6. Activities Most Mentioned as Degrading the Environment around Lipe

Type of Activities	% of Total Respondents (n = 419)	% of Non-Thai Respondents (n = 257)	% of Thai Respondents (n = 162)
Waste related activities	64	72	51
Tourism related activities	28	15	47
Boat related activities	21	23	17
Fishing related activities	15	21	5

Respondents were asked to give suggestions about what would stop activities harmful to the environment. Education, legislation, and waste management were the most frequently mentioned answers. International visitors mentioned waste management more often than Thais (Table 5.7). Of all respondents, 84% say they are willing to pay a fee to help support nature conservation around Lipe. The mean of the amount considered fair for such a fee is 140 baht (\$3.50) per visit, with 210 baht (\$5.25) as the mean of the non-Thais, and 54 baht (\$1.35) that of the Thais.

Table 5.7. What Would Stop Activities Seen around Lipe that Are Degrading the Environment

Suggestions	% of Total Respondents (n = 250)	% of Non-Thai Respondents (n = 126)	% of Thai Respondents (n = 124)
Education	46	48	46
Legislation	34	30	38
Waste management	32	44	22
Limited access	11	14	9

### 5.5.5 Relationship between Urak Lawoi and Tourists

The relationship between the Urak Lawoi and tourists has been mutually beneficial and welcomed by both parties. Before they arrived, half of the surveyed visitors had learned primarily from travel books and magazines, that the people of Lipe have a culture and language that are different from those of Thais. Even though the primary attraction of the Adang Archipelago remains its natural environment, the Urak Lawoi added a “cultural” attribute to the destination, which differentiated it from other island destinations. The simple, exotic, and relatively traditional ways of day-to-day life of the Urak Lawoi seem to satisfy and impress visitors who search for or are interested in experiencing the ‘other’ or the past when modern technology was not integrated too much into the day-to-day life they experienced at home. As the tourism industry develops in the Adang Archipelago, the Urak Lawoi transform their role from a local resource user to “resources” for the industry, i.e. as a tourist attraction, the host, and as a local source of tourism industry labor.

Most Urak Lawoi welcome tourism and describe tourists as people who come to look around and do not harm anything. Having visitors is seen as fun. A majority of the Urak Lawoi welcomes an increasing number of tourists, as they unanimously say: “The more, the merrier”. These people look forward to a higher level of tourism development. For example, Mr. Roaj wants Lipe to be *jaroeng* (progressive<sup>24</sup>) like Phi Phi Islands, and he is convinced that it will certainly happen. Despite his background in fishery, he and his family look forward to working in tourism. Few others, such as Ngam’s mother or Chompu prefer the



current low-impact bungalow type of resort. They do not want Lipe to become like Phi Phi where, in their opinion, things are all messed up and the Urak Lawoi are confined to a small area and have to live “like in a prison”. Their relatives on other islands sold their land to capitalists for a lump sum of money. Not knowing how to save the money, these relatives soon spent it all and were chased out by the capitalist who now owns the land.

#### *5.5.5.1 Alternative Source of Livelihood*

Opportunities of the Urak Lawoi in other sectors of the economy have been limited by their low educational level, lack of skills for jobs that are not related to fishery, and disinterest in working as daily wage earners or on the mainland. Loss of and limited access to resource bases make it difficult for the Urak Lawoi to maintain their traditional ways of life and subsistence-based economic system. Contemporary Urak Lawoi no longer only fish and gather sea products. They look for alternative forms of livelihood and have diversified through job opportunities in the tourism industry. The younger generation of the Urak Lawoi is an important local source of tourism industry labor and involvement in tourism as an alternative means of livelihood has become increasingly common. Working in the tourism sector is especially attractive because it gives the Urak Lawoi opportunities to earn cash, which they generally lack.

In 1998, twenty-five percent of the households had at least one family member working in the tourism sector, more than half of which were women working at resorts (*Appendix 7*).



Figure 5.6. Taxi Boat for Tourists

Sixty-eight percent of all people working in the tourism sector work in a resort, while 32% run taxi boats. Some men combine running a taxi boat with fishing, taking tourists around when hired, and going fishing on the days when there is no demand. The boating skills of the men and extensive knowledge of the local area are valuable for the local tourism industry. The snorkeling and scuba diving spots pointed out by Urak Lawoi guides are places rated “good” in scientific studies. I asked Mr. Roaj who both fishes and takes tourists around whether he notices differences between running a taxi boat for tourists and fishing. He said taking tourists around is better because of the certainty in cash income and the ease of work. “It is not difficult work. You anchor the boat and the tourists go swimming or lay in the sun. When they want to return, we just take off”, he said. By contrast, money from fishing is unpredictable and depends on luck even when you go to sea

every day. *Taukay* Pee confirmed Mr. Roaj's view by saying that people can earn up to 10,000 baht (US\$ 250) per month by giving boat service to the tourists. In fishing, if they get the same amount, they are considered very lucky. Mrs. Chompu said when her husband runs a taxi boat for tourists, he earns more than 1,000 (US\$ 25) baht of cash a day. In one tourist season, he got over 40,000 baht (US\$ 1,000). She thinks if he is more diligent, he can definitely make 70,000-80,000 baht (US\$ 1,750-2,000) in one season. As they are running a resort, finding guests is not a problem.

#### 5.5.5.2 Experience of Authenticity

Two of the tourist resorts are located in the village on Lipe. Most tourists in a survey, especially the non-Thais, have no problem with Lipe islanders living next to a resort. Even though getting to know local culture was listed as a main activities by only 10% of the survey respondents on Lipe Island, over half of all respondents have contact with the islanders, most of which happens simply through walking in the village or hiring taxi boatmen. Sharing the same space, both on land and in the sea, tourists and the local people are inevitably exposed to the ways that each other live. The fact that they do not share a common language does not seem to hinder their communication and attempts to understand each other. In a tourist survey, 36% of the respondents were impressed by the simple way of life of the Urak Lawoi. As the destination is little developed, there are hardly any organized activities catering to the tourists, except a *rong gneg* dance performance, which is occasionally organized for a big Thai group tour. With the Urak Lawoi, it is still

possible for the visitors to experience an authentic and traditional tropical island life style, different from their own every day life and hard to discover in their own culture. The fishers go fishing for their *taukay* and are not interested in selling their harvest to a tourist. The villagers play *ramana* drum when a spirit grants them a wish, but not for a tourist show. Experiencing an authentic, traditional way of life fulfills a desire of many tourists travelling in foreign places.

#### *5.5.5.3 Host and Guest*

Respondents mention that they are most impressed by the friendliness of the local islanders. Through taxi boatmen, a few tourists have developed a deeper friendship with their families. These tourists then, in subsequent visits, use their boat service regularly, come to visit their home, have a meal together, and even stay with the Urak Lawoi families. In return, the visitors offer money to help the families buy a boat or remodel their houses. Friendship between Mr. Arabek, a Swiss tourist, and Mrs. Malee's husband, Harn, illustrates such a relationship. As a tourist visiting Lipe for the first time, Arabek stayed at Lipe Resort where he got to know Harn, who offered taxi boat service and took him around. They became friends and Arabek stayed at Harn's house with his family for three months during his past visit. He gave them money to build a new house and gave 2,000 baht (US\$ 50) to Mrs. Malee so that she did not have to go to work at a resort.

#### *5.5.5.4 Learning to Conserve for Tourists*

Before the introduction of tourism, the Urak Lawoi viewed marine and coastal resources only as sources of subsistence goods. Corals and reef fish are simply common parts of their environment, and have not traditionally appealed to the Urak Lawoi as beautiful things. The term, “so-so” is normally used to describe their feeling about the corals, and it seems strange for many Urak Lawoi to hear that corals are pretty. Through tourists, some Urak Lawoi gradually learn that fish and corals have leisure, recreational, and aesthetic values. One of the boatmen told me a story of how a group of tourists got so excited about what they saw underwater that they convinced him to jump in the water to take a look. In the water, he only saw the soft corals common in the area. He did not quite know what to say to the tourists. “I did not see anything beautiful and was amazed they asked me to go in the water for that. But they were so excited, I could only nod. They say beautiful, so it is beautiful”.

Realizing how important the marine and coastal environment is for attracting tourists from whom they earn money, the Urak Lawoi have started to understand at least the rudimentary practices of conservation and their importance. For most Urak Lawoi, the first thing that comes to mind about conservation is “to not destroy corals”. As many Urak Lawoi said, “there was no need to take care of corals in the past but now there are many tourists.” Mr. Chai, a part-time tourist taxi boat driver, said that tourists make him want to conserve coral reefs because if they are gone, tourists won't be coming here. The boatmen have also

learned not to upset the tourists by throwing the anchor on a coral head or taking certain forms of sea life out of the water in their presence. Mr. Daeng, another part-time taxi boat driver, said that in the past, when he dropped an anchor, he never cared where it would hit. Both Thai and Western tourists complain if his anchor hit corals, even without tourists, he now uses a buoy and makes sure that the corals are not damaged. He said he started to feel bad hurting them. The presence of tourists seems to make the Urak Lawoi more concerned about their relationship with the natural environment. As an example, during the tourist season in 1998, a villager wanted to remodel his house and got a permission to use a big log from the park. However, he said that he would have to wait till the tourist season was over because it does not look good if tourists see the log transported for house remodeling.

Interestingly, it is the tourists, not the park officials, who seem to succeed in involving the Urak Lawoi in conservation efforts. The fact of Urak Lawoi involvement in the tourism industry shows us that even though tourism-generated jobs cannot be related to the traditional lifestyle of the Urak Lawoi, they welcome the industry because of the economic incentive they receive. Consequently, a conservation ethics develops because Urak Lawoi see that maintaining local resources is necessary to continue attracting the tourists who generate additional income.

## 5.6 Conclusion

This chapter has described the main outside groups of coastal and marine resource users and their different relationships with both the resources and the Urak Lawoi, past and present. It is apparent that these groups of outsiders have different patterns of resource use, some complementary and others that are in conflict. *Taukay* and commercial fishers use the resources for generating profit in the fishery industry. The national marine park Division of the Forestry Department and the Marine Life Conservation Unit of the Fishery Department are interested in conserving the natural environment and local resources, while the provincial government would like to utilize these resources for economic development. Tourists visit the archipelago for its attractiveness as an island destination with a healthy ecosystem and for its recreational value. Land and resort owners benefit from tourism development that has been supported by the park and the government.

Unequal power relations between the Urak Lawoi and the other groups presented in this chapter influence the resource-related actions and every day practices of the local people, and the impacts of the outside groups on both the natural environment and social processes in the Adang Archipelago. Due to the park status, the state holds power and has control over the natural resource rights, access, use, and management. Levels of power executed by the state vary, depending on the officials themselves, time and space, the specifically affected groups of resources users, and the political and economic groups behind them.

Despite the status of being direct and long-term local resource users, the Urak Lawoi have the least power, and have become the most marginalized group. They depend on their *taukay* patron, land owners, and tourists for their alternative means of livelihood. They also use some forms of resistance to gain access to necessary resources. Considering the capitalization of the fishing and tourism industries, intensification of resource use, and participation of the Urak Lawoi in the market economy and modern world, I would like to discuss and analyze potentials and problems in sustaining local resources and culture in the Adang Archipelago in the following chapter.



## CHAPTER 6

### ANALYSIS OF PROBLEMS IN SUSTAINING LOCAL RESOURCES

#### 6.1 Introduction

In previous chapters, I have described changing ways of life among the Urak Lawoi and the powerful impacts of outsiders in the Adang Archipelago. In this chapter, I will use political ecology to analyze different problems in sustaining natural resources and local culture in the area. I will examine reasons why the centralized resource management and conservation approaches of a national marine park have had little impact on sustainable resource use in the Adang Archipelago. Effects of non-communal property regimes on the local culture and environment, connection between the economic interests of both local and regional 'powers' and the ways local resources have been exploited, as well as discrepancies between park policies and their limited execution will be discussed.

Furthermore, I analyze the disintegration and loss of local cultural traditions in the archipelago, the status of its foraging nomadic people and ethnic minority groups in a modern world, and their recent participation in market economics and modernization as a strategy to survive. The chapter also examines the lack of Urak Lawoi participants in local leadership and communal institutions and their difficulties in participatory management. Lastly, it addresses the conflicts and competition of resource use between the Urak Lawoi and outsiders, particularly those involving the capitalization of fishery and tourism industries.

## 6.2 Introduced Concepts and Impacts

As Harvey (1993:25 in Bryant 1997:9) notes,

...all ecological projects (and arguments) are simultaneously political-economic projects (and arguments) and vice versa. Ecological arguments are never socially neutral any more than socio-political arguments are ecologically neutral. Looking more closely at the way ecology and politics interrelate then becomes imperative if we are to get a better handle on how to approach environmental/ecological questions.

### 6.2.1 National Marine Park

Park policies and concepts of state and private land ownership have been introduced in the Adang Archipelago and argued for as ways to conserve natural resources and economically develop the area. The power relations among those who introduce these concepts, those who benefit from them, and the majority of the Urak Lawoi have been unequal and manifested by the physical environment. The deserted, overgrown areas marked by old coconut trees not only point out the old villages or popular *bagad* areas of the Urak Lawoi, they also illustrate the Urak Lawoi's lack of power to negotiate with the park. At the same time, private land and resorts on Lipe, which belong to the family of the infamous *Kamman Jong*, show us how people in governmental positions and with "connections" have been able to take advantage of the official land acquisition system. The Urak Lawoi have never been involved in policy development, planning, or managing natural or cultural resources of the area. Under centralized management, top-down rules and regulations are imposed upon the Urak Lawoi without taking into consideration their

unique way of life and culture. At one time, communal rights of access to resources and the *bagad* food foraging lifestyle in the Adang Archipelago were central to Urak Lawoi culture. Now, the access and right to local resources are determined by official rules. These rules sharply constrain Urak Lawoi access to and use of the resources, and strongly influence a change in their living styles. Deserted overgrown *bagad* areas and villages on different beaches in the archipelago, still marked by tall coconut and other fruit trees, and overcrowded residential areas on Lipe are only few examples of the topography of a politicized environment that reflect unequal power relations among different actors.

As Blaikie (1985 in Neuman 1992:95) stated, "...any conservation policy, is often a political endeavour, producing winners and losers. An understanding of why a particular conservation policy is resisted, can be pursued by asking who loses and who gains." In the opinion of the Urak Lawoi, they are the losers in the park. The sense of livelihood security based on access to resources for meeting basic needs and offsetting risks has been undermined. For the first time, Urak Lawoi are faced with uncertainty about basic subsistence. Their feelings of being oppressed and dissatisfied are clearly reflected in the most common complaint: "Life has been hard since the park came." On one hand, their lesser power over access to environmental resources is demonstrated by the fact that the majority of the Urak Lawoi have largely complied with the rules of the park. On the other hand, they resist the more powerful parties and defend their rights to natural resources with everyday forms of resistance (Scott 1985). Such practices rarely draw public attention to how the Urak Lawoi try to reclaim and maintain their right to resources.

Outsiders notably label these practices 'encroaching', 'poaching', 'stealing', and other 'illegal' activities. Being in a weaker position, the Urak Lawoi unanimously justify their resistance with the simple phrase: "no stealing, no food". Some even say that if they support conservation, they will end up starving.

From the perspective of state officials, Urak Lawoi ways of life and attitudes threaten the park management goal of conservation. As Neumann (1992:88) pointed out, much subjectivity is involved in defining the expressions 'threats to national parks' or 'environmental degradation'. From a political ecology perspective, viewing the situation from the 'bottom up' and within the historical context of state mandated changes in resource use, it is the park, which is seen to be encroaching on Urak Lawoi villages, imposing concepts for which they do not see a need, and threatening their livelihood. Among the Urak Lawoi, benefits of the park's conservation, reasons for protecting an area, and any advantages that might result have never been made clear to them. I mentioned earlier that many older Urak Lawoi neither understand the concept of conservation nor see the need for it. Given their background, they never suffered a real scarcity of subsistence resources or had any reason for concern about the future. In the past, with low population pressure in the vast archipelago, the traditional nomadic food foraging style was environmentally sound as it prevented overexploitation of the resources at one particular area for a longer period of time, and allowed for their regeneration. Today, the degree of impact of the Urak Lawoi on the environment is certainly different from the past as their population has increased. However, it is doubtful

whether the ban of *bagad* has really resulted in conservation of the natural resources in the Adang Archipelago. On one hand, it entirely stops harvesting at certain places. On the other hand, it causes a shift from low-impact resource use spread around the archipelago to a high-impact use concentrated in the area on and around Lipe Island, turning it into a highly degraded spot. Additionally, as the Urak Lawoi seek new means of livelihood security and protection, more of them are taking up commercial fishing under a *taukay* or entering the tourism industry, both of which have negative impacts on the natural resources that seem much larger than their traditional practice of *bagad*.

As mentioned in the previous chapter, the Tarutao National Park Management Plan was developed nearly 20 years after the park was established in 1974. The delay of the management plan did not mean that consequences of the conservation policies of the park managers on the people in the protected area had been critically examined, nor was the time used to incorporate the needs and views of local people into different phases of the plan. Little effort was made to develop projects that would consider long-term needs of the Urak Lawoi in a way that was meaningful to the foragers themselves. As a result, once the park concept and the related rules and regulations began to be implemented, an immediate problem came: no alternatives for livelihood were instituted when the traditional practices were banned. Both the National Park and Fishery Patrol enforced official regulations and arrested those who did not comply. None of the parties involved felt responsible for promoting livelihood alternatives. *Taukay* Son said that the National Marine Park has not done anything in terms of helping the people or providing

educational information. *Taukay* Kiti added he has never once in the last 30 years seen an official visit from provincial agricultural division. The only time he remembers the Fishery Department helping the villagers was when they loaned the villagers net and wire to start them making traps after dynamite fishing and *uan laum* were banned.

In practice, priority in realizing the park plan has been centered on Tarutao Island, where the main park office is located. Six different zonings proposed in the management plan have not been materialized in the Adang Archipelago. Villages on Lipe and Adang and the area around the Adang park office have overlapping, and even contradictory zones, with intensive, recreational, special, and general use zones, all in one area. In the Report of Preliminary Survey of Tarutao Marine National Park (Mahidol University 1974), Lipe was already viewed as a problem area due to the concentration of population and different human-related activities on the small area, and a legal change—to separate Lipe to avoid complex consequences—was suggested. In my opinion, excluding Lipe from the park would not offer a solution, as it seems difficult to implement effective measures for insuring that the effects of activities generated on the island do not spread to the rest of the Adang Archipelago.

### *6.2.2 State and Private Land Ownership*

The political processes through which state and private land ownership are translated into everyday practices of the local people are an ongoing struggle. These include new definitions of land, sea, resources, rights of use, access and entitlements. An inverse

relationship obtains between the production of the park space by declaring the Adang Archipelago a state property and the control of this space by park official surveillance on the one hand, and the livelihood space of the Urak Lawoi and their accessibility to resources on the other. Within the same geographical landscape, the Urak Lawoi are facing profoundly different and constantly changing social features of the area.

Boundaries between state and local society as well as the rights of local resource use are quietly being contested and redefined.

As a result of the park being established by the state without involving the Urak Lawoi in any decision-making on altering land use or management, the majority of Urak Lawoi inevitably became alienated from the land they traditionally lived on. The land alienation goes hand in hand with their sedentarization and the discontinuation of traditional food foraging culture on different strands. For the first time, the Urak Lawoi are looking for resources needed for their livelihood on state or private property instead of on the commons. With increasing land and sea use for tourism development and large fishing operations, they are placed in a disadvantaged position where they are forced to over-exploit less fertile, crowded, and ecologically more vulnerable areas, and to look for alternative livelihoods in order to survive. Some who were once fishermen, depending on local resources for subsistence, have become seasonal service people for the tourism industry, driving taxi boats or working in a resort. Such phenomenon has been shared in different places outside the Adang Archipelago, as Helu-Thaman (1993:106) points out:

“...land alienation was the beginning of the end of many indigenous cultures, including those of the Hawaiians, the New Zealand Maori, the Australian Aborigines, and the Kanaks...Today stripped of much of their land or environment, cultural survival for many island peoples is often tenuously based on such touristically salable aspects of their culture...rather than on the more productive environment-based aspects.”

Because land titles and ownership on Lipe are confusing and the records are not up-to-date, conflicts over land rights between private parties or between the local people and the park are common. Rights to resources are ambiguous and interpreted differently by different parties who choose to act based on their history, knowledge, and power. In relation to claiming of private land ownership, with knowledge of officially institutionalized systems, connections, and power, the more progressive Urak Lawoi and those in a chief position, such as the village heads and their family members, have managed to win larger portions of land than others. For an example, a resort owner simply expanded his area by fencing into the land of a deceased Urak Lawoi man, whose wife was compensated by a small amount of money for liquor. When land record officers came to measure the size of the land parcels, the fences worked to the advantage of the resort owner.

With private and state land ownership, social gaps and marginality have increased among the local people. Those who have less power and are not familiar with the concept of private land ownership end up losing their resources and depending on landowners or state officials who control the access. This dependence brings about status of inequality between those who have more and those who have less. Most Urak Lawoi do not keep



track of what has happened to their ancestor's land and the titles. Mrs. Mudcha of Lipe, for example, said that her grandmother had legal right for a piece of land. When she and her children died, however, no one in the family went to the land office to claim ownership. Mrs. Mudcha believes that her grandmother's land is now lost. She currently lives on a beachfront area belonging to an outside land speculator and plans to move inland to someone else's land if she is chased away.

Because the Urak Lawoi are considered as *chaao lay* or a "sea" people, it is easy for one to underestimate the importance of residential land for them. As I have mentioned in Chapter 4, living on strands is an important key to their cultural survival. On Lipe, most Urak Lawoi continue to have their houses in the strand area close to the sea even though the land they live on does not belong to them. Some officials see this as an untidy settlement and suggest that the area would be better used for park purposes, including tourist resorts, while the village should be moved inland and laid out in a more systematic way or moved entirely to the mainland.

Today, many Urak Lawoi realize the value of land, but for most, it is either too late to claim it back or no longer possible to buy a parcel in the Adang Archipelago. A few Urak Lawoi who have saved some money are buying land in Satun Province on the mainland so that they will have a place to live if they are evicted from Lipe in the future. However, most Urak Lawoi prefer living on an island and doing jobs related to fishing. A few key informants did not think that they would be able to live on the mainland at all. One said,

"Living on the mainland, I cannot see the sea. It feels completely dark". Others described being on the mainland as "uncomfortable" and "crowded". In addition, they are not used to the city lifestyle in which basic needs, such as food, housing, and transportation, can only be acquired on monetary terms. Till today, most *chaao lay* see the mainland as a market, not a preferred home, where they occasionally visit and spend money on things that are unavailable on the island.

### **6.3 Implementation of Official Rules and Regulations**

What is often at stake is not the state's ownership, but the ways by which its agencies control access to resource extraction from forests; what is disputed is not state intervention in forest conservation and natural resource management, but the instruments and forms of control used by its agencies to carry out these activities. (Rangan 1997:72).

The declaration of state property may give the park the legal right to possess and use the local resources in the ways it sees fit, and to exclude others from the use of particular resources. However, neither park status nor state property status necessarily determine the ways in which resources are used and managed or allow for conservation. When the power of state ownership is supported by locally unacceptable controlling measures or the enforcement of park rules and regulations is lax, the park concept is inevitably weakened. The controlling process, which checks and directs social actions in relation to the right of use and access to resources, has, at times, sharpened to the degree of violence between park personnel and the local people. Over the years, the park concept has been accepted to a certain degree. However, there have been apparent difficulties in implementing the

related rules and regulations. In the following section, I will examine the complex factors at play in this context.

### *6.3.1 Cooperation of Implementing Agencies*

In Thailand, individual governmental agencies have developed and implemented sectoral management plans since 1962. However, the Coastal Resource Management Plans was first initiated in 1980, and the Marine National Park Division of the Forestry Department was not established until 1993. The Office of National Environment Board (ONEB) is the relevant policy-making agency, while implementation and enforcement is carried out by various other agencies, including the Department of Fisheries, the Royal Forestry Department, the Department of Mineral Resources, the Land Development Department, the Tourism Authority of Thailand, and ONEB. There is no single national agency responsible for coastal management or which has jurisdiction over both marine areas and coastal lands. For example, the Agriculture and Co-operative Department takes care of natural resources, while issues related to people are under the Interior Ministry. The Department of Fisheries manages fisheries resources, while mangrove areas come under the Royal Forestry Department. In addition, policemen, who may have no environmental knowledge or training, enforce environmental acts and regulations.

Although intersectoral cooperation is presented as a major objective, it has rarely been achieved due to a lack of coordination, and a reluctance to enforce the regulations among

many different agencies (Sriratana Tabucanon 1991:582-583, Johnson 1997, Tarutao Park Head, pers. int.). Officials associated with Tarutao Park and the Marine Life Conservation Unit on Lipe agree that both the Forestry and Fishery Departments work towards sustainability of natural resources and should be working together, Forestry for land and Fishery for water, to become more effective in the area. But in practice, they do not. According to the park officials, the problem with coordination is 'ego'. As a park assistant put it: "nobody wants to go and talk to the other first". The Park Head himself believes an outside person is needed to coordinate a project involving different departments.

In addition to problems with the cooperation of related agencies, the rules and regulations of different agencies are sometimes overlapping and other times contradictory. For example, according to a rule of the National Marine Park, no fishing is allowed in park waters, even the artisanal fishing of the local villagers. However, the Fishery Department does not arrest those who fish in the park area unless they use trawling devices combined with a motored boat within 3000 meters of the high water mark (Tanthong 1995). In another example, light luring boats and drive-in net fishing are not forbidden by park laws, and fishery regulations only forbid the boats when used in combination with nets sized smaller than 2.5 inches.

Furthermore, there are differences in the degrees to which violators are punished for illegal fishing activities by the park and the fishery departments. Park fines are as low as

500 baht (US\$ 12.50) per boat crew, and the amount does not seem to threaten those who intend to fish in the prohibited areas. If a 15-man commercial fishing boat can earn 50,000-100,000 baht (US\$ 1,250-2,500) on a trip, the owner would not mind being fined 7,500 baht (US\$ 187.50) and allowed to go free. Only 10-20 cases of illegal fishing are prosecuted by the park per year (Eitel 1994:54). The fine of the fishery department is much more severe. The boat owner will pay at least 100,000 baht (US\$ 2,500) per boat, and 10,000 baht (US\$ 250) per crewmember. Worst of all, he usually loses at least 5-6 days of fishing income if the boat is confiscated while the case goes to court.

### *6.3.2 Execution of Rules and Regulations*

Thailand does not suffer from a lack of rules and regulations that support natural resource conservation. The problem is their execution. As Johnson (1997:23) pointed out, “Despite an abundance of laws regulating gear type, fish size, and geographical and seasonal closures, source material and personal interviews suggest that Thailand’s coastal regulations are flaunted widely”. The execution of the rules and regulations in the Adang Archipelago is complicated by several factors. First of all, there are internal problems of the relevant agencies. These include not only the lack of funding and personnel capacities for monitoring and enforcement, but also a lack of interest in such work and of relevant insights among agency personnel into the local situation—insights that might help create a basis for collaborative conservation management of the area. Eitel (1994), a researcher who stayed at the Adang Park Station during his fieldwork, commented that for those

who come to visit, the southern point of Adang, where the park station is located, is a paradise, and the chance to work for a salary would seem like 'a dream-come-true'. Yet for park personnel, the job means low pay and isolation. "Not one can swim. The corals they have been hired to protect, they have never seen, and the forests they manage are not a source of interest, but instead a chunk of territory that must be protected" (Eitel 1994:46). Supervising park officials admit the problem of lax implementation in the Adang Archipelago, and the park head did not show interest in sea patrols because the land work alone is already overwhelming. Staffing the park is thus problematic. For example, only one park employee was able to scuba dive and put up mooring buoys. For the Head of the Marine Life Conservation Unit, Adang Archipelago is a small portion of the huge area he is responsible for, and patrolling only takes place when he is on site since the others do not have a permit to arrest the wrongdoers. On most days, the fishery personnel at the Marine Life Conservation Unit are either idle or spend time clearing leaves from the ground, occasionally entertaining themselves by hunting rare bird species in the area.

Johnson (1997) pointed out another problem related to the way in which fisheries enforcement works in Thailand. Generally, the enforcement officials from different agencies, including Fishery Patrol, Fishery Protection, District Office and Terrestrial Police, will not intervene unless they receive a request for assistance. Moreover, suspects can only be arrested when they are caught in the act of breaking regulations. Many coastal communities in Thailand lack infrastructure and the means of communication to request

such a timely intervention. Additionally, plaintiffs or witnesses may end up in a difficult or even dangerous situation if asked to identify offenders with power and influence.

Johnson (1997) also mentions problems with fisheries enforcement officers being ill equipped to deal with violent confrontations. In some rural areas of Thailand, such as those in Satun, outside officials may be confronted by mob behavior when they interfere with the interests of a local group. As an example, there were threats to burn a new speedboat that had been given to the fishery patrol by the EU. The boat had successfully caught about 20 illegal fishing operations in a short period of time and this threat was a warning to the fishery officials to stop using the boat for this purpose.

Being aware of the problems implementing official rules, commercial fishers do not follow the rules and regulations very seriously. For example, the regulated mesh size of commercial fishing nets is 2.5 cm, but a big fishing gear shop owner in Satun said that the most commonly bought net has a size of 1.5 cm. During Eitel's fieldwork (1994) and my own in 1997 and 1998, we experienced several acts of encroachment by trawlers and purse-seiners, as close as 100 meters offshore and only one bay away from the park offices. These cases do not happen without being recognized by the park; however, the officials are not always capable of enforcing their own rules and feel frustrated about such situations. Mr. Boomreuang, the former park head of Tarutao Marine National Park himself complained: "Here in a park, a National Park, it became a special one kilometer limit. They're scraping everything off the bottom. They're killing my turtles" (Alexander 1993 in Eitel 1994).

### *6.3.3 Influence of Powerful Parties*

National marine park status and state ownership in the Adang Archipelago do not override economic and political power and local interests in the area. Many old and powerful elites in Satun Province have a hand in commercial fishery and, at the same time, are local patrons of influential local politicians. Similar to other coastal zones of Thailand, industrial commercial fishing in the Adang Archipelago is usually backed by groups that have stronger financial and political interests as well as the necessary connections and economic resources to violate the law (Khoo 1980:52 in Torell 1984:107; Ruohomäki 1999:15). The links between politicians and businessmen involved in the big fishing business are so close that the state naturally comes to support the cause of their interests and is less likely to support decisions or measures that are not in their favor. Johnson (1997:48) pointed out that Thailand's coastal fishing regulations are a perfect case showing that states are susceptible to outside influences capable of encouraging legislators and enforcers to design and enforce rules in ways that suit their own personal interests. In one sense, the Department of Fishery has decided to protect the interests of small-scale fisheries by legislating the trawl and push net ban. In another, it has resigned itself to serving the interests of commercial fleets and downstream industries by providing inadequate enforcement. In Tarutao Marine National Park, the rules and regulations have been strongly compromised by the park to benefit economic development of the province through commercial fishery. For example, commercial fishing has been permitting within 2.5, 1.5, and finally just 1 km from shore.



Consequently, movements towards sustainable development or solving conflicts between large and small-scale fisheries in the area seem difficult. In July 1994, an announcement was drafted by Satun Province prohibiting the use of fishing tools in conservation areas in the Adang Archipelago, defined as those within 1 kilometer from watermark on shore, (Fishery Office, Satun Province 1994). The proposed closure was rejected by Satun's club of commercial fishery and discontinued. Over the recent years, different people have brought up similar suggestions for preservation or conservation areas. For example, the current Head of the Marine Life Conservation Unit on Lipe suggested that a special area around Lipe be officially instituted to protect and preserve the traditional means of fishing (including hook and line, trap, and small net fishing) that cannot compete with modern fishing methods and equipment. In 1998, European Community officials of the Adang Sustainable Development Project pushed hard for the realization of a special conservation zone closed to commercial fishery in order to allow for more space for traps and reduce their concentrating burden on corals in particular areas. However, a meeting with other parties rendered the proposal impossible. It was argued that, except for king mackerel, the target fish types of the commercial fishers and artisanal ones are different. More importantly, the idea was strongly opposed by the local commercial fishery organization that would lose their economic benefits. Consequently, the provincial government did not pursue the idea.

An incident that reflects the political power of commercial fishery over official rules and regulations involved a trash fish processing boat stationed in the middle of the Adang

Archipelago in 1996. The boat bought non-target fish catches from commercial fishing boats and processed it into animal feed products. At the same time, it sold illegal gasoline to the fishing boats. A huge amount of untreated wastewater was released regularly and directly into park waters. As some witnesses reported, "Sometimes, the sea water around the area would be totally yellow". The fishing patrol head said that he could not arrest the boat as it had a proper paper to run a factory on board, and the waste water would have to be tested by the Fishery Department before an arrest could be made. The test, however, never happened. At the same time, the local park head was offered a large monthly bribe to let the boat stay and was warned about its connection with a high ranked politician. The park head refused to cooperate and informed the Satun Governor. This finally resulted in the removal of the boat after several months of operation in the park.

Material interests of powerful actors are reflected in their efforts to shape the construction of environmental issues. In the integrated coastal resource management plan of the Satun provincial administrative organization, restoration and conservation of the environment and natural resources are the main objectives. However, near shore commercial fishing and over-fishing are not included as problems (see Table 6.1). This again reflects the power of those who benefits from such activities, and the lack of official recognition of the underlying socio-economic processes that accelerate the exploitation of the natural resources. Even though influence of economic interests and political power on resource exploitation in the Adang Archipelago is obvious, it has not been addressed in studies or reports on the problems of the coastal and marine resources in Satun Province [for

example, Rowchai (1991), and Report of Coastal Conditions in Satun Province (Division of Natural Resource and Environmental Management 1995), in which technical or scientific solutions are usually recommended.

Table 6.1. Objectives and Problems of Integrated Coastal Resource Management of Provincial Administrative Organization of Satun, Fiscal years 1996/1997 (Provincial Administration of Satun 1997:21)

<p>Objectives:</p> <ol style="list-style-type: none"> <li>1. to support and encourage conservation of the environment and natural resources</li> <li>2. to restore natural resources and the environment</li> <li>3. to create awareness of the management of natural resources and the environment</li> </ol>
<p>Problems:</p> <ol style="list-style-type: none"> <li>1. Coastal erosion of the coasts and riversides</li> <li>2. encroachment of mangrove forests</li> <li>3. problems with garbage on coastal areas</li> </ol>

#### 6.3.4 Corruption and Bribery

One of the criticisms of political ecology is that it does not deal deeply with the day-to-day workings of local politics, but remains focused on formal political structures, often at the inter-class level (Neuman 1992:85). On the informal, micro-level political arena, different strategies have been used among different resource users of unequal power relations to negotiate and gain access to resources (Table 6.2). As mentioned earlier, the weakest parties with little negotiating power use silent strategies, such as every day forms of resistance, to resist the power of the others, and gain or retain their access to the resources. Those with more financial means may use it to gain more access to resources from those who have official control. In Thailand, bribery among governmental officials

may be hidden but is widespread, and there is no exception to this in the Adang Archipelago. Among those with medium power, such as local *taukay* and outside commercial fishing operators, paying bribes to those who control access to the needed resources has been a common practice. Bribes are referred to as a *katamnium* (custom fee). Some local people even commented that governmental officials can actually be the biggest problem of conservation. Mrs. Jaidee, said, “the park concept may be good but the park people are not always. Some of them got rich from the bribes or illegally exploiting the resources by themselves”. *Taukay* Kiti jokingly referred to the park as a profit-making company. In his view, the officials have been “eating”, and even today it is hard to find officials that do not “eat”. Local people witnessed officials cutting down big trees or taking lobsters and shells they prohibit others from harvesting.

Table 6.2. Power Level and Official Recognition of Resource Users in Adang Archipelago

Level of Official Recognition	Power Level		
	High	Medium	Low
High	State	Local Park, Fishery Officers	
Medium	Local Elites/ Politicians	Land Owners, Tourism Entrepreneurs	Tourists
Low		Commercial Fishers <i>Taukay</i>	Urak Lawoi

During the days of dynamite fishing, bribery among local officials was so severe that some *taukay* considered stopping the method because they could not afford to pay the bribe. *Taukay* Kiti, for example, paid 4,000-5,000 baht/month to the local police, and

treated them at a restaurant if his catch was exceptionally high. When he changed to *uan laum* fishing, he had to pay the Adang park officials a suggested 10,000 baht per month for his two boats to be able to fish in restricted areas or secretly at night. After a year, the park officers wanted to raise the amount, and when *taukay* Kiti refused, they tried to arrest him again. As *taukay* Kiti described, he was playing 'hide and seek' with the officials. Unable to find the needed evidence of equipment used in *uan laum* to charge against him with a violation, they finally gave up and lowered the requested amount of their bribe. With the new park head, he no longer needs to bribe the park officials.

Bribery is constantly negotiated on the informal micro-level politics and plays an important role in the access to and use of the local resources. Today, the *taukay* are still paying water police or customs, and trawlers offer bribes to local fishery officials. During my fieldwork, a successful Urak Lawoi, Mr. Yos, whose family runs a profitable tourist resort, was asked to pay 100,000 baht by a park official. He refused to pay by saying that he did not have the money. Unlike him, most *taukay* and commercial fishers accept the practice and see it not only as a way to increase their access to the resources, but also as a way to avoid trouble. The *taukay* said that they otherwise would be easily charged for not registering the movement of goods and boats across the Thai-Malaysia border during their delivery. For the trawlers, it pays off as they feel free to trawl anywhere and are warned when a patrol boat approaches the area.

## 6.4 Urak Lawoi as a Food Foraging Nomadic People and a Minority

To justify settlement of the nomads in the south:

“sedentarization . . . is a means of improving the economic and social conditions of those communities... to integrate them into the life of the nation and to enable them to contribute fully to national progress . . . If not for their own good, then nomads must be settled for the good of the nation” (New Internationalist 1995:8).

The Urak Lawoi represent one of Thailand's few ethnic or tribal minorities and till today still carry an image of a nomadic people. In the present world, both ethnic minorities and peoples with a nomadic life style have difficulty in gaining acceptance from mainstream populations and national governments. One may say that the Urak Lawoi are in a particularly disadvantaged position in mainstream Thai society. Even though they are called *thai mai* (new Thai) and, among Thailand's sea nomadic peoples, are considered the most adapted to the local Thai culture (Hinshiranan 1996:202), they are seen as being different from the 'real' Thais. In 1972, after studying the Urak Lawoi for almost three decades, Hogan stated that, "The Urak Lawoi.... have lost much of their own distinctive culture but have not yet been absorbed into the Thai community, so that many of them seem to be living a cultural vacuum" (Hogan 1972:206). Today, allegations that ethnic subcultures are divisive, backward, or separatist are still common. Images of how they consume natural resources have been constructed and sometimes used against them. Although the Urak Lawoi are not perceived as a threat to national security like some other ethnic groups (Kruahong 1998), they are seen as shiftless sea gypsies and, in the park,

potential environmental degraders. In the management plan of Tarutao National Park (Office of the National Environment Board. n.d.:42, 61), they are compared to the mainstream Thai population and considered not motivated to enhance their quality of life, and difficult to promote any employment among them.

Engelhardt (1989:139), who studied hunting and gathering groups of Thailand, including the Urak Lawoi, emphasized that their survival depends not so much on elaborate technologies or political systems, but on finding an econiche in which a group can hold its own with minimal competition, and on developing a culture that specializes in exploiting the resources of this econiche. Among the Urak Lawoi, the marine and coastal environment in the Adang Archipelago represents such an econiche from which, by local practices and experiences, they acquired a sound empirical knowledge of a natural environment providing their livelihood. The nomadic food foraging way of life allowed them to live comfortably on a subsistence level and to sustain the resources they depend upon. However, official policies in Thailand have offered tribal peoples little choice other than assimilating to Thai life or having their own ways of life destroyed (Keyes 1987:24). Practically, the Urak Lawoi have been forced to abandon their core nomadic lifestyle and to share their econiche with other groups of people. Although these have been accepted by most Urak Lawoi as a survival strategy, it has had strong negative impacts on their cultural survival. The willingness to change and adapt among the Urak Lawoi is well described by Anderson (1994:13) as follows:

Between tradition and change, the choice is always for facilitating survival, both that of the group and that of the individual. Where tradition best protects survival, traditional claims, such as on landlord reciprocity, will prevail. Where change best protects survival, new norms, such as an appeal to national and international agencies, will become the order of the day.

All over the world, nomadism constitutes a “challenge to the orderly mind” of the government administrator eager to do something to improve the “wretched” living conditions of nomads (Brémaud and Pagot 1962:320 in 1982:119). Forced sedentarization has been used as a strategy to deal with nomadic peoples. As Hitchcock (1994:62 in Hinshiranan 1996:177) says: “Well-intentioned governments. . . radical or conservative, civil or military, colonial or post-colonial—all seem to favor the settlement of hunter-gatherers and are unprepared to recognize hunting and gathering land rights”. What is often forgotten is well captured in the statement of Maybury-Lewis(1985:378), who looked at maintaining ethnic minorities in a larger scale, as follows:

. . . people do not cling to their cultures merely to use them as inter-ethnic strategies. They cling to them because it is through them that they make sense of the world and have a sense of themselves. We know that when people are forced to give up their culture or when they give it up too rapidly, the consequences are normally social breakdown and personal disorientation and despair. The right of a people to its own culture is therefore derived from a fundamental human need, yet it receives less protection, even in theory, than other human rights because it concerns groups rather than individuals. . . . There is in fact a world-wide tendency to deny the rights and sometimes even the very existence of ethnic minorities, in order to protect the nation-states.



## 6.5 Urak Lawoi and the Modern World

Hinshiranan (1996) used the term “opportunistic foragers” to represent many groups of contemporary foragers who are versatile in responding to new economic opportunities. This term affirms the recognition that they are not a remnant of prehistoric hunter-gatherers sealed in their self-sufficient socio-economic system. The relations with a larger world are not merely an ethnographic reality, but a factor that contributes to the continuing existence of modern foragers (Hinshiranan, 1996:16).

### *6.5.1 Integration into Market/World Economy*

Between the middle and the end of the nineteenth century, Thailand’s internal market started to integrate into the global capitalistic world economy. The process of rural development has often included increasing integration into the world market. Loss of land and other resource bases contributes to extensive economic involvement with a larger society, and rural societies are making a transition from a subsistence economy to an industrial one. Consequently, the ongoing transition process has meant that local people have either to find alternative ways of making a living or adapt old ways to meet the needs of the modern market economy. Hinshiranan (1996:13) who studies the Moken, another sea nomadic people in the Mergui Archipelago of the Andaman Sea, has pointed out that contemporary hunter-gatherers actually do more than “hunt” and “gather” as their new economic options derive mostly from their contact and interactions with a larger

society. “The new paradigm in hunting-gathering research is a paradigm that rests on the assumptions of contact and of economic diversity and flexibility” (Bird-David 1988:18).

In the case of the Urak Lawoi, rights and access to resources have increasingly been determined by outside forces. Today they have had to discontinue their traditional nomadic food foraging way of life, share their econiche with other groups of people, and can no longer isolate themselves or maintain their traditional subsistence-oriented economy. Low levels of technology and their traditional social organization do not allow them to compete with or adapt to the modern economy, which requires increasing productivity to keep up with the demands of a surplus market. With sedentism and increasing contacts with outsiders, the Urak Lawoi have embraced the opportunities that the integration of the village economy to the world-economy has entailed. These alternatives depend on their locally superior empirical knowledge of the coastal and marine resources, much of which would be irrelevant if they were suddenly transposed to the mainland, a factor that restricts their opportunity to the sea. They are incorporated into the capitalist mode of production and surplus value is extracted from them. Small-scale Urak Lawoi fishers shift along the line of commercial fishery production, participate in the industrial organization of *taukay*, and become more diversified by taking on an island tourism-related job. To counter the risk of marginalization in both the forms of economic ecological and political-economic components (Black 1990:36), the Urak Lawoi are more and more dependent on market transaction and systems based on a monetary economy and increasing surplus production.

The capitalist mode of production and surplus value in turn may force the Urak Lawoi to extract an unsustainable surplus from the sea itself, and abandon practices that prevent environmental degradation. However, by doing so, they reduce the risk of being further marginalized and encapsulated or becoming attractions for romantics and tourists for whom the allegedly eternal and unchanging sea nomads represent “the other”, or “the inventory of a living museum”--a term borrowed from Khazanov (1994:xlvii), who uses it to describe the unchanging pastoralists.

For most outsiders, foragers are often seen as simple, poor, helpless people who do not put any effort into improving their living conditions and who are dependent on a larger society, especially through different forms of material benefit (Hinshiranan, 1996:17). Thus, engaging in trade with them or hiring them as wage-laborers (even with very low compensation) is actually doing them a favor and assisting them in their daily survival. However, the decision to participate in the market economy is a choice made by the Urak Lawoi to adapt to or reject certain systems for sound economic as well as ecological reasons. Hinshiranan (1996) and Headland (1986), who studied the Agta in the Philippines, argued these peoples are not “primitive” or backward people who do not adapt to their changing environment. On the contrary, they constantly made choices to deal with changing situations. Participating in the market economy is not only a strategy to secure their basic needs for life, but also a way to adapt themselves to a cash economy and modernization. Cash and credit systems allowed for the acquisition and accumulation of durable goods from outside and larger-scale dwellings. The so-called traditional

society is not an original state, but a product of their integration and dependence on the capitalist metropolis (Greenberg and Park 1994:6). With the disintegration of their traditional way of life, which was closely related to subsistence, came a new sense of owning and belonging. From a non-storing culture, the modern Urak Lawoi are becoming increasingly familiar with possession and storage.

Similar to other contemporary fishing communities in the South of Thailand, the Urak Lawoi of today are living 'in between', overlapping with both tradition and modernity, in the sense that neither has as yet taken precedence over the other (Ruohomäki 1999:193). They are no longer small-scale fishing communities, but they have not yet made the leap necessary to become communities relying solely on industrial fishery production. There are groups of fishermen who are doing well, and it cannot be said that fishing as an occupation is becoming marginalized. Rather, it is becoming fragmented into those fishermen who eke out a living and those who have the capital, social connections and skills to become *taukay* or tourism entrepreneurs. To sum up, incorporation into the world market economy and marginalization seem to go hand in hand as this incorporation leads to the marginalization of some groups of resource users by pushing them toward spatial and social margins as resources get depleted (Siar 2000:6-7). Their dependence on nature as a provider in the context of a low-storage society and nomadic lifestyle are being replaced by dependency on people, particularly outsiders.

### *6.5.2 Participation in Modern Life Style*

According to the provincial government's evaluation of development level of villages in 1994 and 1996 in Amphoe Muang, Satun Province, Lipe fell into the categories of villages with the first priority for development (Satun Provincial Government 1996:6776). All the index categories of basic infrastructure, including land titles, power supply, transportation, business within the village, and fuel source, were ranked under average. Other socio-cultural categories, such as employment, knowledge about quality of life, cultural, sports, and religious activities were also ranked under average.

Among the Urak Lawoi, there are different views about the development level of their village and different desired levels of participating in the modern life style. Many development indexes seem to be irrelevant to their lives. In the same way as being "in between" in terms of their economy, the Urak Lawoi are "in between" in their adaptation to the modern kind of life. Ways to participate in modern life style have been defined in their own terms, with room for tradition as well as for change and adaptation, some of which seem difficult for an outsider to understand. For instance, Urak Lawoi do not see the importance of having roads or pipe water systems. Well water is convenient for washing and they do not mind stopping at Adang Islands to fetch fresh drinking water during a fishing trip. Walking and traveling by boat are considered convenient means of transportation. Many of them would rather receive treatment from a shaman for their illnesses rather than from a physician. Most Urak Lawoi also feel comfortable using a

quiet corner in nature as their toilet and do not see any need to have a toilet in the house. Thus, after visiting relatives on Rawai Beach in Phuket, Mrs. Malee complained that Rawai is so developed that it was hard to find a place to do her toilet business (even though there are real toilets everywhere). On the other hand, they desire a central power system, city clothing, jewelry, home furnishings like kitchen cabinets, or high-powered motorboats.

There are Urak Lawoi who are content if life tomorrow is similar to life today. For them, it is hard to think about what should be changed or what they would like to do differently. The Head of the Sea Life Conservation Unit on Lipe calls this “a state of comfort”. He explains that the islanders have houses to live in and food to eat without having to pay anything for them. They do not think that they have any problems, and do not care about further development. However, for other Urak Lawoi, they seem to regard themselves as not only poverty-stricken, but also as being quite incapable of bettering their position (Hogan 1972:213-214). In Bodley’s opinion (1988:3), “indigenous people themselves do not find their way of life materially inadequate when they are still in control of their undepleted natural resources”. Mr. Decha, for example, complains so much about his poverty that he wishes his life to end quickly so that he might be reborn rich. His dissatisfaction about life is not perpetual. He describes himself as a bright boy and his family was one among those who used to own land but lost it during the land speculation. Now being in his 20’s, he calls himself a ‘braindead’ adult without a stable means to support his family. On the contrary, there are those who think that their standard of life

today is higher than before and that it is easier to earn a living than in the past. Mr. Aim, for instance, described life in the past as being full of hardship and "living like pigs and dogs". For him, it was even difficult to subsist in those days when he would stay hungry if he did not catch any fish. In his view, life is better today because it is possible to buy food and there are opportunities to better one's life.

Participation in the modern lifestyle happens not only because some environmental change has occurred, but also because such change is culturally significant. "Individuals are motivated by the central value orientations of their culture. It is the inability to achieve or perform adequately according to these values that leads them to seek an alternative ethnic status in which it is possible to succeed or at least not to fail" (Barth 1969 in Rambo et al. 1988:85). As they have lost control over subsistence resources and with the increasing importance of the monetary system and city life style, the Urak Lawoi have turned to seek security and control over their life circumstances through materials they can acquire by money. Today, it is no longer uncommon to find contemporary Urak Lawoi owning things common in the city. For instance, while the number of families with a TV set in 1989 was just 15, by 1996, 47 of 129 (or 36%) households already had a television set, of which 46 were color TV. (Statistics Department of Satun Province 1996, n.p.). Urak Lawoi, especially those in the younger generations, are now constantly exposed to modern lifestyles. Younger fishermen have opportunities to fish outside the archipelago and learn about the world around them. Those who work in the tourism industry have contacts with visitors. Tourists from all over the world and mass media in

the form of video films, television, and radio, expose the villagers to the world of modernity and consumption goods. Consequently, some villagers want to emulate the middle-class lifestyles they see in television soap operas and shows. As a local shop owner who grew up on the island simply states: “Today the island people want to become the city people”.

Twice each year, the Urak Lawoi had the *loi rua* festival where a ceremonial boat is built and many people, both men and women, are involved in its construction. It is now obvious that younger people are not interested in participating in building the ritual boat. They seem to be more interested in ‘joyful’ activities such as disco dancing on the stage and walking around in their best clothes. Mr. Somkid believes that *ramana* and *rong ngek*, traditional music and singing, will die out with the older generation, as the young people are more interested in modern rhythms.

### *6.5.3 Modern Life Styles among Children and Women*

Modernization and integration into market economy have undoubtedly affected lives of women and children and the intra-household relations. For the Urak Lawoi children, besides exposure to modern life through the media, schooling has been an instrument of cultural modification and the school is the primary source of knowledge about outside world. All teachers in the Adang Archipelago are outsiders and the textbooks or lessons are not modified to fit the local way of life. As Bodley (1982:113-114) puts: “the years



that children are required to spend studying the dominant culture's textbooks are in direct competition with the normal enculturation process. Furthermore, schooling deprives the traditional community of the important contribution that children often make to the subsistence economy". Generally, Urak Lawoi parents would like their children to learn to read and write. They like to say that today's children are more "intelligent", by which they do not mean the opposite of being stupid or dumb, but being literate and not easy to deceive. Most parents do not see any need for education after the primary level and would rather have their boys work at sea. The children themselves feel that they cannot do much with what they learn in school in their real life situation.

The difference between what children learn or are expected in school and what they experience in their real life can be illustrated by the results of an essay assignment for a Thai language class of 6<sup>th</sup> graders titled, "Life in My Dream". From the total number of 12 students, eight wished for a musical instrument, mainly the piano, and the same number a satellite dish. Seven students wished for an expansion of the school and the same number a computer. Such wishes seemed more likely to come from students in the city and unexpected from a rural community where neither central power system nor running tap water exist. Only two students wished that people would not litter and destroy the corals. The two best high school students, Ngam and Kam, have the potential to receive an outside scholarship for higher education, and want to become a medical doctor and businesswoman. While Ngam intends to return to the island, Kam admitted that

business may not be relevant for the local situation and she may eventually stay on the mainland.

Some families, especially those who have extensive contacts with outsiders, show interest in having their children further their studies on the mainland. Chompu's family, for example, has had several conflicts with the park. They have recently bought a house on the mainland in preparation for an eviction. Her family wants the children to study so that they can become "clever" and "somebody", and avoid being coerced or threatened like today. Chompu is concerned that the children would be stupid and incapable of following others or knowing how things work in the city if they only study or live on the island. Her brother, Yos, regrets that he himself only went to school for a few years because his father needed his help with sea work. Feeling uneducated, he admits that sometimes he feels afraid when he talks to officials. In his words: "These are men like me but what makes me afraid is their rank, their position". Today he is very determined, by any means necessary, to send his son to study on the mainland. He said, "Even if I have to die at sea, it will be all right as long as my children can study".

Among women, technology plays a big role in changing their way of life and the intra-household dynamics. According to *taukay* In, women used to accompany men on their fishing trips and during *bagad*. They helped to collect shells, sea cucumbers, and lobsters, and were busy with the post-catch process like cutting, salting, and drying sea products. A few did some small-scale agriculture together with men. In those days, there were no

shops on the island, and women made household necessities by themselves, including baskets, mats, coconut oil, flour, and desserts.

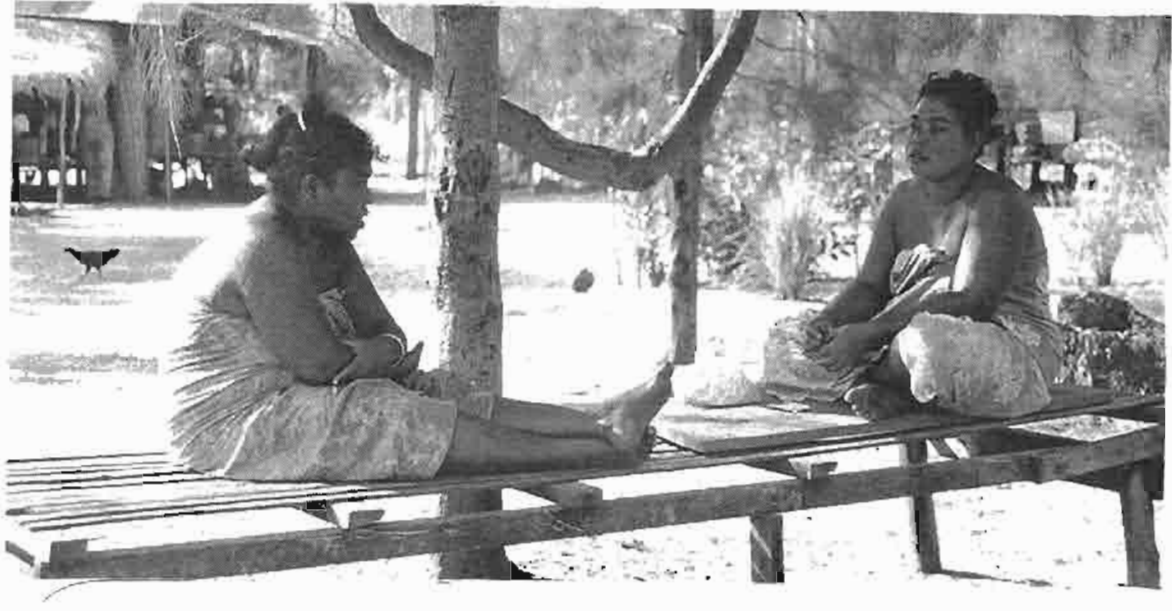


Figure 6.1. Urak Lawoi Women in Their Free Time

Today, the motorization of long-tailed boats makes it possible for the men to fish anywhere in the archipelago and return within the same day. There are no more long trips where women need to accompany their men. In addition, the rules and regulations of the park forbid and restrict harvesting of the sea products that require intensive post-harvesting labor that was primarily taken care of by women. Fish have become the main catch and only need to be iced and delivered. Collecting oysters by women still happens, but very rarely. Moreover, unlike Adang or Rawi, small Lipe does not allow the additional settlements to have much fertile land for planting. Today cash income, credits, and local shops are now available. Traveling to a market on the mainland has become

much more convenient. Consequently, manufactured goods have replaced home products. Today, most married women, whose husbands earn a decent income, stay at home and have a great deal of disposable time. Many spend it on daily card playing. Only few others, usually unmarried teens or older women, may support themselves by working at a resort, washing clothes for those who have money, or collecting oysters around the island at low tide.

## **6.6 Local Leadership and Community Institution**

Being remote and rural, Adang Archipelago does not enjoy the strong involvement of central or provincial governmental officials in its local leadership and community. At the same time, the Urak Lawoi themselves are not interested in “community leadership” or “communal unification”, and do not have difficulty accepting leaders who are not Urak Lawoi. Consequently, the Urak Lawoi entered into relationships in which they became clients of outside patrons, and local leadership has been transferred into the hands of outsiders who do not necessarily represent Urak Lawoi interests. The following part of the chapter discusses the characteristics of community leadership and institutions in the Adang Archipelago, and their connection with difficulties in sustaining local culture and traditions.

### 6.6.1 Leadership by Outsiders

Leaders of the Urak Lawoi community in the Adang Archipelago--either as village heads or as *taukay* employers-- have typically been outsiders. The only leading positions that are held by an Urak Lawoi are those of a medicine man and/or *to mor*, a spiritual leader chosen by the community and highly respected for his ceremonial, ritual and healing roles.

In the past, community leaders were either believed to have spiritual power or connections with outsiders who had authoritative power over people or allocative power over objects. The most well-known village heads include the magical, legendary To Kiri, a Muslim traveler from Indonesia, and the infamous *kamman* Jong, also known as *jao pho*<sup>25</sup> Andaman (The Godfather of the Andaman Sea), an ethnic Chinese from Satun Province who came to be a *taukay* for salted fish, married a daughter of To Kiri and became one of the most powerful men in the region.

Today, the leaders are outsiders motivated by business interests rather than a desire to lead or represent the community. The current village head is a mainlander who owns the largest resort on Lipe Island. He is married to a daughter of the late *kamman* Jong and has been in the permanent position of the village head since 1985. He demonstrates little knowledge of and interest in the villagers or community activities. Outside the tourist season, he generally lives on the mainland. Most of the villagers are dissatisfied with his

leadership and quite a few villagers blame him for delaying important governmental announcements that would benefit the villagers and using governmental funds for his own interest. According to the schoolmaster, the village head appointed his wife's two sisters to be representatives of the sub-district administrative organization (*or bo to*<sup>26</sup>) without asking the villagers. A sub-district deputy, who came to visit Lipe during my fieldwork, revealed to me that a village development proposal has never been submitted even though support and funding could be made available.

Despite dissatisfaction with current leadership, the Urak Lawoi do not seem to be interested in leading or being led by another Urak Lawoi. The Urak Lawoi's lack of interest in power and, in relationship to it, leadership is an interesting phenomenon. I can only speculate that it may be a result of the independent nomadic life they had in the past, where each family was practically responsible for itself. They help others and share in times of need, but are not interested in community work or leading the others. The traditional semi-nomadic culture of the Urak Lawoi did not prepare them to be community actors, and their sense of being a part of a community seems to be less developed than in an average rural Thai community. It also seems easier for them to accept an outsider who has more power and authority than Urak Lawoi. This may be due to the fact that outsiders have been the ones who successfully help link and facilitate *contact with other communities*. Till today, the Urak Lawoi are quite individualistic and are, at most, interested in kin or small-group relationships. They are not used to getting

together to work towards a common goal that benefits the community as a whole. Most villagers take care of their households, but are not concerned about the rest of the village.

Under non-Urak Lawoi leaders who are more interested in their own matters than those of the community, there has not been an organized community institution that takes care of the concerns and problems of the Urak Lawoi, or is interested in perpetuating their traditions and culture. Without a leader who organizes such an effort or helps the Urak Lawoi to learn to unite, it is difficult for them to get together for a common project. For example, although there are obvious problems with fishing trawlers intruding near shore waters, many Urak Lawoi admit that they have never fought against them because, without an organized effort and leadership, they do not know what to do. Another local Urak Lawoi man referred to the taxi boats that transfer tourists from the big passenger boats to Lipe as an illustration of the lack of coordination or cooperation among themselves. They do not queue or organize a taking turn system, but instead each boat fights for passengers. Costly projects that have been initiated to benefit the community, including pipe water and solar systems, fall into the hands of a few people because there is no community organization or coordination in managing them. The schoolmaster has tried to initiate a cooperative project. However, the concept has not received much attention because people are not interested in cooperating on a larger scale or uniting for a common cause. Outsiders who have lived with the Urak Lawoi for many years conclude that they are more focused on their own benefit than on any common good.

the *taukay* provide fishing tools, credits, and help in emergency situations. The village head distributes information and knowledge on important official formalities, and connects them with officials from other bureaus on the mainland. The schoolmaster helps get outside funds for village activities and organizes them. These include the solar energy system, stereo equipment for the *loi rua* festival, and sports uniforms for the students and teenagers. The park or fishery officials can relax restrictions on Urak Lawoi access to resources required for their livelihood, such as woods and rattan, land to live, and certain sea life. Holding keys to the needed resources and being able to provide for security of life, these patrons have evident power that vests them with authority and opportunity to become leaders of the Urak Lawoi and to direct or influence their way of life and resource uses.

The patron-client relationships are not, however, absolute. There is a hierarchy, and the roles of patron and client can change. Some *taukay* who are the patrons of the Urak Lawoi are clients of capitalists on the mainland. Some Urak Lawoi who used to be clients are *taukay* today.

### 6.6.3 Remote Community

According to the report of the Statistics Department of Satun Province (1996, n.p.), the first problem of the local population is inconvenient transportation. Today, the average time to travel between Lipe and a provincial office on the mainland is eight hours, and



longer or impossible during the monsoon season. In the past, when transportation between the Adang Archipelago and the mainland was even more difficult, the area was pretty much left unsupervised by outside governmental officials, and the life of the Urak Lawoi was entirely dependent on local leaders and “informal” powers often connected with illegal trade and activities.

Being a junction between Malaysia and Thailand, the waters of the Adang Archipelago are a strategic location for illegal activities and a nexus of conflicting interests. Except for the current village head, all previous village heads seemed to have been involved in the activities or conflicts of interest in one way or another, which eventually led to a tragic end of their lives. Even the magical, To Kiri, was killed by a snake that is supposed to have been sent by his opponent. Sabu, his son and successor, was killed on board by dynamite during fishing. The infamous *kamnan* Jong was assassinated in Phuket. Ard, a Chinese assistant of Banjong who became a village leader for a very short period was shot dead. Direk, the following head, was also shot—it is suspected because of conflicts of interest over pearl oysters—but survived. Among all past village heads, *kamnan* Jong was suspected to be most involved in piracy, illegal logging, illegal mining, smuggling, and dynamite fishing. His influence and connections with those who had power were extremely strong. He was noticeably feared by park and other provincial governmental officials and, at the same time, loved and respected by the villagers. The villagers considered him as a good leader because he was able to help them in every matter, including ones that had to deal with outside officials like military drafting and residence

registration. His power was supposed to be unquestionable and not to be challenged by anybody. As an old villager put it: “*kamnan* Jong helped out the villager with different matters, but he did not want anybody to rise. They were helped but oppressed”.

Today, because they consider Lipe a rural, remote area, the majority of governmental employees on Lipe see their position as temporary and do not wish to work there for longer than a few years. Their families live on the mainland, and family visits are often the main reason for their absence from duty. During my fieldwork, there were consecutive days when the public health office, which was supposed to be open 24 hours and staffed by three people, was not occupied because all the officials were on the mainland. Only one of the six policemen, who is married to a local woman and has a store on Lipe, is usually present. Because of the distance from the mainland, visits of officials from the mainland have been irregular and rare, and supervision of the local governmental officials is lax. The distance also causes lack of up-to-date knowledge on the local situation. This seems to be even more obvious on Adang where the residents of the 30 households feel mostly neglected as even a visit of the village head is very rare, and any visits from the mainland come only after Lipe, if at all.

At present, Adang Archipelago has become much more accessible and more governmental officials are visiting the area. The illegal activities may have continued, but not to the open and convenient extent as they once were. The provincial government has tried to reach the local population by bringing in a team of officials from different

divisions to handle their concerns locally. At the same time, visits of high ranked officials from different departments are increasing. However, these visits ultimately aim to develop the Urak Lawoi rural community in a way defined by the outside officials and little attention has been given to understanding the local situation. During the visit of a governmental team in 1998, an official from the transportation section gave a short talk about road safety without realizing that there was no road or car on the island. Most Urak Lawoi do not pay attention to these visits and do not develop a better sense of life security from them. In a meeting with the officials, they are often asked about local problems. However, there is no village representative who would answer these questions and the villagers themselves do not feel comfortable or “safe” voicing their concerns with outsiders. Most complaints stay among themselves and are never heard by those from outside.

### **6.7 Conflicts and Competition of Local Resources between Urak Lawoi and Outsiders**

According to Bryant and Bailey (1997:28), in the analysis of environmental change and conflict within the context of economic and social processes, actors may be place or non-placed based, and include ones with unequal power relations in a “politicized environment”. In the Adang Archipelago, Urak Lawoi have been permanent and direct users of the coastal and marine resources. Once the area was given the status of state and private property and subjected to increasing outsider access, it has become a site of

competition over the resources on which the livelihood of the Urak Lawoi has depended. Outside users are both indirect (i.e. park and provincial governmental officials) and temporary (i.e. large-scale commercial fishers and tourists) in nature. Both groups have substantial impacts on the sustainability of both the natural and cultural resources of the areas. The following part examines these issues.

### *6.7.1 Industrial vs Small-Scale Fishery*

According to Russel and Poopetch (1990 in Ruohomäki 1999:14) commercial fishing in Thailand displays a highly dualistic structure, in which small-scale fishing households continue to coexist with large-scale fishing establishments. At present, too many fishers are pursuing a decreasing number of fish. The coexistence therefore inevitably comes with the persistent conflict of large-scale commercial fishing boats entering the near shore fishing areas used by small-scale fishers, degrading local fishing grounds, depleting local fish stocks, or destroying stationary gear of the small-scale fishers. The intrusion of large-scale commercial fishing in the near shore areas have been reported by many in the coastal areas (Ruohomäki 1999:14), and is the most common complaint of the Urak Lawoi. In this politicized environment, the large-scale commercial fishers benefit more, while the Urak Lawoi are worse off as a consequence of the resource depletion and lack of power in dealing with the conflict.

The centralized fisheries management system that currently exists in Thailand has, in general, not been effective in addressing problems of over-exploitation and conflicts between small-scale and commercial fishers (Pomeroy 1995:153). Implemented in 1979 in the Andaman Sea, the trawl and push net bans within three kilometers of shore were designed to prevent destructive gear from degrading coastal fishing areas and tearing up stationary gear (Johnson 1997:23). However, as mentioned in Chapter 5, fisheries constitute the single most important contributor to the total gross product of Satun province, and the Andaman Sea has become an alternative fishing ground to the depleted Gulf of Thailand. The growth of commercial fisheries in the area is substantial, and the industry has become very powerful and influential. In 1998, the Department of Fisheries even had to handle a request by the commercial fishers to reduce the area from three to one kilometer after several trawlers were arrested for fishing in the three-kilometer prohibited area.

Problems with the implementation of rules and regulations by both the park and the fishery agencies in the local area were common. The Urak Lawoi, who have been powerless against the large-scale fishing sector therefore expressed their frustration that the Fishery Patrol catches them for small activities but the big offenders are let go. As *taukay* Pee put it: “the rich can do, but not the poor”. Johnson (1997:49) who suggested community-based management for the coastal zones in Thailand admitted that, “in terms of enforcement, the notion that small-scale fishing communities can or should have the capacity to enforce territorial fishing areas is clearly unrealistic and potentially very

dangerous. More viable is the notion that local communities monitor the existing rules and appeal to local authorities when these rules are violated.” However, according to the Lipe villagers who have reported near shore intrusions to Fishery Patrol many times, they have not noticed any improvement. As they said, “When the Fishery Patrol comes, the trawlers always disappear. When the Fishery Patrol is not around, they are back again”.

Considering themselves small-scale fishers, the Urak Lawoi do not believe they are responsible for the depletion of marine stocks. Even though they have used destructive fishing methods such as dynamite, they often said that the method was introduced by outside people. They commonly blame the rapidly decreasing number of the sea turtles and fishes on industrial fishers from outside, which in their opinion, have caught too much of everything. For example, when I asked Mr. Lobo-- a 70-year old Urak Lawoi who has fished all his life and is convinced that fish and shells will never go extinct-- why the turtles are becoming extinct, he promptly said because of the trawlers. Like many Urak Lawoi, *taukay* In believes there is no need for the conservation of sea life if the islanders are the only ones who use them. *Taukay* Kiti has a similar opinion to In’s. He said if the government is strict about banning the entry of big commercial fishing in the area and banning of dynamite fishing, the island people here can live comfortably, the local marine resources could be sustained, and there would be no need for any big conservation project.

A local official of the Sea Life Protection Unit of Lipe Island, in residence since 1994, felt that the villagers of the Adang Archipelago have already contributed to conservation after they stopped destructive fishing activities. In his view, the outsiders, in particular the big fishing boats like trawlers, now play a more important role in whether or not conservation is possible. However, as economic interest and profits are the driving forces of large-scale commercial fishery operations, and the official rules and regulations that would prevent their exploitation of the local resources are not properly executed, the small-scale fishers like the Urak Lawoi are in a disadvantaged position. At the same time, there is not much potential for sustaining the local marine resources.

#### *6.7.2 Tourism Development vs Sustainable Development*

Besides fisheries, Satun Province does not have any other well developed industry. It has a minimal industrial infrastructure and tourism seems to be an industry that can be developed more easily than others. It is obvious that larger political and socioeconomic structures support the development of tourism in the Adang Archipelago. The development clearly illustrates the dilemma between the economic benefits derived from increasing tourism revenue and the need to protect the cultural heritage and ecosystems that give national parks their value. Ideally, the park would like to develop eco-tourism as it is considered an environmentally friendly way to commodify the local resources, and a viable approach to 'save' the environment. However, the Adang park management is

facing the problem of too many visitors and the lack of capacity to support both park management and tourism development at the same time.

According to a carrying capacity study, the feasible maximum number of visitors is 100 people per day on Adang (Mahidol University 1992). In practice, the real numbers on Adang and Lipe are many times higher, especially during the holidays. During the tourist season, the park officials almost exclusively take care of the tourists, resulting in neglecting the other park tasks. During the off-season, the park personnel spend time keeping up with maintenance of the tourism facilities.

The Adang Archipelago, especially Lipe Island where most tourism development is taking place, does not have infrastructure that can accommodate a large number of tourists. Inevitably, the increasing number of tourists put much pressure on the natural environment. Garbage disposal is becoming severe at all tourist sites and neither the park nor the provincial government has a solution. The provincial governmental officials encourage the people to help collecting the garbage and keep the island clean. However, there is no proper disposal system in the archipelago. Most resorts burn, pile, and bury their garbage. Almost daily the air is filled with the smell of burning plastics, the majority of which are drinking water bottles generated by tourists (*Appendix 8*). In addition to the garbage problem, Lipe occasionally faces shortage of fresh water for big groups of visitors. In terms of impact on coral reefs, even though there are spots where their condition seems fine, it is common that after a few loads of big group tours, the water is



murky from the disturbed sediments. Reckless oil discharges and coral damage by local long-tail or passengers boats are a fairly common scene (Ochieng et al.1997:37).

According to Muqbil (in Wong Poh Poh 1998:252), there has been no shortage of plans and policies to reconcile tourism development with nature conservation in Thailand. The problem has been the lack of implementation. Implementing park rules and regulations on tourism development faces difficulties in a way similar to the previously mentioned enforcement of the fishery rules and regulations. As one of the park head's assistants admits, encroachment of park land for resort construction on Lipe has become increasingly common and some of these encroachers have personal connections and are backed up by powerful outside political and economic parties, including some at the Governor's office and at the Land Department. The park, consequently, is indirectly forced to compromise by warning about the encroachment while leaving the resorts to operate. The park head is well aware of these negative impacts of tourism development, and would rather place limits to development on Lipe. Even though he sees the importance of carrying capacity and would like to have quality tourists rather than quantity, he cannot choose them or control the number of visitors.

Being one of the main income generators of Satun Province, tourism is fully supported by the provincial government. Already in 1998, the President of Satun Chamber of Commerce told a resort owner who has a large piece of private land on Lipe and currently owns 25 bungalows, that he should increase the number to 500. Local people with proper

resources are eager to participate in tourism development and have a share in the profits. On Lipe Island, current development is under the control of the village head's family, which owns four of the five existing resorts. Few other Urak Lawoi who claim that their ancestors owned some land are building resorts, and parts of private land owned by outsiders could well be used for larger tourism development scale in the near future.

The attempt of the park to support tourism development has also been obvious. During my fieldwork, when there was news that decorative reef fish have been collected and sold to Malaysia, the Adang Park Head immediately investigated the issue. I asked him why it was so upsetting that some decorative fish were taken when so many thousand kilograms of other fish were caught daily. The answer was that without decorative fish, the corals will not be very attractive for the tourists.

Tourism offers seasonal prospects to enhance the economic positions for a few villagers, especially younger men and women. At the same time, its consequences have included increased social differentiation, a growing gap between rich and poor, land speculation, and increased outside ownership of resources. It threatens to destroy some important aspects of the natural resources and unique cultures on which tourism largely depends. As socioeconomic processes of commodification and globalization happen with more formerly sea nomadic people being drawn to serve the industry and tuned to accommodate the tourists in a "standardized" global way, local distinctiveness is disintegrating. Quite a few Urak Lawoi told me that the Satun Governor wanted Lipe

Island to be developed like Phi Phi Island, and they believe with increasing tourism development, Lipe will become progressive and developed. However, some other people are suspicious about tourism development. As one local woman said, "People always said if there are more bungalows and tourist resorts, we will be developed. But it is the Thais who opened the resorts that are developed. The island people stay the same, no more developed".

## **6.8 Conclusion**

In today's changing situation in the Adang Archipelago, development that takes into consideration the sustainability of the natural environment and cultural characteristics of the Urak Lawoi has faced many challenges and obstacles, despite the park status and conservation policy. The Urak Lawoi themselves are ready to participate in a new modern lifestyle and market economy, and are not too concerned about maintaining their traditional cultures. *In the following chapter, I would like to conclude by proposing alternative sustainable development paths and provide suggestions for necessary steps to be taken if the local resources are to be used in a sustainable manner and the local culture is to be conserved.*

## CHAPTER 7

### POLITICAL ECOLOGY OF RESOURCE USE IN THE ADANG ARCHIPELAGO AND DEVELOPMENT PATHS: CONCLUSION

#### **7.1 Introduction**

This dissertation began with an overview of the Adang Archipelago and the cultural history of the Urak Lawoi in the area. Their ways of life and changing relationships with coastal and marine resources were then presented in relation to the impacts of resource users from outside and their relationship with the Urak Lawoi. Problems in sustaining the local culture and resources were identified and discussed.

The Adang Archipelago is going through processes similar to those occurring in the rest of the world where traditional peoples are being required to share with other people the resources on which their livelihood once depended. This is “cost”—seemingly unavoidable—of participating in the modern world. At the same time, with a unique history and people, the Adang Archipelago has locally specific challenges and opportunities with regard to sustaining its natural resources and local culture. In this chapter, I will present a summary of my findings, and will then suggest how sustainable resource management and cultural conservation would ideally be realized in the Adang Archipelago. Following this, I will provide a synoptic discussion of present realities in the Archipelago and how they affect the likelihood of ideally realized cultural and environmental conservation in the region. Finally I will end this dissertation with specific lessons learned from the research.

## 7.2 Summary of Findings

### *7.2.1 Economic and Political Relations Play a Very Important Role in Resource Use, Management, and Degradation in the Adang Archipelago.*

In the Adang Archipelago, the resource user groups are of different social, economic, institutional and/or political origins. They come together in social relations of widely unequal power. These user groups have different resource interests and aims, and their own means to reach them. (Table 7.1) Importantly, relationships among resource users and their, often disparate, aims and practices underlie the ways in which the resources of the Archipelago are finally used and managed.

With its legislative power, the government and its officials officially comprise the most powerful party in determining ways of local resource use in the Tarutao Marine National Park. However, in specific local contexts, the power of the state is sometimes extended to economically and politically dominant non-governmental groups and individuals. At the same time, state power is not infrequently challenged and/or negotiated by these and other groups. For example, the “industrialization” of traditional fishing methods, such as trap and line fishing, has made commercial fishing possible in the park. Official rules and regulations have been transgressed by both the local people and outside fishers. Lax enforcement is taken advantage of, and bribes and personal connections have become common ways to increase resource access and use.

Table 7.1. Political Ecological Analysis of Resource Users in Adang Archipelago  
(adaptation of a table used in Blaikie's 1995:208)

Group	Position in Political Economy	Source of Power	Resource Interests and Aims	Means to Reach Aims
Urak Lawoi	labor, marginalized, excluded from decision making process	long-term residency but limited power	subsistence and secure livelihood	knowledge of local environment, expertise in fishing, everyday forms of resistance
<i>Taukay</i>	rent capitalists, middlemen linking to market economy	long-year patronage, ownership of means of production, monopoly over extending credit to Urak Lawoi, contact to outside	sustainable profit from fishery	capital investment on fishery, knowledge of commercial fishing and marketing, support from <i>luknong</i>
Large scale commercial fishing operators	capitalists, producers of important export products	support from political (state) and economic (industry and international market) power	maximum profit from fishery	technology, capital, transgression of official rules and regulations
Governmental officials - Park and fishery officials - Provincial officers	control state	Vested authority from national government	- conservation, income via corruption - economic development	legislation, budget allocation, choice to execute rules and regulations, individual access to power
Tourists	consumers	income source	recreation, leisure	Capital
Land Owners	owner of land resource	ownership of land most local people live on	profit from tourism development	land titles, capital, respect from villagers

To a large degree, the Urak Lawoi—the group with the least power—follow the official rules and regulations. At the same time, they use everyday resistance strategies to claim rights to resources important for their livelihood, gaining a place for themselves in a non-confrontational and obscure way. A few Urak Lawoi have also increased their access and rights to resources through connections made with outsiders who have political or economic power.

Problems of environmental degradation in the Adang Archipelago can be seen as symptoms of the economic and political power of a privileged few who exploit the resources for large, typically short-term profits. Technical solutions to a resource problem seem to fail when no consideration is given to the root causes: people, and the social and political dimensions of their relationships. Take dynamite fishing as an example. The method was considered destructive to coral reefs and officially banned from the area at the beginning of the 1990's. However, the overexploitation of fisheries in the coral reef areas did not stop with the ban. The economic interests of commercial fishing and links between the operators and local political power led to the secret practice of blast fishing as well as other exploitative practices, including illegal near shore trawling. The problem of establishing a special conservation area in the Adang Archipelago is another example of a technically feasible alternative that failed because of its socio-economic and political dimensions. Furthermore, locally sustainable carrying capacities for visitors have not been enforced because of conflicts with the province's economic development plan, the

need for cash income of the local people, and the lack of awareness regarding the negative impacts of mass tourism.

### *7.2.2 Meanings of Resources Are Plural, Complementing and Contrasting among Different Groups of People.*

Perceptions of resources vary among different groups of users. Their decisions about how to use and manage specific resources are based on their socio-cultural background, worldview, and relationships with the resources in question. Meanings of resources are therefore plural and anything but neutral. Some are conflicting while others are complementary. Inevitably, resource meanings have been variously used as political tools in supporting or attacking the actions of individual groups and how they deal with local resources. For example, the park has viewed natural resources as state property to be conserved. Consequently, the displacement of the Urak Lawoi from common property resources, and prohibitions on taking the natural resources within the park, have been justified as supporting conservation for the national good. In sharp contrast, the Urak Lawoi consider the archipelago to be their home—a place where they have enjoyed a traditionally unproblematic abundance of marine resources. They do not feel a need to develop conservation ethics, and feel that their relatively small amount of resource use for subsistence purposes does not result in any degradation. Because they are made to suffer adverse effects on their livelihoods as a result of the park's establishment and consequent reductions of access to previously common property resources, they justify illegal takings



of resources as necessary for survival. The provincial government recognizes and focuses on the economic potential of fishery and tourism industries in the area, and desires a higher level of development. The park, however, is concerned with the carrying capacity of these activities, while current ecotourists view any kind of increased development as destructive to the archipelago as a tourist destination.

*7.2.3 The Urak Lawoi Are No Longer Relatively Isolated Traditional People. They Participate in the Modern Way of Life and Market Economy, and Are a Part of a Larger Society.*

When the Urak Lawoi settled in the Adang Archipelago in 1909, they were the only people present and the archipelago was relatively isolated from the mainland. Over the last few decades, as more outsiders have come into the archipelago and different ways of life have been introduced, the Urak Lawoi have increasingly responded to social, economic, and political changes that affect their way of life. The resource accessibility of other groups put an end to the Urak Lawoi's econiche characterized by minimal competition. At the same time, exposure to the outside world through media, tourism, and the formal education system has introduced the Urak Lawoi to mainstream, modern lifestyles. In regard to tourism alone, the Urak Lawoi are now confronted by many tourists from the most advanced and wealthy societies of the Western world. Their social life and subsistence-oriented economy are being transformed accordingly, but for the most part, the Urak Lawoi have been developing viable adjustment strategies in response.

Although, indebtedness and rural wage labor have emerged, most Urak Lawoi consciously welcome modernization and the market economy. At present, they are in actuality living “in between” traditional and modern life styles. They cling to certain practices with which they are comfortable, but are viewed as “old fashioned” by outsiders. At the same time, they are willing to change and adapt their norms and traditions, or even to discontinue them, if such change supports their survival or helps them to earn a comfortable place in the new situation.

In the process of making these changes, alterations have occurred in their relationships to resources, both among themselves and with other users as well. Their harvesting of resources is now mainly determined by market demands. They are now fishing for money, not for fish. Contacts with other people are increasing, especially with those from whom it is possible to earn income. The Urak Lawoi have become more dependent on those who facilitate their contacts with the outside world, and their traditional way of life is changing rapidly.

Among themselves, social and economic inequality increases with their incorporation into the market economy. Until recently, the traditional subsistence economy of the Urak Lawoi, and other cultural mechanisms, served to limit material acquisitiveness, storage, or accumulation. Diversification of their harvest type and locations supported their livelihood. Mutual assistance protected them in difficult times. Today, they no longer operate in a closed economy, but instead as a part of a global economy. Individuals earn

cash income and are able to buy and accumulate consumer goods and afford services offered in the modern world. Earning ability varies among them and there is now a tendency toward material accumulation among those who are able to make use of the changing situation and who participate successfully in the market economy. Children of these people have better chances of receiving higher education or study on the mainland. At the same time, those who fail to establish connections with outsiders or to adjust become still more marginalized. Inequality of property increases and results in the decline of mutual assistance networks. Impoverished households become dependent on richer ones or on outsiders. The Urak Lawoi, once known as people who could not be coerced by money, are transforming into people who believe in its necessity. Yet, money management is a concept not known or understood by most Urak Lawoi. Therefore, when they earn much, they spend much and do not save or invest for the future.

Modern technology and the market economy have a strong impact on the Urak Lawoi's family dynamics, especially the time and activities of women. In the last few decades, women have discontinued many of their traditional activities. With the ban of *bagad*, families stop moving around to forage for food. At the same time, modern boat technology allows round trip travel to any spot in the Adang Archipelago in a single day. The fishermen return home at the end of the day, decreasing the need for their wives and children to contribute as actively to family welfare as had once been the case. Park prohibitions against taking non-fish species eliminates time spent on harvesting and post-catch processing. In addition, the availability of ice since the 1980's makes it possible to

store fresh fish, and salting or drying are no longer necessary to preserve the catch. With the loss and limited use of land in the park, agriculture also discontinued. Time that men and women used to spend together on food foraging, food preservation, or small-scale gardening has been reduced almost to none. Moreover, with cash income and market accessibility, women are buying instead of making what they need. All these factors lead to much free time among women. A few work seasonally in the tourism sector, while many others do not have new activities to replace those they discontinued. Card games have become the most popular daily activity to pass time.

*7.2.4 The Alteration of the Urak Lawoi's Traditional Culture Is Accelerating Because of a Lack of Understanding and Recognition of Who They Are, an Inability to Determine for Themselves How They Live, and a Lack of Institutional Support.*

Cultures are not static collections of fixed practices and values, but represent sustained patterns of both conservation and innovation. The Urak Lawoi's traditions are not and, indeed, have never been static. Granted that the Urak Lawoi were once the Orang Laut Kappir who were forced to become sea nomads and who later made a transition out of a fully nomadic life-style in the late 19<sup>th</sup> century (Sopher 1977), they clearly had the creative resources for negotiating what must be counted two major cultural shifts: from being sedentary to nomadic to semi-nomadic. Since their settlement in the Adang Archipelago, subsistence with a semi-nomadic food foraging lifestyle was the core of the Urak Lawoi's traditional culture. It allowed them to take advantage of different spaces in

the Adang Archipelago, and helped to prevent overexploitation of a particular resource at any given area by adjusting the time spent in any one place. In addition, it was a more appropriate local specialization than some other subsistence strategies, and provided the Urak Lawoi with a standard of living superior to some other fishing communities. They stand now in the midst of yet another major transition.

The Urak Lawoi have social and cultural characteristics distinct from the dominant Thai culture. However, with little knowledge of the Urak Lawoi's cultural history and their semi-nomadic life style, people often compare this ethnic minority to, and judge them against, the mainstream population. Even though their nomadic nature only applied to their food foraging practice and was seasonal, they are often referred to as "sea gypsies", a term that implies wandering without a home. The advantages of their nomadic food foraging are commonly not understood or accepted by sedentary people who see it as a "primitive", unnecessary practice, and a destructive—almost predatory—way of resource use. Their subsistence level of production is associated with an unproductive, backward, purposeless, and lazy lifestyle.

What happened to the Urak Lawoi women is an obvious example of disintegrating traditional roles. With technology development, modernization, and market integration, their roles as harvesters of non-fish species, post processors of sea products, and accompanying members during longer fishing trips, broke down. Today, most women are 'unoccupied'. A development option that is concerned with human development would

need to address such an issue. Most outsiders have an impression that the Urak Lawoi women are lazy and not interested in doing anything except playing cards. However, it seems to me that this is a result of them not having developed alternatives to the traditional ways of contributing to family and communal welfare. Urak Lawoi are generally not very interested in service work, but some see the financial incentives of tourism jobs and work in this sector. A few were fortunate enough to receive support from family members or *taukay*, and have been able to follow their aspirations and start their own ventures, most of which involve food selling to other villagers or visitors.

The state seemed to assume that nomads would settle anywhere if they were given the opportunity. Their rights to *bagad* were not recognized and the practice was banned. This has disrupted Urak Lawoi traditional culture. The Urak Lawoi were offered sedentary livelihood alternatives, including settling on Lipe Island or moving to the mainland. However, the choices given neither fit their lifestyle nor allowed them time to make adjustments at their own pace. Moreover, the Urak Lawoi did not have an opportunity to learn about or make a place for themselves in the mainland society to which they were offered opportunity to be moved. While the move to Lipe allowed them to continue parts of their lifestyle, albeit in a crowded area, the mainland offer reduced their ties to the sea and fishing activities to simply a way of finding food and earning income. The Urak Lawoi's social organization evolves around marine life harvesting. For them, the island and the sea have no market value and do not constitute private property. Whether the

Urak Lawoi are fishermen or drivers for tourist taxi boats, their tie to the sea has remained the center of their life.

Official leadership positions in the village have been held by people from outside. The Urak Lawoi themselves are not interested in leading or representing their community.

Those who practice the traditions seem to belong to an older generation. Many young

Urak Lawoi see their traditions as backward, and few treasure their heritage and culture.

Without a strong, countervailing voice representing the people and their culture, the Urak

Lawoi have become the group most vulnerable to disruptive changes in the Adang

Archipelago. And yet, the self-conscious awareness that parts of their culture might be

irrevocably lost if they accept modern development does not seem to have developed.

Beside a few members of the Thai royal family who have shown interest in the civil rights

of the *chaao lay* and the life of the Urak Lawoi (Kruahong 1998:97, Ukrit 1989:25-26),

there have been no institutions that support or protect their existence and culture. The

remoteness of the archipelago discourages officials from the mainland from working

seriously towards the long-term welfare of the local people. The Urak Lawoi have easily

been dispossessed of the resources their lives and livelihood depended upon for decades

as these became valuable to others. Furthermore, they have taken on different meanings

for different groups. For the park, they are people who happen to have lived on what has

become park land and who should be relocated if the park's objective of conservation is

to be achieved. For the *taukay*, they are readily available local labor with appropriate

fishing skills. For some others, including the tourists, they are sea gypsies representing an attractive relic past, simpler ways of life: the “other” or “the ecologically noble savage”.

*7.2.5 The Patron-Client Relationship between Taukay and Urak Lawoi Is of Mutual Benefit. It Provides Today’s Basis of the Urak Lawoi’s Socio-Economic Structure, Determining Patterns of Local Livelihood.*

As far back as the 1950’s, the Urak Lawoi of the Adang Archipelago already had contacts with outside *taukay*. These contacts became their links to the outside world. *Taukay* have become the closest and most important local patrons on whom the livelihood of the Urak Lawoi depends. *Taukay* provide boats and fishing tools, determine what and how to harvest, link the Urak Lawoi to the market and the outside world, offer them credit, and help their families in times of difficulty. In return, the Urak Lawoi trade their fishery skills, knowledge, and labor. Without the Urak Lawoi, *taukay* would not be able to operate their commercial fishery. And without the *taukay*, it is difficult to imagine how individual Urak Lawoi lives and their community would not be completely disrupted. Even with fishery, the majority of Urak Lawoi have never gone beyond being harvesters of marine products. They totally depend on *taukay* for all other functions as they have never learned about the market or the consumers.

The patron-client relationship between *taukay* and Urak Lawoi has been long and well established. Even though the relationship is based on structural inequality and most Urak



Lawoi are kept indebted (at least, in the short-term), this does not necessarily result in their dissatisfaction or foster negative associations with respect to the *taukay*. Most Urak Lawoi enjoy the benefits of being in patron-client relationships and prefer being in them to becoming independent. With limited knowledge and skills in most areas and being accustomed to having a middle person, it is difficult for the majority of the Urak Lawoi to become independent. However, independent fishers and Urak Lawoi *taukay* are emerging. These people treasure the freedom to work for themselves and set better prices for their catch from direct selling on the mainland.

#### *7.2.6 Conservation Ethics and Practices Are Developed with Necessity, Knowledge or Incentives*

Indigenous peoples have been referred to as people who have a higher environmental ethic than that of the modern industrialized world, but, at the same time, the idea of “Ecologically Noble Savages” has been challenged and criticized. Ellington (2001) has discussed in detail these opposite views, and warns us of the political repercussions arising from both positive and negative stereotyping of marginalized groups. Bodley (1997:611-612 in Ellington 2001:354) points out that ecological “nobility” is a false issue and has stressed that “when a group has no politically or commercially driven cultural incentive for expanding its population, production, and consumption, its members do not need to be self-conscious conservationists”.

The dominant cultural meaning and practice of “conservation” at the current historical moment focuses on preservation of biodiversity (of species and higher levels) and ecosystem function. This approach to conservation is dependent on a set of political, economic, and intellectual realities with few parallels in human history. Conservation of biodiversity for its own sake, and preservation of wilderness for recreation or aesthetic admiration, are goals that may make sense to urbanized elites in industrial society (Guha 1989, 1997 in Smith and Wishnie 2000:516).

The case of the Urak Lawoi in the Adang Archipelago indicates that conservation ethics and practices develop for a reason. They neither simply exist among all traditional or indigenous peoples, nor can they be imposed upon them by officials. The Urak Lawoi lack a conscious conservation ethic, but do have some conservation practices. These practices did not evolve into a full-fledged conservation ethic because the Urak Lawoi were able to enjoy free use of resources over a vast area with little competition or scarcity. They thus maintained an optimistic view of natural resource abundance and did not worry about overexploitation or extinction. At the same time, their subsistence way of life and semi-nomadic nature are responsible for the practices that tacitly or implicitly support conservation, such as small scale harvesting of resources and temporary harvesting in one area.

A lack of awareness about the value of certain resources, such as coral reefs, also contributed to the lack of concern for their conservation. Working for a *taukay* and being supplied with blast fishing material, the Urak Lawoi were involved in dynamite fishing, which was extremely destructive to the coral reefs. However, they were not concerned with the reef conditions as long as there were fish to catch. Education and financial

incentives from tourism based on a healthy natural environment help the Urak Lawoi to understand the need for conservation and to develop practices that support the concept. This need is thus seen in very strong instrumental or utilitarian terms and is markedly different from conservation movements that appeal to notions of the intrinsic value of natural resources and environments.

My fieldwork findings also point out that, in the Adang Archipelago, one cannot assume that officials hired to work towards conservation, such as the park and the fishery officers, necessarily do so in practice. As *taukay* Kiti summed up, “The government has to be good first before they can convince the villagers to conserve”. Here it seems that incentives, especially financial ones, play a big role in the practice of conservation.

#### *7.2.7 The Urak Lawoi Are not Involved in Resource Management of the Adang Archipelago*

Having resided in the Adang Archipelago for the longest and being direct users of the local resources, the Urak Lawoi are undoubtedly a ‘real’ stakeholder when it comes to resource issues. However, decisions made in relation to resource use and management are often centralized and top-down, and have never involved them. *Ad hoc* solutions for dealing with local problems vary with individual park heads. Their lack of an integral role in the management of local natural and cultural resources has led to the discontinuation of certain traditional subsistence practices of living and has pushed them towards

participation in commercial resource extraction for the market economy. This, in turn, underutilizes their keen knowledge of both the local environment and resources—knowledge that has been accumulated for generations.

Although the Urak Lawoi have complained much about the decisions made by others, for several reasons they are actually not interested in resource management. Most are simply concerned with the fundamental needs of life such as shelter, food, and safety. Over 85% of the Urak Lawoi do not have any land title. Living on the land of the others, they are uncertain about their length of stay in the archipelago. The taking of materials needed for their livelihood, including their favorite foods, wood for cooking fuel and house construction, or rattan for trap making, is restricted by the park. According to Smith and Wishnie (2000:505), controlled or exclusive access (stable land rights) is one of predicted conditions under which conservation is likely to occur.

The Urak Lawoi are peace-loving people, who do not enjoy confrontation and who avoid being in a potential conflict. Voicing their problems makes them worry about their life safety. Furthermore, they feel powerless to control the exploitation of resources by outsiders despite obvious signs of growing resource depletion. As resource management would be more successful with the participation of the Urak Lawoi, collaborative or community-based management seems to be a reasonable option. However, with the current situation, these management styles do not seem to be realizable. In addition, the Urak Lawoi neither see themselves as environmental degraders nor as having a role in

resource-use decision-making. There are no ongoing efforts to alter this problematic situation.

#### *7.2.8 Multiple and Competitive Uses of Resources Result in Degradation of the Resources.*

As fishery products are one of its top exported commodities, the Thai state supports fishing technology and encourages industrial fishing operators to increase the total marine catch. At the same time, it has stated the need for conserving natural marine resources and has begun to talk about sustainable development in marine fisheries. The case of the Adang Archipelago reflects the multiple purposes of such a plan. To compensate for the declining catch in the Gulf of Thailand, the operators are increasingly harvesting in the Andaman Sea—an alternative, richer fishing ground. Apparently, industrial fishing is a serious problem for Tarutao Marine National Park and the Urak Lawoi. However, support of national fishery development may not take local problems into consideration.

Furthermore, the archipelago has been a home of the Urak Lawoi who have practiced a communal property regime. Inevitably, there have been conflicts with the realization of park and state property concepts, and the enforcement of official rules and regulations. To live together and lessen historically violent conflicts, both Urak Lawoi and the park have compromised. To a certain degree, the Urak Lawoi comply with park requirements. At the same time, the park allows for taking certain resources that are necessary for their

subsistence. However, with integration into the market economy, the Urak Lawoi have been employed to extract resources for commercial purposes. Here, even in the same group of resource users, there is more than one way of use, each occasioning different degrees of resource exploitation. Just as it is not possible to limit a user group to a particular way of resource use, it is not possible to limit the impact of use only to a particular area. Although tourism development concentrates on private properties on Lipe, and commercial fishing supposedly happens over 3 km from shore, the exploitation and degradation on Lipe and in sanctioned offshore areas have far-reaching impact for other areas.

Despite the park status of the Adang Archipelago, the park does not have exclusive rights to manage the area. With the multiple uses of resources, there are different agencies involved in planning and managing the area, not to mention the influence of “unofficial parties”. Coordination of these agencies has not been effective. Some of the rules and regulations are overlapping, while others contradict. To date, there has been no true coordinating body, and meetings with different interest groups have not resulted in satisfactory solutions accepted by all. As a result, agreements are difficult to reach and regulate.

*7.2.9 Tourism Provides for a Seasonal and Supplemental Use of Resources. Naturally the Adang Archipelago Has a Potential for an Eco-Tourism Destination. However, Tourism Developers Are Geared towards Higher Levels of Tourism Development and Ultimately Mass Tourism.*

Tourism links the rural economy of the Adang Archipelago to the world market system—a central operational factor in which is attention to economies of scale. Similar to other remote island destinations, the Adang Archipelago is a peripheral, non-industrialized area which has limited development options but which possesses resources valuable in the tourism industry. In the survey I conducted, its natural environment was rated as the primary attraction. Its low level of tourism development was highly valued and the archipelago was considered one of the last “pristine” destinations in Thailand. The Urak Lawoi added a cultural attribute that differentiated the archipelago from other tropical island destinations. As they continue their way of life with hardly any organized activities catering to tourists, the destination offers experiences of the “undisturbed” local lifestyles.

With its attractive environment and unique historical and cultural heritages, Tarutao Marine National Park is seen by both the park and the provincial government as having high potential for tourism development. Tourism has been promoted as a means of sustaining both culture and environment, often under the guise of rural development, generating local employment, and economic and political incentives for park management and conservation. Many Lipe islanders believe that tourism will help them to become

more progressive. Visitors come in the dry season, which is a period when marine harvest yields are usually lower. A few fishers supplement their income in this season by running taxi boats, which can generate a much larger amount of cash income than fishing. Half of the Urak Lawoi workforce in tourism consists of women. Working at a resort or its restaurant afford concrete alternatives to simple unemployment for women who otherwise would not have any income or other means of livelihood, and whose traditional ways of making family and communal contributions have already substantially eroded. This applies in particular to younger women who are not yet married and to older women who are alone.

Over 80% of the international visitors are from Western Europe, and most visitors are well traveled both in Thailand and other countries. Most visitors consider themselves ecotourists and rated tourism development and environmental degradation negatively, as reasons for them to stop visiting destinations. Nevertheless, tourism developers and the majority of the islanders are interested in a higher level of development that accommodates a larger number of visitors and generates more income. On Lipe, private land has been used for resort development and some of the park's land has been encroached upon for the same purposes. Infrastructure plans such as roads or a harbor seem to give priority to tourism rather than village development. Even the Adang park officials spend nearly all their time and attention catering to tourists during the dry season. More local people are participating in tourism development, and it is likely that outside investors will join in sooner or later. At present, tourists and the local people are



able to share the local resources without much conflict. However, scale-variant economics practically dictates—barring successful intervention—that the scenario that has played out on many other island destinations in Thailand will take place in the Adang Archipelago: a transformation from a “pristine” destination with few tourists to mass tourism without proper infrastructure support resulting in environmental degradation and the resource competition with the local people. For the present, eco-tourists or tourists who prefer low impact destinations, do not find themselves forced to go elsewhere. That, however, can change with great rapidity if other sites in Thailand are used as indicators.

### **7.3 Development in the Adang Archipelago**

In the case presented here, environmental and cultural change is understood through political ecology. The analysis reviews the past way of life and relationship between people and their environment and resources. The current situation of the Adang Archipelago is based on the history of the area and its connections with political-economic forces beyond the archipelago. Changes in the environment and local culture are the responsibility of more than one group of people. They are closely linked to different factors and to the politics of unequal power among different groups of people. The Adang Archipelago has a high potential for both conservation and development--an already embedded, conflicting nature of the place. The situation in the archipelago is complex and the question here is how feasible it is to manage the protected area and

conserve its natural resources and cultural heritage when the economic development of fishery and tourism industries is highly desired by those with political-economic power.

### 7.3.1 The Ideal

In theory, because Adang Archipelago is a part of Tarutao Marine National Park, which is recognized as one of the ASEAN Heritage Parks and Reserves, the sustainability of its environment and culture in the interests of the nation and future generations should be at the heart of any development. This would mean that its development options and levels would need to be limited to low impact ones. At the same time, since different stakeholders have impacts on the change of natural resources and culture in this area, it would be ideal if the development involved them and if collaborative management could be realized. In order for the Urak Lawoi to participate in such management, they would first need to be empowered. Environmentally compatible and culturally appropriate alternatives for development, such as small-scaled aquaculture and ecotourism, would be most appropriate for the area.

#### *7.3.1.1 Low Impact Development*

Healthy ecosystems, richness of natural resources, local cultural experience, and small-scale development are in themselves assets of the Adang Archipelago. Even though the place possesses resources valuable for fishery and tourism industries, large-scale

activities that degrade the natural resources or negatively effect cultural integrity will put at risk the uniqueness of the Adang Archipelago and its competitiveness in its category, and so need to be restricted. Such activities include large-scale commercial fishing and mass tourism. Fines or other suitable deterrence need to be sufficiently severe to be effective. Certain areas, for example, 3 nautical miles or 5.56 kilometers from shore, should be protected for spawning and nursery grounds and have a total closure from large scale commercial fisheries. Because such an area is the primary location for trap fishery of the *taukay* and the Urak Lawoi, the scale of the trap fishery and its impact on the ecosystem need to be investigated and evaluated. The park will then need to decide whether special areas would be exempted for the local trap fishery or whether any other low impact fishery related activities could be introduced to substitute the trap fishery. With a clear special conservation zone, the limited budget, equipment, and staff of the park and fishery offices could be more effectively allocated.

While low impact development may not generate a large, short-term income, it has better potential for definite and sustainable benefits because the resources stay intact. Low impact economic development also has the merit of fostering social and human development: Urak Lawoi would not be compelled to face the immense forces of changes brought about by large scale exploitation of their immediate environment and resources.

### *7.3.1.2 Collaborative Management between the State and Local Community*

Instead of relying on the park to manage the Adang Archipelago on its own simply because of the status of the area, co-management between the State and the local community may be a better way to counteract the uncontrolled exploitation of multiple resource uses. “As advocated by several researchers (Gunn 1988, Haywood 1988, Inskeep 1991, Murphy 1983 in Jamal and Getz 1994:194), representatives from the various stakeholder groups should be involved at an early stage in the planning and decision making process. Gray (1989:65 in Jamal and Getz 1994:194) emphasizes the importance of early involvement, since “failure to include them in the design stage only invites technical or political difficulties during implementation”.

Co-management allows for active exchange of the different meanings, concerns and possible solutions of resource issues between the government and the local resource users. It can prevent a functionally holistic view of the situation from getting lost as each party deals with the issues on their own. At the same time, it is more effective for clearly organized stakeholders rather than individual groups to counteract the privileged few who have economic and political power, who favor large, short-term benefits, and who are the root causes of the degradation of resources. Co-management can help realize equitable development and allow the people most affected by development to exercise some control over it.

As the case study has demonstrated, there are conflicting and competitive activities centered on the use of the same resources in the Archipelago. In the ideal situation, co-management aims to achieve joint responsibility and authority for resource management through cooperation between the government and local resource users (Pomeroy 1995:149-150). A dynamic partnership between the local community and the government will allow a resource management team to address interests of the local fishers and community and to focus on their capacity building. The team must initiate farsighted and dynamic economic strategies that work towards the interests of the greater good, and vary from simply letting the market operate freely or serving the needs of particular societal interests. The partnership is complemented by the ability of the state to provide enabling legislation, enforcement and other assistance. The attempt requires an investment of time and effort by all groups to set management plans and establish mutual rights and duties for development that is not only economically beneficial, but also ecologically sensitive and culturally appropriate for a protected area. The “cost” in terms of vesting time and effort in collaborative management is crucial to its success. Otherwise, no sense of ownership and shared responsibility will emerge at a level sufficient to counteract the centrifugal forces obtaining among actors in the area on the pivotal issue of resource use.

Although the Urak Lawoi do not consciously practice conservation, in situations where conservation agencies are understaffed and underfunded as they are in the Adang Archipelago, they are more likely to have the sensitivities needed to observe illegal activities, especially those destructive to the environment in the narrow windows of

opportunity for effectively deterring such activities. Indeed, they are more likely than any of the other local groups to be able to serve in this “early warning” capacity.

Because the provincial government, the park, and the local community have differences in value orientation and interests towards resource uses, a mediator is most likely needed to assist in solving disputes over legitimacy and a convener to guide proceedings. (Gray 1985 in Jamal and Getz 1994:191)

A convener is required to initiate and facilitate community-based tourism collaboration. The convener should have the following characteristics: legitimacy, expertise, resources, plus authority...According to Gray (1989 in Jamal and Getz 1994:198), the role and identify of the convener is a critical component in the problem-setting phase, which essentially represents the pre-negotiation phase. The role of the convener is to identify and bring all legitimate stakeholders to the table.

In the Adang Archipelago, there is no existing party with convening power (i.e., the ability to induce stakeholders to participate). An NGO or a neutral governmental agency specially assigned for this task would need to become involved or created as a convener and mediator.

### *7.3.1.3 Empowering the Urak Lawoi*

Throughout the dissertation, I have pointed out that the Urak Lawoi are the group with the least power. Despite the fact that they live in the immediate environment of their resources, receiving direct benefits or bearing direct costs from them, neither their status

as an important stakeholder, nor the importance of their involvement in resource management, nor their unique culture have been recognized. Practices for dealing with outsiders, competing user groups and resource managers do not exist in most traditional societies (Berkes 1985:204). The Urak Lawoi are not able to defend their historical rights to resources or negotiate means of conserving their traditional ways of life when these come into competition with the interests and aims of other groups. Among many policy-makers and development specialists in Southeast Asia, it is felt that only an empowered community can address both the need for economic development and the conservation of natural resources (Pomeroy 1995:147). The case of the Adang Archipelago seems to be no exception to this view. It is especially difficult to imagine how the Urak Lawoi might successfully lobby for sustaining their cultural heritage in the absence of significant empowerment.

Empowered people see themselves as capable of effectively determining how they will live. Empowerment rests on an ability to act (Little, 1995:129) and on an enhanced capacity for self-help. There are notable ironies implicit in the empowering process of the Urak Lawoi. First, in order for them to maintain (i.e. revalidate) their resource rights and conserve their traditions, changes are needed. Second, they need outside assistance to become empowered so that they will be able to help themselves and deal with outsiders in more equal terms. This outside assistance may include education and training, financial support, and technical and legal advice, all of which may come from governmental or non-governmental agencies. For an ethnic minority group like the Urak Lawoi to be

empowered and avoid absorption by the mainstream culture, some form of governmental, institutional and legislative support will likely be necessary. Ideally, Urak Lawoi will themselves be trained to lobby for such support and will exercise oversight on its enactment. Examples from other island nations like Fiji, Palau, Yap and much of Papua New Guinea demonstrated the importance of legalization for the long-term protection of local rights and mitigating the forces of economic development. Indeed, only such legal measures seem able to protect traditional fishing rights (Johannes 1984:345). As interesting as the ironic nature of empowerment is at a theoretical level where it can be contested from a variety of perspectives, at a practiced level it must simply be accepted as a “given” or “non negotiable”. Most fundamentally, this is because empowerment is needed to ensure the ability to meet basic needs, such as food, shelter, health, and safety. Ironic or not, empowerment is crucial to survival.

In this case, securing a long-term home in the Adang Archipelago and their life safety are the main concerns of many Urak Lawoi. The park is worried that the Urak Lawoi do not exhibit a consistent conservation ethos. However, their felt lack of security in the transition to becoming fully sedentary combined with the apparent fact of having no long-term home in the archipelago can only worsen the situation because they do not feel obliged to protect their immediate environment and conserve its resources. In fact, basic empowerment might, by some, be seen in terms of non-compliance—a power not to conserve.



Any viable alternative requires first developing Urak Lawoi self-esteem, self-reliance, and a sense of community membership or leadership. However, such social changes require time, effort, and supporting institutions. To have confidence in who they are, their culture and traditions need to be evaluated, understood and acknowledged in their own terms. Urak Lawoi who know their culture well and see the importance of maintaining or reviving it are needed for this process. To become self-reliant and to detach themselves from the client and patron relationship, there must be apparent incentives that outweigh those of simply remaining in the relationship. For this to become possible, they may need to expand the range of their perceived economic and social choices. To develop a sense of community membership and leadership, they need to become aware of the advantages of community over individual or household action.

Without empowering the Urak Lawoi first, it is difficult to see how they would or could participate in any kind of management. Their social goals and aspirations are closely related to ways in which they manage their immediate environment. To involve the Urak Lawoi in the local conservation effort, they must become involved in the decision-making and management process through which they can influence decisions that affect them. Self-determination is the most basic of all human rights. This may require changes of local and regional social structure, and even national institutions and attitudes. The Urak Lawoi should be the ones who tell us who they are and how their needs and way of life can be seriously taken into development considerations. They should be able to let us know what they themselves are willing and interested in doing to gain a place for

themselves within the changing environment of their home place, and to help conserve the traditions and resources they have depended upon for generations.

As defined earlier, being empowered is being able to determine how one will live. In the case of the Urak Lawoi, limited individual empowerment seems already to be taking place. For example, a few Urak Lawoi have successfully become free from the patron-client relationship and now work independently or are *taukay* themselves. Thus, individual Urak Lawoi may willingly choose dependency or the pursuit of self-interest in the market. However, these would be choices they make by and for themselves as individuals—a relatively weak form of empowerment. In the ideal situation, a stronger form of empowerment is needed—of the Urak Lawoi as a people or community freely able to determine its own course of development, uncoerced or indoctrinated by outside interests. Such empowerment alone is capable of helping redress social inequalities and community development, rather than simply contributing to the quality of life of personally empowered individuals.

#### *7.3.1.4 Environmentally Compatible and Culturally Appropriate Alternatives*

With the loss of access to resources, market economy, and rapid technological change, the Urak Lawoi's traditional ways of life have been altered. Hostility among the Urak Lawoi toward the park is primarily based on the frustrations of not being able to continue their livelihood activities due to park restrictions, in combination with the lack of clear

alternatives to those activities. Considering that they have had to give up some of their traditional ways of life and historical rights, yielding to the authority of the state in its effort to create a national heritage, more support should be forthcoming from the government. Viable livelihood alternatives should be offered to insure that the Urak Lawoi will be able to maintain themselves in the changing context of their environment, and even to benefit directly from its status as a protected area. Such support could include education and training, initial capital, and infrastructure. If the Urak Lawoi are offered environmentally compatible and culturally appropriate alternatives and are able to continue their lives in their home place, they would be happier to contribute to the protection of the resources, thus lowering the government's cost of doing so. Alternative cooking fuel, for example, would release the Urak Lawoi from illegal taking of woods for charcoal making.

Small-scale aquaculture and/or ecotourism would be examples of low-impact forms of development that are environmentally compatible and culturally appropriate. Given the marine knowledge and related skills possessed by the Urak Lawoi, and the fertility of the Adang Archipelago, small-scale aquaculture should be explored as an alternative. After all, it is increasingly recognized that development cannot be sustainable unless it works with, rather than against, local cultural traditions. During my observations of trap fishing, I noticed how fast *Pteria penguin*, a type of pearl oyster, naturally grew on the net of the traps. So far, there have been a few attempts from private people and a development program to raise pearl oysters on a relatively large scale. Early efforts succumbed to

storm-related disaster and, more recently, near shore trawling of large commercial fishing vessels has rendered the projects unsuccessful. At the same time, very small scale, short-term “semi-aquaculture” projects of the local people seem to thrive quite well. For example, In catches murex shell (*Chioreus ramosus*) juveniles and raises them to maturity. This specific example suggests the potential of pilot projects coordinating the efforts of parties who are able to provide the funding, know-how, monitoring, and ongoing management of the project. Fishery offices, the national marine park, the provincial government, and local people could work hand in hand in designing and realizing such a project.

Another environmentally compatible and culturally appropriate development option is ecotourism. In this study, ecotourism is defined as responsible travel to natural areas, which has minimum impact on the natural environment and local culture, and improves the well-being of the local people. Ecotourism can be complementary to fishery during the dry season, when the amount of sea harvesting is low, but the weather conditions are favorable for visiting, and can help to diversify the area’s economic base. Since the Adang Archipelago is both remote and rural, a sustainable ecotourism industry may benefit local economies and promote more equitable distribution of income. It also provides an incentive to ensure that surrounding biodiversity is used sustainably (McNeely and Dobias in Hvenegaard and Dearden 1998:701). A trekking tourism program at a village near Khao Yai National Park in Thailand, provides a successful example of such alternative. The program generates “much needed income for local

communities, improved park relations with villagers, and indirectly reduced poaching. Nevertheless, such programs require strict management, specific conservation objectives, training for nature guides, and strategic marketing for a suitable clientele” (Hvenegaard and Dearden 1998:704).

Participatory planning for park-based tourism may provide the best opportunity for integrating conservation and community development. Community participation as described by Murphy (1985 in Campbell 1999:535) is central to the ecotourism concept, particularly during planning in order to ensure that benefits reach residents in destination areas (Simmons 1994 in Campbell 1999:535). Acknowledgement and involvement of the Urak Lawoi in management and development is crucial for the success of an ecotourism project. They need to help preserve the natural resource for the tourist, and must see a benefit for themselves in doing so. To give them an opportunity to have good and well-paid job to improve their economic situation through tourism, career enhancement programs need to be initiated and supported. These include language and skill training for the hospitality industry, and information on cultures of the guests. The Urak Lawoi could offer to share their way of life with tourists who wish to experience their culture. Villagers could be encouraged to run taxi boats and those who are knowledgeable about the area’s natural history could be park naturalists and become qualified nature guides.

### 7.3.2 The Reality

In the field of development and natural resource management, it is not uncommon and frequently not considered problematic to use a prescriptive or normative approach in addressing a case. The ideal development strategies described above may seem most appropriate for the Adang Archipelago. However, in reality their realization seems difficult, if not impossible, because of the following obstacles.

*7.3.2.1 Low Impact Development Alternatives that Are Environmentally Benign and Culturally Appropriate Require Budget, Personnel, Work, and Infrastructure, All of Which Are Currently Non-Existent.*

Low impact development is hardly synonymous with low levels of management. In fact, it requires high quality management, effective stewardship, well-trained personnel, and adequate infrastructure. “If tourism is to contribute to sustainable development, then it must be economically viable, ecologically sensitive and culturally appropriate....If ecotourism is to contribute to sustainable development, then careful planning and management will be required” (Wall 1997:483). This involves the application of zoning once proposed in the park management plan in order to protect fragile areas from excessive use and to direct visitors to areas of exceptional interest. In the park budget, additional funds are needed to cover personnel, visitor facilities, and tourist management training for both the park personnel and the local people. Self-financing mechanisms for

the part of the park in the Adang Archipelago based on tourism revenues—for example, through entrance or concession fee collection—need to be established and the money needs to be channeled back into the park. In terms of infrastructure, the destination needs a garbage disposal system, more trails, more buoys, visitor centers at key entrance points, especially on Lipe Island, and more ranger-naturalists to interpret the park's land and marine ecology for visitors. Legislation related to the protected area may also need to be changed to reflect ecotourism requirements. The real—and not merely ideal—possibility of realizing either ecotourism or small-scale aquaculture, depends on: practically sustained flexibility being exhibited by local management; the institution of locally suitable park rules and regulations and their effective execution; the empowerment of the Urak Lawoi; knowledge of local culture and natural resource; the education of hosts and guests; and appropriate levels of support from the provincial and national governments.

*7.3.2.2 Political Structure and Conflicting Resource Interests Hinder the Effective Execution of the Park Concept, Collaborative Management and Empowerment of the Urak Lawoi.*

The legalistic and regulatory approach of a state property regime, i.e. the park, means little in the present situation wherein the park does not have the capacity to systematically enforce its concept. Uncontrolled development with multiple and competitive uses of resources despite the park status will continue and will result in degradation of the

resources and cultural heritage. At the same time, under the current structure of politics, co-management is extremely difficult to realize. As Waddock (1989 in Jamal and Getz 1994:196) proposes “three conditions must be present for organizations to participate in collaborative efforts: recognition of interdependence, perceptions that significant benefit will result from the collaboration, and recognition of importance of the issue(s)”. In the case of the Adang Archipelago, except between the Urak Lawoi and their *taukay*, and between the park or Urak Lawoi and the visitors, the recognition of interdependence among the stakeholders is weak or non-existing. Moreover, the resource use in the Adang Archipelago is not only competitive but also highly conflicting. The park does not believe that having Urak Lawoi reside in the park area is beneficial for conservation. The Urak Lawoi feel that their livelihood has been made difficult by the park status and blame large-scale commercial fishing on over-harvesting and invading their “territory”. The commercial fishers—with substantial direct and indirect political and economic force—are unwilling to comply with the park rules and regulations. And the eco-tourists are ready to go somewhere else if the development of the destination is higher.

The current political structure that underlines these conflicts is based on relationships of highly unequal power among the stakeholders with competitive interests. The most politically powerful groups, for example the commercial fishing operators, are often people with the most economic power or are backed up by them. They have the most influence on the reality of resource use and management. The conflicting interests do not allow for collaboration or opportunities for finding balance among different sectors, and,



as Gray (1985 in Jamal and Getz 1994:198) points out, mandate alone is not sufficient to generate conditions conducive to collaboration. For the commercial fishing operators, collaboration with the park would mean accepting restrictions on sea life harvesting, an idea already proven unwelcome. For the park, collaboration with the provincial government could mean allowing for larger-scale tourism development and bearing the negative environmental impacts of such development in the park area. For the State, collaboration with the Urak Lawoi could mean recognition of their historical rights to resources and reversing the status of some of the park's land back to Urak Lawoi management, a policy difficult to be accepted by the national government.

Collaboration could only be effective if the stakeholders recognize the potential advantages of working together. In this case, one of the most important goals of development should be the sustainability of the natural and cultural resources. However, low impact development options that are environmentally benign and culturally appropriate are not desired by powerful stakeholders such as commercial fishing operators or tourism developers. The goal of sustaining local resources for long-term use seems to be least interesting for the most powerful parties who operate under the enormous attraction of fast profit making and the need to cover high operating costs. Under the general rubric of sustainable development, the interests of each party seem individually open to being met through pushing forward an appropriate single-sector concept of development (*i.e.* park for conservation, commercial fishers for fishery development, Urak Lawoi for livelihood). But such concepts falsify the reality of the

situation in the archipelago as each fails to acknowledge the intersectoral competition for resources. Trade-offs between sectors begin to seem necessary in the interest of furthering the greater goods of the whole set of stakeholders and the aims of sustainable conservation practices. However, the most powerful groups have shown little commitment to the benefits of such greater goods and collaboration does not offer promising trade-offs that would be sufficient for the powerful to give up some of their power or present profits.

In reality, the current political structure does not afford much chance for the Urak Lawoi—at present the least influential stakeholders—to become empowered. Other stakeholders are not interested in the empowerment of the Urak Lawoi. Moreover, the passivity of the Urak Lawoi, who have had little control over local resources within recent memory, is itself a major obstacle to empowerment. The cultural gap that needs to be bridged for an indigenous community to advocate its own legal rights necessarily alters the “terrain” on both sides of the sought-after institutional bridge. In addition to the need to train indigenous advocates—typically through educational immersion in a non-local setting, a process with its own ironic costs—the scale variance between the local, indigenous community and the state inevitably leads to an institutionalization of power inequalities. Indigenous groups can use various “technologies” (legal, communicative, etc.) to consolidate their rights, but will never do so on a truly and permanently level playing field.

If the previously mentioned development alternatives are to benefit the Urak Lawoi, means must be found to facilitate local participation in the industry. At a minimum, this requires the provision of appropriate training and access to capital. These do not currently exist. The lack of the capital and training necessary for entry into the tourism industry reinforces the dependency already evident in the Urak Lawoi's situation—a situation in which they play the role of a subordinated class with the least real power and opportunity only to receive the smallest proportion of available development benefits.

#### *7.3.2.3 Global Forces Uncontrolled and Unsolved by Local Solutions*

The existing problems are linked to forces that cannot be controlled or solved by a local solution, i.e. by the local residents or the local park. Both fishery and tourism are Thailand's most important export industries, and both provincial and national governments have favored as a dominant model of economic development one that supports the maximum utilization of resources for these industries. As Clancy (1999:50) points out, "...but the reality is that much of third world tourism today is not small-scale, ecologically oriented, or even broadly participatory." In addition, one cannot deny the increasing forces of the *global market economy and world-wide mainstream* modernization. The more the Adang Archipelago is integrated into the rest of the world, the more complex the problems of its resource degradation and cultural disintegration become, and the less local development can be controlled by local people. The

interconnection between local development problems and global forces is summarized by Clancy (1999:3) as follows:

. . . development was not a linear process but instead more holistic, where wealth and poverty were intimately linked on a global scale. In its more vulgar form, underdevelopment in the South and development in the North were argued to constitute “two sides of the same coin” (dos Santo 1970; Frank 1967, 1969 in Clancy 1999:3). Development in the metropole, in other words, came at the expense of the periphery. As such, greater economic integration would only lead to greater poverty and misery.

#### **7.4. Lessons Learned**

Realistically, the problems with the realization of the ideal development strategies make the development of the Adang Archipelago without further degradation of its natural resources and disintegration of its local culture a very distant hope. Considering that the situation in the Adang Archipelago is an example of the changing relationships of people and natural resources induced by economic development and outside influences, I would like to end this dissertation by presenting lessons learned about sustaining natural resources and local culture and development that can be applied to other similar cases.

First, a top-down, centralized decision and policy such as national park establishment does not guarantee conservation of natural resources. Realization of a park concept cannot happen without normative consensus among those who are affected by its status. Community outreach programs are needed to promote people’s awareness of their potential roles in conservation.

Second, in a competitive resource use situation where stakeholders have highly unequal power, those with the least power are the losers. The scenario is worse when they do not have an institution to represent them or support their negotiation power. These people practice everyday forms of resistance or ally themselves with a more powerful party in order to survive and increase their access to resources. In the short-term, to give them an opportunity to voice their own concerns and negotiate with the others on a more equal footing, mediation—and, in particular, a facilitator with legitimate power—is needed for the purpose of meeting with other stakeholders to arrive at a consensus. In long-term, for both their empowerment and capacity building for collective actions, institutional and legislation support are crucial. Such may only become possible with intervention of government or non-governmental agencies or international support.

Third, problems of environmental degradation and cultural disintegration of a specific area are interconnected with forces beyond the local situation. The case of the Adang Archipelago has demonstrated how power, politics, and socio-economic factors influence the distribution and use of resources. In addition, it has made evident how these factors structure and transform perceived and actual space, as well as the society of those affected. Impacts of local solutions are limited and support from higher/broader levels is necessary. Such support may include, for example, provincial, national, or regional policies of natural resource conservation, their comprehensive plans on economic development and sustainable resource use, national and international recognition of ethnic minority groups, their culture and traditional resource rights.

Fourth, execution of a conservation project needs to be early and proactive to allow for effective outcomes. Ideally, it should even begin before any sign of degradation becomes visible. The case of the Adang Archipelago shows that despite an early establishment of a national marine park in the area, the implementation of the park concept did not happen in a timely manner, and the resultant lags in fully consolidating the park's identity allowed degradation to happen despite its (fledgling) status. Reactive and remedial measures may not be able to prevent further resource degradation or reverse damages already incurred.

Fifth, knowledge of the local culture and natural resources are a necessary basis for their sustainability. However, in a peripheral area, like the Adang Archipelago, the knowledge either has only been stored among the local people or does not exist. In relation to an ethnic minority group, knowledge and insights into their culture need to be broadly disseminated, especially among the decision makers so that they can properly design development policies and plans that take the integrity of the local cultural heritage into consideration. My field experiences point out that to study an ethnic minority group, an ethnographic study that allows for "deeper" insights would be more appropriate than other research methods that require less involvement or interaction of the researcher with the people. The other methods, such as interview and surveys may yield faster results, but the findings of such "question-answer" research efforts may not afford a full enough picture of local realities to be useful.

In terms of natural resources, baseline data, monitoring, and information systems become essential and need to be developed if there is to be any hope of achieving a sustainable development project where a key aim is to ensure reasonable livelihoods for resource users without surpassing ecological limits. Both scientists and resource users can contribute to establishing baseline data and monitoring systems of the resources. Relevant scientific studies perfectly complement, and are complemented by, the knowledge developed by and passed on through generations of local people who rely on the surrounding resources.

Such data illustrate the dynamic interactions of the people, their environment, and its resources. They help to identify the levels of resource degradation, their possible causes and recovering measures. They provide useful information for decision makers formulating development policies and help to prioritize action and design effective resource management plans for sustainable use and conservation. They also provide guidelines for longitudinal evaluations and for the planning of future improvements by policymakers and managers. The case of the Adang Archipelago has clearly demonstrated that without the knowledge of a culture, the traditions and way of life are easily undervalued and underappreciated.

Local knowledge is invaluable and should be recorded before it is lost with the rapidly changing way of life among minority groups. This seems now to be more urgent and important than ever. The disintegration of a culture could mean the loss of the stock of

knowledge on which they have traditionally drawn. As Redclift and Sage (1994:2) state, culture not only represents the prism through which we view nature, it also represents an essential part of our natural capital stock. For example, the harvesting of non-fish species by the Urak Lawoi is now largely reduced due to their local scarcity, the prohibition of the park, and the difficulty in selling them to a local *taukay*. However, the Urak Lawoi who used to harvest these resources still possess profound knowledge about them. At one point in my field study, I came across a group of Urak Lawoi fishers who were able to not only correctly identify mollusk species I found in an identification guidebook of mollusks in the Andaman Sea, but also added ones not found in the book. Their involvement in building a local knowledge base—often through direct contribution—and in ongoing monitoring processes may increase their participation and ability to contribute to management planning and management activities as well.

Sixth, consciousness and education of sustainable natural resource use and conservation are the long-term basis for sustainable development. Different examples in the Adang Archipelago illustrate how the lack of such awareness and education are related to harmful patterns of resource use. These include the lack of awareness of resource depletion due to over-harvesting, misperception of the advantages of mass tourism, the lack of understanding about the changed environment and situation where resource competition is fiercely increasing, and the missing consciousness of the importance of leading one's own community by oneself. In a protected area where "conservation ethics" as such are not fully developed and the local people do not understand the park's mission,



the park service needs to engage in a more aggressive program, combining community education with consciousness building.

### **7.5. Final Remarks**

I would like to conclude that sustainability of the marine and coastal resources and the integrity of the cultural heritage in Adang Archipelago can only be achieved if both the local people and those outsiders with power see the importance of doing so. I also would like to emphasize that even though the Urak Lawoi's empowerment and their participation in conservation efforts are crucial, they will not, by themselves, solve the problem of resource exploitation and cultural disintegration in Adang archipelago. A realistic development strategy would neither blindly encourage community-based resource management without considering the readiness of the community nor stubbornly push for intervention by outside development experts without considering the sustainability of the development projects themselves. In the face of powerful economic interests and globalization, the chance of realizing development that takes sustainable patterns of resource use and social development into consideration can only be achieved if all parties, and especially those who have political and economic power, understand and are willing to support such development. Unless that happens, the Adang Archipelago will most probably turn into another case of a badly degraded place that once possessed a healthy ecosystem and distinctive society.

I am aware that as an outside researcher, my presentation of the case study and my discussions of the ideals and realities of future development are inevitably affected by my worldview and value judgements. In addition, compared to the local people, I am in an easy position as I can present data, draw conclusions, and make suggestions without being directly involved in the situation or affected by their results. However, it is still my hope that this dissertation will help readers, especially decision-makers, better understand the situation in the Adang Archipelago and provide useful perspectives for envisioning a future that will allow for the continuity of its natural and cultural assets. I do not have an intention to speak for the Urak Lawoi, but only to help disclose their struggles. I sincerely hope that the Urak Lawoi themselves will one day be able to voice their own positions within “development discourse” and that this research will have contributed to laying the foundation for their realization of a changed and changing way of life that is nevertheless fully and truly their own.

APPENDIX 1  
CORAL TYPES IN THE ADANG ARCHIPELAGO

Island	Area of Reefs/ Deepest Point	Types of Coral	Cause of Degradation
<b>Adang</b>	2.29 km <sup>2</sup>		
West	4-7 m	<i>Porites lutea, Porites nigrescens, Porites Synaraea rus, Lobophyllia sp., Fungia spp., Acropora florida, Diploastrea heliopora, Goniopora sp.</i>	
South	4-7m	Same as above	
Southeast	3-5m	<i>Acropora spp.</i> (much lilamentous blue-green algae)	star-of-thorn seastars infestation in 1986
East till Northeast	5-8m	<i>Porites lutea, Lobophyllia sp., Fungia spp., Diploastrea heliopora</i>	blast fishing
<b>Rawi</b>	2.76 km <sup>2</sup>		
East	6 m	<i>Porites lutea, Lobophyllia sp., Fungia spp., Acropora florida, Acropora formosa, Acropora sp. tabulate form, D Millipora spp., Millepora spp., Merulina ampliata, Hydnohpora rigida, Pocillopora verrucosa</i>	
South		<i>Porites lutea, Porites Synaraea rus, Porites nigrescens, Acropora humilis</i>	storm damage in 1986
North		<i>Porites lutea, Acropora humilis, Acropora formosa, Fugia spp., Heliopora coerulea</i>	
<b>Lipe</b>	1.45 km <sup>2</sup>		
Southeast		<i>Porites lutea, Porites Synaraea rus</i>	
Northeast		<i>Porites nigrescens, Pocillopora verrucosa, Acropora Formosa</i>	
North	1m	<i>Porites lutea, Acropora florida, Montipora angulata</i>	

Northwest	3-6m	<i>Porites lutea, Porites Synaraea rus, Porites nigrescens, Fungia spp., Echinopora lamellose</i>	
South	6m	<i>Porites lutea</i>	
Most Southern Tip	4m	<i>Porites lutea, Porites nigrescens, Porites Synaraea rus</i>	
<b>Hin Ngam</b>	0.15km <sup>2</sup>	<i>Porites lutea, Porites nigrescens, Porites Synaraea rus, Fungia spp., Millepora sp.</i>	
<b>Butong (Tong)</b>	1.67km <sup>2</sup>		
Northeast to Northwest	4-7m	<i>Porites lutea, Porites nigrescens, Porites Synaraea rus, Heliopora coerulea, Acropora formosa, Acropora florida</i>	
Southwest	14m	<i>Porites lutea, Diploastrea, heliopora, Lobophyllia sp.</i>	
<b>Kata (Yang)</b>	0.21 km <sup>2</sup>	<i>Porites lutea, Porites nigrescens, Acropora formosa, Acropora florida, Acropora subulata, Acropora hyacinthus, Fungia spp., Sinularia sp., Nephthea sp.</i>	
<b>Bissi</b>	0.30km <sup>2</sup> 6-10m	<i>Porites lutea, Porites nigrescens, Heliopora coerulea, Fungia spp., Diploastrea heliopora, Echinopora lamellose</i>	
<b>Talang</b>	0.05 km <sup>2</sup> 5-7m	<i>Porites lutea, Heliopora coerulea, Xenia sp., Millepora sp., Diploastrea heliopora</i>	

[Source: Phuket Marine Biological Center (in Printing), 1994 Survey

APPENDIX 2  
CORAL REEF MONITORING IN THE ADANG ARCHIPELAGO 1987-1997

Year (Data Source)	1987 (Geater et al.1987)	1989 (Phongsuwan et al. 1991:63-68)  Condition (% of live coral coverage)	1992 (Office of Academic Services 1992 : 2-16)	1994 (Phuket Marine Biological Center: in printing)  Condition (% of live coral coverage)	1997 (Ochieng et al.1997)
Adang North		fair (25-50%)	somewhat destroyed with revival potential		- 39% live and 37% dead coral covers - low number of fish traps - coral damage by blast fishing - no detectable change in percent cover of live and dead corals compared to study in 1987
Adang Northeast		very degraded (5-20%)		degraded to good (20-70% )	- 52% of live coral cover - high incidence of smashed and blashed corals - compared to 1987, live coral cover slightly reduced and same percentage of dead coral
Adang East	Highest dead coral cover	fair (40-45%)	somewhat destroyed with revival potential	degraded to good (20-70% )	- highest (50%) dead coral cover - higher number of fish traps when compare to other parts of island - blasted and newly smashed and overturned coral colonies - high number of sea urchins - unchanged ratio of live to dead coral compared to 1987
Adang Southeast		degraded (10-35%)	somewhat destroyed with revival potential	degraded (1-15%)	

Adang South	Entirely broken (southeast)  dead coral 21.63% (southwest)	very degraded (<5%)	totally destroyed	fair to good (30-55%)	- recolonization by young <i>Acropora</i> and Fungid corals down to 5% - seven fish traps - two incidences of blast fishing - signs of recovery; reduced dead coral cover but insignificant live coral cover reduction
Adang Southwest		very degraded (15-25%)	fair		
Adang West		good (65-75%)	somewhat destroyed with revival potential	fair to very good (25-75%)	- highest percentage of live hard coral cover 67% - only one incidence of blast damage
Adang Northwest		degraded to fair (30-60%)			
Lipe Island					- large number of damaged, overturned coral heads - large number of functional and abandoned fish traps and nets - high number of sea urchins
Lipe North		very degraded (10-20%)		(5-30%)	
Lipe Northeast			totally destroyed	very good (25-85%)	

Lipe East		fair to good (45-70%)			
Lipe Southeast		degraded (5-35%)		degraded (20%)	
Lipe South		degraded (0-20%)	fair	degraded (5-25%)	
Lipe Most Southern Tips				good (45-55%)	
Lipe Northwest		very degraded to good (5-65%)	fair	fair to very good (35-60%)	
Rawi North		degraded (5-30%)	somewhat destroyed with revival potential	degraded to fair (5-25%)	
Rawi Northeast		fair (45-50%)			
Rawi East		good (65-70%)	somewhat destroyed with revival potential	mostly very good (35-80%)	
Rawi Southeast			fair		
Rawi South		very degraded (5-20%)	totally destroyed	degraded to fair (5-40%)	
Rawi West		very degraded (5-30%)			
Butong Northeast to Northwest		fair (40-60% and 15-20% on patch reef)		very good (10-80%)	
Butong Southeast		fair (35-60%)			
Butong South		degraded (5-15%)			

Butong Southwest		very degraded (10-25%)		degraded to good (20-45%)	
Butong West		very degraded (<5%)			
Kata (Yang)		degraded to fair (5-35%)	fair	very good (30-80%)	
Hin-Ngam North			fair	fair to very good (20-65%)	
Hin-Ngam Southeast		degraded (15-20%)			
Hin-Ngam West		35%			
Hin-Ngam Northwest		good (60%)			
Jabang			intact		
Bissie		fair in general		degrade to fair to good	
Talang Island				degraded	- 25% live coral cover - 14% dead coral cover - high fishing activities but no blast damage



APPENDIX 3  
QUESTIONNAIRE  
SOCIO-DEMOGRAPHIC DATA OF HOUSEHOLDS  
IN THE ADANG ARCHIPELAGO

1. What is the number of household members?
2. Is the household leader male or female?
3. What are the ages of the members in the household? (for children: in school or pre-school)
4. What is the educational level of the household leader?
5. What is the main material of the house?
6. Does the house have a toilet?
7. What is the occupation of the household leader?  
If it is fishing, ask 7.1-7.4; otherwise continue with question 8
  - 7.1 Does he/she works with a *taukay* or for oneself?
  - 7.2 If he/she works with a *taukay*, which *taukay*?
  - 7.3 What fishing methods are currently used (including shell collecting etc.)?
  - 7.4 Where does he/she go fishing?
8. What is the household leader's past occupation?  
If it is fishing, what methods were used ( including shell collecting, etc.) and where did he/she go?
9. Did and does anybody in the household work in tourism?  
If yes, what kind of job?
10. Does anybody in the household work outside Adang Archipelago?  
If yes, what do they do?
11. Did anybody used to work outside Lipe?  
If yes, what did they do? Why did they come back?
12. What is the (estimated) household income per month or year?
13. Does anybody in the household own land?  
If yes, where? How many rai?
14. Does anybody in the household own a boat?

If yes, what kind of boat? How did he/she get it?

15. What is the first thing the household leader would want to get if he/she has money?
16. What does the household leader want his/her children to be?
17. If the person who answers the above questions is not the household leader, what is the *name of the person* and what is his/her role in the house?

**APPENDIX 4**  
**FREQUENCY TABLES OF SOCIO-DEMOGRAPHIC DATA**  
**OF HOUSEHOLDS IN THE ADANG ARCHIPELAGO**

**Number of household members**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	5	3.1	3.1	3.1
	2	20	12.6	12.6	15.7
	3	36	22.6	22.6	38.4
	4	31	19.5	19.5	57.9
	5	37	23.3	23.3	81.1
	6	17	10.7	10.7	91.8
	7	6	3.8	3.8	95.6
	8	4	2.5	2.5	98.1
	9	3	1.9	1.9	100.0
	Total	159	100.0	100.0	
Valid cases	159	Missing cases	0		

**Sex of household leader**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
male	1	144	90.6	90.6	90.6
female	2	15	9.4	9.4	100.0
	Total	159	100.0	100.0	
Valid cases	159	Missing cases	0		

**Age groups of male household leader**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
10's	1	3	1.9	2.1	2.1
20's	2	50	31.4	34.7	36.8
30's	3	41	25.8	28.5	65.3
40's	4	23	14.5	16.0	81.3
50's	5	16	10.1	11.1	92.4
60's	6	8	5.0	5.6	97.9
70's	7	3	1.9	2.1	100.0
	88	15	9.4	Missing	
	Total	159	100.0	100.0	
Valid cases	144	Missing cases	15		

**Age groups of female household leader**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
10's	1	8	5.0	5.1	5.1
20's	2	55	34.6	34.8	39.9
30's	3	41	25.8	25.9	65.8
40's	4	36	22.6	22.8	88.6
50's	5	9	5.7	5.7	94.3
60's	6	5	3.1	3.2	97.5
70's	7	4	2.5	2.5	100.0
	999	1	.6	Missing	
	Total	159	100.0	100.0	

Valid cases 158 Missing cases 1

**Years of education of male household leader**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	60	37.7	42.0	42.0
	1	2	1.3	1.4	43.4
	2	2	1.3	1.4	44.8
	3	1	.6	.7	45.5
	4	61	38.4	42.7	88.1
	5	1	.6	.7	88.8
	6	13	8.2	9.1	97.9
	10	1	.6	.7	98.6
	12	1	.6	.7	99.3
	14	1	.6	.7	100.0
	66	1	.6	Missing	
	88	13	8.2	Missing	
	99	2	1.3	Missing	
	Total	159	100.0	100.0	

Valid cases 143 Missing cases 16

**Years of education of female household leader**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.6	.9	.9
	2	4	2.5	3.8	4.7
	3	4	2.5	3.8	8.5
	4	71	44.7	67.0	75.5
	5	1	.6	.9	76.4
	6	22	13.8	20.8	97.2
	12	1	.6	.9	98.1
	14	1	.6	.9	99.1
	66	1	.6	.9	100.0
	0	53	33.3	Missing	
	Total	159	100.0	100.0	

Valid cases 106 Missing cases 53

**Number of males in a household**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	9	5.7	5.7	5.7
	1	48	30.2	30.2	35.8
	2	47	29.6	29.6	65.4
	3	38	23.9	23.9	89.3
	4	14	8.8	8.8	98.1
	5	3	1.9	1.9	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Number of females in a household**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	52	32.7	32.7	32.7
	2	59	37.1	37.1	69.8
	3	29	18.2	18.2	88.1
	4	14	8.8	8.8	96.9
	5	5	3.1	3.1	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Number of preschoolers in a household**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	90	56.6	56.6	56.6
	1	66	41.5	41.5	98.1
	2	3	1.9	1.9	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Number of school children in a household**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	58	36.5	36.5	36.5
	1	56	35.2	35.2	71.7
	2	41	25.8	25.8	97.5
	3	4	2.5	2.5	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Number of people aged after school to 25 years old in a household**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	52	32.7	32.7	32.7
	1	57	35.8	35.8	68.6
	2	39	24.5	24.5	93.1
	3	7	4.4	4.4	97.5
	4	4	2.5	2.5	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Number of people aged 26 to 40 years old in a household**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	56	35.2	35.2	35.2
	1	46	28.9	28.9	64.2
	2	52	32.7	32.7	96.9
	3	5	3.1	3.1	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Number of people aged 41 to 60 years old in a household**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	108	67.9	67.9	67.9
	1	23	14.5	14.5	82.4
	2	27	17.0	17.0	99.4
	3	1	.6	.6	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Number of people over 60 years old in a household**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	136	85.5	85.5	85.5
	1	18	11.3	11.3	96.9
	2	5	3.1	3.1	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Category of yearly income in baht (40 baht = 1 dollar)**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
0	0	4	2.5	2.9	2.9
less than 10,000	1	39	24.5	28.1	30.9
10,000-15,000	2	55	34.6	39.6	70.5
15,000-24,000	3	14	8.8	10.1	80.6
24,000-36,000	4	8	5.0	5.8	86.3
36,000-48,000	5	6	3.8	4.3	90.6
>48,000	6	13	8.2	9.4	100.0
	88	20	12.6	Missing	
	Total	159	100.0	100.0	

Valid cases 139 Missing cases 20

**Parent's desired job for their children**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Up to the child fishery	1	91	57.2	57.2	57.2
tourism	2	35	22.0	22.0	79.2
teacher	3	1	.6	.6	79.9
government	4	4	2.5	2.5	82.4
others	5	2	1.3	1.3	83.6
don't know	6	3	1.9	1.9	85.5
	7	23	14.5	14.5	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Dominant material of house**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
jark leaves	1	22	13.8	13.9	13.9
bamboo	2	36	22.6	22.8	36.7
wood	3	7	4.4	4.4	41.1
metal	4	85	53.5	53.8	94.9
tilt	5	2	1.3	1.3	96.2
cement	6	1	.6	.6	96.8
coco leave	8	4	2.5	2.5	99.4
plastic	9	1	.6	.6	100.0
	99	1	.6	Missing	
	Total	159	100.0	100.0	

Valid cases 158 Missing cases 1

**Having a toilet in the house**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
no	0	88	55.3	55.7	55.7
yes	1	70	44.0	44.3	100.0
	00	1	.6	Missing	
	Total	159	100.0	100.0	
Valid cases	158	Missing cases	1		

**Desired support from government**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
electricity	1	67	42.1	65.7	65.7
pipe water	2	1	.6	1.0	66.7
school	3	3	1.9	2.9	69.6
majority	4	14	8.8	13.7	83.3
don't know	5	17	10.7	16.7	100.0
	00	57	35.8	Missing	
	Total	159	100.0	100.0	
Valid cases	102	Missing cases	57		

**Job of household leader**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
fishing	1	122	76.7	76.7	76.7
no job	10	5	3.1	3.1	79.9
general	2	7	4.4	4.4	84.3
construction	3	3	1.9	1.9	86.2
tourism	4	6	3.8	3.8	89.9
business	5	7	4.4	4.4	94.3
fish + tour	6	5	3.1	3.1	97.5
others	7	1	.6	.6	98.1
boat & others	8	2	1.3	1.3	99.4
fish+construction	9	1	.6	.6	100.0
	Total	159	100.0	100.0	
Valid cases	159	Missing cases	0		

**Present fishing method**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Hook&line+trap	1	65	40.9	49.6	49.6
others	10	5	3.1	3.8	53.4
h&l	2	21	13.2	16.0	69.5
trap	3	14	8.8	10.7	80.2
net	4	5	3.1	3.8	84.0
shell collecting+another	5	9	5.7	6.9	90.8
cucumber collect.+another	6	2	1.3	1.5	92.4



net+another	7	4	2.5	3.1	95.4
>2 combinations	8	6	3.8	4.6	100.0
	88	28	17.6	Missing	
		-----	-----	-----	
	Total	159	100.0	100.0	

Valid cases 131 Missing cases 28

**Taukay working with**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Nguan	1	65	40.9	50.4	50.4
Sum	2	26	16.4	20.2	70.5
Pol	3	9	5.7	7.0	77.5
Porn	4	10	6.3	7.8	85.3
self	5	8	5.0	6.2	91.5
others	6	11	6.9	8.5	100.0
	88	30	18.9	Missing	
		-----	-----	-----	
	Total	159	100.0	100.0	

Valid cases 129 Missing cases 30

**Family member used to work outside**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
no	0	123	77.4	77.4	77.4
yes	1	36	22.6	22.6	100.0
		-----	-----	-----	
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Family members currently working outside**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
no	0	129	81.1	81.1	81.1
yes	1	30	18.9	18.9	100.0
		-----	-----	-----	
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0

**Current outside job of family member**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
fishery	1	18	11.3	60.0	60.0
tourism	2	2	1.3	6.7	66.7
household worker	3	6	3.8	20.0	86.7
business	4	3	1.9	10.0	96.7
others	5	1	.6	3.3	100.0
	88	129	81.1	Missing	
		-----	-----	-----	

		Total	159	100.0	100.0
Valid cases	30	Missing cases	129		

**Owning a boat**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
no	0	116	73.0	73.0	73.0
yes	1	43	27.0	27.0	100.0
	Total	159	100.0	100.0	

Valid cases	159	Missing cases	0
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**Method of Acquiring the Boat**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
bought	1	35	22.0	81.4	81.4
given	2	5	3.1	11.6	93.0
built	3	3	1.9	7.0	100.0
	88	116	73.0	Missing	
	Total	159	100.0	100.0	

Valid cases	43	Missing cases	116
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**Owning land**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
no	0	135	84.9	84.9	84.9
yes	1	22	13.8	13.8	98.7
maybe	2	2	1.3	1.3	100.0
	Total	159	100.0	100.0	

Valid cases	159	Missing cases	0
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**Job in the Past**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
fishing	1	128	80.5	80.5	80.5
no job	10	1	.6	.6	81.1
general	2	6	3.8	3.8	84.9
construction	3	3	1.9	1.9	86.8
tourism	4	4	2.5	2.5	89.3
business	5	5	3.1	3.1	92.5
fish+tour	6	3	1.9	1.9	94.3
others	7	4	2.5	2.5	96.9
fish+construction	8	3	1.9	1.9	98.7
boat&others	9	2	1.3	1.3	100.0
	Total	159	100.0	100.0	

Valid cases	159	Missing cases	0
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**Fishing method in the past**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
uan loom	1	33	20.8	26.0	26.0
others	10	10	6.3	7.9	33.9
lobster+shell	11	2	1.3	1.6	35.4
fish+shell+lobster	12	3	1.9	2.4	37.8
hook&line	2	22	13.8	17.3	55.1
shell	3	3	1.9	2.4	57.5
cucumber	4	5	3.1	3.9	61.4
trap	5	5	3.1	3.9	65.4
cucumber+shell+fish	6	5	3.1	3.9	69.3
hook&line+trap	7	29	18.2	22.8	92.1
net fishing	8	6	3.8	4.7	96.9
shell+trap	9	4	2.5	3.1	100.0
	00	6	3.8	Missing	
	88	26	16.4	Missing	
	Total	159	100.0	100.0	

Valid cases 127 Missing cases 32  
-----

**Family member used to work in tourism**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
no	0	112	70.4	70.4	70.4
yes	1	47	29.6	29.6	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0  
-----

**Family member currently working in tourism**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
no	0	119	74.8	74.8	74.8
yes	1	40	25.2	25.2	100.0
	Total	159	100.0	100.0	

Valid cases 159 Missing cases 0  
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**Type of job in tourism**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
resort	1	27	17.0	67.5	67.5
boat	2	13	8.2	32.5	100.0
	88	119	74.8	Missing	
	Total	159	100.0	100.0	

Valid cases 40 Missing cases 119

-----  
**Family member working in tourism**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
mhl	1	11	6.9	27.5	27.5
fhl	2	5	3.1	12.5	40.0
relative	3	1	.6	2.5	42.5
daughter	4	15	9.4	37.5	80.0
>lperson	5	8	5.0	20.0	100.0
	88	119	74.8	Missing	
	Total	159	100.0	100.0	

Valid cases 40 Missing cases 119  
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**Name of resort where family member works**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Lee Pae	1	8	5.0	25.8	25.8
Chao Lay	2	10	6.3	32.3	58.1
Andaman	3	4	2.5	12.9	71.0
Pattaya2	4	6	3.8	19.4	90.3
outside Lipe	5	3	1.9	9.7	100.0
	88	128	80.5	Missing	
	Total	159	100.0	100.0	

Valid cases 31 Missing cases 128  
-----

**Wish if money is available**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
new house	1	43	27.0	27.9	27.9
land&education	10	1	.6	.6	28.6
don't know	11	4	2.5	2.6	31.2
repair house	12	1	.6	.6	31.8
saving	2	54	34.0	35.1	66.9
spending	3	15	9.4	9.7	76.6
boat motor	4	3	1.9	1.9	78.6
boat	5	4	2.5	2.6	81.2
things for house	6	12	7.5	7.8	89.0
shop	7	6	3.8	3.9	92.9
house & other	8	10	6.3	6.5	99.4
others	9	1	.6	.6	100.0
	00	5	3.1	Missing	
	Total	159	100.0	100.0	

Valid cases 154 Missing cases 5  
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**Role in the household of interviewee**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
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mhl	1	53	33.3	33.3	33.3
fhl	2	97	61.0	61.0	94.3
child	3	5	3.1	3.1	97.5
neighbor	4	2	1.3	1.3	98.7
relative	5	2	1.3	1.3	100.0

Total	159	100.0	100.0
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Valid cases	159	Missing cases	0
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**Sex of interviewee**

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
male	1	56	35.2	35.2	35.2
female	2	103	64.8	64.8	100.0

Total	159	100.0	100.0
Valid cases	159	Missing cases	0

**APPENDIX 5**

**ENGLISH QUESTIONNAIRE FOR VISITORS OF LIPE ISLAND**

### Questionnaire for Visitors of Lipe Island

*Your answers will be useful for research on the relationship of the visitors with the coastal resources and the people of Lipe Island. This research is a part of data collection for my Ph.D. dissertation in resource management and developmental studies at the University of Hawai'i. Thank you very much for your cooperation.*

1. What are important criteria when you select an island destination?

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2. Is this your first visit to Lipe Island? \_\_\_\_\_ Yes (please go to question 7)  
\_\_\_\_\_ No (please answer the rest)

**If no,** 3. How many times have you visited Lipe? \_\_\_\_\_

4. When did you first visited Lipe? \_\_\_\_\_

Since your first visit, what changes have you observed, which are most significant to your vacation:

5. positive changes: \_\_\_\_\_

6. negative changes: \_\_\_\_\_

7. Where do you stay on Lipe? \_\_\_\_\_

8. How many days do you plan to stay on Lipe? \_\_\_\_\_

9. What is your average daily spending on Lipe (including bungalow, foods, boat trips, etc.) \_\_\_\_\_ baht/day

10. What are your main activities during your present stay?

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11. What impresses you the most about the natural environment of Lipe and its surroundings?

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12. Aside from the people working at the resort where you are staying and in the restaurants, do you have contact with other Lipe islanders? \_\_\_\_\_ Yes \_\_\_\_\_ No

13. How do you have contact? \_\_\_\_\_

14. What impresses you the most about the villagers of Lipe?

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15. When did you learn that the people of Lipe have their own culture and language which are different from the Thais? \_\_\_\_\_ Before arrival \_\_\_\_\_ After arrival \_\_\_\_\_ Now

16. From which source? \_\_\_\_\_

17. Do you know that Lipe is a part of a national marine park? \_\_\_\_\_ Yes \_\_\_\_\_ No

18. **If Yes**, does the status of a national marine park influence your interaction with the natural environment of Lipe and how? \_\_\_\_\_

19. Would you be willing to pay a fee to help support nature conservation around Lipe?

\_\_\_\_\_ Yes \_\_\_\_\_ No

20. In your opinion, what would be a fair amount? \_\_\_\_\_ baht

21. What kind of change on and around Lipe Island would make you stop visiting?

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22. What activities you have seen around Lipe are degrading (harmful to) the environment?

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23. What could stop such activities?

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Please circle the answer that most reflects your opinion on each of the following aspects:

	very good	good	average	poor	very poor
24. diversity of marine life around Lipe	5	4	3	2	1
25. quality of sea water around Lipe	5	4	3	2	1
26. quality of beaches of Lipe	5	4	3	2	1
27. condition of terrestrial (on land) environment on Lipe	5	4	3	2	1
28. condition of marine environment around Lipe	5	4	3	2	1
29. cleanliness on and around Lipe island	5	4	3	2	1
30. environmental compatibility of your bungalow	5	4	3	2	1
31. quality of your bungalow	5	4	3	2	1
32. quality of life of Lipe islanders	5	4	3	2	1
33. communication/understanding with Lipe islanders	5	4	3	2	1
34. availability of information on Lipe and its surroundings	5	4	3	2	1
35. convenience of traveling from mainland to Lipe	5	4	3	2	1
36. convenience of traveling around Lipe	5	4	3	2	1

Would you say you agree strongly, slightly agree, are neutral, slightly disagree, or disagree strongly with each following statement?

	strongly agree	slightly agree	neutral	slightly disagree	strongly disagree
37. Lipe islanders should <u>not</u> live near a resort	5	4	3	2	1
38. I am satisfied with my visit of Lipe	5	4	3	2	1
39. I will most likely visit Lipe again in the future	5	4	3	2	1
40. Tourism degrades the nature around Lipe	5	4	3	2	1
41. I consider myself an eco-tourist*	5	4	3	2	1
42. Lipe has a potential for an ecotourism* destination	5	4	3	2	1
43. Lipe islanders seem to care about their environment	5	4	3	2	1
44. The Lipe islanders are an important reason for my return visit	5	4	3	2	1
45. There are too many tourists on Lipe	5	4	3	2	1

46. When you compare Lipe with other small tropical islands you have visited, does it have any uniqueness?

\_\_\_\_ Yes      \_\_\_\_ No

47. If yes, what is unique on Lipe? \_\_\_\_\_

*Information about yourself*

48. What country are you a citizen of? \_\_\_\_\_

49. How old are you? \_\_\_\_\_ 50. Are you \_\_\_\_\_ male or \_\_\_\_\_ female?

51. What is your educational level? \_\_\_\_\_

52. What is your profession? \_\_\_\_\_

53. What is your monthly net income in US \$? \_\_\_\_\_

54. Have you traveled to Thailand before? \_\_\_\_ Yes \_\_\_\_ No

If yes, 55. How many times? \_\_\_\_\_

56. Which other islands in Thailand have you visited? \_\_\_\_\_

57. Please name countries you have traveled to in the last 10 years: \_\_\_\_\_



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\* Here 'ecotourism' is defined as responsible travel to natural areas, which has minimum impact on the natural environment and local culture, and improves the well-being of the local people.

*Thank you very much for answering the questionnaire. Have a pleasant stay and a safe trip.*

APPENDIX 6  
SAMPLE OF CATCH OF A *TAUKAY*

Date of Fishing Trip	Catch Method	Caught Species	Catch Amount in kg	Price/kg	
Sep 27, 1997	h&l	<i>Scomberomorus guttatus</i>	5	30	
		<i>Euthynnus affinis</i>	3	10	
Sep 28, 1997	h&l	<i>Scomberomorus semifasciatus</i>	16.5	30	
	h&l	<i>Scomberomorus semifasciatus</i>	11.5	30	
	h&l	<i>Scomberomorus semifasciatus</i>	9.5	30	
	h&l	<i>Scomberomorus semifasciatus</i>	8	30	
	22 traps (15 with fish)	<i>Caesio cuning (big)</i>	10	30	
		<i>Caesio cuning (small)</i>	23.5	18	
		<i>Cephal. miniatus</i>	17	35	
		<i>Sigarus janus</i>	5	5	
		<i>Lethrinus</i>	7	13	
		Baby Fish	7	3	
Sep 29, 1997	h&l	<i>Scomberomorus semifasciatus</i>	12.4	30	
	h&l	<i>Scomberomorus semifasciatus</i>	17	30	
	h&l	<i>Scomberomorus semifasciatus</i>	3,7	30	
	18 traps (17 with fish)	<i>Caesio cuning (big)</i>	39	30	
		<i>Caesio cuning (small)</i>	27	18	
		<i>Epinephelus tukula</i>	14 (1 fish)	20	
		<i>Lethrinus</i>	12	3	
		Baby Fish	8	13	
	Sep 30, 1997	h&l	<i>Scomberomorus semifasciatus</i>	12	30
		h&l	<i>Scomberomorus semifasciatus</i>	10.5	30
h&l		<i>Scomberomorus semifasciatus</i>	10	30	
Oct 2, 1997	h&l	<i>Scomberomorus semifasciatus</i>	8	30	
	h&l	<i>Scomberomorus semifasciatus</i>	3	30	
	h&l	<i>Scomberomorus semifasciatus</i>	4.4	30	
Oct 9, 1997	21 traps (all with fish)	<i>Caesio cuning (big)</i>	15	30	
		<i>Caesio cuning (small)</i>	85	18	
		<i>Epinephelus tukula</i>	28	20	
		<i>Lethrinus</i>	5.5	13	
		<i>Sigarus javus</i>	7	5	
		Parrot	15	3	
		18 traps (all with fish)	<i>Caesio cuning (big)</i>	43	30
	<i>Caesio cuning (small)</i>		48	18	
	Baby Fish		21	3	
	<i>Lethrinus</i>	9.5	13		
Oct 10, 1997	4 traps (all with fish)	<i>Caesio cuning (big)</i>	36	30	
		<i>Sigarus javus</i>	14	5	
		Trevally	26	18	
		<i>Cephal. Miniatus</i>	27.8	30	
	3 traps (all with fish)	<i>Caesio cuning (big)</i>	88	30	
		<i>Lutjanus</i>	3	35	
		<i>Epinephelus tukula</i>	17	30	

		<i>Sigarus javus</i>	5	5
Oct 19, 1997	22 traps (18 with fish)	<i>Caesio cuning (big)</i>	21.2	30
		<i>Caesio cuning (small)</i>	25	18
		<i>Epinephelus tukula</i>	27.5 (1 fish)	20
		Trevally	16.5	18
		Baby Fish	5	3
	20 traps (16 with fish)	<i>Caesio cuning (big)</i>	58	30
		<i>Caesio cuning (small)</i>	9	18
		<i>Epinephelus tukula</i>	11 (1 fish)	20
		<i>Lethrinus</i>	4	13
		Baby Fish	3	3
Oct 24, 1997	22 traps (12 with fish)	<i>Caesio cuning (big)</i>	29	30
		<i>Caesio cuning (small)</i>	22	18
		<i>Sigarus javus</i>	15	5
		Baby Fish	6	3
		<i>Lethrinus</i>	6	13
	20 traps (8 with fish)	<i>Caesio cuning (big)</i>	29.2	30
		<i>Caesio cuning (small)</i>	15.8	18
		Baby Fish	9	3
		<i>Lethrinus</i>	8.5	13
Oct 29, 1997	21 traps (all with fish)	<i>Caesio cuning (big)</i>	54	30
		<i>Caesio cuning (small)</i>	49	18
		<i>Sigarus javus</i>	34	5
		Baby Fish	15	3
		<i>Lethrinus</i>	10.5	13
		Grouper	22	35
	20 traps (17 with fish)	<i>Caesio cuning (big)</i>	15	30
		<i>Caesio cuning (small)</i>	21	18
		<i>Sigarus javus</i>	5	5
		Baby Fish	13	3
		<i>Lethrinus</i>	10.5	13
Dec 23, 1997	4 traps (2 with fish)	<i>Caesio cuning (big)</i>	152	30
		<i>Caesio cuning (small)</i>	60.8	18
		<i>Lutjanus</i>	7.8	37
		Baby Fish	1	3
		<i>Lethrinus</i>	1	13
		<i>Cephal. miniatus</i>	5	35
	2 traps (1 with fish)	<i>Caesio cuning (big)</i>	38.5	30
		Trevally	34	18
		<i>Sigarus javus</i>	3	5
		<i>Lutjanus</i>	7	37
		<i>Cephal. miniatus</i>	23	35
	3 traps (2 with fish)	<i>Caesio cuning (big)</i>	49	30
		<i>Caesio cuning (small)</i>	44	18
		<i>Lutjanus</i>	1	37
		<i>Cephal. miniatus</i>	15	35
	2 traps (2 with fish)	<i>Caesio cuning (big)</i>	92.5	30
		<i>Caesio cuning (small)</i>	33	18

		<i>Lutjanus</i>	4.2	37
		<i>Caranx</i>	1.4	18
	12 traps (2 with fish)	<i>Cephal. miniatus</i>	9.4	35
		<i>Epinephelus tukula</i>	3	20
		<i>Lethrinus</i>	3.2	13
Dec 31, 1997	30 traps (all with fish)	<i>Caesio cuning (big)</i>	72	30
		<i>Caesio cuning (small)</i>	74	18
		Baby Fish	8	2
		<i>Segarus javus</i>	4	5
		Parrot	38.4	3
		<i>Cephal. miniatus</i>	4.8	35
		<i>Lethrinus</i>	6	13
Jan 1, 1998	21 traps (19 with fish)	<i>Caesio cuning (big)</i>	28.8	30
		<i>Caesio cuning (small)</i>	38.8	18
		<i>Lutjanus</i>	2	37
		Baby Fish	46	2
		<i>Segarus javus</i>	13	5
		Parrot	11.5	3
		<i>Cephal. miniatus</i>	3.2	35
		<i>Lethrinus</i>	8.2	13
		uncertain	2.5	30
Jan 6, 1998	21 traps (2 with fish)	<i>Caesio cuning (big)</i>	93.5	30
		<i>Caesio cuning (small)</i>	19	18
		uncertain	2	35
		<i>Segarus javus</i>	7	5
		Parrot	8	3
		<i>Lethrinus</i>	3.5	13
Jan 7, 1998	3 traps (all with fish)	<i>Caesio cuning (big)</i>	160	30
		<i>Caesio cuning (small)</i>	56	18
		<i>Lutjanus</i>	2	37
		<i>Segarus javus</i>	11	5
		<i>Cephal. miniatus</i>	2.8	35
		Grouper	3	13
	2 traps (all with fish)	<i>Caesio cuning (big)</i>	43	30
		<i>Caesio cuning (small)</i>	8.8	18
		<i>Cephal. miniatus</i>	64	35
	3 traps (1 with fish)	<i>Caesio cuning (big)</i>	49	30
		<i>Caesio cuning (small)</i>	37	18
		<i>Segarus javus</i>	2.5	13
		Grouper	2	5
	4 traps (2 with fish)	<i>Caesio cuning (big)</i>	107.4	30
		<i>Caesio cuning (small)</i>	22	18
		<i>Lutjanus</i>	2.5	37
		Grouper	15	35
Jan 10, 1998	30 traps (all with fish)	<i>Caesio cuning (big)</i>	251.3	30
		<i>Caesio cuning (small)</i>	117	18
		<i>Segarus javus</i>	34	5
		Parrot	71	4
		Baby Fish	15	3

		<i>Cephal. miniatus</i>	41	35
		<i>Epinephelus tukula</i>	5.5	20
		<i>Lethrinus</i>	5	13
Jan 14, 1998	21 traps (18 with fish)	<i>Caesio cuning (big)</i>	86	30
		<i>Caesio cuning (small)</i>	58.5	18
		Trevally	17	18
		Parrot	6	3
		Grouper	2	18
		<i>Cephal. miniatus</i>	26	35
		<i>Lethrinus</i>	4	13
Jan 16, 1998	23 traps (11 with fish)	<i>Caesio cuning (big)</i>	28	30
		<i>Caesio cuning (small)</i>	47	18
		<i>Segarus javus</i>	22	5
		<i>Lutjanus</i>	18.5	35
		Baby Fish	31	3
		<i>Lethrinus</i>	23.5	13
	30 traps (17 with fish)	<i>Caesio cuning (big)</i>	197	30
		<i>Caesio cuning (small)</i>	90	18
		<i>Segarus javus</i>	3	5
		Baby Fish	19	3
		<i>Lethrinus</i>	11	13
Jan 17, 1998	5 traps (2 with fish)	<i>Caesio cuning (big)</i>	5	30
		<i>Caesio cuning (small)</i>	35	18
		<i>Segarus javus</i>	18	5
		<i>Lutjanus</i>	1.5	35
		Baby Fish	15	3
Jan 19, 1998	13 traps (8 with fish)	<i>Caesio cuning (small)</i>	5	18
		<i>Segarus javus</i>	49	5
		Baby Fish	63	3
		<i>Cephal. miniatus</i>	1.8	35
		<i>Lethrinus</i>	8	13
Jan 20, 1998	9 traps (4 with fish)	<i>Caesio cuning (small)</i>	19	18
		<i>Segarus javus</i>	15.5	5
		Baby Fish	25	3
	10 traps (7 with fish)	<i>Caesio cuning (small)</i>	11	18
		<i>Segarus javus</i>	65	5
		Baby Fish	11	3
		<i>Lethrinus</i>	5	13
Jan 21, 1998	7 traps (all with fish)	<i>Caesio cuning (big)</i>	5	30
		<i>Caesio cuning (small)</i>	61	18
		<i>Segarus javus</i>	36	5
		Baby Fish	17	3
		<i>Lethrinus</i>	5	13
	23 traps (all with fish)	<i>Caesio cuning (big)</i>	104	30
		<i>Caesio cuning (small)</i>	124	18
		<i>Segarus javus</i>	17.5	5
		Baby Fish	47	3
		<i>Cephal. miniatus</i>	3.5	35
		<i>Lethrinus</i>	12	13

	30 traps (all with fish)	<i>Caesio cuning (big)</i>	166	30
		<i>Caesio cuning (small)</i>	384	18
		<i>Segarus javus</i>	21	5
		Baby Fish	47	3
		<i>Cephal. miniatus</i>	9.4	35
		<i>Lethrinus</i>	27	13
Jan 22, 1998	6 traps (3 with fish)	<i>Caesio cuning (big)</i>	68	35
		<i>Caesio cuning (small)</i>	56	18
		<i>Segarus javus</i>	15	5
		<i>Cephal. minitus</i>	2	35
	5 traps (3 with fish)	<i>Caesio cuning (big)</i>	13	30
		<i>Caesio cuning (small)</i>	75	18
		<i>Segarus javus</i>	4	5
		Baby Fish	6	3
		<i>Cephal. miniatus</i>	1	35

**APPENDIX 7**  
**NUMBER OF PEOPLE HIRED BY TOURIST RESORTS ON LIPE ISLAND**

<b>Type of Work</b>	<b>Number Hired by Andaman Resort and Monthly Pay in Baht</b>	<b>Number Hired by Chao Lay Resort</b>	<b>Number Hired by Lipe Resort and Monthly Pay in Baht</b>	<b>Number Hired by Pattaya Song Resort</b>
Cook	1 local woman, 1 outside woman /2,200-2,300	3 local women	4 local women /3,000	
Housekeeper	2 local women /2,200-2,300	2 local women	2 local women /1,800	
Receptionist/ Waitress	4 local women /1,500-2,000	3 local women	5 local women /1,600	
General Worker (Garbage Collector, Cloth Washer)	2 local women, 1 outside woman		2 local women for washing /1,800 2 local women for area cleaning/ 2,000 4 local men for general work/2,000- 6,000	
Construction Worker	3 outsiders /6,000 per bungalow			
<b>Total</b>	<b>9 local people and 5 outsiders</b>	<b>8 local women</b>	<b>19 local people</b>	<b>10 (4 local people and 6 family members)</b>

**APPENDIX 8  
MONTHLY WASTE FROM TOURIST DRINKS**

<b>Resort / Shop</b>	<b>Beer Bottles</b>	<b>Water Bottles</b>	<b>Soda Water Bottles</b>	<b>Liquor Bottles</b>	<b>Fruit Juice, Soft Drink, and Beer in Can</b>	<b>Fruit Juice in Small Carton</b>	<b>Soft Drink Bottles*</b>
Andaman	150	336	360	?	60-90		1080
Chao Le	240	360-480	120	?	no		120
Lee Pae	360	600	?	60			720
Pattaya Song	1,080+	1,200	returned to Singha	30-60	going to start selling		2,160+
Pattaya Nung	540	510	?	110	450-600		
Shop Right of School	145	150		50	145		145
Shop Left of School	168	600	72 (20% returned)	60	60 (120 per Thai holiday)	96	144
<b>Total Number of Bottles, Cartons, and Cans</b>	<b>2,683+</b>	<b>3,756-3,876</b>	<b>552</b>	<b>310-340</b>	<b>715-955</b>	<b>96</b>	<b>4,369+</b>

\* Bottles can be and are generally returned.



## ENDNOTES

### Chapter 1

<sup>1</sup> In this dissertation, the definitions of nomadism and sedentism by Salzman (1980:10) are used. Nomadism is defined as "movement of the household during the annual round of productive activities". The definition limits nomadism to societies in which families, rather than individuals or specific categories of individuals, are engaged in movement. *Sedentism is defined as "the settled, immobile location of the household during the annual round of productive activities"*.

<sup>2</sup> Typical reefs are defined as coral reefs which consist of a large number of coral genera and the coral total cover (both living and dead) exceeding 70% of the viewed areas (Phongsuwan and Changsang 1987:152).

<sup>3</sup> According to Ochieng et al. (1997) an undisturbed healthy reef classified as "good" should generally have at least twice as much live coral than dead coral.

<sup>4</sup> According to Bodley (1994:23) foraging is subsistence based on harvesting naturally occurring plants and animals by hunting, gathering, and/or fishing.

### Chapter 3

<sup>5</sup> 257 English, 137 German, and 268 Thai questionnaires were distributed according to the preferred language of the respondents.

<sup>6</sup> Five questionnaires were incomplete (no answers on page 2) or strangely answered. These are excluded from the analysis.

<sup>7</sup> I use the term 'indigenous people' to refer to the first people who settled in the area. Throughout the dissertation, the term is used interchangeably with 'traditional people'.

### Chapter 4

<sup>8</sup> According to Sopher (1977:1), "the environment of strand begins where the land meets the sea and extends landward and seaward from this line. It is of variable and often uncertain width; some writers find it convenient to regard it as the area between the lines of extreme high and low tide. It is best regarded as a zone of transition between the sea and terra firma; as such it is very often characterized by its own special land forms and life forms".

<sup>9</sup> On one of trap fishing trips I accompanied, the fishers started by driving to Talo Pinang on the south of Rawi to pay respect to the *jaao ti* (guarding spirit of the place). One of the traps that were to be placed on that day was pushed down to the knee-high water near the beach. Two men left the boat with a big cooking pot, a knife, and a water container. They headed to a big tree that had a piece of cloth tied around it. They knelt down in front of

the tree and used the knife to cut thin slices of the pig head in the pot. They offered the spirit a tiny bowl of water and a giant clam shell containing a cigarette and the pork slices. The fishers said that there are different *jaao ti* but they always come to this one. The trap was then brought back on the boat, ready to be placed under water.

<sup>10</sup> Most land titles on Lipe are either *so ko nung* or *no so sam*. *So ko nung* was issued when no previous land right document existed and the land was claimed before December 1, 1954. Today *so ko nung* is no longer issued. If a piece of land has no *so ko nung*, even when a family occupied and cultivated the land in the past, they have no right to claim the title. *So ko nung* land must not be characterized as prohibited private land such as road, infrastructure, waterways, sanctuary, or forest land.

*No so sam* can be acquired if the land already has a title of *so ko nung*, or a reservation paper. Official measurement is done by walking around the piece of land, and if no one rejects the acquisition process within 30 days, *no so sam* can be issued. The land can be sold, transferred, or given to another person.

If a person has already occupied a piece of land for 10 years, and map plans and UTM of the land are available, a *chanod* can be issued. The owner of *chanod* has land ownership right while *no so sam* has only land use right.

In Thailand, when a party openly and peacefully occupies land whose title belongs to another party, for *so ko nung* and *no so sam*, the original owner may lose the land to the occupying party after one year, for *chanod* after 10 years. This is judged by the court.

<sup>11</sup> To Kiri brought coconuts from Satun and started to grow them on several islands of the Adang Archipelago. Engelhardt (1989:138) reported that coconuts represented a large portion of the local vegetable diet and were used as a source of water on boat journeys and fishing trips. As the Urak Lawoi sprouted coconuts and planted them whenever they moved to a new site, coconut trees have become evidence for the sites where they built their houses or temporary shelters. The age of the trees affords a clue to the length of the interval since the last occupation. Coconuts have also been sold on the mainland and used as a trade item for other necessities with the commercial fishing boats from outside, such as ice or sometimes even gasoline. The trade of coconuts for other things was proven particularly useful in time of difficulties.

<sup>12</sup> As described by Ruohomäki (1999:229), knowledge of complex lunar and tidal rhythms requires years of experience to gain. For the fishermen, such knowledge is passed from generation to generation. Ruohomäki explained the cycle of moon and tidal change very clearly and I would like to quote his description as follows:

The full moon (*duan nghai*) occurs once every 28 days. After full moon there is a period of 15 days during which the moon is waning; this period is called *duan raem*. For example the third day after full moon is called *raem saam kham* (third waning moon day) and so on until *raem siphaa kham* (fifteenth waning moon day); this is the new moon, when it is completely dark. After this there is the period of *kham khyn* (waxing moon), which lasts until the next full moon.

The lunar cycle directly affects the tidal rhythms. The first three days after both full moon and new moon are called *nam yai* (big water) or the period of

spring tides. From this time the difference between high and low tides is the biggest. During this time the currents are strong (*nam chieu*) and fishing is difficult. From the fourth to the sixth day the difference between the tides gets smaller and although there are still some strong currents the fishing gets easier; this is called *nam lot long*. The seventh, eighth, and ninth days are the best fishing days as the difference between the tides is the smallest; the period is called *nam tai* (calm water) or the period of neap tides. The local fishermen consider this the best period for fishing. On the tenth and eleventh days the difference between the tides increases; this period is called *nam khyn*. The fifteenth corresponds to either new moon or full moon and the currents are strong again, before the period of *nam yai*. Therefore, in a 15-day cycle there are 11 good fishing days, with the seventh, eighth and ninth days either full or new moon being the best days.

<sup>13</sup> Ruohomäki 1999 has described *rua haang yau* as follows:

. . . . long, narrow canoe-like craft fitted with outboard motors. The boats are classified according to how many *kong* they have. The *kong* is a piece of the frame to which the wooden planks of the boat are attached. The *kong* are always in odd numbers, because even numbers would bring bad luck. Eleven *kong* is considered to be the smallest boat, and usually the bigger fishing boats have either 19 or 21 *kong*. The *kong* are set around 50 cm apart. Therefore, a boat, with 19 *kong* is around 9.5 m in length. The average boat with 19 *kong* is around 9.5 m in length. . . . They are strong and simple to use and use diesel for operation. The engine has a long (4-5m) steel rod attached to it with a propeller at the end. This steel rod can be lifted up easily and therefore the boat can be driven in shallow water if need be.

<sup>14</sup> *Loi Rua* ceremony and festival is considered the most important traditional ceremony of the Urak Lawoi. Despite some modifications, it successfully remains so until today. The festival takes place twice a year, during the full moon of the 5<sup>th</sup> and 11<sup>th</sup> months of the lunar calendar. The Urak Lawoi use the occasion to pay respect to their ancestors and symbolically to float away their misfortune with a ceremonial small boat, which is constructed out of *mai rakum* (a type of very soft wood) for this special purpose.

During my field work, the *loi rua* festival started on the day before full moon, on the 9<sup>th</sup> of May 1998. At about 2 pm, people went to the shrine of To Kiri to pay respect to their ancestors. They brought foods, *mak plu*, to the shrine. Afterwards, a member of each house lit up a candle and let *to mor* (an Urak Lawoi spiritual leader) read their fortune from the tears of the candles. Around the school ground, a few stalls were set up to sell foods, drinks, and small products. A big stage was raised on the ground. On the next three evenings, dance music in Thai, English, and India was played and the stage was filled with dancers, most of who were the younger villagers.

In the early morning of the next day, a long-tailed boat left Lipe with more than 20 men and women to Adang to collect *mai rakum*. The people costumed themselves like *kon pa* (forest or “primitive” people). They painted their face black and put on sewed up leaves

as a shirt or skirt on top of the normal cloth. Another boat called *rua lai* (chasing boat), carrying men and women dressed similar to the people in the first boat, went to wait for the wood-carrying boat at Laem Son of Adang. When the wood-carrying boat came, the chase began. The two boats rode in front of the island up and down 3 times. People in the boats danced and sang. Buckets made into simple drums were used as music instruments.

In the late morning, a few men started to gather on the school ground to build the ceremonial boat. By early afternoon, there were three groups working on the boat. The first group had four men, including 2 professional boat builders of the village, working on the boat frame. The other two groups had men and women working on decorative pieces for the boat. The boat frame was finished mid afternoon, and people immediately started to decorate it. On the bow, there is a figure of a man with a spear pointing at a turtle. According to Ukrit (1989:161), a turtle or a bird is an important symbol for a supernatural figure that the Urak Lawoi respect. Turtles also represent animals they have eaten. With the ceremony, the animals are supposed to return to the original owner, and the sins of the Urak Lawoi are forgiven. The ceremonial boat was completed in the late afternoon.



Figure 8.1. Making of a Ceremonial Boat



Figure 8.2. Carved Figures on the Bow of a Ceremonial Boat

In the evening, villagers lit little candles and placed them on the boat. They also put some foods, sweets, money, hair and nail into the boat. Symbolically, in this way, their bad luck is supposed to float away with the boat, which was carried into the water at sunrise in the next morning. On land, people started off with another ceremony. A parade, leading by people playing music such as a fiddle, was followed by men carrying seven pieces of woods resembling crosses lightly decorated with colorful strips of cloth. These protective crosses were installed into the sand in front of the village to keep the evils and misfortune brought away by the boat from returning to the land. In the village, people continued to sing and dance for the rest of the day.

<sup>15</sup> A regular trap has an approximate size of 38"high x 68"wide x 100"long. The bottom frame is made of straight branches of wood while the rest of the frame is made of rattan stocks bound together with metal strings. The net at the bottom and top parts are fishnet or woven plastic rope while the nets on the lower part of all sides are woven metal wires.

The mesh size is approximately 2". The front side has a tapered opening for fish. A small door for removing the fish from the trap is in the middle of the lower part on the left side. An example of rattan and wood stalks used for trap making is shown as follows:

bottom part:

- 3 long pieces of wood (left, middle, and right)
- 2 long pieces of rattan (left and right)
- 7 medium rattan/wood pieces (from front to back)
- 2 short and 1 long rattan pieces to support the opening of a trap (2 short ones following the tapered shape of the opening, a long one in the middle from the opening point to the back)

body part:

- 7 long rattan pieces (from lower left moving up and down to lower right)
- 5 long curved rattan pieces (from front to back)

opening part:

- 6 short rattan pieces

back part:

- 3 short rattan pieces (from bottom to top, left, middle and right)
- 1 medium rattan piece (across in the middle from left to right)

Total

- 15 long, 8 medium (or 1), and 11 short pieces of rattan
- 3 long, 0 (or 7) medium pieces of wood

<sup>16</sup> According to Urak Lawoi sea cucumber collectors, there are two kinds of *pling kamad*. The big one has the size of half the lower arm and the small one is about one palm long and is all bumpy. They can be picked during the day when they come out of hiding places during the rising tide or at night. The cucumbers are placed in a pot of water that is heated to a bubbling boil. Liquid from the cucumbers is separated from the body which will be further grilled. Both dry body and liquid are sold in Langkawi of Malaysia. The collectors showed me the products in 3 forms, dark brown liquid, balm, and balm mixed with nutmeg. Two to three drops of the liquid are mixed with warm water for applying on burns or drinking to heal internal injuries, cuts or wounds. The balms are for external application.

## Chapter 5

<sup>17</sup> As an example with trap fishing, a new boat equipped with new engines and a compressor may cost 106,000 baht (see follows), an amount that takes nearly 9 years for an Urak Lawoi who saves 1,000 baht (US\$ 25) a month for it.

Items	Cost in Baht
a 21 <i>gung</i> boat	35,000
the tail and the motor for the tail	26,000-27,000
air compressor with everything	45,000 (air pump > 20,000 and motor > 20,000)
total costs without other fishing tools	106,000 baht

<sup>18</sup> The large-scale fisheries are engaged in deep-sea fishing, and use capital-intensive, high technology gears and vessels (trawlers, purse seiners, etc.). Average catches are larger than those of the small-scale fisheries. The large-scale sector primarily supplies urban centers, provides fish for export markets, factories, and industries that can absorb large amounts of fish. Industrial fisheries are dependent on a modern post-harvest sector (fish-meal factories, fish-oil factories, etc). Because of the high input of capital, the sector is also more sensitive to fluctuations in prices, catches and energy costs (World Bank 1982:27-28 and Thomson 1980:3 in Torell 1984:104,107).

<sup>19</sup> On February 23, 1981, Thailand's proclamation of a 200-nautical mile EEZ or Exclusive Economic Zone began. It is estimated that through the proclamations of neighboring EEZ's the Thai fishing fleet has lost access to 300,000 km<sup>2</sup> of fishing grounds (Neamnumpet 1981:4; *Bangkok Post*, August 13, 1982; *Economic Review* 1982:82; *World Fishing*, Jan/Feb 1982: 25; *South China Sea Programme* 1981:15; in Torell 1984:200). If no agreements with other nations can be made, the total Thai fishing effort must be conducted within the national zone of approximately 94,700 N miles<sup>2</sup> (Torell 1984:200).

<sup>20</sup> The light generated by the fishing vessels attracts small fishes and other sea organisms. Squids and large fishes are then aggregated to feed in the illuminated area.

<sup>21</sup> The protection of land within a national park in the National Parks Act of 1961 reads as follows (Eitel 1994:37-38):

. . . land which means the surface of the land in general and includes mountains, streams, swamps, canals, marshes, basins, waterways, lakes, islands, and seashores which has been declared a national park under the Act. The features of the land should be of natural interest and must not be owned or legally possessed by any party other than the public body. This land is preserved in its natural state for the benefit of public education and enjoyment.

<sup>22</sup> The term 'ecotourism' is defined in the questionnaire as "responsible travel to natural areas, which has minimum impact on the natural environment and local culture, and improves the well-being of the local people".

<sup>23</sup> Phi Phi Islands are located in the Andaman Sea, Southwest of Thailand in Krabi Province. The main island, Phi Phi Phi Don, which has an area of 9 square kilometers and once served as a residence for a few fishing families, has rapidly become one of the most popular tourist destinations in the Andaman Sea. In 1996, on average, 2,000 tourists visited the island daily and produced over 1.2 tons of solid waste. A solid waste burning plant was established in 1993, but its capacity was quickly exceeded by the increasing number of both national and international visitors.

<sup>24</sup> *Jaroeng* means “progressive” in Thai. In relation to tourism development, the Urak Lawoi often use this word to mean, “having many tourists and more tourism development that allows for additional income”.

## Chapter 6

<sup>25</sup> *jao pho* is usually translated into English as 'godfather'. Phongpaichit and Piriyarangsan (1995:57) describes *jao pho* as follows:

The term conveys not only wealth and power but also an ability to operate above the law. Most are ethnic Chinese by origin and generally based in the provinces. They have wide business interests, covering both legitimate and criminal activities. They have groups of associates and followers. They move closely with powerful bureaucrats, policemen and military figures. They sit in positions of authority in local administration. They play a key role in parliamentary elections.

<sup>26</sup> *or bo to* = *ongkarn boriharn suan tambon* or TAO, (Sub-District Administrative Organization). TAO representatives are elected by their constituents—the villagers in their community. TAO has their own source of funding which they can collect and allocate as they see fit.



## FOREIGN WORD GLOSSARY

<i>ampho</i>	sub-district
<i>bagad</i>	a longer period of staying away from home during food foraging
<i>baht</i>	Thai currency unit. One US dollar is about 40 baht
<i>bed</i>	hand lines for fishing
<i>bubu</i>	fish trap
<i>chaao ko</i> or <i>kon ko</i>	island people
<i>chaao lee</i> or <i>chaao talee</i>	sea people
<i>farang</i>	foreigners
<i>gab kao</i>	things to be eaten with rice
<i>gong</i>	a piece of the frame to which the wooden planks of the boat are attached. They are set around 50 cm apart and are always in odd numbers, because even numbers would bring bad luck. Eleven <i>kong</i> is considered to be the smallest boat, and usually the bigger fishing boats have either 19 or 21 <i>kong</i> . A boat, with 19 <i>kong</i> is around 9.5 m in length.
<i>hoi muk kong</i>	a type of pearl oyster that has become rare and very expensive
<i>jaao ti</i>	guarding spirit of a place
<i>loi rua</i>	literally meaning “floating a boat.” The name of an Urak Lawoi festival taking place twice a year in the 5 and the 11 <sup>th</sup> months of the lunar calendar.
<i>loob (sai)</i>	fish trap
<i>luknong</i>	subordinate
<i>mai rakum</i>	soft wood used to make a ceremonial boat for the <i>loi rua</i> festival
<i>mak plu</i>	areca and betel
<i>nai tun</i>	capitalist
<i>nam</i>	water. In relation to season, there are two <i>nam</i> in one month and each <i>nam</i> lasts 15 days.
<i>nam tai</i>	dead water period, happening twice a month between the 5 <sup>th</sup> and the 12 <sup>th</sup> days after the full or new moon
<i>or bo to</i>	(TAO, Tambon Administrative Organization) TAO representative elected by their constituents—the villagers in their community. TAO has its own source of funding that it can collect and allocate as seen fit.
<i>pinto</i>	lunch box
<i>pling kamad</i>	a kind of sea cucumber
<i>pling nom</i>	a kind of sea cucumber
<i>rai</i>	a land size measurement equal to 2.5 acres
<i>rammana</i>	a style of music with percussion instruments and singing, performed by men
<i>rong ngeng</i>	a style of singing and dancing, performed by women
<i>rua ganchieng</i>	rowboat moved by paddling to the back

<i>rua haang yao</i>	a long narrow boat equipped with outboard motor at the tail end
<i>rua jaew</i>	rowboat moved by paddling to the front
<i>rua lai</i>	chasing boat in the <i>loi rua</i> festival
<i>tam kao sarn krog mo</i>	(literally meaning “pounding rice grains to remove the husk only enough to fill a pot”) an expression to describe a habit of earning only enough for the day
<i>thai mai</i>	new thai
<i>talo</i>	bay
<i>taukay</i>	middleman, boss, patron
<i>tokbed</i>	hook and line fishing
<i>to mor</i>	a spiritual leader chosen by the community and highly respected for his ceremonial, ritual and healing roles
<i>uan laum</i>	rounding up net fishing
<i>uan yeepoon</i>	a kind of net fishing
<i>urak lawoi</i>	sea people

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