

PUBLIC PARTICIPATION IN FOREST MANAGEMENT IN THAILAND

A Case Study of Sanepong Village, Kanchanaburi Province

By

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DECLARATION

This thesis contains no material which has been accepted for the award of any other higher degree or graduate diploma in any tertiary institution, and to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

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ABSTRACT

This thesis investigates some aspects of public participation by villagers in Sanepong village, Thailand, in forest management. As a tribal community living in the forests for more than 200 years, this group of Karen people have developed their traditions and culture, along with a subsistence economy, in the surrounding forests. The thesis shows how the community has developed distinctive ways of participation in forest management.

The Thai Government, especially since the 1991 declaration of the Thung Yai - Haui Khakaeng World Heritage Area that covers forests traditionally used by Sanepong villagers, has attempted to move the community out. On the other hand, during recent years there have been countervailing forces resulting in efforts by the Government, and others such as non-government organisations, environmentalists, and academics to improve national forestry management, resulting in a trend to decentralise forest resource management to the local level as well as to revive community rights. Community forestry has become an alternative to involve people in forest management. While communities reafforest, maintain, and protect the forests, on the one hand, they can benefit from them through forest products and services, on the other.

The thesis case study of Sanepong shows the hierarchical village social structures which relate to public participation. The communal sense of commitment and individual villager commitment sustain villager involvement in forest management and conservation. They employ adaptive mechanisms to improve their forest management, and hope to gain recognition from the government sector for the legitimacy of their management role and for their rights of continued occupation of the forests.

Sanepong is in the western sector of the World Heritage Area, in the Thung Yai Naresuan Wildlife Sanctuary. The management of this World Heritage Area has to recognise the importance of community forestry roles. The thesis results suggest that, to achieve effective public participation in forest management in such a traditional society, community forestry projects have to recognise the importance of traditions, culture, social structures, and their relationships with respect to the forests and forest management. Participation has to be accommodated in all processes in management

activities, with reference to local initiatives, planning, decision-making, implementation, and evaluation. The understanding of the forest ecosystem by the local villagers, as part of the ecosystem themselves, if given expression through this participatory management, can work in favour of achieving a better quality of life for the local villagers and may be the best way of conserving biodiversity and environmental integrity in the long run.

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CHAPTER 1

COMMUNITY FORESTRY: THE CONTEXT, AND THE STUDY AIMS

1.1 Introduction

Deforestation in the tropical zone is considered a major environmental problem for which solutions must be found. Thailand is also facing this problem. Although logging was banned in 1989, the question is how the remaining forests can be appropriately conserved and managed on a sustainable basis. The Thai Seventh National Economic and Social Development Plan 1992-1996 stated guidelines and measures for the administration and management of forestry (National Economic and Social Development Board 1992). In these guidelines, the first priority is to encourage local people to participate in managing forest resources. This is demonstrated by the intention to create legislation covering community forests, and to encourage local organisations to have a legal role in reafforestation efforts, as well as protecting and benefiting from the forests. The law is intended to be in place by 1996 according to the national plan mentioned above, but efforts are being made to see it passed before then.

It is the purpose of this thesis to explore the potential for participation in forest management by the people who live in Thai forests. It includes a case study of a remote village in Thailand. The study shows the nature and extent of participation, and is relevant to the predicted effectiveness of forest management in similar situations. Because of the particular case study situation, it is also relevant to the management of World Heritage Areas inhabited by indigenous people.

1.2 Selected literature on community forestry

1.2.1 Definitions of community forestry

A number of different definitions are used to describe community forestry. The Food and Agriculture Organisation (FAO 1978) defines community forestry broadly as any situation which intimately involves local people in forestry activities. It includes a spectrum of situations ranging from

woodlots for fuel and other forest products for local needs, through to the growing of trees at the farm level to provide cash crops and other products at the household, artisan, or small-industry level to generate income, and to benefit forest-dwelling communities.

Korwanit (1985) and Kuankajorn (1990) focus on the economic aspects of community forestry, especially in generating income for villagers. Korwanit describes community forestry as people's use of natural or plantation forests to increase their individual incomes. Kuankajorn is more concerned with the aspect of conservation, identifying community forestry as the use of forest resources for the highest economic benefit whilst maintaining local ecosystems.

Wiersum (1984), in reviewing different approaches, identifies community forestry as all professional forestry activities that aim specifically at the participation of local people in management, and at the fulfilment of the forest-related needs and aspirations of these people. Pragtong (1991), consistent with Wiersum, defines community forestry as a type of forest management which brings people's needs into management objectives. He argues that the local people should formulate management plans and control their implementation whilst benefiting from the resources of the forest.

These definitions do not include the important roles that might be played by traditions, culture, and belief systems in the interactions between communities and forests. This thesis is concerned with a traditional tribal community, its hierarchical social structure, and the people's attempts to maintain their occupation of and relationships with the forests. The essential elements of the above definitions have been adopted with the incorporation of these cultural aspects. Community forestry in this study is therefore defined as a social movement or peoples' organisation at a community level, an intra- and sometimes inter-village network within a forest ecosystem aiding community participation in the use and management of forest resources. These forest resources are local common property. The use and management of the resources rely on local wisdom, ideology, and community rights. They also reflect social norms and values, attempts at social equity, and attempts to maintain community subsistence on a sustainable basis.

1.2.2 Key factors in community forestry

The concept of community forestry achieved international prominence during the 1970s and 1980s, as reflected in three World Forestry Congresses¹ held during that period. Many descriptive terms were used, such as social forestry, participatory forestry, and forestry for rural community development.

The literature on community forestry relates to five main concepts. These are as follows.

- Structural changes in government roles and development
- Cultural dimensions
- Communal property systems
- Social movements
- Rural development and sustainable resource utilisation

1.2.2.1 *Structural changes in government roles and development*

The dynamic adaptability of community forestry management responds to macro external conditions (Chamarik *et al.* 1993). Poffenberger (1990a), in his study, *The Evolution of Forest Management Systems in Southeast Asia*, and Lohmann (1991) in *Who Defends Biological Diversity? Conservation Strategies and the Case of Thailand*, describe the current conflicts between forest people and governments over forest land use in Southeast Asia. They state that these conflicts come from systematic attempts by governments to gain exclusive rights to forest lands through legislation and policing measures with little or no recognition of the rights of those inhabiting and dependent upon the forests. Vandana Shiva (1991) notes that, in Southeast Asia and Brazil, the traditional practices and rights of local communities are violated and the destruction of resources for the benefit of the few is justified in the name of national development and the generation of foreign exchange.

1 World Congress on Forests for Socioeconomic Development, Buenos Aires, 1972;
World Congress on Forests for People, Jakarta, 1978;
World Congress on Forest Resources in the Integral Development of Society, Mexico City, 1985.

Resource management has become more centralised. Goodland, Ledec, and Webb (1989), in their study describing environmental mismanagement, state that the role of governments in resource management and national development contributes to the growth of outside business interests while simultaneously destroying local wisdom about resource management and subsistence production. Leff (1985) suggests that the predominant economic strategy, based on the maximisation of profits and on the ideology of human progress, reflects racial prejudices against indigenous people, displaces their traditional practices, depletes their natural resources, and degrades their quality of life. The resulting resource exploitation and poverty, often accompanied by ecosystem degradation, may be correlated with the local community's lack of power to manage resources and a loss of the capability to develop self-reliance (Santasombat 1993a).

1.2.2.2 *Cultural dimensions*

Ramitanon, Karnchanaphan, and Karnchanaphan (1993) describe six cultural aspects of the relationship between humans and forests in four villages in northern Thailand as follows.

(i) Humans and forests interact in an ecosystem in a holistic way and this relationship is integral to the culture and history of a community.

(ii) Social concepts of community forestry originate from a recognition of complexity and diversity. Implied are interdependent relationships between humans and forests. Community rights are modified in order to support self sufficiency and sustainable relationships with nature.

(iii) Community forestry managerial concepts have been developed on the basis of local knowledge and wisdom over many years. Ramitanon, Karnchanaphan, and Karnchanaphan (1993) found that the evolution of usufruct rights shows the relationships between forest resources and social equity, the promotion of social stability, and ecosystem equilibrium. They state that communities also classify the forests in three categories: watershed forests, utilised forests, and sacred forests. Villagers' interactions with the forests differ depending on traditions and culture.

In upland Cebu, in the Philippines, Borlagdan (1990) identified the major weakness of community forestry as the failure to consider the local land-

control patterns. Hausler (1993) explained how community forestry difficulties in Nepal were due to the lack of recognition of indigenous knowledge and power relations.

(iv) The relationships between individuals, individuals and society, and people and nature have developed on the basis of hierarchical power, reflected in the social order, and in Animistic belief systems, which are thought to govern natural prosperity and individual well-being. Community forestry regulations are also based on these relationships.

(v) The cultural aspects of community forestry imply ideological reproduction. This reproduction attempts to adapt the ideology of traditional power structures under the pressure of external changes.

(vi) Community forestry as a cultural phenomenon reflects the belief in the rights of humans to use their labour for a subsistence way of life. The understanding of sustainable practices is demonstrated by formulating regulations, and organising for forest protection and conservation. Fox (1990) in his study in community forestry in Java, Sulawesi, Kalimantan, and Irian Jaya, and Peluso, Poffenberger, and Seymour (1990), in their study in Java, showed that successful community forestry projects demonstrate an understanding of community practices. These practices comprise village tenure systems, historical land-use practices, and local beliefs about village and forest origins.

1.2.2.3 *Communal property systems*

This concept stands on the basis of resource use rights and management by users. The users state who have the rights to use, and how to use the resources. Although these resources are a type of common property, they are different from other types such as open-access common property which everyone has the right to use without regulations, or State property which is owned and managed by the government (Santasombat 1993b; Ramitanon, Karnchanaphan, and Karnchanaphan 1993).

The community is the user and the manager of communal property, including forests. This form of communal property management has a long history. Berkes and Farvar (1989), in their study of communal properties, explained that state laws, in general, approve only the property system of state vs. private. They noted that property, in the contemporary Western

view, is either private or it belongs to the state. Resources which are not amenable to private appropriation are called "common property". But "common property" in this sense does not mean that the resource is owned collectively by a group; it means it is not owned by anyone. It is a free good. Berkes and Farvar argued that common property should be restricted to communally-owned resources - that is, those resources for which there exist communal arrangements for the exclusion of non-owners and allocation among co-owners. Gibbs and Bromley (1989) note that the governments of many countries expand their resource management down to the local level through enacting new laws. They explain that this has created resource-use conflicts between local and national interests in such countries.

1.2.2.4 *Social movements*

Community forestry may be transferred from generation to generation by means of tradition and culture, and through new movements amongst villagers to protect their resources from external intervention. This social movement aspect of community forestry consists of three main factors: a common intention to conserve the forest, the local management systems, and strong community organisation (Chamarik *et al.* 1993).

Community forestry reflects the attempt to balance agricultural activities and ecosystems as well as to create social equity. Some such social movements, moreover, have not been limited by the boundary of each community but extend to a network (Koohacharoen 1992; Ramitanon, Karnchanaphan, and Karnchanaphan 1993). For instance, communities in the same river valley and using the same forest have coordinated their management (Tongdeelert and Lohmann 1991; Tan-Kim-Yong 1993). In this context, community forestry is a social movement at the community and/or network level for conserving and managing natural resources which are the common property of a community or a number of communities (see also 1.2.4).

1.2.2.5 *Rural development and sustainable resource utilisation*

Community forestry is a means for directing self development on the basis of tradition and cultural diversity, whilst attempting to conserve natural resources and the environment (Elz 1989; Santasombat, Saengchot, and Sawanrungrang 1992). This development can encourage the community's

ongoing cultural evolution along with maintaining biodiversity, self reliance, and appropriate resource management on a sustainable basis.

Poffenberger (1990b) identifies the forest communities of Southeast Asia as possessing a wealth of knowledge regarding their environment and on how to sustainably manage forest lands to meet their needs. These communities develop strategies to respond to diverse ecological settings, while their local regulations and management practices play an important role in sustaining forest resources.

Thus, community forestry is conceptually more complex than professional forestry and/or government-controlled local forest management, since virtually everything in such communities and their surrounding environments is interrelated and interdependent. In this context, this thesis investigates in depth community forestry practices in a village in Thailand, with the aim of contributing further understanding of public participation in community forestry management.

1.2.3 Interdependence between humans and tropical community forestry

Scientists suggest that tropical deforestation significantly affects global climatic change, in particular, temperature, wind regimes, rainfall, and weather patterns (Myers 1990). Tropical forest conservation is a part of efforts to maintain not only the world's ecosystems but also genetic resources for humanity's sustainable use. Biodiversity, cultural diversity, and local wisdom have substantial value for technological, industrial, and genetic development, for example in pharmaceutical production and the development of plant and animal hybrids. In the current situation, biodiversity, cultural diversity, and local wisdom are being destroyed through accelerated deforestation.

Many tropical forests are also the homes of tribes of indigenous people. Each tribe has developed a lifestyle within the forest, and developed local wisdom about forest ecosystems, herbal medicine, and forest use for hundreds or thousands of years. Thus, forests are places not only for biodiversity but also cultural diversity.

Through studying the forests, humans come to understand the relationships and interdependence of components forming a forest ecosystem. They can also understand the relationships amongst human

communities, and between humans and nature, as well as natural reproduction and sustainability (Chamarik *et al.* 1993). Bertrand (1984), Sale (1985), Dell (1989), the Australian Conservation Foundation (1989), and Gray (1990), provide accounts of the relationships between indigenous people and forests. They argued that the continuity and sustainability of these societies depend on the biodiversity and sustainability of the forest which provides life-support systems, such as food, water, shelter, and herbal medicine.

Chamrusphanth *et al.* (1992) suggested that communities in forest ecosystems have developed belief systems and ideologies which consider trees and forests as sacred. The forests are the living places of guardian and ancestral spirits. These belief systems and ideologies anchor local people's awe and respect, as well as practices of forest maintenance and conservation. If these communities are separated from the forests, not only biodiversity and sustainability of the forests but also cultural diversity and sustainability of those local communities are endangered.

Economic forestry focuses on commercial benefits and wood production. While this concept supports natural resource exploitation, it has been argued that community forestry supports a production system which is in harmony with nature, ecosystem equilibrium, public participation, and the strengthening of community consciousness (Punyakul 1992; Chamarik 1992; Apichatvullop 1993; Cernea 1993).

1.2.4 Community rights and community forestry management in Thailand

The role of community forestry in forest management in Thailand is discussed in detail in Chapter 2. At this point the issue of community rights is considered. Community forestry in Thailand is a form of forest conservation seen in many communities with subsistence agricultural practices.

Many communities have established their own organisations to manage forests. Seventeen villages in See-gao district in Trang province, Southern Thailand, have coordinated intra- and inter-village conservation activities and established a coordinating committee as a network for local mangrove forest management (Hubbel 1992; Rain Drop Association 1992). In the Northeast, there are many community organisations, such as forest conservation committees in Kok Damnoen village in Yasothorn province, Nong Ka, Nong Bua and Sang Pork villages in Surin province, Kam Plear

and Korn Sri subdistricts in Ubonrajathani province, Pakham district in Buriram province, Siew subdistrict in Srisaket province, Kud Plakao village in Kalasin province, and Saeng Pa village in Loei province (Dantanin *et al.* 1993; Chantawong *et al.* 1992). There is also an established network called the Seven Northeast Provinces Conservation Committee to coordinate community forestry management in this region (Dantanin *et al.* 1993). In the North, there are community forestry committees in Nam Krai village and Silalang subdistrict in Nan province, Mae Han village in Mae Hong Sorn province, Muang Ngam village in Chiang Mai Province, and Pa Lan village in Chiang Rai province (Tingsapat 1991; Ramitanon, Karnchanaphan, and Karnchanaphan 1993).

Tongdeelert and Lohmann (1991) showed that muang-faai irrigation systems are managed by communities in northern Thailand to supply water for agricultural production in 80 per cent of Northern irrigation areas (the other 20 per cent being under governmental irrigation systems). A muang faai system consists of a small reservoir which feeds an intricate, branching network of small channels carrying water in carefully calibrated quantities through clusters of rice terraces in valley bottoms. The systems also conserve water catchment areas, ensuring regular run off and protecting the ecosystems of these areas. Tan-Kim-Yong (1985), and Chantawong *et al.* (1992) stated that muang faai is a water-management system developed in response to a common requirement of Northern communities: the need to divert, store, divide, and slow down the swift and heavy flow of streams from forested mountains.

Furthermore, these authors suggested that rituals and beliefs connected with muang faai reflect the villagers' submission to, respect for, and friendship with nature, rather than an attempt to master it. In mountains, forests, watersheds and water, villagers see things of great value and power. This power has a favourable aspect, and one that benefits humans. At the same time, if certain boundaries are overstepped and nature is damaged, the spirits will punish humans. They noted that keeping a muang faai going demands cooperation and collective management, sometimes within a single village, sometimes across three or four subdistricts including many villages. The rules or common agreements arrived at during the yearly meeting amount to a social contract. This governs how water is to be distributed, how flow is to be controlled according to seasonal schedules, how barriers are to be maintained and channels dredged, how conflicts over water use are to be settled, and how the forest around the reservoir is to be

preserved as a guarantee of a steady water supply and a source of materials to repair the system.

The ethical commitment of communities towards the forests is also the starting point for generating traditional rights of controlling, conserving, and managing the forests. An implication of community rights is not the absolute occupation of natural resources, but limited rights to use resources as common property under community regulations.

Community members, who maintain and conserve the forests, have the rights to use and benefit from them (Uwanno 1993). Although each member has rights to use common forests, the community can issue regulations to maintain social equity.

1.2.5 Local wisdom about ecosystems in Thailand

There is evidence that local traditions and regulations relating to community forestry management show an evolution via observation and experience over generations. Knowledge about plants, forests, biodiversity, and the relationships between humans and ecosystems has developed into systematic concepts. These can be thought of as "local wisdom". Aspects of this are summarised below.

1.2.5.1 *Knowledge about relationships amongst humans and soil, water, and forests*

Panyakul (1992), in *People Centered Development: An Overview from Development Experience in Thailand*, argued that villagers who manage community forests clearly understand the interrelationships amongst soils, water, and forests. People know that if forests are destroyed, water run off would be affected and the community could not survive. In this ecosystem, all components show an interrelationship and interdependence with others. Panyakul believed that local wisdom can serve as a cornerstone of sustainable development, as it is developed from the experience of local communities and emphasises harmonious coexistence between humans and nature, and it is oriented toward self reliance, thus requiring little input from external sources. He gave concrete examples of community-based development, including natural-dying and local weaving activities, and alternative forms of agriculture. For example, rather than monoculture,

there is crop rotation and diversity, organic farming integrated with animal husbandry, and local water management techniques.

1.2.5.2 *Knowledge about the structure and characteristics of forests*

Chamarik *et al.* (1993), in an overview of community forests in Thailand, stated that villagers understand plant stratification and species habitats, for example, forest vegetables and medicinal herbs. Forest areas are classified by conservation and use purposes.

1.2.5.3. *Knowledge about the limitations of forest use*

Tolba (1982) argued that, in traditional rural societies, socioeconomic decision-making is based on deep insights into the complex interactions between social, economic, demographic, and physical factors, gained by experience over generations. It permeates all factors of social life: socioeconomic structures and processes, traditions, culture, religions, and myths. He notes that these people maintain a balance within the carrying capacity of the surrounding forests. Ramitanon, Karnchanaphan, and Karnchanaphan (1993), and Techamong (1993) also gave evidence from their studies that villagers formulate methods, guidelines, and prohibitions against overuse which might cause imbalance. Their knowledge encompasses the structure and characteristics of the forests, the cycling of nutrients in the forest ecosystem, and the recovery processes after ecosystem disruption associated with rotating cultivation.

1.2.5.4 *Knowledge of the nutrient cycle and biomass in tropical ecosystems*

Many hill tribe communities use crop rotation methods, with the burning of cut and dried vegetation. These methods can increase organic elements and encourage self-recovery processes of soil nutrients, according to Tan-Kim-Yong (1991). Rural villagers are also said to realise the importance of the biodiversity of the forests, not only for their own use but also for protecting soils and maintaining ecosystems (Lohmann 1991).

1.2.6 Community potential in forest management in Thailand

Besides the local wisdom about ecosystems and traditions of conservation, communities have developed their forest management potential in two particular ways.

1.2.6.1 *Roles and adaptive capability of community leaders and organisations*

Vaddhanaphuti (1984) describes the important roles within community forestry usually held by traditional leaders. These leaders, in general, descend from the first families occupying and settling an area. Each of these families may hold large amounts of land in a village. This large land tenure and patronage can lead these families to take important roles in resource management and in formal village committees (Jitpiromsri 1985).

The village committee is the main organisation which implements management decisions and solves the conflicts in resource use (Pragtong 1991; Hafner 1993). Village committees also coordinate resource use with neighbouring villages.

There are many cases of community forestry conflicts between communities and agro-forestry businesses and/or the government. The village committees' roles are weakened because these committees also play another role as local government agencies (Apichatvullop 1993). To solve these problems, many communities have adopted informal organisations to manage community forestry, which are separate from village committees (Ramitanon, Karnchanaphan, and Somsak 1983), such as *muang faai* committees and community forestry committees.

1.2.6.2 *Villagers' potential to resolve resource conflicts*

While conflicts over community forestry have been increasing, villagers show their adaptive capability by inventing new tactics and integrating these tactics with their traditions through both formal and informal channels, amongst themselves and/or coordinating with outside organisations. These tactics include the following.

Revival of traditions and informal negotiation

These tactics have been applied to solving problems inside the village or between neighbouring villages, and rely on the belief systems and traditions of respect amongst involved villagers and communities (Chamrusphanth *et al.* 1992; Techamong 1993).

Organising movements to oppose and to protest

This tactic is used for conflicts with external business operations, or government development projects (Leungaramsri and Rajesh 1992; Hubble 1992; Local Development Institute 1992), such as the protests against logging concessions, agro-forestry plantations, and large dam construction projects.

Network establishment

Community networks have been established for increasing organisational strength and bargaining power. There are several levels of these networks, namely, subdistrict, canal or river basin, province and region (Lohmann 1991; Rain Drop Association 1992; Tan-Kim-Yong 1993).

Community-government cooperation

In some communities, people have managed their forests with support from government agencies, such as the Royal Forestry Department (RFD), the Community Development Department (CDD), and the Local Administration Department (LAD). Amornsanguansin (1993), and Apichatvullop (1993) studied Thailand's Upland Social Forestry Project, which implemented pilot projects for government-community forestry in 18 villages in the North and Northeast regions. These projects used village organisations, such as village committees, youth groups, and women's groups. These authors state that the significant factor is the capacity of some government personnel, "community organisers", to recognise the important implications of public participation in forest management.

Improving managerial efficiency

Tingsapat (1991), in his study of community forestry in Silalang subdistrict, northern Thailand, notes that 10 villages in this subdistrict established the

Forest and Watershed Area Protection Committee in 1985. The committee frequently conducts forest patrol activities. The patrol squad comprises three groups of 10 members each. These activities support the managerial attempts to protect the forests from both internal and external encroachment. Charoenruk (1991) noted that Pae village in Chiangmai, northern Thailand, conducts forest patrols every day. The villagers also protect the watershed from bushfires by making fire break trails around the area and collecting dry wood to reduce the danger.

Hubble (1992) and the Rain Drop Association (1993) studied seven villages in See-gao district, southern Thailand. The two studies explain managerial improvement attempts in these communities through planning and implementing the Community Mangrove Recovery Project and the Seagrass Conservation Project. These encourage local students, teachers, and private and government sectors to join the local villagers in rehabilitation of the community mangrove forests. These villages also disseminated their activities through mass media to gain public acknowledgement and to encourage other communities to participate in community forestry and resource management.

Cooperation with other organisations

Cooperation has proved to be a process of socialisation which strengthens villagers' organisations. The process may also increase organisational bargaining power against the state and the business sector in negotiation on resource conflict issues, according to Lohmann (1991) and Leungaramsri and Rajesh (1992). Other external organisations involved in the cooperation process are NGOs, academics, universities, and the mass media.

1.2.7 Common characteristics in community forestry: summary

Based on the literature, communities involved in community forestry, particularly in Thailand, commonly show six characteristics.

(i) High communal solidarity and cultural cohesion. A community not only resides in the same area, but exhibits solidarity by the social relationships among its members, for instance, kinship relations. Community consciousness appears in belief systems, ideology, traditions, and local ceremonies. These not only contribute to solidarity but also to ideological reproduction.

(ii) Common benefits. Villagers' benefits from land, water, and forest use for agriculture and life-support systems, including food, medicine, house construction, household materials, and fuelwood, are the basis of community forestry management. Thus, forest conservation, from this point of view, maintains common benefits.

(iii) Forest conservation consciousness. This consciousness covers beliefs, ideology, and community rights. It may be maintained by, at least, three conditions: transfer of tradition and ideological reproduction from generation to generation, the necessity to protect community and ecosystem equilibrium, and resistance to external interference.

(iv) Strong leaders. Almost all communities maintaining community forests have strong leaders. These leaders not only implement regulations for forest conservation, but also dynamically use local wisdom and traditions to adapt to changing socioeconomic and political situations.

(v) Community organisation. Communities use managerial organisations which may be formal (such as a village committee and subdistrict council) and/or informal (such as a community forestry committee and muang-faa committee). In some cases, organisational networks are established which support extensive movements.

(vi) Equitable and sustainable managerial systems. Managerial systems are one of the key factors in achieving community forestry effectiveness. Four significant principles are noted: the recognition of community rights and traditions in community forestry management, the realisation of members' common benefits and social equity, the equilibrium and sustainability of productive systems and ecosystems, and, particularly, public participation.

These factors appear to be common to, and may be the basic conditions for, long term community forestry. Management systems for this kind of forestry are oriented towards meeting needs for self-reliant production and a secure livelihood. They are based on local wisdom and knowledge, which are evolved from long-accumulated experience and are derived from observation of the interdependence between individuals and the community on the one hand, and the surrounding ecosystems on the other. In particular, this system recognises the right of all community members to participate in management and conservation as well as to utilise the forests,

under certain regulations set up and agreed upon by members of the community. It is the aim of this study to investigate these principles as they are manifested in a particular area.

1.3 The thesis study

The study area is Sanepong village, Laiwo subdistrict, Sangklaburi district, Karnchanaburi province, Thailand. It is in rugged, quite mountainous country in western Thailand near the Thai-Myanmar (formerly Burmese) border, and is inhabited by Karen hill tribe people. The village is also located in Thung Yai Naresuan Wildlife Sanctuary (see Map 1.1), a section of Thung Yai - Haay Khakaeng World Heritage Area. The World Heritage Area is managed by the Royal Forestry Department, and was declared to protect the flora and fauna in what is one of the largest areas remaining in South East Asia with a wide diversity of intact forest types. The government has been applying pressure on the Karen since the World Heritage declaration for them to move from the area.

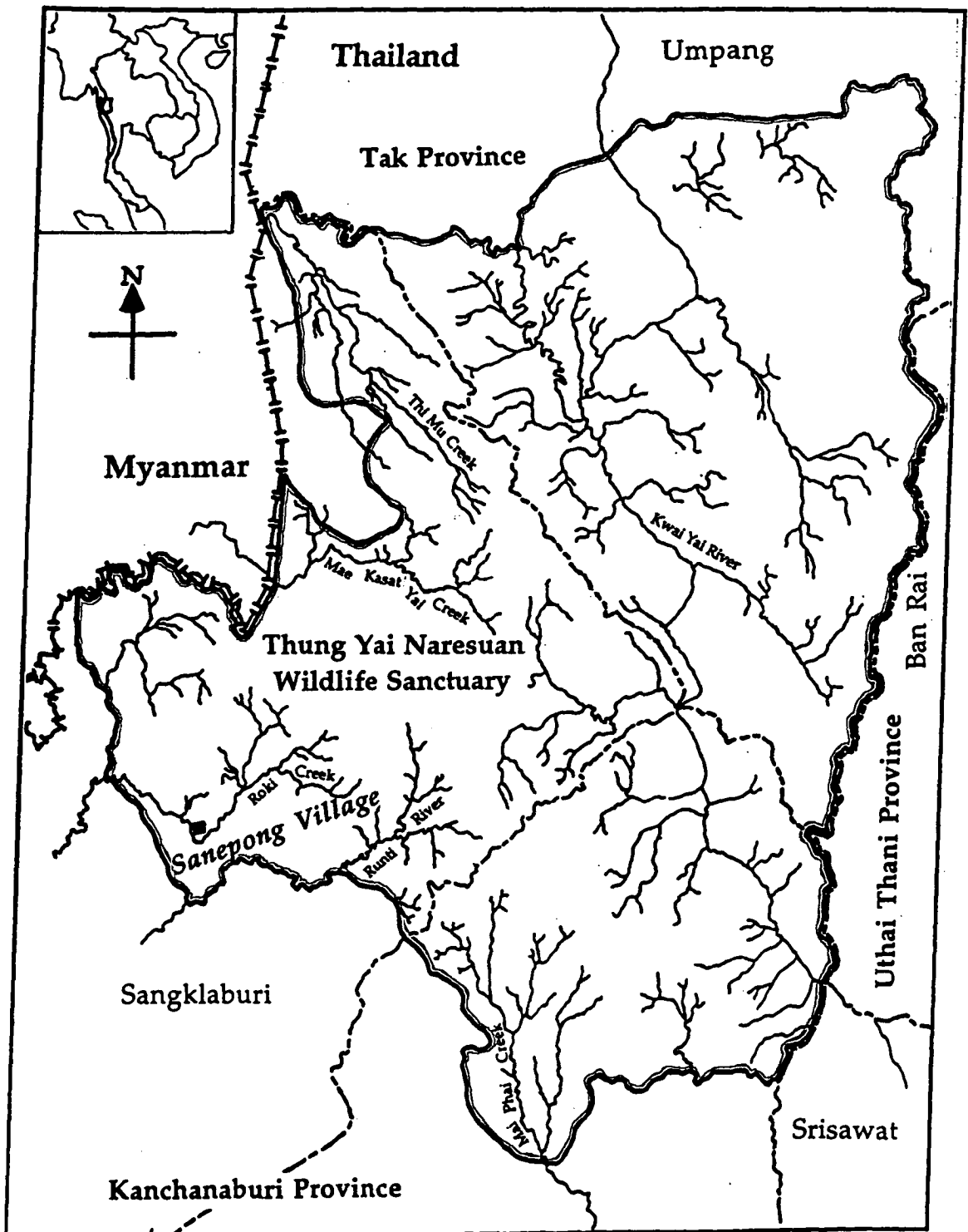
1.3.1 Objectives

- (i) To study relations between people and forests, including the pressures on the community and their adaptive dynamics.
- (ii) To study the cultural traditions of the people related to their forest management.
- (iii) To explore the conditions and constraints governing the efficacy of public participation in forest management, and appropriate methods and guidelines for participation.
- (iv) To analyse coordination and cooperation in forest management among government agencies, non-government organisations (NGOs), and the villagers.

1.3.2 Context of the thesis

Chapter 2 explains the broader context of Thai forest management, giving a historical overview. It covers the current state of Thai forests. Chapter 3 gives the details of the case study area and the research methodology. Chapter 4 presents the research results from the author's field study,

Map 1.1 Thung Yai Naresuan Wildlife Sanctuary, Showing location of Sanepong village



Legend

Scale 1: 500,000

- Wildlife sanctuary boundary
- National boundary
- Provincial boundary
- District boundary

undertaken during two trips to Sanepong village in 1993 and early 1994. Most data was collected during the second visit of seven weeks. Chapter 5 discusses the results, showing the factors which affect public participation in community forestry management in Sanepong. Lastly, Chapter 6 provides conclusions and recommendations. Lessons from Sanepong which are potentially of wider applicability to other community forestry projects are included, and comments on the management of World Heritage Areas by traditional occupants are made.

CHAPTER 2

THE EVOLUTION OF FOREST MANAGEMENT AND THE STATE OF THE FORESTS IN THAILAND

2.1 Evolution of Thai forest management

Forest management in Thailand has evolved with the socioeconomic and political development of the country. This evolution can be divided into four main periods: the traditional, the colonial, the industrial, and the present.

2.1.1 Traditional period

In former times, what is now the Thai state consisted of several small communities of both Thais and minorities. These communities were grouped into many city states on the basis of geographical and ethnic boundaries. Thailand was established by the combination of these city states, and the centre of the Thai ethnic group became the capital city. During this period, environmental management decisions were made by the local communities. These management systems were developed on the basis of belief systems, traditions, local wisdom, and local agreements. Each community had its own management organisation comprised of a village headman and a village committee. However, there were three aspects overseen by the central regime:

- tax and revenue collection;
- land conflict management; and
- land expropriation for public use (Uwanno 1993).

The traditional systems still existed for more than 800 years after the emergence of the Thai state, up to the colonial period.

2.1.2 Colonial period

Since the beginning of European colonisation in Southeast Asia, the Thai central regime tried to maintain its sovereignty by centralisation and

westernisation. Private property legislation and resource management centralisation, in particular, were attempted (Chamarik *et al.* 1993). It was the beginning of the transfer of natural resource management rights from the local communities to the central government. The Thai government was then forced to allow foreign companies, supported by the military forces of their countries, to exploit natural resources, especially through logging and mining. To manage forest resources and logging concessions, the Royal Forestry Department was established in 1896.

2.1.3 Industrial period

Extensive deforestation accompanied the acceleration of economic development dating from the 1960s. During this period, many forestry laws were implemented such as the *Wildlife Preservation and Protection Act 1960*, the *National Park Act 1961* and the *Forest Reserve Act 1964* (Arbhabhirama; Phantumvanit and Elkington 1987). These laws provided for the commercial exploitation, rather than the preservation of the forests. Their main purpose was to classify national forests into three types: wildlife sanctuaries, national parks, and forest reserves. They legalised logging concessions in the state forest reserves. Under these acts, wildlife sanctuaries, national parks and forest reserve areas were plotted without any provision for existing communities (Uwanno 1993). Those who traditionally lived in the areas, and those who settled before the laws were passed, were designated illegal settlers. Moreover, various governments during the period granted hundreds of logging concessions to private enterprises to exploit these forest reserves (see also 2.2).

2.1.4 Present period

As the business sector has dramatically grown, it has invested in agroforestry to supply raw materials for the highly profitable pulp and paper industries. To encourage this kind of investment, the Thai government established the National Forestry Policy in 1985, which consisted of three important principles:

- (i) state the proposed forest areas as at least 40% of the country's land;
- (ii) encourage and motivate private agro-forestry plantations to supply raw materials for pulp and paper industries; and

- (iii) formulate the Thai Forestry Action Plan as a part of the natural resource development plan and establish the National Forestry Policy Committee to manage the National Forestry Policy and the Thai Forestry Action Plan (Chamarik *et al.* 1993).

After declaring this policy, the government, through the Royal Forestry Department, the Royal Thai Army and the Ministry of Interior, has implemented the Land Distribution Programme for the Poor Living in Degraded Forest Reserves to resettle people outside the forests and lease these lands to the agroforestry businesses. This problem has created conflict between the government and the agroforestry businesses on the one hand, and the affected people on the other, involving confrontations and violence (Koohacharoen 1992). Some major events are listed below.

Selected chronology of local opposition to commercial tree plantations*

- February 1985: Villagers from 15 villages in Nong Bua subdistrict, Surin province, staged a demonstration against Eucalyptus planting.
- May 1985: Villagers from Poan Sai subdistrict, Roi Et province, requested that the government give expropriated land back to the village.
- June 1985: Villagers from three villages in Rattaburi district, Surin province, converged to uproot Eucalyptus saplings in the commercial reforestation project area encroaching on village farmland.
- September 1985: 2,000 villagers from Siew subdistrict, Uthompon Pisai district, Srisaket province, uprooted Eucalyptus saplings, burnt down the government Eucalyptus nursery and demanded a halt to the reforestation programme in None Lan community forest.
- December 1985: Villagers from Nongbua and Kokmamuang subdistricts, Pakham district, Buriram province, launched a rally at the local government office to protest the Eucalyptus

* Source Koohacharoen (1992)

reafforestation and resettlement issue. They demanded permission to undertake reafforestation with rubber trees instead of Eucalyptus.

- February 1986: Villagers from Nam Kam village, with another eight villages in Non Sawan subdistrict, Patumratana district, Roi Et province, uprooted Eucalyptus saplings and attacked the bulldozers in order to stop clearing of natural forest in the name of reafforestation. About 900 rai* of cleared forest has since been reafforested with native tree species by the villagers.
- March 1986: Villagers from Kok Ekwang subdistrict, Buengkarn district, Nongkai province, rallied in the district to protest against land speculation by developers related to the Eucalyptus reafforestation business.
- March 1986: 2,000 people from two subdistricts in Buengkarn district, Nongkai province, demanded the acquittal of villagers charged with destroying 400 rai of Eucalyptus plantations and burning the government Eucalyptus nursery.
- June 1986: 3,000 people from Wattana Nakorn district, Prachinburi province, burnt a forestry official's house in an act of reprisal against the damage to crops by encroaching Eucalyptus plantations.
- June 1987: Thousands of people from Pakham district, Buriram province, uprooted eucalyptus saplings, burnt the government nursery and cut down 200 rai of eucalyptus trees in a demand to the government to return land expropriated for Eucalyptus planting.

In 1985, the Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP) and the World Bank, in cooperation with the World Resources Institute (WRI) announced the Tropical Forestry Action Plan (Koohacharoen 1992). This plan promotes a form of

* 2.5 rai = 1 acre

land use that maximises economic returns in order to solve the shortage of fuelwood in rural areas, to support the establishment of institutions concerned with economic forestry, and to conserve genetic resources in order to supply industrial development in the long term (Lohmann and Colchester 1990).

In Thailand, the initial impetus for a Thai Forestry Master Plan came from the Finnish consulting engineer, Jaakko Poyry. A former Prime Minister (Prem Tinsulanonda) then secured a commitment to fund the plan from the Finnish government during a visit to Helsinki in 1988. The terms of reference of the Thai Forestry Master Plan were drawn up by Jaakko Poyry in that year.

In late 1990, Mr Rauno Laitalainen, the chief of the Thai Master Plan team, invited Thai NGOs and academics to a meeting to exchange views about the Plan, which could then be said to have included the "participation" of the public and NGOs. However, Thai environmental groups and academics were critical of the commercial bias of the terms of reference document from the start. The document emphasised the promotion of fast-growing commercial plantations. Moreover, it suggested the lifting of Thailand's logging ban on the grounds that it seemed unlikely that the country will indefinitely deny itself the use of all its natural forests for sustained yield timber production (Koohacharoen 1992).

Following a meeting with Laitalainen in February 1991, Thai NGOs insisted that the terms of reference should be changed. The Thai NGOs' recommendations (Non-Governmental Organisation Coordinating Committee on Rural Development 1991) are listed below.

(i) As the Master Plan is concerned with tropical forests rich in biological resources and with their ecological sensitivity, the primary emphasis must be put on protection and conservation of natural forests. Biological research should be promoted with a view to Thailand's future, and to the development of Thailand's science and technology.

(ii) The definition of degraded forests should be changed so that priority is given to regeneration of tropical forest ecosystems. Equating the plantations of fast-growing species with forest cover, as so earnestly articulated in the 1985 National Forestry Policy, is totally unacceptable. Fast-

growing tree plantations, where justified, must have no adverse impact on the ecology of the neighbouring land.

(iii) The goal of drafting comprehensive forestry legislation which covers forest protection management and community forestry should be explicitly stated.

(iv) Local people's rights and local knowledge related to conservation and sustainable management of natural resources must be explicitly recognised in the master planning process. Projects should involve local people and NGOs in the planning process. Consequently, the aid budget for the planning purpose must be restructured to provide direct support to villagers in their efforts to develop and establish decentralised planning and decision-making mechanisms.

(v) Full access to information pertaining to the planning process, and public access to all master plan meetings, must be guaranteed by the contracting parties. All dissenting opinions must be officially documented.

(vi) The executive authority should be under the jurisdiction of a higher-level body that is fully accountable to the public, instead of being left solely to the Royal Forestry Department as at present.

The above six-point recommendation was endorsed and agreed upon by both Mr Rauno Laitalainen, in his capacity as the master plan team leader and representative of Jaakko Poyry Co., and the NGO-Coordinating Committee on Rural Development (NGO-CORD) together with the Project for Ecological Recovery, as representative of the concerned Thai NGOs. Subsequently, however, Laitalainen refused to sign the above recommendations.

Lohmann and Colchester (1990) suggest that, in the case of Thailand, the National Forestry Policy and Plan formulation should not only concentrate on what the Government and bureaucratic sector would like to do with forest resources and land, but also consider social equity and justice. They also query whether policy and plans reflect current forest conditions. They appear to doubt that local communities, NGOs, academics, and politicians have truly been involved in this policy and plan formulation.

2.2 The state of the forests in Thailand

Tropical forests of Thailand are rich in flora and fauna, including 916 bird species, 55 rattan species (out of 600 in the world), and 41 bamboo species (out of 200 in Southeast Asia). There are an estimated 27,000 species of flowers, including more than 1,000 species of orchids in the Thai-Malayan region alone, constituting 10% of the world's flower species (Chantawong *et al.* 1992).

The different forest ecosystems of Thailand and their rich biodiversity are important for the large rural population that depends on the forests for their livelihood. Pintong (1991), in his study of the evolution of forest encroachment in Thailand, and Nakabutra (1993) state that the forests are used as catchment areas to supply water to farmers' rice fields, as raw materials for house construction and fuel, as a source of herbal medicine and food including mushrooms, bamboo shoots, honey, vegetables and fruit, and as fishing grounds in coastal mangrove forests. They add that the forests are a rich source of cultural strength. Despite large migration to the cities over the last twenty years, these factors continue to be important in Thailand which still has 72.6% of its population in rural areas (National Economic and Social Development Board 1989).

In 1961, 53% of the country was still covered with forests, but there was a rapid decrease to 43% in 1973, 38% in 1976, 34% in 1978, 29% in 1985 (Arbhabhira, Phantumvanit and Elkington 1987) and 27.95% in 1989 (Royal Forestry Department 1992). In other words, Thailand lost about 45% of its forest areas over this 28 year period. The continuing deforestation can be attributed directly to various government policies, especially the laws and policies of the Thai governments, implemented since the establishment of the Royal Forestry Department in 1896 (Chamarik *et al.* 1993), and originally influenced by British commercial interests.

Historically, Thailand's forests have been viewed by the state as a vast timber resource. Large scale commercial logging by Thai and multi-national companies has been a key cause of the rapid rate of deforestation. In 1968, 516 logging concessions were granted covering an area of 150 million rai (60 million acres) of forests, which accounts for almost half of Thailand's total land area of 321 million rai (128 million acres). In 1987 alone, three million cubic metres of wood were extracted. Before a nationwide logging ban was

declared in 1989, there were 316 logging concessions covering an area of 93 million rai (37.2 million acres) (Royal Forestry Department 1990).

In 1986, local people's protests against commercial logging practices began in the Northern region of Thailand where uncontrolled logging was destroying watershed areas and threatening the livelihood of the rural agricultural population. This local opposition was strengthened with support from non-governmental organisations (NGOs), academics, environmentalists, university student groups and the country's media.

In late 1988, heavy floods devastated many villages in Southern Thailand. Mudslides carrying uprooted trees and thousands of logs washed down the deforested slopes, killing hundreds of villagers and causing extensive damage to property. With pictures of homeless villagers and farmland buried under sand appearing in the newspapers and on television every day, the anti-logging opposition suddenly grew into a national movement (Chantawong *et al.* 1992). This unprecedented disaster made a huge impact on the Thai public. The anti-logging sentiment that had been expressed long before the flood grew stronger. Leungaramsri and Rajesh (1992) state that those who had previously seen the cancellation of logging concessions as an impossible demand began to vigorously support the proposal. They noted that the Prime Minister (General Chatchai Choonhawan) and the Agricultural Minister (General Sanan Kajornprasart), of the time were forced to negotiate with the villagers, students and environmentalists. The Government was under tremendous pressure from the public anxious to see the end of Thailand's logging era. The strong people's movement against commercial logging forced the government to declare the total logging ban in January 1989.

The National Forest Policy of Thailand drafted in 1985 stipulated a target area of 40% forest cover, about 182 million rai (51.2 million acres) (Arbhabhirama, Phantumvanit and Elkington 1987). This policy divided forests into two types: forests for conservation (15%) and for commercial production (25%) (Chamarik *et al.* 1993). After the ban, the national goal for conservation of forests was increased from 15% to 25% of the country's total land area, or about 84.5 million rai (33.8 million acres), by designating forest areas as national parks and wildlife sanctuaries, and decreased commercial forests from 25% to 15% (National Economic and Social Development Board 1992; Royal Forestry Department 1992).

This policy emphasised the role of the business and private sectors in helping government programmes aimed at the reafforestation of the forest area classified as production forests, more than half of which is degraded forest land. The policy was ostensibly aimed at meeting the domestic wood demand for housing and fuelwood. The private sector, consisting of Thai and multi-national companies, however, introduced plantations of fast-growing tree species like *Eucalyptus camaldulensis* to provide raw material for pulp and paper industries.

The reafforestation programme, characterised by large Eucalyptus plantations, grew into a major controversy in Thailand. The villagers and NGOs opposed the reafforestation programme because forest land was being taken over by tree plantations, and because Eucalyptus trees were not suitable for their needs. In many areas, Eucalyptus plantations had been found to deplete the ground water supply, threatening irrigation and agriculture. The Eucalyptus monoculture offered meagre benefits to the local people in terms of fuel and fodder needs.

Moreover, NGOs, academics, and other concerned people have been criticising the principles of the forest policy itself as biased in favour of commercial reafforestation and ignoring the question of land rights for more than 10 million people living in these so-called degraded forest areas.

The opposition to fast-growing tree plantations, especially Eucalyptus, led to violent conflicts between villagers and local authorities in some areas. The government, however, has not relented in the face of strong opposition to the controversial reafforestation programme, nor has it addressed the crucial land rights question.

Government development policies directed towards attaining "newly industrialised country" (NIC) status have had a destructive impact on the country's forests. These policies include mining projects, the proposed construction of 48 roads bisecting five national parks and eight wildlife sanctuaries, and energy and irrigation development policies involving the construction of five large dams, proposed in the Seventh National Economic and Social Development Plan (1992-1996). These dams would submerge more than 70,000 rai (28,000 acres) of forest (Chantawong *et al.* 1992). The aggressive promotion of industrial agriculture and tourism contributes to increasing encroachment on natural forest areas for agroforestry plantations, hotel resorts, golf courses, and also fuels

widespread land speculation. In some cases, business interests have persuaded villagers occupying degraded forest land to sell their lands. Subsequently, the villagers illegally encroach on new forest land.

The 1989 logging ban provided a moratorium, but has not improved Thailand's forest situation. Local people continue to be blamed for forest encroachment and degradation. The government views the forced displacement of villagers from their land as a solution to the deforestation problem. The military-backed Land Distribution Programme for the Poor Living in Degraded Forest Reserves, which was initiated in mid-1991 (Hubble 1992), envisaged moving more than ten million people out of forest reserves, as a measure to protect the forests.

The government refuses to acknowledge that the community forestry practices have been protecting forest areas. The life-sustaining relationship between local villagers and their forest ecosystems is ignored in policy planning, which, in fact, undermines local people's capacity to conserve and manage their forests.

At this critical time, Thailand appears to need sustainable forestry management practices. Community forestry is among the options considered in the national forestry management plan as stated in the Seventh National Economic and Social Development Plan 1992-1996. The reluctance of the Government to promote community forestry is a major public concern.

In conclusion, despite intentions that state otherwise, trends in Thai forest management can be summarised as follows:

- (i) centralisation of forest management;
- (ii) transfer of community rights over forests to the central government;
- (iii) separation of people and communities from the forests;
- (iv) granting of logging concessions and lease of forest land to agro-forestry business; and

- (v) implementation of management and development practices that fail to provide for biodiversity and cultural diversity.

CHAPTER 3

OVERVIEW OF THE CASE STUDY AND RESEARCH METHODOLOGY

3.1 Overview of the case study area

Sanepong village was chosen to investigate public participation in forest management because its surrounding forests exhibit a diverse and apparently healthy flora and fauna, and its people are known for their long standing relationship with the forests. The community has used traditional methods of conserving and managing their natural resources for hundreds of years, but have had to adapt these methods under new socioeconomic pressures. The case study was undertaken to describe aspects of this community and its environmental management in depth. Sanepong, the site of the case study, is one of three villages in the first village group of Laiwo subdistrict in Sangklaburi district of Kanchanaburi Province (see Map 3.1 showing the local surroundings).

Karen* people have been living in this area for more than 200 years. That the forests they have used for such a long period are deemed World Heritage suggests they have used good land management practices. Objective measures of their effects on the forest ecosystems have never been undertaken, however. A United Nations Environment Programme management research project is under way in the area currently, but it is too early for results.

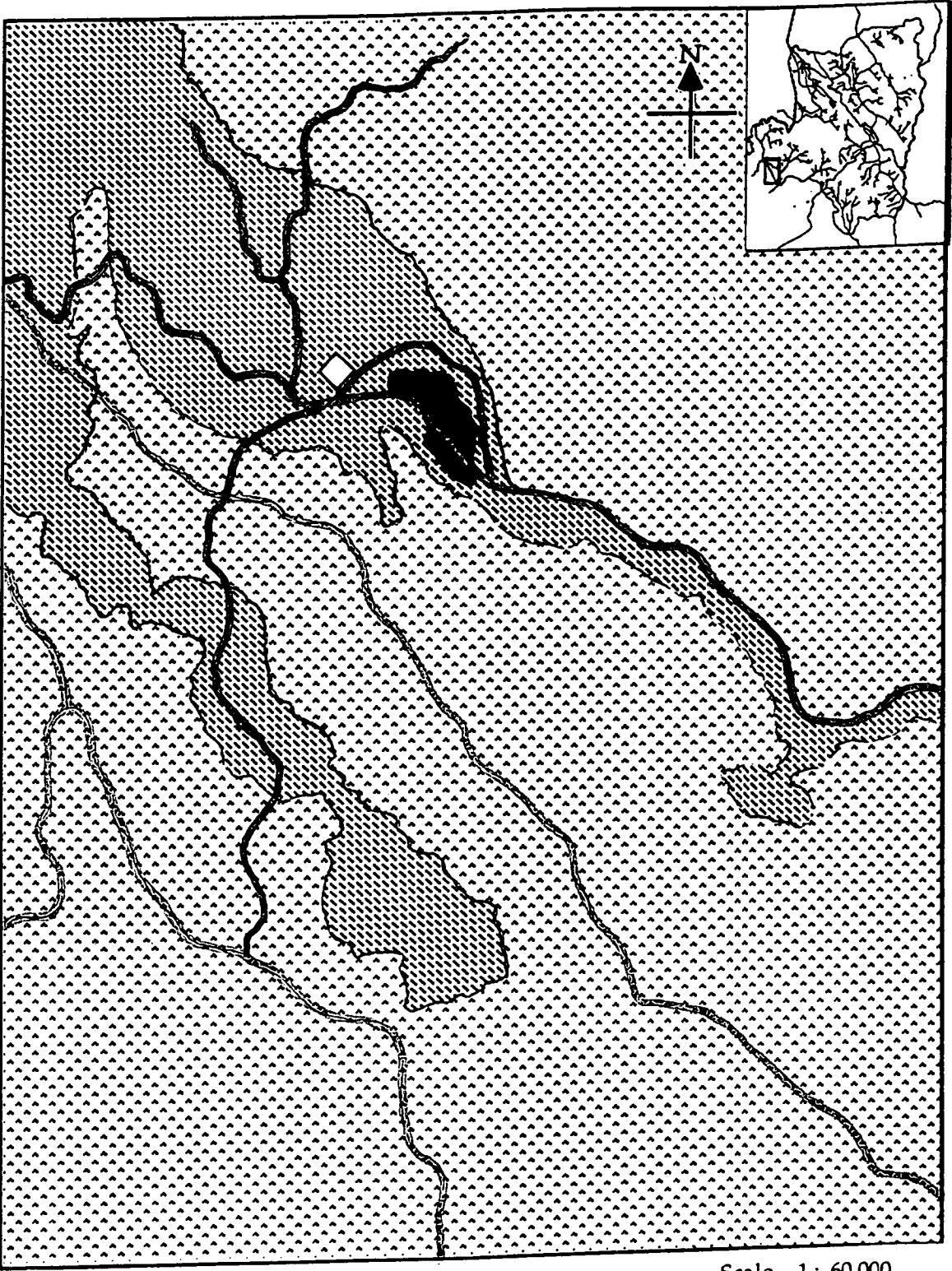
Sanepong has 56 households with a total population of 294 (male 160/female 134). All are fundamentalist Buddhist. The village is divided into two parts by the Roki Creek. The village also hosts the following institutions and agencies:

- (i) the Sanepong Monk Practicing Temple;

* The Karen people are the largest hill tribe group in Thailand, including about 300,000 of all 600,000 hill tribe people.

** Sunthoravej School was established and run by police rangers because of the remote and politically sensitive location.

Map 3.1 Sanepong village and its surroundings



Scale 1 : 60,000

- Legend

 - Wildlife sanctuary boundary
 - Roki Creek
 - Main road
 - Village road
- Sanepong village
 - Valley area
 - Mountainous area
 - Forest Protection Unit

- (ii) the Sunthoravej School**;
- (iii) the Non Formal Education Centre (see section 4.5.1.3);
- (iv) the Kindergarten Centre;
- (v) the Sanepong Forest Protection Unit (see section 4.5.1.1);
- (vi) the Hill Tribe Development Unit (see section 4.5.1.2); and
- (vii) the field office of the Wildlife Fund Thailand (see section 4.5.2).

Sanepong village is also situated at the edge of a vast tropical rainforest area called "Thung Yai Naresuan". This forest is fertile and rich in both flora and fauna. There are 21 endangered animal species in this area (Thiraprasat 1992). In 1974, the Thai government declared the area as the Thung Yai Naresuan Wildlife Sanctuary (Chantawong *et al.* 1992) under the *Wildlife Preservation and Protection Act 1960*. Suddenly, regulations prohibited land occupation, the cutting down of trees, and the hunting of wild animals (Chamarik *et al.* 1993). This sanctuary covers all villages in the Laiwo subdistrict. Since the declaration, all villagers here have been residing illegally. The government, however, let the people continue to live in the area and this situation still holds.

In 1991 the United Nations Educational, Scientific and Cultural Organization (UNESCO), following a Thai government proposal declared the Thung Yai Naresuan Sanctuary and, to the east, the Huay Khakaeng Wildlife Sanctuary a World Heritage Area (Leungaramsri 1992). After the World Heritage declaration, the government formulated a resettlement project to move the people out of the forest area. To conduct this resettlement, the Royal Forestry Department has been working with the Royal Thai Army and the Ministry of Interior through the Land Distribution Programme for the Poor Living in Degraded Forest Reserves.

The villagers in Laiwo subdistrict, including Sanepong villagers, have, nevertheless, opposed the programme and called for the continuation of their traditional occupation of this area. Working in this village since 1984, the Wildlife Fund Thailand has coordinated negotiations between the government agencies and the affected people.

Wide opposition to the eviction of farmers and hill tribes had been growing since 1986, but exploded in 1989. Environmentalists in Thailand came together and issued a statement condemning Thai forest policy for the eviction of villagers from state forests (Chamarik *et al.* 1993). NGOs throughout the country seized this moment to encourage public recognition that the reinstatement of community forestry was a solution. Under these renewed pressures, the government set up a national committee to draft a Community Forestry Bill. Sanepong people as well as other affected people are hoping this law will solve the problem.

Since Thung Yai Naresuan forest area was declared a wildlife sanctuary in 1974, and a World Heritage Area in 1991, there have been conflicts between villagers and the authorities about illegal activities in this area. In recent years, three major issues have been discussed amongst people living in the area, NGOs, environmentalists, academics, and some government agencies.

- (i) Do the Karen people have the right to continue living in this area?
- (ii) How can they participate in the management of local ecosystems?
- (iii) What are the appropriate relationships amongst the government authorities, the communities, and the forests?

3.2 Data collection

Four types of data collection were employed in this study. The first (section 3.2.1) took place in both Tasmania and Thailand. The other three were entirely field-based, conducted by the author during a seven week stay in Sanepong (see sections 3.2.2-3.2.4).

3.2.1 Literature review and research programme development

The investigations of selected community forestry literature and of forest management in Thailand were carried out both in Tasmania and in Thailand. During a first trip to Thailand (21 July - 26 August 1993), information about community forestry and forest management was collected from university libraries, government agencies, and NGOs. Socioeconomic and general information about Sanepong village was also

collected in this phase to provide an overview of the study area. Further research was then conducted in Tasmania to develop the ideas for the fieldwork programme and the methodology. During the first field trip, the author also made fieldwork arrangements with the Wildlife Fund Thailand and the Royal Forestry Department. The author visited the case study area, and participated in the Operational Conference on Conservation Forest Management by Local Public Participation at Kanchanaburi which was concerned with the villagers living in Thung Yai Naresuan, during 16-17 August 1993.

3.2.2 Behavioural observation

The researcher participated in community activities as much as possible to study participation and interactions among villagers, interactions between leaders and villagers, and collective behaviour. Behaviour and activities concerning the utilisation, conservation, and management of the community forests were recorded to support analysis from other data collection programmes.

3.2.3 Information on traditions, culture, and local wisdom

Local written material, folk stories, proverbs, songs, ceremonies, taboos, and wisdom about forest management were recorded using a standard form (see Appendix 1, page 101). Factors such as kinds of media, contexts, and activities were recorded, as was anything which demonstrated interactions between culture, traditions, local wisdom, and the forests.

3.2.4 Interviewing

The target population for in-depth interviews was all 56 households in the village. As discussed later, practical difficulties resulted in 25 households being surveyed in this way. One representative of each household was to be the respondent. A questionnaire was developed in Hobart by the researcher to help in this process (see Appendix 2, page 102). The questions were designed to cover eight major parameters:

- (i) the socioeconomic circumstances of the target population with reference to the forests;
- (ii) forest products and other benefits from forest management;

- (iii) sense of commitment to the forests;
- (iv) capacity to manage the forests;
- (v) degree of involvement by members of the community;
- (vi) the factors which explain involvement;
- (vii) conflict resolutions and the forests; and
- (viii) degree of villager satisfaction with current forest regulations.

The author stayed in Sanepong village from 27 December 1993 - 15 February 1994. Due to the dry season in Thailand at the time, the villagers were less involved in cultivation activities and more in social activities. In the rainy season the villagers work on their fields. Access to the village is difficult, if not impossible, in the wet season. During the field research, the author stayed at the Wildlife Fund Thailand field office which is situated in the village, in order to have close contact with the villagers.

Most of the Karens in Sanepong cannot speak the Thai language. To communicate with them, particularly for the interviews, the author sought help from two villagers who fluently speak Thai. One was a "knowledgeable young" person (see section 4.3.2), and the other a Wildlife Fund Thailand employee. As eager but untrained volunteers, at first they tended to influence the answers from respondents. With practice, they were able to directly interpret questions and answer without adding their own recommendations. However, it must be acknowledged the interpreters may have affected the research results, but the author believes that the findings truly reflect the respondents views.

3.3 Data analysis

In line with the qualitative approach applied to data collection, the emphasis was on interpretation and explanation of causal factors in villager behaviour. Trends in behaviour, opinions, and attitudes are also given, however.

Analysis focuses on the individual, the family, and the community. Social interaction in the form of traditions, culture, and local wisdom is analysed

and discussed together with the behavioural observation results. This analysis is presented in four sections in Chapter 4. These four sections are: economic factors and livelihood of the villagers, social structures and their relationships, forest-related traditions and culture, and other factors concerning the relationships between villagers and the forests.

The household interview results are analysed and discussed separately in section 4.6. The responses to the questionnaire are analysed and discussed in detail.

In the discussion (Chapter 5), threads linking the factors are drawn out. This leads to an interpretation of the relationships amongst commitment, participation, and forest management in the village.

CHAPTER 4

RESEARCH RESULTS

Before discussing the specific results from the field methodologies, namely, the behavioral observation component, the recording of cultural activities and materials, and the household interviews, section 4.1 introduces a range of aspects of the Sanepong Karens' culture and their relations with the forests.

4.1 Background: aspects of belief systems, agriculture, and forest conservation

4.1.1 Karen traditional belief systems and their life-style

4.1.1.1 *Birth ceremony: the beginning of the relationship between human life and nature*

Sanepong villagers believe that trees have their own spiritual power affecting human life. A big tree with many flowers and fruits, in particular, can benefit the future life of a new born child. In this village when a family has a new baby, a family leader or a father will bring the placenta to the forest and tie it on a big tree which no one can cut down (Boonpinun 1993). Thus, each person has at least one tree to protect.

4.1.1.2 *Agriculture: conservation activities*

Agricultural plantations in Sanepong village support a self-sufficient economy, and show adaptation to natural conditions such as high altitudes. Each family has approximately three plantation areas rotating each every three years. The rotation system prevents soil erosion, and weed and pest increases that normally result from using the same area for several years. This method encourages the soil to recover through natural processes.

Traditionally, the community has 10 prohibitions regulating agriculture, each specifying land which may not be used.

- (i) An area above a natural spring in the forests.
- (ii) An area around a natural spring.
- (iii) An area around the confluence of two creeks.
- (iv) An area around the the confluence of three creeks.
- (v) A steeply sloped area.
- (vi) An area where a creek splits into two.
- (vii) An area between two parallel creeks.
- (viii) Two sides of a creek may not be used by one family.
- (ix) A family may not use three areas in one year.
- (x) An area which blocks access to other agricultural areas.

Other prohibitions apply to land of particular topography, where there are particular kinds of wild animals, and special trees (more details in section 4.6.4.1).

4.1.1.3 *Hunting wild animals*

Villagers cannot hunt large wild animals. This is considered the worst sin, according to Buddhism. No meat is sold or exchanged in the village. These people are almost vegetarian, but aquatic animals are caught from the Roki creek as a protein source.

4.1.2 Conservation organisation and regulations of Sanepong village

To manage, conserve and protect their culture and the forest ecosystems, Sanepong villagers established the Cultural and Environmental Conservation Committee. This Committee is comprised of seven members:

- (i) the village headman Chairman
- (ii) a village headman's assistant Deputy-Chairman

- (iii) a villager representative
- (iv) a villager representative
- (v) a villager representative
- (vi) the chief-assistant of the Forest Protection Unit
- (vii) the chief of the Forest Protection Unit Secretary

The function of this committee is

- (i) to formulate a cultural and environmental conservation plan for the village;
- (ii) to act as an example and to encourage others to join in the plan's implementation;
- (iii) to implement and enforce the plan according to the villagers' wishes;
- (iv) to coordinate and to contribute to other agencies' activities; and
- (v) to implement other decisions of village meetings.

Furthermore, the villagers has established the Advisory Committee to help the Cultural and Environmental Conservation Committee with laws and procedures. This Advisory Committee is comprised of six members:

- (i) the Buddhist abbot of Sanepong Monk Practicing Temple;
- (ii) the Laiwo subdistrict chief;
- (iii) a local administrative officer;
- (iv) a Sunthoravej School teacher;
- (v) a Hill Tribe Development Unit officer; and

- (vi) a Wildlife Fund Thailand Officer.

In January 1993, the Cultural and Environmental Conservation Committee and the villagers established seven regulations:

- (i) no hunting wild animals;
- (ii) using only the land which has been used in the past, and not selling any land to an outsider;
- (iii) not causing bush fires;
- (iv) using forest resources only for villagers' needs;
- (v) not allowing any outsiders to settle in the village;
- (vi) not encouraging tourism which is against the *Wild Animal Preservation and Protection Act*; and
- (vii) maintaining respect for the local belief systems and traditions of the ancestors.

The Cultural and Environmental Conservation Committee also set the penalties for violations, as shown in Table 4.1 on the next page.

4.2 Economic factors and livelihood of the villagers

The behavioural observation component of the field survey investigated specific economic factors and the general well-being of the villagers in Sanepong. The four aspects studied were agricultural activities, hiring labour, diet, and health and health care.

4.2.1 Agricultural activities

Generally, the agricultural activities of a household take place on dry rice plantations, except for those farming low swampy land who might cultivate rice paddies. Only the dry rice plantation is discussed in this study due to its dominant role. Other agricultural activities are animal husbandry, and fruit and vegetable growing.

Table 4.1 Violations and penalties

Violation	First Penalty (baht*)	Second Penalty	Third Penalty
1. hunting wild animals	-a big animal: fine 1,000.- -a small animal: fine 500.-	-fine and send the violating person to the subdistrict chief for cautioning	-send the violating person to the forestry officer to commence legal proceedings
2. cutting down a big tree	-each tree: fine 1,000.-	-fine and send the violating person to the subdistrict chief for cautioning	-send the violating person to the forestry officer to commence legal proceedings
3. encroaching on the forest	-each rai**: fine 1,000.- and barred from that area	-fine and send the violating person to the subdistrict chief for cautioning	-send the violating person to the forestry officer to commence legal proceedings
4. causing a bush fire	-fine 300.-	-fine and send the violating person to the subdistrict chief for cautioning	-send the violating person to the forestry officer to commence legal proceedings
5. selling land to an outsider	-fine 1,000.- -confiscate that land, and give to landless people	-fine and send the violating person to the subdistrict chief for cautioning	-drive from the village
6. making a loud noise, annoying others and/or firing a gun in the village	-fine 500.-	-fine and send the violating person to the subdistrict chief for cautioning	-send the violating person to the forestry officer to commence legal proceedings
7. being drunk and disturbing others	-fine 500.-	-fine and send the violating person to the subdistrict chief for cautioning	-send the violating person to the forestry officer to commence legal proceedings
8. stealing	-fine three times the value of the stolen item	-fine and send the violating person to the subdistrict chief for cautioning	-send the violating person to the forestry officer to commence legal proceedings

* 18 bahts = 1 A\$

** 2.5 rai = 1 acre

4.2.1.1 Rotating rice cultivation

Rotating rice cultivation is a strong feature of this subsistence economy. The amount of rice production is directly related to the annual consumption of each household. A family's size determines their ability to cultivate. However, social control processes and the balancing of subsistence needs may directly limit the cultivation area allotted to each household. If any households extend their cultivation areas above appropriate household needs, they will be asked to decrease their land demands by the village elders.

The annual rice cultivation begins in late January. Each household has an appropriate land area. This will have been cultivated before and will have

been either been used for the past two years or been left fallow for 7-10 years. To clear virgin forest for cultivation requires considerable time and effort. Cutting down large living trees is prohibited by village regulations (see page 40). Cultivation must conform to the traditional beliefs of the village (which are shown in 4.6.4.1).

Before starting their activities on this land, they have to ask permission from the land goddess, "Songtari"*. They declare that their use is only for family self sufficiency, and ask for Songtari's protection from wild animals, insects, and disease disturbances. They ask for her blessing to produce enough rice for their annual consumption. When they clear covering vegetation, they leave it to dry for 1-2 months. They then burn the residue on a still day to prevent the fire from spreading to the forests.

The Thai traditional New Year, "Songkran", on April 13, is the beginning of the cultivating year and precedes the rainy season. Before planting, villagers ask Songtari and "Pibuyo"* to support and protect their rice. If insects invade the rice fields, they will conduct a ceremony asking Songtari and Pibuyo to eradicate these insects. The significant activity in this ceremony is stringing a white rope around the field. The rope will protect the field from malicious spirits. Protecting the field by this method, without insecticide, may result in a local increase in fauna abundance and diversity, including in particular birds, reptiles, amphibians, and other insects. Thus, natural enemies of pest insects may play a crucial role in ecosystem equilibrium and protect the rice field. This may well reflect the accumulated experience of the Karen hill tribe who have lived in the forest ecosystem for many generations. These people relate problems and their resolution to supernatural influences as an essential part of their lives.

There are some rotating rice cultivation fields around the village. Most of them, however, are scattered throughout the surrounding forests, especially near the tracks linking Sanepong and the neighbouring villages. In fields distant from the village, the crops may be destroyed by wild animals. The intruders are monkeys, wild pigs, and wild chickens (jungle fowls). Those who have rice fields in the forest areas usually have to build small huts and live there during the cultivating season until they can bring all their rice back to the village.

* 'Songtari' is the Karen name for the land goddess.

* 'Pibuyo' is the Karen name for the rice goddess.

To protect the rice fields from wild animals, villagers may hit a bamboo drum loudly or light a fire in the fields, using the light and smoke to drive the animals away. In 1993, a village headman's assistant had to fire his gun to drive a group of monkeys out of his field. When he went back to the village, he faced the 500 bahts penalty for shooting, according to the village regulations (see page 41). Rice shortages for some families may be caused by the kinds of misfortunes mentioned above, or by family member sickness (see 4.2.4). The solidarity of social relationships, demonstrated by lending rice to a family in need, is common in this community. When floods or wild animals destroy rice fields, other villages in Laiwo subdistrict will send their surplus rice to the affected villages.

Rotating rice cultivation processes of Sanepong village use each field for about three years. Beliefs and traditions of land ownership do not support private ownership rights. If one family would like to use someone else's land for rice cultivation, they must ask the occupant beforehand. The land occupation rights will still rest with the traditional user, however, in the long term.

4.2.1.2 *Vegetable gardening*

Villagers often plant chilli and vegetables between rice rows. The main purpose is household consumption, but, if there is a surplus, they can be sold.

The government's subdistrict development programme piped water from the creek near the village in November 1993. Almost every house has used the water tap since. By using this water supply throughout the year, most households now grow vegetables in their backyards. This reduces the need to gather wild vegetables from the forest.

4.2.1.3 *Fruit tree plantations*

Almost every household grows fruit and other productive trees. The popular trees are coffee, mango, lime, coconut, jackfruit, durian, banana, and areca palm. New families recently separated from parents usually have small trees which cannot provide enough fruit for their consumption. Those with mature trees may also sell the surplus fruit at the urban market (normally at Sangklaburi district centre 14 km from the village). Fruit trees

are a source of income for many households throughout the year. The orchards surround the village.

4.1.1.4 *Animal husbandry*

Animal husbandry in Sanepong village has been introduced in recent years. Ancestral traditions strictly prohibited this activity, because it would bring carnivorous animals to the village, especially tigers and bears. In the past, villagers hunted wild animals and aquatic fauna for protein requirements. After the area was declared a wildlife sanctuary in 1974 and a World Heritage Area in 1991, they could not hunt in the forests as before but were allowed to continue harvesting aquatic animals. The latter have been reduced in number due to increasing pressure. During this difficult time, the villagers have changed their behaviour to raise animals, such as cows, buffalos, goats, pigs, ducks, and chickens. Animal raising, however, has led to two conflicts.

- (i) Conflict with the ancestral prohibition against animal raising inside the village.

Although this prohibition remained in the villagers' beliefs, the need for protein pushed them to adapt their way of life to allow animal husbandry. Since this change, there has been a dramatic increase in sickness in the village, particularly malaria and diarrhoea. There is a rumour that these diseases originated from the deviation from the ancestral beliefs. To solve the problem, the village headman called for a village meeting. Two resolutions from the meeting were: to allow villagers to raise animals in the village except goats, pigs, and chickens, since raising these animals critically violated the traditional beliefs; and that the villagers who continued raising these three animals had to move out of the village to live on the opposite side of Roki Creek. All villagers agreed to adopt these resolutions, and 12 households moved. The incidence of disease has since decreased, and the resolutions have become new regulations in the village.

- (ii) Conflict with local foresters.

Foresters at the Sanepong Forest Protection Unit maintain that the domesticated animals are carriers of disease to the animals in the wildlife sanctuary. This applies particularly to cows and buffalos which freely roam along the forest link routes between Sanepong and other villages. The

foresters unsuccessfully appealed to the villagers to stop raising animals. The villagers, through cooperation with the Wildlife Fund Thailand officers, have negotiated with the foresters to allow this activity. This conflict has since abated.

4.2.2 Hiring labour

The increase in living expenses (see also 4.2.4) has driven some villagers, who do not have other sources of income or too little income, to leave the village to find work on construction sites or large commercial farms. Their purpose is basically to earn enough wages to meet their annual subsistence needs. This activity occurs seasonally in the mid-rainy season when the rice planting is completed and/or during the dry season after harvesting crops. Some of the younger generation are leaving and working in the district or provincial centres, changing their way of life and permanently resettling in urban areas.

4.2.3 Diet

The main diet in the village consists of rice and chilli paste mixed from chilli and salt. Supplements to this meal are the varieties of cultivated or wild vegetables. The wild vegetables are seasonal, more plentiful in the rainy season. Pickling wild vegetables extends food supplies. There are numerous kinds of wild vegetables (see details in 4.4.5.1) which have various edible parts, such as bulbs, leaves, shoots, flowers, and fruit.

Meat protein is mainly from aquatic animals in Roki Creek (see details in 4.4.5.1) but these can only be caught during the rainy season due to their migration from downstream. The activity occurs only occasionally, after cultivation and other household tasks are completed. Those who raise poultry enjoy eggs frequently, but those who raise cows, buffalos, pigs, and goats may consume them only during major household and/or village ceremonies.

Diet in Sanepong village is in general semi-vegetarian. Selling or buying meat in the village is very strictly prohibited according to ancestral doctrines. Those who would like to buy meat have to go to the district market which is far away and hard to access.

4.2.4 Health and health care

While this survey was being conducted, there were many villagers suffering from colds, stomach ache, diarrhoea, or malaria. During recent years, there has been an increasing number of sick persons. These have apparently been cured both by traditional herbal medicine and by modern medicine at the district hospital. Due to improved road access, particularly during the dry season, villagers have increasingly tended to bring patients to the district hospital, as well as buying modern medicines or asking for them from government and non-governmental field agencies in the village. Sickness amongst Sanepong villagers can have two impacts.

4.2.4.1 *An impact on agricultural activities*

A family member who is sick cannot work in the fields during the cultivating season. Moreover, he/she may need care during this period. Consequently, for the following year, this family may not have enough rice to feed its members and may have to borrow from relatives or friends.

4.2.4.2 *An impact on the self-sufficient way of life*

The health and health care problems in a family may cause economic pressures because it will have to reallocate money for the coming year. If the money saved is not enough to cover the cost of modern health care, a family will have to borrow from others. This family will then have to earn more money in the next year both for medicine and paying back loans. In the past traditional medicines from the forests were mainly used at no cost.

4.3 **Social structures and relationships**

The author's behavioural observations of relationships in Sanepong village addressed two levels of social organisation: the micro level of the family unit and the macro level of the community as a whole. Three aspects of social organisation were the focus: social stratification, power structures, and interactions amongst levels.

4.3.1 Micro level - the family unit

The family characteristics of the Karen in Sanepong are similar to those in other parts of the region. The most obvious is the nuclear family. The

establishment of a Karen family usually occurs by marriage. Newly-wed couples have to leave their parents and build their own houses. Proximity to the parents' houses will depend on their size and the amount of care the parents may need.

Sizes of families vary, and established families may have 5-7 children or more. One significant factor is the lack of birth control in this village. Babies are traditionally delivered by medicine women, often relatives of the families.

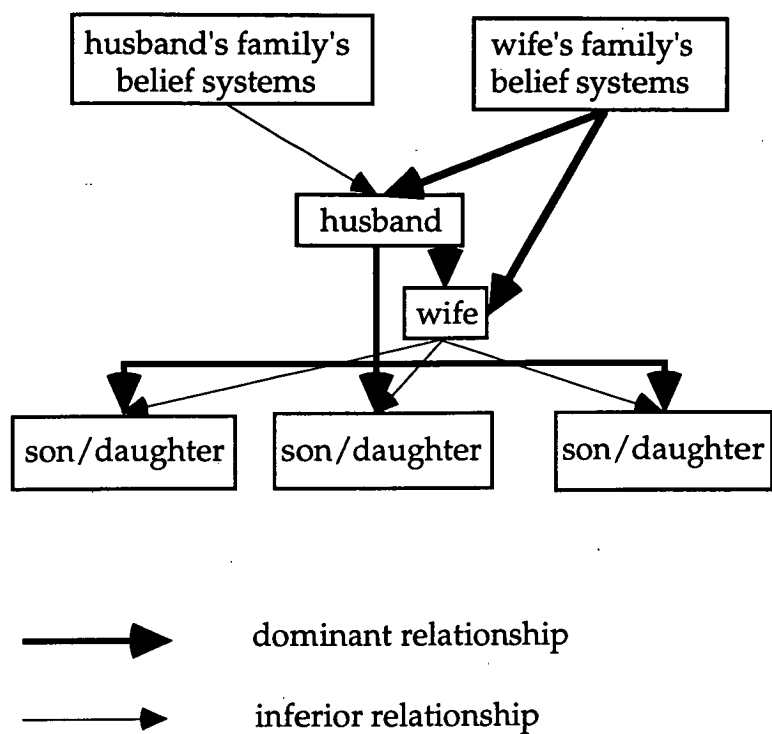
A new family may face difficulties and have a harsh life because it has few labourers for cultivation. When a family member gets sick during the cultivating season, the rice production itself will decline and there will be a shortage. Social interdependence among relatives and community members, however, plays an important role in helping new families pass through this hard time and reach the mature family stage where they can secure their economic status.

Traditionally, a husband has to adopt the belief system (ancestral spirit and family norms) of his wife's family. Family social structure, however, is the reverse. The husband plays the dominant role in most aspects of family affairs. This dualistic characteristic of family structure and relationships (see Figure 4.1 on the next page) has been passed down from ancestors for countless generations. The husband's dominant role in the family extends to inter-family relationships and the community, such as in the village meetings and community development activities.

4.3.2 Macro level - the community unit

The male role in the community is distinctly seen in decision making in village affairs, generally through the village meeting, once a month on 'full moon day'. Traditionally the male, as the family leader, is accepted as a member in the village meeting. If he is unable to attend, his wife may attend instead. There is an order of seating on these occasions (see Figure 4.2). At the front of the meeting hall (the temple hall) sits the Buddhist abbot, the only one who has a large, one foot tall table for his seat (others are seated on the floor). He is the head counsellor of the village meeting. Also at the front is the village headman who is the chairman of the meeting. Next to him is the village committee (the village headman's assistants, and

Figure 4.1: Family structure and relations



a subdistrict chief's assistant) and the knowledgeable elderly villagers. In the next group, the majority are the family leaders, who are male, and the knowledgeable young villagers. The last group, at the end of the hall, includes the female family representatives, and any observers (such as the Wildlife Fund Thailand officers).

Figure 4.2: Order of seating at monthly village meetings

Buddhist abbot		

village headman		

village committee	/	knowledgeable elderly villagers

family leaders (male)	/	knowledgeable young villagers

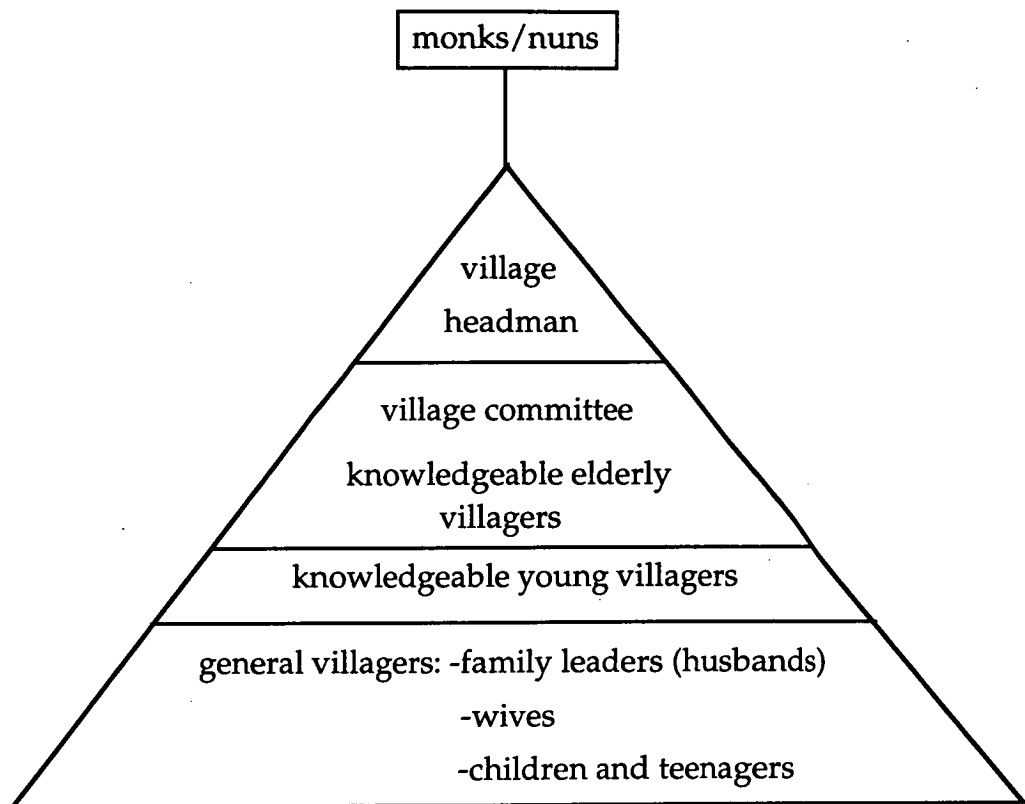
family representatives (female)	/	observers (WFT's officers)

The seating structure in the temple hall reflects the structure of the community, and provides a picture of social stratification. The most important person is the Buddhist abbot who is not only the religious leader but also the moral leader. He represents the monks and nuns of the Buddhist temple. The village headman is the leader of the villagers and also the formal local administrator, with power from the national government, but elected at the village level. The headman's assistants and the subdistrict chief assistant, who are also national officials appointed by the headman, are in the formal elite group of the village, and help the village headman in governing and managing village affairs. The knowledgeable elders are in the informal elite group, advising both the leaders and the villagers, and controlling the behaviour of villagers in line with ancestral doctrines and traditional belief systems. The knowledgeable young have a higher social rank than the general villagers, but lower than the leaders because of their age. They are distinguished by a traditional education as monks. This traditional knowledge includes ancestral traditions and culture, traditional music, and herbal medicines. There were two knowledgeable young in the village, both male. The general villagers who are the majority can be stratified into three groups: the family leaders (husbands), the wives, and the children and teenagers. This social stratification is shown in Figure 4.3.

The leadership roles in the village are shared among the formal leaders and the knowledgeable elderly villagers. The most important leader is the village headman, by virtue of his formal authority and his coordinating role with governmental agencies. In the village meeting, the headman plays the dominant role while the headman's assistants, the subdistrict chief's assistant and the knowledgeable elders contribute additional information concerning tradition. It seems that the information and orders from government agencies are adjusted and integrated with village traditions before being implemented in the village. The "silent majority" are the general family leaders who pay attention to the leaders and the knowledgeable elders and adopt the results of the meeting. The knowledgeable young only answer the questions of the leaders and the elderly on some complicated issues.

Village development activities are conducted after every village meeting, such as improving the walking tracks between Sanepong and other villages, school cleaning, and constructing village facilities. Each family has to send

Figure 4.3: Social stratification pyramid



one member to participate in these activities, and this is usually the family leader. A family that does not participate in these activities is always chastised by the leaders and the elders or even the general villagers, except when a family member is sick, or for other important reasons. This is one kind of social control process, along with the traditions for controlling deviant behaviour in the village.

4.4 Forest traditions and culture

Karen society in Sanepong village is similar to other indigenous societies in its strong commitment to traditions and culture. The Karens have their own written language. The Karens used to be a nation state several hundred years ago, and they still have a strong commitment to their ethnic group.

The Karens have developed their civilisation over many generations. Sanepong Karens, in particular, have almost cut themselves off from the outside world due to their solitary lifestyle and the inaccessibility of the village. Their civilisation has persisted unlike many other tribes in

Thailand whose ways now reflect contact with outside development and civilisation.

From observing and talking to many members of the village, the author concludes that Sanepong traditions and culture arise from two main factors, Animism and Buddhism.

4.3.1 Animism

Karen Animism in Sanepong appears to be associated with the long history of their interactions with nature for their survival. Their epistemology draws on two world views: the natural and the supernatural. The supernatural influences nature through its control, protection, and maintenance of natural equilibrium. The Animist forest beings in the villagers’ belief system are nature gods and goddesses, a father god, ancestral spirits, sacred animals, and sacred areas (see Table 4.2).

Table 4.2: The Animist forest beings in the Sanepong Karens’ belief systems

<u>Kind of being</u>	<u>Name or Characteristics</u>
Natural gods and goddesses:	forest god, mountain god, land goddess, water goddess, and rice goddess
Father god:	the highest sacred spirit in the village; provides happiness for the villagers and protects them from illness and disturbances
Ancestral spirits:	the spiritual life form after death of ancestors who protect the village and the villagers; these spirits live in the "cemetery forest", a sacred area where no human activity except cremations and funerals are allowed.
Sacred animals:	some kinds of animals that cannot be harmed or killed (see details on page 68)
Sacred areas:	areas prohibited from cultivation or house building (see details on page 68)

4.4.2 Buddhism

The Karen in Sanepong adopted Buddhism as their religion many hundreds of years ago. Buddhism as a new social institution in this village does not conflict with Animism. It has become well integrated with Animism and, in some areas of belief, this unified view has more influence on the villagers' way of life than Animism or Buddhism alone. The Buddhist characteristics relevant to the surrounding forests of Sanepong are as follows.

An animal's mind or spirit has the same value as a human's. To harm or to kill an animal is prohibited in Buddhist doctrine. The villagers acknowledge this principle. However, they may catch aquatic animals for food in recognition of protein needs.

There is a relationship between sacred spirits and trees. According to Buddhism, all big trees have guardian spirits to protect them and their surroundings. The villagers generally respect all the big trees in the village and the surrounding forests, especially Bayans and Pipals, which are the most important trees in the Buddhist legends. The Buddhist temple in the village was originally located near a Pipal tree. This tree is also the most sacred tree in the village.

Apart from the direct relationship between Buddhism and the forests, Buddhism as a social institution has developed and extended its roles to function as the spiritual centre, the communal activity centre, and the educational and socialising centre of the village.

4.4.2.1 *The spiritual centre*

The Buddhist temple and its area in the village are immaculately kept and are symbols to which the villagers pay the highest respect. The most sacred tree and the father god shrine are situated inside this area. Sinfulness is not allowed in this area, nor catching aquatic animals along the Roki Creek boundary of the area.

4.4.2.2 *The communal activity centre*

The temple is the location for almost all traditional ceremonies. Every big Buddhist sabbath (the full moon day of each month), after a feast, a village

meeting is held in the temple hall. The communal activity centre plays an important part in most social activities in Sanepong.

4.4.2.3 *The educational and socialising centre*

The Buddhist institution in Sanepong has religious, traditional, cultural and linguistic functions. In order to be judged mature adults, villagers, particularly males, learn the ancestral ways through at least three months living as a monk or a nun. Elderly monks are the teachers for new monks and nuns. In this way, Buddhist traditions and culture are passed from generation to generation.

4.4.3 Local myths and stories

The author's collection of as much information as possible on traditions and culture extended to the local myths and stories told by the elderly villagers and parents to the children as a part of their socialisation. Attention was focussed on those with implications for forests and forest management. Five local myths and stories were noted: the Great Elephant and the Laiwabong Sacred Area, the Gold Tree, the Heron and the Crab, the Gaur, and Rice is Better than Money. These are presented here.

4.4.3.1 *The Great Elephant and the Laiwabong Sacred Area* (Source: the Buddhist abbot)

This story's main theme involves a Karen family of seven brothers. The six elder brothers do not like the youngest one and would like to get rid of him. They tell him to catch an elephant. If he does not catch one, he cannot go back home. Unexpectedly, he catches a white elephant. The elephant is willing to go back home with him, help him work, and also bring him a large amount of gold. With this elephant's help, the last brother builds his own house and becomes a rich man. Many years later, the elephant wants to go back to the forest. It waits until the man leaves home and escapes to the forest, hiding in a deep cave inside a mountain. The man follows it to bring it back, and finds traces of the elephant in the cave. He tries to search the cave but cannot find it. In anger, he throws his hook for controlling the elephant down into the valley near the mountain and goes back home, abandoning his attempt to bring it back. The valley which is near Sanepong village has become a sacred area for the Karens in this village and Laiwo subdistrict.

The story appears to relate to the origins of one sacred place which involves elephants and the prosperity they bring to humans. However, the brother was not satisfied with what he had. He would have liked to own the elephant all his life. The story also implies that the Karens should live together harmoniously, and not exploit elephants which are the biggest animals in the forest and, in Karen belief, the kings of the forests.

4.4.3.2 *The Gold Tree*

(Source: a knowledgeable elderly villager)

This story is about a poor man living his harsh life alone. One day he sleeps on a big flat rock near his house. When he wakes up, he is very surprised. The rock is no longer the rock, but a big tortoise. The tortoise has brought him to a deep forest, where he finds a huge tree of gold from which the turtle feeds itself everyday. The man picks up some gold leaves which are lying in abundance on the ground. When he comes back to his village, he uses some of the gold leaves to buy food but gives most to the poor. However, some greedy villagers have spied on him and eventually find the gold tree. They cut down the tree and try to bring it back. Suddenly, their bodies change to rock and remain so forever more.

The Gold Tree story refers to the utilisation of the forest. The Karens should behave wisely, and utilise the benefits from the forest only for subsistence. They should share the benefits and help those who are poor and in troubled situations.

4.4.3.3 *The Heron and the Crab*

(Source: a knowledgeable elderly villager)

In a small swamp, there are various kinds of water animals which have lived peacefully together for a long time. One day, a heron finds this swamp with its abundance of food. It deceives the animals, saying that the great dry season is coming and that this small swamp will disappear in a few days. The heron, however, will help to carry all the animals to a new large swamp which will not dry up. All the water animals believe the heron and ask it to bring them to the new swamp. The heron uses its long beak, picking them up one by one and flying away. Finally it is the turn of a big crab. Flying high with the big crab in its beak, the heron tries unsuccessfully to eat the crabs. This crab, knowing that it was deceived, uses a big claw to grip the heron neck. The heron is killed by the crab.

This story implies that one who exploits others will eventually be undone by his actions. From a different angle, humans should be satisfied with the status quo of their environment. Any attempt to change or to move from their original environment will bring disaster upon themselves.

4.4.3.4 *The Gaur*

(Source: a middle aged villager)

The Gaur story is about a tragic situation in one family. The father is head over heels in love with a new wife and drives his son out of the house and into the forest. The son secretly comes back to see his father and persuades his father to kill his step-mother. He then feels very guilty about his sins against the wife he has killed and his son. Losing his mind, he walks into the forest and is killed by a gaur (a large ox species). His son goes looking for his father and finds his body. In his anger, he puts two sharp bamboo sticks on his head and fights with the gaur. He kills the gaur, but cannot take the bamboo sticks off his head. Suddenly, his own body is transformed into a gaur, and he lives forever in the forest.

This story implies that an immoral family faces unavoidable disaster. The significant link to the forest is the belief of Sanepong villagers that the gaurs have human spirits. To harm or to kill gaurs is traditionally prohibited.

4.4.3.5 *Rice is Better than Money*

(Source: Leungaramsri 1992)

There is a family with a son who does not like farming and does not want to stay in his village. One day, he tells his parents that he is leaving his village to make money to get rich. His parents object that there is no need for money because the village is rich in rice and wild vegetables. If one is only hard-working, the family can survive. But the son does not listen and leaves the village. One day he comes back with a friend and boasts about the large amount of money he has earned. His parents are saddened by his distorted sense of values. For supper that night his mother serves him and his friend a tray full of coins.

This story implies that rice is valued more than money or other accumulations of wealth. Having enough rice for the whole year is vital to the Karen way of life. The story reflects the highly-regarded value of self-subsistence.

4.5 Other factors concerning the relationships between villagers and the forests

To understand the relationships between the villagers and the forests of Sanepong it was essential to investigate external factors in addition to internal ones. These external factors include the roles of government agencies, an NGO, and other outsiders.

4.4.1 Government agencies

There are four main government agencies with field offices inside the village: the Sanepong Forest Protection Unit, the Hilltribe Development Unit, the Police Ranger Primary School, and the Non Formal Education Centre. The Sanepong Kindergarten is also a government agency but is not discussed in this study, not being relevant to forest management.

4.5.1.1 *The Sanepong Forest Protection Unit*

The government agency most relevant to the forests in this area is the Sanepong Forest Protection Unit. It is an agency of the Royal Forestry Department working permanently in the village. Its office is about 500 metres along the road from the village centre. Its functions are to protect the forests around Sanepong from encroachment, illegal logging and, particularly, wild animal hunting. There is a roadside checkpoint in front of the office to monitor people and vehicles entering and leaving the area. They are searched for illegal equipment and forest products.

This protection unit was established in 1982. In its early days, there were many conflicts with the villagers concerning the rigid enforcement of laws and regulations. Wildlife Sanctuary and World Heritage Area regimes dictated sudden changes in the villagers' lives. The critical conflict occurred when the Government introduced The Land Distribution Programme for the Poor Living in Degraded Forest Reserves in 1990. The programme was implemented in Sanepong village and Laiwo subdistrict (and many other villages in Thailand) to resettle the villagers outside the forest area. Sanepong and Laiwo villagers protested against the programme and asked the government to allow them to live in the Thung Yai Naresuan Wildlife Sanctuary as their ancestors had for many generations. During the programme implementation, several thousand affected villagers protested in many parts of the country. A national crisis arose regarding forestry

policy and the livelihoods of people living in state forests. After that regime (which collapsed after the Bangkok Bloodshed in mid-1992), the interim government rejected the programme in 1992. The present government has solved the conflict by establishing buffer zone forest areas where there are villagers' settlements and activities, but this does not apply presently to Sanepong, which is in the World Heritage Area. The government has also drafted the *Community Forestry Bill* which will be presented to Parliament for approval by 1996. The new policy of the Government is to legitimise the presence of villagers and their activities in the state forests all over the country.

4.5.1.2 *The Hill Tribe Development Unit*

The Hill Tribe Development Unit is a field agency of the Public Works Department, and has a responsibility to develop the quality of life among the Karens in Sanepong village. It encourages activities such as fruit tree cultivation, coffee plantations, and duck husbandry.

Duck rearing uses free range feeding in the village and along the Roki Creek. When feeding along the creek, the ducks pass their excreta directly into the water which the villagers use in their households and as drinking water. Contaminated water is a health risk associate with infection by contagious diseases, particularly diarrhoea. There has recently been an increase in illness, especially stomach ache and diarrhoea in the village according to some villagers.

The coffee plantation encouraged by the Hill Tribe Development Unit is not supported by a market plan. The villagers face a low price for their coffee products and have few buyers. At the time of the field study, they had stored their coffee for a year without finding a purchaser.

The Hill Tribe Unit has twice in recent years submitted a proposal regarding the community's right to live in the forest. They argued on the basis of historical occupation before the sanctuary's declaration, and a harmonious way of life within the forests. On both occasions, no response has come from the central authorities involved.

4.5.1.3 *The Police Ranger Primary School and the Non Formal Education Centre*

Two major governmental educational institutions in the village are the Police Ranger Primary School (Sunthoravej) and the Non Formal Education Centre. These two institutions' roles are not only to educate juvenile and adult villagers, but also to provide the means for cultural assimilation in line with government policy in favour of a united Thailand. The latter may have major impacts on traditional culture and society.

The Police Ranger Primary School was established in Sanepong village under the national security policy of the former Government about 10 years ago, when the area was declared one of communist operations. The 'education for security' objectives emphasize unifying the Thai language and culture. Attempts at dilution of the Karen language and culture by the central lowland Thai have been conducted through this school. Young students are not receiving the traditional education of their families and the Buddhist temple.

The Non Formal Education Centre was recently established in the village for adult education. Its role is to develop Thai literacy and the general knowledge of the village adults. Because of the village's isolation and harsh lifestyle, the previous teacher was reluctant to work there. Ultimately he was dismissed due to his frequent absences from duty. The new teacher took up her responsibilities in January 1994. She is newly graduated, used to an urban lifestyle, and may also experience loneliness and hardship. One obvious benefit the centre has provided for the villagers is a small solar electricity supply. Many villagers have brought their own wet cell batteries (the type used in cars) to recharge for their household use. This electrical supply has become the main source of household light in the village.

4.5.2 The Wildlife Fund Thailand

There is only one NGO with a field office in Sanepong village, the Wildlife Fund Thailand. The Wildlife Fund Thailand has conducted two projects, "Conservation Knowledge Dissemination in Rural Areas" and "Encouragement and Development of Thung Yai - Huay Khakaeng" in Laiwo subdistrict, including Sanepong. These projects encourage the villagers to understand the importance of conserving and sustainably utilising the forests without affecting the interdependence between the

villagers and the forests. The organisation has conducted several activities in the village (see details in section 4.6.10, page 79).

The Wildlife Fund Thailand also encouraged the establishment of a conservation organisation in Sanepong village (the Cultural and Environmental Conservation Committee) and in other villages in Laiwo subdistrict, as well as at the subdistrict level. This provides a network to foster cultural revival and environmental conservation activities in the village and subdistrict.

In 1994, the Cultural and Environmental Conservation Committee of Laiwo subdistrict proposed a Native Plant Nursery Project which involves collecting the seeds from Thung Yai Naresuan forest area. The nursery will be located at Sanepong. It will distribute native plants to government agencies and other organisations conducting reforestation programmes. Some native plants are sold to raise money for long-term management and to support the subdistrict development programmes and other cultural revival and environmental conservation activities. This project has been submitted to a United Nations programme for funding as an activity contributing to biodiversity conservation at the community level.

4.5.3 Other outsiders

Various people interested in exploiting the land have been coming to the village and the surrounding forests. Many years ago, before the establishment of the Sanepong Forest Protection Unit and the entry of the Wildlife Fund Thailand, there was a coffee plantation group in the Sanepong forest area. The villagers were very concerned. The village committee and Sanepong's Self Development and Protection volunteers asked these people to stop their forest encroachment, and they moved out because of the villagers' pressure. When asked why they had to drive these people out, the villagers said they were afraid that this activity might lead to further encroachment. This would have affected their traditional subsistence way of life. Also, the government agencies, especially the Royal Forestry Department, might have thought that the villagers had encouraged the outsiders.

Villagers are acutely aware of land purchasers from outside, and attempt to discourage them. Many villagers found that they did not own the land they had occupied; it was the King's. They and their ancestors were only

occupiers of the King's forest. In particular, since the area was declared a wildlife sanctuary and the World Heritage Area, they did not have any rights to own or to sell. Moreover, they were aware that future generations would not have enough land and forest if this generation sold some to the outsiders. Allowing outsiders to settle in the village might also threaten their traditions and culture.

There are also some *Mons* (a minority group in Thailand who are mostly refugees from Myanmar) illegally collecting forest products in Sanepong's surrounding forests, such as bamboo shoots and rattan vines. They tend to collect all bamboo shoots or cut all rattan vines from each clump. This can greatly reduce the plant's vigour or cause its death. The villagers who come across these activities either drive these outsiders out of the area or report the incidents to the village committee.

4.6 Interview results

The interviews were conducted from the end of December 1993 to mid-February 1994. It was proposed to include all 56 households in Sanepong village. At first, however, when the author asked about the relationships between people and the forests, especially relating to traditions and culture, they avoided answering. It seemed that the villagers did not trust the interviewer, being an outsider. The concern of the villagers may have been due to their memories of the resettlement project of the Government during 1990-1992 (The Land Distribution Programme for the Poor Living in Degraded Forest Reserves).

Thus, the first month was spent explaining the objectives of the study and gaining the trust of the villagers. After this period, the villagers responded positively. This was particularly true of leaders. Due to the time limit, however, the interview target population had to be adjusted from all 56 to 25 households. The distribution of this 25 household target population is classified by the side of Roki Creek on which they live (see Table 4.3). The sex and age of household respondents are given in Tables 4.4 and 4.5. Interviews took place in the houses, and generally required about two hours. The respondents were nearly always male family leaders, as village protocol did not permit women or other family members to speak for the household.

Table 4.3: Distribution of households where interviews were carried out, according to which side of Roki Creek the house were located.

	Proposed households	Achieved households
Right side	12	5
Left side	44	20
Total	56	25

Table 4.4: Sex of household representatives interviewed

	Respondents
Male	22
Female	3
Total	25

Table 4.5: Age of household representatives interviewed

	Respondents
25-29	7
30-39	5
40-49	8
over 50	5
Total	25

4.6.1 Access to outside information and towns, and government agency contact

Twenty respondents have never listened to the radio while four listen every day, and one sometimes listens at others' houses. The four listen about 1-3 hours. The preferred programmes are mainly news, while documentary and music programmes are sometimes heard. Only a few villagers can afford radio receivers and batteries due to their economic situation. Twenty-two respondents have never read a newspaper and three read one once every 1-2 months. One problem affecting both listening to radio and reading newspapers is a lack of understanding of the Thai language. Only four respondents out of 25 had ever attended primary school. The remainder have had no formal education.

Contact with the town can occur through the need to sell agricultural products. These include fruit and vegetables, and are sold to buy other food

such as salt and shrimp paste. People may also visit the town to work, to take patients to the hospital, or to attend the district meeting in the case of leaders such as the village headman, the headman's assistants, and the subdistrict chief's assistant. The frequency of visits to the town is shown in Table 4.6.

Table 4.6: Visits to the town of Sangklaburi (about 14 km away)

Frequency	Respondents
More than once a month	8
Once a month	6
3-4 times a year	10
Once every 2-3 years	1
Total	25

The frequency of contact with government agencies at the district centre is shown in Table 4.7. Besides the leaders who have meet with the agencies every month, many villagers contact these agencies once every five years to renew their identification cards. Another opportunity for contact occurs when the government agencies at the district level conduct the district mobile office project in Sanepong once a year, in the dry season.

Table 4.7: Government agencies contact

Frequency	Respondents
More than once a month	2
Once a month	6
Once every five years	10
Never	7
Total	25

Direct access to outside information and contact is limited by the inaccessibility of the village, by the villagers' low economic status, and, especially, by the inability to speak and read the Thai language. Outside information is channelled through the formal leaders who act as agents between the villagers and government agencies. However, the Wildlife Fund Thailand's officers provide information to the villagers, particularly about forest conservation.

4.6.2 Economic status

Questions on the economic status of individual households focused on two criteria: the area cultivated in 1993, and household income per year. The results indicate that only one family did not cultivate rice in the previous season (nor perhaps for several years) because it did not have enough family labour as a result of the death of its family leader (the husband) several years ago. This family's income depends on a son who works in the town and sends money. The cultivated areas of respondents' households are shown in Table 4.8.

Table 4.8: Size of cultivated area attached to respondent households

Land use pattern	Amount (acres)	Respondents
Dry rice field only	0.4-1.9	14
	2.0-4.0	6
<u>Dry rice field and wet paddy</u>	<u>2.4-8.0</u>	<u>4</u>
<u>Total</u>		<u>24</u>

Table 4.9 shows the economic status of each household. The group that has between 500 and 2,900 bahts/year derives its income mainly from agricultural products such as vegetables and fruit from gardens and backyards. The next group with income 3,000-10,000 bahts/year sells agricultural products and hires seasonal labour. The last group receives income from agricultural products and regular salaries for permanent and semi-permanent jobs, such as local government officials and Wildlife Fund Thailand employees. The minimum wage for an unskilled labourer in Bangkok is about 780 bahts/week.

Table 4.9: Household annual income

Annual income* (baht)	Respondents
500-2,900	8
3,000-10,000	8
<u>Over 10,000</u>	<u>9</u>
<u>Total</u>	<u>25</u>

* 18 bahts = 1 A\$

4.6.3 Forest products and services

Forest utilisation by Sanepong villagers was surveyed with regard to household consumption, such as food and herbal medicines, and materials for household use and construction. Respondents were asked to identify the relationships between the surrounding forests and their agricultural production and way of life.

4.5.3.1 *Food*

Vegetables and other plants in the forests are important food. The results show that there are 24 kinds of wild vegetables and plants consumed by the villagers (see details in Appendix 3, page 125) of which four are common: bamboo shoots, *Dryopteris amboinensis* Kurz., *Amaranthus spinosus* Linn., and *Melientha suavis* Pierre. Different parts of these plants are used, such as tops, flowers, leaves, fruit, seeds, bark, stems, bulbs, rhizomes and roots, depending on the kind of plant and the cooking purposes.

Four kinds of wild animals - jungle fowl, fish, shellfish, and frogs - are hunted. Most are aquatic animals which are abundant during the rainy season and easy to catch. All 25 households interviewed catch these aquatic animals as their main source of protein. Regulations prohibit hunting terrestrial wild animals, but two respondents admitted that they sometimes catch jungle fowl.

All the respondents gather wild plants and catch aquatic animals in the forests around the village, especially along Roki Creek due to this area's richness and convenience of access. These plants and animals are scarce during the dry season and the villagers have to gather and hunt further away than in the rainy season. The frequency may vary due to the consumption needs of each household and their free time. This frequency is shown in Table 4.10.

4.6.3.2 *Herbal medicines*

The respondents using and those not using medicinal herbs from the forests are nearly in the same proportion: 13:12. The ailments cured by the herbal medicines are colds, diarrhoea, skin diseases, and muscle aches. The more serious diseases have to be cured by modern methods at the district hospital.

Table 4.10: Frequency of gathering wild plants and catching aquatic animals

Frequency	Respondents
Every day	4
2-3 times a week	11
Once a week	5
More than once a month	4
Once a month	1
Total	25

4.6.3.3 *House construction materials*

Although the Karens in Sanepong traditionally build their houses by using bamboo for almost all the structure and palm leaves for roof covers, many are now built from timber and galvanised iron. Some respondents explain that this change is due to higher income and, importantly, that by using timber and galvanised iron the houses will last longer. The traditional ones must be rebuilt every 2-3 years. Table 4.11 demonstrates the proportion of materials used in the respondents' housing construction.

Table 4.11: Materials used in housing construction

Construction materials	Respondents
Bamboo and palm leaves	4
Mixed bamboo, timber, palm leaves and galvanised iron	16
Timber and galvanised iron	5
Total	25

4.6.3.4 *Household utensils*

Utensils from forest products are commonly seen in the households. There are three main sources of these utensils: rattan, bamboo, and timber. The uses of these forest products are shown in Table 4.12 on the next page.

The area along Roki Creek is rich in forest resources and it is easy to bring these materials back to the village. Light-weight rattan can easily be carried, but bamboo and timber is taken from the upper creek so it can be floated down to the village.

Table 4.12: Household utensils from forest products

Sources	Utensils
Rattan	-shelves and chairs
Bamboo	-reed mats, baskets, water flasks, shelves and chairs
Timber	-beds, tables, chairs, cupboards, shelves, chopping blocks, and large mortars (for pounding rice to separate grain from chaff)

Two year bamboo shoots or older are selected due to their strength and durability. Young plants are left to provide for coming years. In the case of timber, users search for dying or fallen trees according to the kind and amount they need. They ask permission from the village committee before using them. Criteria for granting permission include the household's needs for house construction, its ability to use the timber, the degree of decay of the present house, and available labour for the construction process. Before making a decision, the committee sends a representative to check the trees to make sure that they are dead, and to inform the Sanepong Forest Protection Unit.

Timber is also used in households for fuelwood. Every interviewed household depends on the forests for firewood and charcoal for cooking. Fallen trees are easily found around the village, and are common property which every household has equal rights to use. Fuelwood is mainly collected for a few days or a week's use. To collect a large amount or to claim prior ownership of fuelwood sources is against ancestral doctrine and is strictly prohibited.

4.6.3.5 *The relationship between the surrounding forests, agricultural production, and the way of life*

Twenty-two respondents stated that there is a relationship between the surrounding forests and agricultural production, while three thought that there is no relationship. The positive respondents said that the forests surround the cultivated land and trap humidity, and rainfall brings nutrients.

All 25 respondents considered that they depend on the forests for food, water, many materials, and fuelwood, almost all their essential everyday needs.

4.5.4 Commitment to the forests

The respondents mentioned five factors relevant to a sense of commitment to the forests. These are:

- community beliefs associated with traditions;
- myths or stories;
- ceremonies concerning the forests;
- sacred spirits in the forests that influence villagers' lives; and
- other attitudes, such as dependency on products and benefits from the forests; an interest in the future of the forests; and the expectation that they will manage the forests, and not regard them as the sole responsibility of the Government and the Royal Forestry Department.

4.6.4.1 *Community beliefs associated with traditions concerning the forests*

Table 4.13: Beliefs about 10 trees

Kinds	Beliefs
Pipal	-an important tree according to Buddhism
Bayan	-the same as pipal
Teak	-the highly respected tree which cannot be used by villagers except in the Buddhist temple
Hopea	-the same as teak
Perw*	-has a sacred spirit
La*	-the same as Perw
All big trees	-have sacred spirits
Trees having a fish-tail shaped branch	-an unnaturally shaped tree which may bring trouble if used
Personal trees	-important to a villager's life (see also page 37)
Bamboo shoots in the dry season on land being considered for cultivation	-leads to problems if used

* Karen names - the author cannot determine common names.

Table 4.14: Beliefs about 12 kinds of land

Kinds	Beliefs
Mountain ridge	These kinds of land cannot be used for cultivation and settlement. The prohibition may lead to cultivation, problems, sickness and, perhaps, to disaster within a family.
Mountain edge	
Large hill	
Tortoise back-shaped hill	
Two opposite sides of a creek	
Land between two parallel creeks	
Upper watershed area	
Land around a spring	
Land around creeks' junctions	
Creek bank	
Cemetery forest	
Laiwabong sacred area	

Table 4.15: Beliefs about 11 animals

Kinds	Beliefs
Elephant	-the biggest terrestrial mammal, having a close relationship with humans; when it dies, it will be reborn as a human.
Asian tapir	-has the flesh of all kinds of mammals in its body
Gaur	-has a human spirit in its body
Barking deer	-a sacred animal; if it barks while a person is choosing land for cultivation, that person will have to look for a different area
Serow	-an endangered species which is a sacred animal
Gibbon	-a sacred animal
Langur	-a sacred animal
Tortoise	-if met while choosing land for cultivation, the person will have to look for a different area
Hornbill	-has strong love for and commitment to its mate; if one dies, the other will also die; killing a hornbill is as great a sin as killing a Buddhist monk
Emerald dove	-the same as the barking deer
Trogon	-the same as the barking deer

Three respondents did not know about community beliefs associated with traditions concerning the forests. Twenty-two respondents said that the community has these beliefs and identified 32 beliefs which can be categorised into three groups: about land, about animals, and about trees (shown in Tables 4.13 - 4.15, page 67-68).

4.6.4.2 *Myths and stories about the forests*

Most myths or stories in Sanepong village are moral lessons which convey ancestral doctrine, including Animist and Buddhist beliefs. Myth and story telling is a process of transferring perceptions and beliefs from one generation to another. "Tellers" are mainly the parents and grandparents in a family, and elderly persons in the village. This process is a part of community socialisation in traditions, cultures, social norms, and regulations. In the interviews, five myths and stories were encountered. The conveyors of these myths or stories are mostly elderly villagers. The brief contexts of these myths or stories are shown in Table 4.16.

Table 4.16: Brief context of myths and stories about the forests

Myths or stories	Contexts
Sanepong Location	-The location of Sanepong village is in the middle of 99 plains among the mountains, the best settlement area according to the Buddhist legend.
The Great Elephant	-There is a close relationship between humans and elephants; they bring prosperity to humans
The Heron and the Crab	-Dominant animals should not take advantage of weaker animals.
The Gaur	-The immoral behaviour of a human will lead to disaster for himself and his family. A gaur has a human spirit.

4.5.4.3 *Ceremonies concerning the forests*

Village ceremonies are channels for villagers to make contact with the supernatural. These ceremonies are conducted for two purposes. Supernatural powers are asked to allow the villagers to use nature for their subsistence, to bring happiness, to protect them from sickness and

disturbances, and to control nature so that it has no negative impacts on them. Another purpose is to pay respect and show gratitude to the supernatural for providing benefits and happiness to the villagers. Seven ceremonies in Sanepong village concerning the forests are shown in Table 4.17.

Table 4.17: Ceremonies concerning the forests

Ceremonies	Purposes
Asking the use of land for cultivation	-asking the land goddess and sacred spirits in the forests to allow villagers to use the land, to protect the rice crops, and to contribute to their successful cultivation
Tying wrists (with white yarn)	-bringing spirits back to villagers' bodies before beginning the new cultivation season
Eating new rice products	-paying respect and giving thanks to the rice goddess, the land goddess, and the sacred spirits in the forests for contributing to the cultivation
Worshipping the water goddess	-paying respect and giving thanks for providing water
Worshipping the cemetery forest	-paying respect to the ancestors.
Worshipping the father god	-paying respect and asking for protection from sickness and disturbances
Shoring up the most sacred tree	-paying respect to this tree as a representative of all trees in the forests; the more strength it has, the more prosperous and happy the villagers are

These ceremonies show the belief in the co-existence of humans, nature and supernatural. Materials, living things, energy, and spirits are interrelated in the ecosystem according to these beliefs. The ceremonies are parts of the traditional way of life of the Karens in this village, who try to maintain environmental equilibrium by asking the supernatural to provide for their subsistence.

4.6.4.4 *Sacred spirits in the forests that influence villagers' lives*

There are seven sacred spirits in the forest with influence on the villagers:

- the forest god;
- the mountain god;
- the Laiwabong god;
- the land goddess;
- the water goddess;
- the sacred spirits protecting big trees; and
- the ancestral spirits.

Their influences are thought to come from their power to protect forests, mountains, animals, and villagers living in the forests. If any villager does not pay respect to and behave within the framework of ancestral doctrine concerning these sacred spirits, that person, his or her family and/or all villagers will face disturbances from wild animals, sickness, and disaster.

4.6.4.5 *Other attitudes to the forests*

All the respondents believed that their lives depend on forest products and benefits. They are interested in the future and generally expect to manage these forests. However, eight respondents thought that maintaining and managing them are the responsibility of the Government and the Royal Forestry Department, while two gave no opinion. Fifteen respondents disagreed and said that the villagers should share the responsibilities because there are not enough foresters to take care of the vast forest area, and the foresters do not have enough knowledge about the forests. The villagers, know and understand the forests and can play an important part in management.

4.6.5 Villagers' capacity to manage the forests

Nineteen respondents thought that the villagers have the capacity to manage the forests, while three thought that they did not, and three did not know. The positive 19 respondents, asked to identify aspects of management capacity, gave details as follows:

- the role of traditional beliefs and regulations maintaining and managing the forests;

- a generally harmonious solidarity which supports looking after and conserving the forests; there is a community consciousness reflecting traditions and culture;
- the addition of the new regulations to the traditional regulations in controlling forest utilisation, and protecting the forest against encroachment from outsiders;
- defining forest areas, and designating particular village households to protect them; and
- cooperating with the Sanepong Forest Protection Unit and the Wildlife Fund Thailand in maintaining and managing the forests.

Those who thought that the villagers lack management capacity gave the reason that they do not have any formal authority to manage the forests, particularly in conflicts with influential forest encroachers and animal hunters. This responsibility should be left to government authorities, such as the Royal Forestry Department and the Police Department.

Regarding attitudes towards the potential contribution by the Government and the Royal Forestry Department to community forestry management, three respondents thought that they could manage the forests without this contribution while six did not know. There were 16 respondents who recommended roles for the Government and the Royal Forestry Department. They said these agencies should

- provide information and knowledge to the villagers about forest laws and regulations, e.g., World Heritage Area regulations;
- improve their own understanding of the subsistence lifestyle of the villagers and its relationships with the forests; and
- share the maintenance and management responsibilities between government authorities and the villagers.

With respect to how the Wildlife Fund Thailand could contribute to community forestry management, six respondents could not say what its role should be, but 19 gave details as follows. The Fund could

- give the villagers advice on how to cope with development pressures in relation to forest management; and
- disseminate facts about the villagers' way of life to outsiders, both government authorities and the public.

Seventeen respondents thought that the villagers experienced no constraints on their community forestry management and one did not reply. Seven thought that they have constraints as shown below:

- the villagers do not have enough time to maintain and patrol the forests because, generally, they have to spend most of their time cultivating their land and working on their homes;
- they do not have any formal authority when conflicts arise with influential outside interests and hunters;
- the foresters who are in charge of forest management in this area do not understand the villagers' subsistence way of life and their need to utilise forest resources.

To remove these constraints, they recommended that the villagers not only protect the surrounding forests and behave themselves in line with their ancestral doctrine, but also create better relationships with the foresters. The Wildlife Fund Thailand could take an important role in the latter process.

4.6.6 Degree of villagers' involvement

This part of the interview focused on forest management activities at the village level, the frequency of villagers' participation in these activities, the reasons for their participation, the village leaders and their roles in forest management, and the degree of participation these leaders allow the villagers when discussing and implementing forest management.

The forest management activities at the village level were limited to the year 1993. Villagers were asked about their participation. The summarised details are shown in Table 4.18.

Eighteen respondents usually participate in most of these activities. Those who participate every time are the village headman and the village committee. For the forest patrols and the checkpoints, only the Self Development and Protection volunteers participate.

Table 4.18: Forest management activities at the village level in 1993

Forest management activities	Characteristics of villagers' participation
The establishment of written regulations and penalties for forest and land utilisation	-villagers' recommendations and approval of these regulations and penalties
Definition of forest areas for each villager group to care for	-those living on each side of the village have a duty to warn of illegal encroachment and hunting in their assigned forest area
Sending villagers' representatives to patrol the forests with the foresters	-villagers delegating this responsibility to Self Development and Protection volunteers
Establishing a checkpoint for examining persons and vehicles entering and leaving the area, to protect the forests from illegal logging activities, especially forest encroachment and hunting during the dry season	-villagers delegating this responsibility to Self Development and Protection volunteers
Village meetings about forest utilisation and conservation	-involvement in disseminating information and discussion about forest management

The reasons given for participation are mainly the strong sense of commitment in the community, and the traditional social behaviour of the villagers. For patrols, the Sanepong Forest Protection Unit and the Local Administration Office at Sangklaburi district occasionally ask villagers to send volunteers to participate.

The interview question asking for identification of village leaders allowed the respondents to name more than one person. The results are shown in Table 4.19.

Table 4.19 Village leaders

Leaders	Frequency
Village headman	23
Village committee	20
Monks' abbot	13
Elderly villagers	11
Wildlife Fund Thailand's officers	1
Foresters	1

The respondents gave further details about leaders' roles in community forestry management as follows:

- (i) disseminating news and information concerning the villagers and the surrounding forests;
- (ii) conducting the village meetings on the forests and appropriate ways of utilising the forest resources;
- (iii) establishing written regulations and penalties applicable to forest use;
- (iv) cooperating with the foresters and the Wildlife Fund Thailand officers in maintaining and managing the forests; and
- (v) monitoring and control of the villagers' behaviour by the elders in line with traditions, culture, and beliefs.

As for the degree of participation that the leaders allow villagers in discussion about the forests, 21 respondents thought that the level is high, but villagers usually prefer to observe the leaders' discussion rather than participate in the discussion themselves. Four thought that their leaders only make a moderate contribution. On the degree of participation that the leaders allow the villagers in forest management, 23 respondents thought it was high, and two thought only moderate.

4.6.7 Factors relating to villagers' participation

Villagers' motivation for taking part in forest management was questioned in relation both to factors they themselves nominated, and the factors later named by the author.

4.5.7.1 *Important factors determining management of surrounding forests*

Respondents were asked to nominate the important factors affecting management. Table 4.20 shows these factors and the frequency of choice. No prompting was made by the interviewer or interpreter.

Table 4.20: Frequency of identification of factors affecting forest management

Factors	Frequency
Meeting, consulting, and understanding among villagers concerning the forests	12
Consciousness of communality and harmonious solidarity	7
Anxiety about the coming generations who may not have any land and forests for their use	6
The role of leaders and knowledgeable villagers	5
Consciousness inherited from ancestors about maintaining the forests	3
Awareness of outsiders exploiting the forests	3
Foresters and Wildlife Fund Thailand officers providing information about how to live appropriately with the forests	2
Social control among villagers	1
Establishment of written regulations about forest and land utilisation	1
Respectfulness and obedience towards the village headman and the village committee	1
Cooperation and coordination among villagers, leaders, Wildlife Fund Thailand officers, and foresters	1

4.6.7.2 *Attitudes towards stipulated factors*

Next, interviewees were asked to comment on the relative importance of five factors presumed by the interviewer to affect the villagers' participation

in forest management. From the results shown in Table 4.21, it can be deduced that all respondents thought that villagers' participation in implementation is very important, while most of them thought that the leaders' efficiency and the villagers' knowledge and access to information are also very important. The support of the Wildlife Fund Thailand was considered to be between very and moderately important. The support of governmental agencies was cited most often as moderately important.

Table 4.21: Attitudes towards stipulated factors

Factors	Degree of importance			
	Very important	Moderately important	Not important	Don't know
Leaders' efficiency	19	4	-	2
Villagers' knowledge and access to information	15	8	-	2
Villagers' participation in implementation	25	-	-	-
Government agencies' support	4	13	8	-
Wildlife Fund Thailand's support	13	11	1	-

4.6.7.3 *Participation in forest management planning*

Eighteen respondents said that they participate in forest management planning. Two did not participate and five did not respond. Issues named as the subject of planning are shown in Table 4.22.

Table 4.22: Forest management issues of concern to villagers

Issues	Frequency
Prohibition on hunting wild animals	8
Prohibition on cutting big, living trees	7
Using only land used in the past	7
Prohibition on exploding, electrocuting, diving and poisoning fish in the creek	7
Using forest resources only for self sufficiency	6
Establishing written regulations about forest and land utilisation	2
Prohibition on outsiders settling in the village	2

4.6.7.4 *Village meetings on forest management*

A village meeting is conducted once a month on the day of the full moon. Forest utilisation, maintenance, and management are usually on the agenda for discussion at every meeting due to their importance to the villagers' way of life (see details in Appendix 4, page 126). Eighteen respondents thought that these meetings usually resolve the problems. Seven thought that the meetings resolve all the problems. The respondents identified the village headman and the village committee as persons who play crucial roles in implementing the meetings' results.

4.6.8 Conflicts and resolution in community forests

Conflicts occur both inside the village and between the villagers and outsiders. In one case, a villager violated regulations by cutting down a big living tree in the forest. Other villagers discovered this violation and reported it to the foresters. The person was consequently arrested and penalised.

Conflicts between villagers and outsiders arise in four ways:

- an attempt to buy land from the villagers;
- encroaching onto the forest to plant coffee;
- illegal logging; and
- hunting wild animals while passing through the forest to refugee camps (occupied by people from Myanmar) at the border.

The conflicts are solved by the village headman, the village committee, and the foresters. The respondents were satisfied with their roles, and believed that the resolutions protected the forests from exploitation.

4.6.9 Villagers' satisfaction with current forest regulations

Written regulations had, at the time of the interviews, been implemented for about one year. These regulations are listed on the boards in the temple hall and the wayside shelter at the village centre, both in Thai and Karen languages. The regulations integrate traditional elements with new additions, which makes them applicable to current situations and problems. However, only some villagers are able to read them. According to the

interviews, 21 out of 25 respondents cannot use the Thai language at all, and it is probable that the number who can read and write in Karen is small.

Questions on villagers' satisfaction with the current forest regulations covered their perception and acceptance of these regulations, and their opinions about the amendments and new regulations. The results are shown in Table 4.24 (on the next page). Twenty-three respondents knew that there are written regulations about land and forest utilisation, and two did not know. All 23 respondents thought that the current regulations are appropriate to use as a framework for forest management and for coping with the present situation. No amendments or new regulations were recommended.

4.6.10 Roles of the Wildlife Fund Thailand in community forestry management

Villagers' were asked about the local activities of the Wildlife Fund Thailand. Table 4.23 shows the activities identified by the respondents.

Table 4.23: Wildlife Fund Thailand activities in the village

Activities	Frequency
Encouraging traditional weaving	16
Providing information about how to live in the protected area	11
Encouraging villagers to make and to use a three-dimensional land-use map	11
Cooperating and coordinating with villagers and foresters in maintaining and managing the forests	8
Collecting data and information about the population and food consumption behaviour of the villagers	8
Employing two villagers to work in WFT projects	7
Conducting eco-excursions for villagers' representatives to study community forestry management in the North and the South	6
Conducting two seminars about villagers and community forestry at Kanchanaburi province	4
Encouraging villagers to plant cardamom under the forest canopy	2
Surveying villagers' cultivated land	1
<u>Experimenting with straw-covered rice cultivation*</u>	<u>1</u>

* Not burning the dry vegetation after clearing land, and covering the soil with straw to mulch against weeds and to retain moisture.

Table 4.24: Perception and acceptance of forest regulations, and supplementary reasons

Regulations	Perception			Acceptance			Reasons
	Know	Don't know	Other	Agree	Disagree	Don't know	
1. Prohibition on hunting wild animals	20	3	-	20	-	3	- Concerns about wild animal reduction and extinction.
2. Use only land used in the past, and no sale of any land to an outsider	17	6	-	17	-	6	- Enough land used without encroaching on the forests for new land. - Coming generations will lack land if any is sold.
3. Not causing any bushfire	11	12	-	11	-	12	- Fires may extend to burn the village and others' cultivated land.
4. Use forest resources only for self sufficiency	16	7	-	16	-	7	- The villagers should only use forests for their subsistence. - Awareness that forest resource exploitation will decrease wild animals and forest fertility, and, subsequently affect villagers who closely depend on these resources.
5. Not allowing any outsiders to settle in the village	12	11	-	12	-	11	- Fear of outsiders' deforestation and culture. - Allowing outsiders' settlement may cause a scarcity of available land in the future.
6. No encouragement to tourism which is against the Wild Animal Prevention and Protection Act	4	19	-	4	-	19	- Tourist activities which exploit forest resources and disturb the peace may have long-term impacts not only on the forests but also on the villagers.
7. Personal behaviour in line with belief systems, traditions and culture of the ancestors	5	18	-	5	-	18	- Strong commitment to belief systems, traditions, and culture will ensure identity and a harmonious way of life with the forests.

Further results in Table 4.25 show that the main benefits perceived are the revival of village culture, and better understanding about appropriate relationships between villagers and the protected forests.

Table 4.25: Perceived benefits from Wildlife Fund Thailand activities

Benefits	Frequency
Cultural revival	14
Better understanding about appropriate relationship between villagers and the protected forests	12
Better understanding about the landscape and land use from the three dimensional map	7
Assistance with maintaining the forests and wild animals	6
Disseminating the information about villagers' way of life and need to live in the forests and use the forest resources	3
Helping villagers to have better lives	2

CHAPTER 5

DISCUSSION

This chapter mainly focuses at a macro level on the results of the field study. The presentation is in five sections: individuals as members of the community in community forestry management; common interests and public participation in forest management; traditions, culture, belief systems, and local wisdom affecting participation in forest management; the hierarchical structure of public participation; and public participation in forest management in the current circumstances.

5.1 Individuals as members of the community in forest management

A commitment to traditional Karen ways still exists in Sanepong village although physical changes have taken place. These changes include more urban styles of dress, permanent house construction using timber and galvanised iron, and fences around houses. However, the focus on individuality appears to be limited to household affairs and has little impact on the community as a whole. Individualism still appears to be less of an influence than communalism. Household regimes reflect common interests and community regulations, in line with traditions, culture, and ancient belief systems.

Forest utilisation is moderated by ancestral beliefs about self-sufficient resource use. For example, rice production is limited to household needs, fuelwood sources are common property, and only dead and fallen trees are used. The selection of land for cultivation is governed by ancestral beliefs about prohibited areas, and can be interpreted as an attempt to maintain balance and preserve significant areas of the forest ecosystem. Prohibitions on outsiders' settlement in the village and exploitation of the surrounding forest resources have been determined and implemented through villagers' consciousness of the survival needs of the community. This has resulted in cooperation, and solidarity in communal activities.

5.2 Common interests and public participation in community forestry management

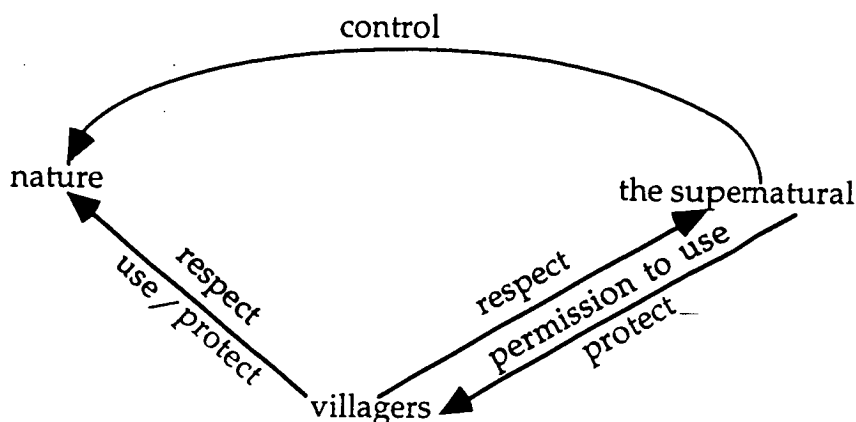
This study suggests that common interests provide an important basis for the villagers' commitment to the forests. Food, herbal medicines, construction materials, household utensils, and fuelwood, and benefits in the form of residential and agricultural land, and the natural beauty of the surrounding environment, all fulfill villagers' basic needs and desires. These forest resources are their supermarket, department store, chemist shop and community park, and more. These products and services are "free" for the villagers to consume without a market economy. Commitment to the common interest appears to create a sense of belonging, concern about the future, and a need to maintain and to protect these life support resources. The relationship between the villagers and the forests is one of interdependence. On one hand, the villagers are the users of the forest resources. On the other, they are the guardians of these resources against outside influences. Forest management in Sanepong village is a shared community responsibility, which includes participation in management activities.

5.3 Traditions, culture, belief systems, and local wisdom affecting participation in forest management

For generations, the Karens in Sanepong village have interacted with their environment and established a lifestyle close to nature. This interaction is integral with traditions, culture, belief systems, and local wisdom. A self-sufficient way of life and forest utilisation that has been sustained for many years are mediated by respect for the supernatural protectors described by Animist and Buddhist doctrines (see Figure 5.1 over page).

The prohibitions against using certain areas in the forests (see Table 4.14) are manifestations of local wisdom and control impact on forest ecosystems. Rotating rice cultivation is another crucial example of local wisdom. This agricultural method is targetted at avoiding over-use which leads to soil degradation and erosion, and benefits the ecosystem by restoring soil quality and reducing plant diseases and insect infestations.

Figure 5.1: Relationships amongst the villagers, nature, and the supernatural according to beliefs in Sanepong



The application of traditions, culture, belief systems, and local wisdom appears to demonstrate an awareness of appropriate relations with the surrounding forests. Although they may not know the term or understand modern concepts of forest management, the Karens show local ecosystem wisdom based on their dependence on the forests.

5.4 Hierarchical structure of public participation

The hierarchical structure of public participation in Sanepong community forestry management is related to social stratification. The macro social structure of Sanepong village (see page 47-50) comprises an elite group and the general public. The elite group consists of two subgroups: formal leaders, such as the village headman, the village headman's assistants and the subdistrict chief assistant, and informal leaders, such as the Buddhist abbot, and the elderly and young knowledgeable villagers. Traditions, culture, and belief systems regulate and control social behaviour and social norms, as articulated by members of the elite group.

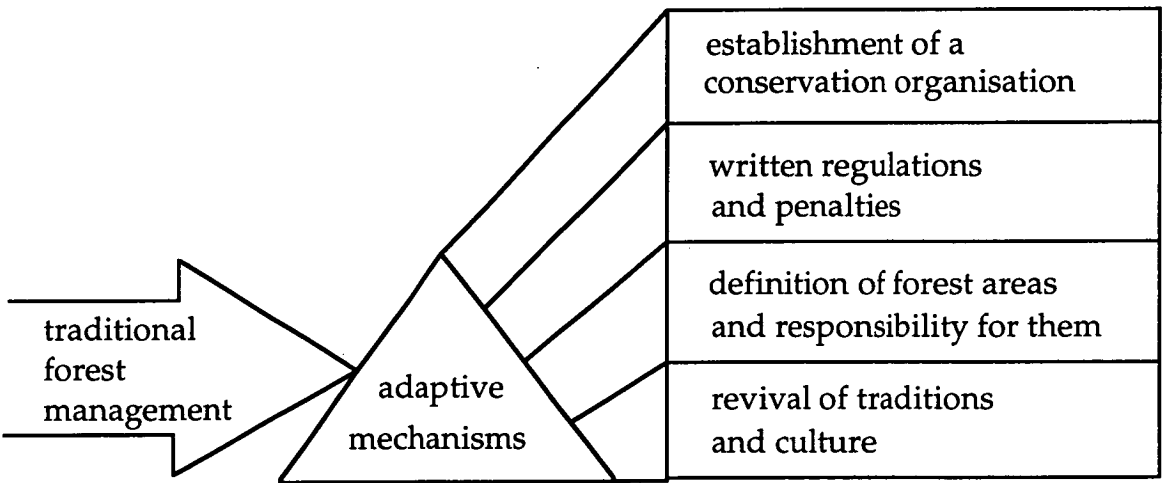
Initiatives in planning and management of the community forest mainly come from the elite group. The villagers' satisfaction with, and participation in the deliberations of the village meetings appears to legitimise these planning and management processes. They are willing to implement the village forest regulations and to participate in forest management activities.

The formal leaders deal with government agencies concerning the common interests. The elite group persuades and guides the villagers to participate in forest management activities.

5.5 Public participation in forest management in the current circumstances

Sanepong village is subject to many pressures, such as the attempt of the Government to relocate the villagers outside the wildlife sanctuary area, outsiders' forest resource exploitation, and the influence of outside culture together with socioeconomic development. These pressures create challenges for the village and the villagers' relations with the forests and, especially, for public participation in forest management. In these circumstances, the elite group and the villagers in general have tried to adapt their forest management, especially regarding public participation. This adaptive capability (see Figure 5.2) is manifest in recent initiatives, namely, the establishment of a conservation organisation, written regulations and penalties, the definition of forest areas and responsibilities for them, and the revival of traditions and culture.

Figure 5.2: Adaptive mechanisms for forest management in Sanepong village



5.5.1 The establishment of a conservation organisation

Many problems and conflicts associated with community forestry management involve outsiders, both individuals and organisations. In particular, they involve government agencies and the Government's political initiatives, such as The Land Distribution Programme for the Poor Living in Degraded Forest Reserves during 1990-1992. In such

circumstances, the formal leaders, that is, those in government positions (though elected by the villagers) cannot at the same time act as traditional villager leaders (which they often are) confronting government agencies. The Government prohibits such activities.

The establishment of the Cultural and Environmental Conservation Organisation of Sanepong village is the alternative that empowers the villagers by acting as their agent under such circumstances. This organisation also functions as a coordinating agent with other village conservation organisations in the Thung Yai Naresuan Wildlife Sanctuary. This process of forming community organisations to manage the forests was observed by Ramitanon, Karnchanaphan and Karnchanaphan (1993) in the north of Thailand. It is possible that this form of network may extend to a regional or even national movement for community forestry management.

5.5.2 Written regulations and penalties

Among the Karens in Sanepong village, belief systems and ancestral doctrine have given rise to social norms, and regulations within which the community functions. These social institutions also provide the framework for relationships between villagers and the forests.

In Sanepong, the community has to adapt its social institutions in the face of pressures from both outside and inside the village. One method noted in this study is the rationalisation of the belief systems, ancestral doctrine, social norms, and regulations concerning the forests. This involves creating a modern context, with causal relationships that can be understood by others outside traditional belief systems. Written regulations concerning the forests and forest utilisation create a systematic framework for community forestry management. The community has also established penalties to strengthen the impact of these regulations.

These regulations and penalties may gain broad recognition, especially from the government sector, whereby community forestry management will be acknowledged as systematic and effective. The overall bargaining power of the community in negotiating with the government sector may be thereby increased.

The written regulations and penalties came from the elite group, but the villagers' awareness of and contribution to these processes show their

degree of access to information and decision making under the traditional social structure. This access aids their understanding of what they have to do concerning the forests.

5.5.3 The definition of forest areas and responsibility for them

The maintenance of defined forest areas is the responsibility of groups of villagers chosen according to the location of their houses in the village. They also audit the violation of regulations as they go out to gather forest products and to cultivate the land. These techniques are an appropriate way to decentralise forest management activities at the grass roots level, to devolve responsibility to those for whom it is most convenient and to those with the most involvement in the forests. Each villager has not only a general responsibility to take care of the forests, but also responsibility for a specific area.

5.5.4 The revival of traditions and culture

The Karen community in Sanepong village has been facing a growing challenge from outside cultures. Sources of outside influence follow three main channels. First is the governmental education system, represented by the Police Ranger Primary School and the Non Formal Education Centre. This is seen as an attempt by the Thai Government to assimilate minority cultures into one common Thai culture under the national unity policy. The second is attempts by the government to improve road access to the area. Villagers can more easily contact outside areas, and government agencies can more efficiently govern the area. Last is the establishment of two government offices, the Sanepong Forest Protection Unit and the Hill Tribe Development Unit, involving officials and their visitors who often violate village regulations. Tourists are also known to cause similar problems. There was some evidence of villagers, particularly some formal leaders, drinking in the village, and annoying other villagers while the author was doing fieldwork there. Drinking in the village, making loud noises, and annoying others are against the village regulations in line with ancestral doctrine.

The entry of outside culture has had both positive and negative impacts on the village and the villagers. On the positive side, the government education system may assist the villagers' communication in the Thai language with outside communities. Houses using timber and galvanised

iron may last for several years. This can save time, and relieve pressures on forest resources compared to traditional buildings, using bamboo and palm leaves, which have to be reconstructed every 2-3 years. On the negative side, the gradual erosion of Karen culture may occur, including those aspects related to their utilisation of forest resources. Outside culture based on a market economy encourages natural resource exploitation. At present the traditional culture has a forest-centered basis.

In response to these challenges, the villagers are revitalising their culture, for example, through a focus on the written language, traditional weaving, classical dance, folk music, and traditional ceremonies. These efforts may strengthen their social institutions further.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

The forests surrounding Sanepong village are not only the life support systems of the community, providing food, medicines, household and house construction materials, and fuelwood, but are also an important basis of traditions, culture, belief systems and local wisdom. Management has evolved from knowledge and experience over many generations. Public participation in management here is a manifestation of local wisdom dynamically integrated with the forest ecosystem. This community can be seen as a model offering hope for the ecologically sustainable utilisation of an ecosystem by people who are both users and guardians of the system.

This study suggests that public participation in community forestry management can enhance attitudes, intentions, and action for sound management and conservation. In Sanepong, the conservation efforts reflect the villagers' solidarity, and an adaptive capability under changing socioeconomic pressures.

The Karen tribe's efforts result from their dependency on and commitment to the surrounding forests. Community survival may depend on the members' cooperation in conserving forest resources. Traditions, culture, belief systems, social norms, and regulations are adapted to enhance the management system. These social institutions are important tools, especially in processes of public participation. However, the solidarity of their involvement may depend on the fundamental unity of the Karens' traditional society.

One factor affecting the efficacy of public participation in Sanepong is the presence of strong leaders. These leaders, both formal and informal, are crucial social agents mobilising and controlling the villagers' behaviour. Villagers are influenced by their beliefs and respect the leaders. These leaders have a form of charisma which comes from descent from a local Karen lord, or from their traditional knowledge.

Thailand is facing major environmental problems in both rural and urban areas, such as urban pollution, and drought and deforestation, and the government's efforts toward solutions have become an important area of policy development since the late 1980s. For example, the logging ban in 1989 was followed by an attempt to improve national forest management, through the National Forestry Policy and the amendment of forestry laws and regulations.

By 1996, according to the Seventh National Economic and Social Development Plan (1992-1996), the Thai Government will have presented the Community Forestry Bill to the Parliament to delegate the rights to manage community forests to the people living in and around the forests. The intention is that these communities will utilise and conserve the forests as the buffer zone areas of the state protected and reserved forests throughout the country. This is a part of decentralisation in resource management.

Community forestry management in Sanepong village is one example of the evolution of public participation, in this case on the basis of Karen traditions and culture. This study contributes to an understanding of community forestry management in such traditional societies. There are, however, many examples of community forestry in Thailand which have different geographic and cultural characteristics and management methods. Public participation is, however, an essential factor in successful community forestry management, according to the literature covered earlier in this thesis. The present study corroborates that finding.

The study also demonstrates a model relevant to World Heritage Area management. The World Heritage Area concept itself has been problematic. There has been difficulty in coming to terms with the meaning of conservation when there are prior occupants of an area valued for its natural ecosystems. This has been the case in the Sanepong area, where the Thai Government over the last four years has been and still is attempting to move the Karens out. Ideas are changing both at the international and national levels, and it is increasingly being accepted that conservation may be best served in some situations where traditional management practices can be maintained. For example, the IUCN concept for the conservation category of Protected Landscape is based substantially on the positive roles of resident populations in caring for land (Lucas 1992). The Sanepong villagers are an example of a community living closely with nature, and their

management practices show evidence of long term relationships which have the prospects of maintaining local ecosystems in a healthy condition. This World Heritage Area could be seen as an exemplary model where protection of both natural diversity and cultural diversity are attended to.

6.2. Recommendations

The results from this study demonstrate relationships between the Sanepong villagers and the forests that are, arguably, harmonious. To develop community forestry management in this village and, perhaps, in neighbouring villages in this area, the author recommends conserving and, if necessary, reviving traditions and culture as an essential tool for maintaining and conserving the forests. The educational system and socioeconomic development, in introducing new technologies and knowledge to communities such as this Karen village, need to show cognisance of and sensitivity towards traditional ways.

Community forestry management needs to involve both government agencies and the local people. The government sector could play an important role in providing knowledge about conservation regulations and ecological science, funds, and supplementary employment, provided they respect the local culture. Many government agencies working in this area, such as the Royal Forestry Department, the Local Administration Department, the Community Development Department, the Public Works Department, and the Education Ministry, could coordinate and integrate their own operations, as well as take the trouble to learn more about the villagers, their culture and their dependence on the forests, and community management of the forests. Attempts to accelerate socioeconomic development by changing these villagers without reference to their own needs and cultural practices could destroy their local culture, and leave the forests open to increased exploitation.

Community forestry needs to concentrate both at the local and national levels on public participation in initiatives, decision-making, and implementation. However, this will only happen if the Government is willing to decentralise control to the local people. Although there is hope there will be a favourable community forestry law, there are many controversial practical issues. These include the following.

- Do the government and Thai society in general have enough knowledge about community forestry?
- If there are many regional and/or local differences in community forestry practices, how can the differences be accounted for in forestry policy?
- What are the appropriate roles of government agencies, NGOs, and the community itself in community forestry management?
- To what extent will the government be willing to confirm the rights of the traditional occupiers of land, including those in forest reserves and in protected lands, such as wildlife sanctuaries and World Heritage Areas?
- To what extent can the government incorporate the rights of minority cultures like the Karens in its visions for the nation?

This study on public participation in forest management in Sanepong village is highly limited in area, time, and scope. More case studies would generate information and knowledge that could be used by government agencies, NGOs, and other parties involved in community forestry. The creation and consolidation of this body of knowledge will encourage decision-makers to take seriously the alternative of a decentralised, participatory model of forest management and conservation, at least in places such as Thung Yai Naresuan Wildlife Sanctuary and the World Heritage Area, where conservation is a priority.

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APPENDIX 1

Culture, traditions, and local wisdom notes form

Date _____

Time _____

Source of information _____

(If a person, position in the village) _____

1. Topic/Name _____

2. Kind of media _____

3. Details of topic

1) _____

2) _____

3) _____

4) _____

5) _____

4 Relationship with the forests

1) _____

2) _____

3) _____

4) _____

5) _____

APPENDIX 2

Interview Form Public Participation in Forest Management in Thailand A Case Study of Sanepong Village, Kanchanaburi

Date _____
Time _____
Household number _____
Position in the village _____

1. How often do you listen to the radio?

- every day 1
- once a week 2
- twice a week 3
- more than twice a week 4
- never 5
- other (specify) 6

2. What programmes do you listen to?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

3. How long do you listen each time? _____

4. How often do you read the newspaper?

- every day 1
- once a week 2
- twice a week 3
- more than twice a week 4
- never 5
- other (specify) _____ 6

5. How often do you go to town?

- every day 1
- once a week 2
- more than once a week 3
- once a month 4
- more than once a month 5
- never 6
- other (specify) _____ 7

6. How often do you contact governmental agencies?

- every day 1
- once a week 2
- more than once a week 3
- once a month 4
- more than once a month 5
- never 6
- other (specify) _____ 7

7. Do you have your own land for cultivation? - yes 1
- no 2

- If 'yes', specify number of land tenure _____ plots

- How large is the area of each plot? _____

- If 'no', why not? _____

8. What types of crop are you growing this year ? _____

9. Sources and amount of income per year:

sources

income

total income

10. (What things do you gather from the forests)

- Food

- Have you ever gathered raw food from the nearby forests?

- yes 1

- no 2

- Specify the kinds of plants and animals you gather

plants

animals

_____	_____	_____	/	_____	_____	_____
_____	_____	_____	/	_____	_____	_____
_____	_____	_____	/	_____	_____	_____
_____	_____	_____	/	_____	_____	_____
_____	_____	_____	/	_____	_____	_____

- Where do you gather the food? _____ (Identify on map)

- Gathering frequency

- every day 1

- once a week 2

- more than once a week 3

- once a month 4

- more than once a month 5

- other (specify) _____ 6

- Medicine

- Have you ever gathered medicinal herbs from the nearby forests?

- yes 1

- no 2

- kinds of herbs

- kinds of diseases cured

- Where do you gather the medicinal herbs? _____
(Identify on map)

- House construction materials

- What kinds of materials from the forests have you used for building your house, and to what particular uses do you put them?

kinds

uses

- Household materials (for internal use)

- What kinds of materials from the forests have you used in your household, and to what particular uses do you put them?

<u>kinds</u>	<u>uses</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

- Where do you get these materials for house construction and household materials? _____ (Identify on map)

- Explain the details of how you collect house construction and household materials: _____

- Do you gather other products from the forests not mentioned so far?

- yes 1

- no 2

- If 'yes', specify 1. _____
2. _____
3. _____
4. _____
5. _____

11. Are there any relationships between the surrounding forests and your agricultural production?

- yes 1

- no 2

If 'yes', what? _____

12. Are there any relationships between the surrounding forests and your way of life?

- yes 1

- no 2

If 'yes', what? _____

(People's sense of commitment to the forest)

13. Are there any community laws or beliefs associated with traditions concerning the forests?

- yes 1
- no 2
- don't know 3

- Tell me up to seven of those you consider most important.

- Specify 1 _____

Do you agree with this tradition? - agree 1
- disagree 2
- don't know 3

Why? _____

- Specify 2 _____

Do you agree with this tradition? - agree 1
- disagree 2
- don't know 3

Why? _____

- Specify 3 _____

Do you agree with this tradition? - agree 1
- disagree 2
- don't know 3

Why? _____

- Specify 4 _____

Do you agree with this tradition? - agree 1
- disagree 2
- don't know 3

Why? _____

- Specify 5 _____

Do you agree with this tradition?	- agree	1
	- disagree	2
	- don't know	3

Why? _____

- Specify 6 _____

Do you agree with this tradition?	- agree	1
	- disagree	2
	- don't know	3

Why? _____

- Specify 7 _____

Do you agree with this tradition?	- agree	1
	- disagree	2
	- don't know	3

Why? _____

14. Are there any myths or stories concerning the forests?

- yes	1
- no	2
- don't know	3

- Tell me up to seven of those you consider most important.

- Specify 1 _____

Does this myth/story help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

- Specify 2 _____

Does this myth/story help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

- Specify 3 _____

Does this myth/story help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

- Specify 4 _____

Does this myth/story help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

- Specify 5 _____

Does this myth/story help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

- Specify 6 _____

Does this myth/story help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? - _____

- Specify 7 _____

Does this myth/story help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

15. Are there any ceremonies concerning the forests?

- yes 1
- no 2
- don't know 3

- Tell me up to seven of those you consider most important.

- Specify 1 _____

Does this ceremony help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

- Specify 2 _____

Does this ceremony help the community in its relationship with the forests?

- yes	1
- no	2
- don't know	3

Why? _____

- Specify 3 _____

Does this ceremony help the community in its relationship with the forests?

- yes	1
- no	2
- don't know	3

Why? _____

- Specify 4 _____

Does this ceremony help the community in its relationship with the forests?

- yes	1
- no	2
- don't know	3

Why? _____

- Specify 5 _____

Does this ceremony help the community in its relationship with the forests?

- yes	1
- no	2
- don't know	3

Why? _____

- Specify 6 _____

Does this ceremony help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

- Specify 7 _____

Does this ceremony help the community in its relationship with the forests?

- yes 1
- no 2
- don't know 3

Why? _____

16. Do sacred spirits or things in the forests have any influence on your life?

- yes 1
- no 2
- don't know 3

Why/why not? _____

- Tell me up to seven of the most important sacred spirits or things, and their influence.

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

- | | | | |
|-----|--|--------------|---|
| 17. | Your life depends on products and services from the forests. | - agree | 1 |
| | | - disagree | 2 |
| | | - don't know | 3 |
| 18. | Local villagers expect to manage their surrounding forests. | - agree | 1 |
| | | - disagree | 2 |
| | | - don't know | 3 |
| 19. | You are interested in the future of these forests. | - agree | 1 |
| | | - disagree | 2 |
| | | - don't know | 3 |
| 20. | Maintaining and managing the forests are the responsibilities of the Government and the Royal Forestry Department. | - agree | 1 |
| | | - disagree | 2 |
| | | - don't know | 3 |

(People's capacity to manage the forests)

- | | | | |
|-----|--|-------------------|---|
| 21. | Do the villagers have the ability to manage their surrounding forests? | | |
| | | - yes | 1 |
| | | - no | 2 |
| | | - don't know | 3 |
| | | - other (specify) | 4 |

- If 'yes', how? _____

- If 'no', why not? _____

22. How can the Government and the Royal Forestry Department contribute to community forestry management? _____

23. How can the Wildlife Fund Thailand contribute to community forestry management? _____

24 Are there any managerial constraints in community forestry?

- yes	1
- no	2
- don't know	3

- If 'yes', what? 1. _____
 2. _____
 3. _____
 4. _____
 5. _____

- How can these constraints be removed? _____

(Degree of involvement of various members of the community)

25. Specify the forest management activities at the community level in this village this year:

<u>activities</u>	<u>frequency</u>
1 _____	_____
2 _____	_____
3 _____	_____
4 _____	_____
5 _____	_____
6 _____	_____
7 _____	_____
8 _____	_____
9 _____	_____
10 _____	_____

26. How often do you participate in these activities?
- every time 1
 - usually (frequency _____) 2
 - sometimes (frequency _____) 3
 - never 4
27. The reasons you participate are (one answer or more)
- the village chief's order 1
 - the village committee's resolution 2
 - the Cultural and Environmental Conservation Committee's resolution 3
 - someone's persuasion 4
(who? _____)
 - others (specify) _____ 5

28. Who are the leaders of your village?
- the village chief 1
 - the monks' chief 2
 - the village committee 3
 - the Cultural and Environmental Conservation Committee 4
 - other (specify) _____ 5
29. How do the leaders play forest management roles? _____

30. What degree of participation do your leaders provide villagers in discussion of the forests?
- high 1
 - moderate 2
 - low 3
 - not at all 4
31. What degree of participation do your leaders provide villagers in forest management?
- high 1
 - moderate 2
 - low 3
 - not at all 4

32. Did you conduct any of your own private forest management?

- yes 1

- no 2

If 'yes', specify:

	<u>activities</u>	<u>frequency</u>
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____
8	_____	_____
9	_____	_____
10	_____	_____

33. Were there any group activities concerning forest management separate from community level activities?

- yes 1

- no 2

If 'yes', specify:

	<u>activities</u>	<u>frequency</u>
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____
8	_____	_____
9	_____	_____
10	_____	_____

(Factors related to the involvement of various people)

34. What factors are important in determining surrounding forest management in this village?

1	_____
2	_____
3	_____
4	_____

5 _____

6 _____

7 _____

8 _____

35. Now I will ask you about a range of factors I have thought of. You tell me whether you think they are important or not.

- | | | |
|--|------------------------|---|
| - leadership efficiency | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |
| - villagers' knowledge and information | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |
| - villagers' participation in implementation | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |
| - governmental agencies' support | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |
| - the Wildlife Fund Thailand's support | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |

36. Is there villagers' participation in forest management planning?

- | | |
|--------------|---|
| - yes | 1 |
| - no | 2 |
| - don't know | 3 |

If 'yes', specify:

1 _____

2 _____

3 _____

4 _____

5 _____

37. How many villagers' meetings about community forestry management were there this year? ___ times

- How often did you attend the forest management meetings?

- once 1
- twice 2
- 3 times 3
- 4 times 4
- 5 times 5
- every meeting 6
- other (specify)___ 7
- never 8

- What were the most important forest management topics or discussions this year?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

38. Did those meetings contribute to the problems' resolutions?

- always 1
- often 2
- not often 3
- seldom 4
- never 5
- other (specify) _____ 6

- If 'yes', who implemented these resolutions?

- the village chief 1
- the village committee 2
- the Cultural and Environmental Conservation Committee 3
- the villagers 4
- others (specify) _____ 5

39. How was the Cultural and Environmental Conservation Committee formed?
- | | |
|-------------------------------------|---|
| - elected by villagers | 1 |
| - appointed by government authority | 2 |
| - don't know | 3 |
| - other (specify) _____ | 4 |
- _____
- _____

40. What are the most important functions of this committee?

1. _____
2. _____
3. _____
4. _____
5. _____

41. How frequently does the Committee meet?
- | | |
|-----------------------|---|
| - once | 1 |
| - twice | 2 |
| - 3 times | 3 |
| - 4 times | 4 |
| - 5 times | 5 |
| - don't know | 6 |
| - other (specify)____ | 7 |

42. Have you ever participated in the Committee's activities?
- | | |
|---------------------------|---|
| - yes (frequency__ times) | 1 |
| - no | 2 |

- If 'yes', specify the most important activities:

1. _____
2. _____
3. _____
4. _____
5. _____

(Conflict resolutions over the community forests)

43. Are there any conflicts concerning the community forests and forest utilisation inside the village?
- | | |
|-------|---|
| - yes | 1 |
| - no | 2 |

- If 'yes', specify the most serious conflicts:

1. _____
2. _____
3. _____
4. _____
5. _____

- with neighbouring villages?

- | | |
|-------|---|
| - yes | 1 |
| - no | 2 |

- If 'yes', specify the conflicts

1. _____
2. _____
3. _____
4. _____
5. _____

- Who played roles solving the problems?

- | | |
|---|---|
| - the village chief | 1 |
| - the village committee | 2 |
| - the Cultural and Environmental Conservation Committee | 3 |
| - the villager's meeting | 4 |
| - other (identify) _____ | 5 |

- Were you satisfied with the resolutions?

- | | |
|-------------------------|---|
| - satisfied | 1 |
| - dissatisfied | 2 |
| - don't know | 3 |
| - other (specify) _____ | 4 |

- Why? _____

(Degree of satisfaction of people with current forest regulation at the village level)

44. Do you know that there are regulations about land use and forest management?

- | | |
|-------|---|
| - yes | 1 |
| - no | 2 |

(If 'no', go to Question 51)

45. Tell me details of the regulations you know of.

1) (prohibition on hunting wild animals)

- known 1

- unknown 2

- other (specify)_____ 3

- Do you agree with this regulation? - agree 1

- disagree 2

- don't know 3

- Why? _____

2) (use only of land used in the past, and no sale of any land to an outsider)

- known 1

- unknown 2

- other (specify)_____ 3

- Do you agree with this regulation? - agree 1

- disagree 2

- don't know 3

- Why? _____

3) (not causing any bush fires)

- known 1

- unknown 2

- other (specify)_____ 3

- Do you agree with this regulation? - agree 1

- disagree 2

- don't know 3

- Why? _____

4) (use of forest resources for self-sufficiency only)

- known 1

- unknown 2

- other (specify)_____ 3

- Do you agree with this regulation? - agree 1

- disagree 2

- don't know 3

- Why? _____

5) (not allowing any outsiders to settle in the village)

- known 1

- unknown 2

- other (specify) _____ 3

- Do you agree with this regulation? - agree 1

- disagree 2

- don't know 3

- Why? _____

6) (no encouragement of tourism, which is against the *Wild Animal Prevention and Protection Act*)

- known 1

- unknown 2

- other (specify) _____ 3

- Do you agree with this regulation? - agree 1

- disagree 2

- don't know 3

- Why? _____

7) (personal behaviour in line with belief systems, cultures and traditions of ancestors)

- known 1

- unknown 2

- other (specify) _____ 3

- Do you agree with this regulation? - agree 1

- disagree 2

- don't know 3

- Why? _____

46. Who formulated these regulations? _____

47. Should these regulations be modified?

- yes 1

- no 2

- don't know 3

- If 'yes', what?

1. (prohibition on hunting wild animals) _____

- Why? _____

2. (use only of land used in the past, and no sale of any land to an outsider) _____

- Why? _____

3. (not causing any bush fires) _____

- Why? _____

4. (use of forest resources for self-sufficiency only) _____

- Why? _____

5. (not allowing any outsiders to settle in the village) _____

- Why? _____

6) (no encouragement of tourism, which is against the *Wild Animal Prevention and Protection Act*) _____

- Why? _____

7) (personal behaviour in line with belief systems, cultures and traditions of ancestors) _____

- Why? _____

48. Should new regulations be added?

- yes	1
- no	2
- don't know	3

- If 'yes', what? 1. _____

- Why? _____

2. _____

- Why? _____

3. _____

- Why? _____

4. _____

- Why? _____

5. _____

- Why? _____

(What is the role of NGOs in the village's management of its forests)

49. Identify the activities of the Wildlife Fund Thailand in the village?

1. _____
2. _____
3. _____
4. _____
5. _____

50. Do these activities provide any benefits to the community?

- | | |
|--------------|---|
| - yes | 1 |
| - no | 2 |
| - don't know | 3 |

- Comments: _____

(General background of a respondent)

51. Age _____

52. Sex

- male	1
- female	2

53. Marital status

- single	1
- married	2

54. Educational attainment

- primary	1
- secondary	2
- other (specify) _____	3

55. How long have you settled in the village ? _____ years

56. Where did you live before coming to settle in this village?

- district _____ - province _____

57. Number of household members () persons

- _____ age	_____ sex	relationship _____
- _____ age	_____ sex	relationship _____
- _____ age	_____ sex	relationship _____
- _____ age	_____ sex	relationship _____

APPENDIX 3

List of wild plants used for villagers' food

1. Pak good (*Dryopteris amboinensis* Kurz.)
2. Pak nam (*Amaranthus spinosus* Linn.)
3. Pak munmoo (*Melientha suavis* Pierre.)
4. Purk pa (*Colocasia esculenta*)
5. Makur poang (*Solanum melongena*)
6. Ma dur (*Ficus* sp.)
7. Pak goum (*Carteva* sp.)
8. Mara pa (*Momordica* sp.)
9. Nor mai (bamboo shoot)
10. Hed (mushroom)
11. Yod wai (rattan top)
12. Cha om*
13. Fak peka*
14. Kerw*
15. Look neang*
16. Kongchuna*
17. Ta soay*
18. Ongchina du*
19. Pu du*
20. Kati du*
21. Teychong-ee du*
22. Kaeng du*
23. Jorpithi du*
24. Wachina du*

* The author cannot determine a scientific or an English common name.

APPENDIX 4

Village meeting topics concerning forest management

1. Cooperation in looking after the forests and wild animals
2. Definition of forest areas and responsibility for villagers
3. Reporting measures about forest encroachment and wild animal hunting
4. Preventing bushfire
5. Prohibition on wild animal hunting
6. Prohibition on cutting down big live trees in the forest
7. Asking for permission from the village committee before using dead trees
8. Appropriate ways for sustainable use of forest products
9. Prohibition of an outsider forsettling in the village
10. Behaving oneself in line with village traditions and regulations

5 _____

6 _____

7 _____

8 _____

35. Now I will ask you about a range of factors I have thought of. You tell me whether you think they are important or not.

- | | | |
|--|------------------------|---|
| - leadership efficiency | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |
| - villagers' knowledge and information | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |
| - villagers' participation in implementation | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |
| - governmental agencies' support | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |
| - the Wildlife Fund Thailand's support | - very important | 1 |
| | - moderately important | 2 |
| | - not important | 3 |
| | - don't know | 4 |

36. Is there villagers' participation in forest management planning?

- | | |
|--------------|---|
| - yes | 1 |
| - no | 2 |
| - don't know | 3 |

If 'yes', specify:

1 _____

2 _____

3 _____

4 _____

5 _____