

Indigenous Knowledge, Customary Use of natural Resources and Sustainable Biodiversity Management: Case Study of Hmong and Karen Communities in Thailand

Supported by

Humanist Institute for Development Cooperation (HIVOS)

Directorate General of International Co-operation of the Netherlands, Ministry of foreign Affairs (DGIS)

Swedish International Biodiversity Programme (SwedBio)

International Working Group for Indigenous Affairs (IWGIA)

Research Report

Indigenous Knowledge, Customary Use of natural Resources and Sustainable Biodiversity Management:
Case Study of Hmong and Karen Communities in Thailand

Copies: 500 items

Edited by:

Udom Charoennyomphrai

Chanthane Phichetkulsamphan

Wilawan Tharawodome

Cover Designed:

co-kayan media team : co_kayan@yahoo.com

Published by: Inter Mountain Peoples Education
Education and Cultures in Thailand Association (IMPECT)

252 Moo 2, Tumbon Sansainoi, Amphur Sansai,

Chiang Mai 50210 Thailand

Tel: +66 (0)53 398-954

Fax: +66 (0)53 398-592

E-mail: impect@cm.ksc.co.th

Indigenous Knowledge, Customary Use of Natural Resources and Sustainable Biodiversity Management:

Case Study of Hmong and Karen Communities in Thailand

By:

Highland Mapping Development and Biodiversity Management Project
Inter-Mountain Peoples' Education and Culture in Thailand Association (IMPECT)
in collaboration with
Forest Peoples Programme

Working Team and Advisors

Highland Mapping Development and Biodiversity Management Project

Administrative Oversight Committee

Sakda Saenmi	Director, Inter-Mountain People's Education and Culture in Thailand (IMPECT) Association
Santichai Saeyang	Deputy Director, IMPECT
Waiying Thongbeu	Coordinator, Karen Network for Culture and Environment

Project Research Staff

Udom Charoennyomphrai	Project Coordinator
Aphiwan Boonphan	Project Researcher
Chanthanmeei Phichetkulsamphan	Project Researcher
Wilalai Tharawarodomorodom	Project Researcher
Sarawut Prathumrat	Human Rights Lawyer

Community Map Surveyors

Phakawat Preechan	Map technician
Surachai Thaweecharoenphorn	Community map surveyor
Somchai Sakulphithakphrai	Community map surveyor
Boonchuay Charoennyomphrai	Community map surveyor
Kamolnphan Saelee	Project secretary

Community Researchers

Pathiphan Wiriyawana	Khun Ya Village
Sakhadi Kietanusorn	Mae Pon Nai Village
Chia Saewa	Mae Ya Noi Village
Chatchai Sengchao	Mae Sa Nga Village

Project Advisors and Experts

Witoon Lienchamroon	Indigenous knowledge
Johni Odochao	Indigenous knowledge
Yua Thanomrungreuang	Indigenous knowledge
Prasert Trakansuphakorn	Research
<i>Ajahn</i> Chuphinit Kasemanee	Research
<i>Ajahn</i> Samart Srichajummnong	Research

International Advisors/Experts

Dr. Marcus Colchester	Director, Forest Peoples Programme
Dr. Maurizio Farhan Ferrari	Biodiversity Policy Adviser, Forest Peoples Programme

Cover photographs:

The Dong Seng Ritual enhances the relationship between the community members, nature (soil, water, forest, wildlife), and the supernatural (Lord of the Land) so that the ecological balance is maintained.

Part of the Mae Ya watershed, Northern Thailand

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Acknowledgements

This research report could not have been accomplished without the cooperation of the people in the four study communities, the community leaders and researchers. We would also like to acknowledge the staff of the IMPECT Association's Highland Mapping Development and Biodiversity Management Project, the Project's Administrative Committee, Sakda Saenmi, Santichai Saeyang, Wai-ying Thongbeu, and all of the project's advisors, such as Ajahn Chuphinit Kasemnee and Prasert Trakansuphakorn for helping to develop the conceptual framework and an understanding of the communities' culture. We also acknowledge the help of Ajahn Samart Srichamnong, Dr. Ron Renald, Pornphimol Phosri, Rebecca Sooksom, Helen Leake, Witon Buadaeng, and Prawit Nikornuaychai and Thaworn Kamphonkul in translating and editing the report. All of the above people gave advice on making the content and language of the report easier to read. Dr. Maurizio Farhan Ferrari's assistance in research training and understanding of the CBD, and finalization of the report, was essential. We extend our gratitude to all of the above-mentioned people.

We would also like to extend our thanks and appreciation to Swedbio and the Novib-Hivos Biodiversity Fund for their financial contributions to the community mapping project (2003-2004) and to the Netherlands Ministry of Foreign Affairs and the Novib-Hivos Biodiversity Fund for their contributions to the "10(c) case study" on customary use and sustainable biodiversity management.

If there are any omissions or errors in the report, we would also like to take this opportunity to apologize. We hope that this research report will be useful to tribal and indigenous peoples in the future.

Research Team

August 2006

Executive Summary

This research project studied the sustainable, customary use of biological resources by highland communities in Northern Thailand. It was undertaken with the objectives of studying the knowledge, customs, and traditions practiced by the Hmong and Karen (Karen) tribes in the management of natural resources and biodiversity, in terms of both the sustainable use and conservation of these resources. The project also studied how highland communities have adapted to the impacts of externally imposed laws, policies and development processes. The study has the further objective of being used to lobby for the effective implementation of government policies in line with Article 10(c) of the Convention on Biological Diversity (CBD). The study used a Participatory Action Research (PAR) approach. Interviewing, observation, and data analysis were done jointly by community leaders, researchers and the advisory team.

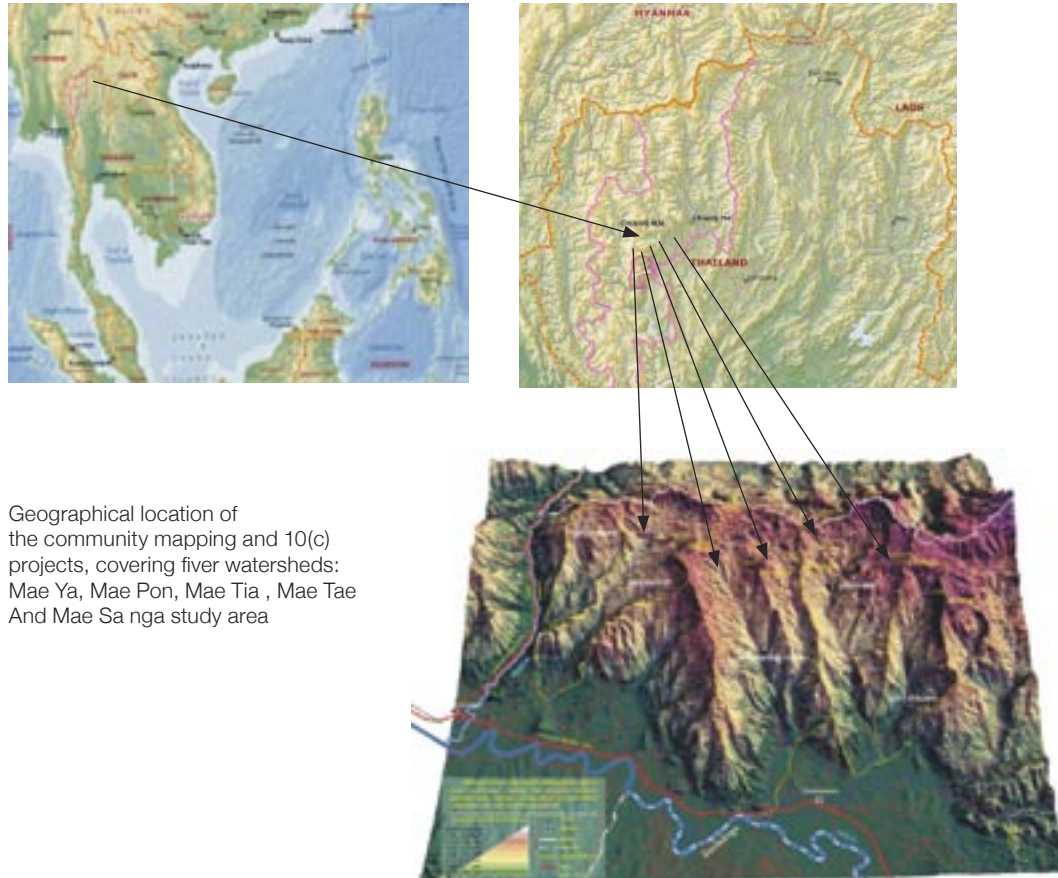
The study found that each community has a traditional leader, who might be not the same person as the official leader. (who is elected by the community) The traditional leaders hold authority based on the history and structure of the community. They play the main role in building a relationship between people in the community and natural resources and biodiversity management, by guiding their customary use of soil, water, forest, animal and plant resources. Indigenous knowledge about customary resource use is expressed as patterns of thought, production, beliefs, customs, traditions and rituals. All of these tangible expressions result in a balance between the maintenance of life and dependence on nature as appropriate for each tribe. Villagers use natural resources in every aspect of their life, from food (through farming, hunting and gathering) to housing, clothing, medicine, and performing rituals at auspicious events like births, weddings, and funerals. The process of transmitting this knowledge from one generation to another is incorporated into customs such as teachings, songs, legends, stories, rituals, and practical daily activities, especially those related to their agricultural and forest-dependent work.

There are similarities between the Hmong and Karen in their categorization of, and beliefs about, the ownership of natural resources, in that the ultimate owners are supernatural entities such as the Lord of the Water, the Lord of the Forest, the Lord of the Mountain, or guardian spirits. Both tribes believe that these spirits are the caretakers and guardians of natural resources. People using these resources ask permission to do so only in order to maintain their livelihoods. After having been granted permission by the spiritual owner, they are required to use the resources carefully and sensibly. These beliefs aid in the sustainable use and conservation of resources.

The main differences between the Hmong (Mae Ya Noi and Mae Sa Nga villages) and the Karen (Khun Ya and Mae Pon Nai villages) are seen in their agricultural systems. The Karen emphasize wet rice and swidden cultivation, mainly producing rice. The Hmong do not grow wet rice or upland rice, but plant cash crops instead. The main factors that play a role in cultural erosion and changes in social and economic activities taking place in the communities relate to the influences of the external development system that emphasizes commercial economic concepts, religion, and formal education.

The work of various government and non-governmental agencies has caused adaptations to occur or has been met with community resistance in the past. For example, Mae Pon Nai village has struggled against the thinking of government and religious organizations, and has not accepted a great deal of outside cultural influence. Khun Ya village has not adopted monoculture cash crops because they believe it destroys their indigenous agricultural methods. Community members have joined together at the community, watershed network, and national people's network levels in order to find an appropriate solution to their problems.

The lack of title to agricultural and residential lands, one of the main problems affecting the two tribes and causing insecurity in resource management, is a result of Thai laws that have placed certain areas under the direct administration of government agencies, such as the laws concerning National Reserve Forests, National Parks, Cabinet resolutions and the Land Act. These laws have created obstacles for highland communities to claim their rights. The Thai Constitution, which is the highest law in Thailand, provides for the recognition of customary natural resource management by tribal and indigenous peoples but the relevant articles have not yet been put into practice.



Geographical location of the community mapping and 10(c) projects, covering five watersheds: Mae Ya, Mae Pon, Mae Tia, Mae Tae And Mae Sa nga study area

In order to respect and encourage customary use of biological resources, the following actions should be taken:

- Cultural rights and the rights of communities to manage natural resources according to their tribal customs must be recognized.
- Government agencies and local administrative organizations must promote and support the maintenance of traditional tribal regulations and community customs, and respect their land rights and cultural rights. The government must review relevant policies and laws and amend them where they conflict with the Constitution and the Convention on Biological Diversity. At the same time, local administrative organizations should have local regulations that accept community practices and do not violate community members' human rights.
- There should be promotion and support of a participatory process to study indigenous knowledge, and a process by which tribal people can formulate their own way of life. The government should listen to the concerns of tribal people regarding community development work and organizing local curricula in schools.
- Peoples' organizations need to build greater understanding about tribal people, disseminate information on the Convention on Biological Diversity and monitor its implementation and reporting.
- Tribal people must be strong and unshakeable, proud of their culture and sure of their rights to their agricultural lands by creating tangible examples and strong organizations at every level to join in a cooperative solution to their problems.

Preface

This report, *Indigenous Knowledge, Customary Use of Natural Resources and Sustainable Biodiversity Management: Case Study of Hmong and Karen Communities in Thailand*, is the result of a Participatory Action Research project among four highland communities, Khun Ya, Mae Pon Nai and Mae Ya Noi of Ban Luang Sub-district, Chomthong District and Mae Sa Nga of Mae Najorn Sub-district, Mae Chaem District, Chiang Mai province. These are Hmong and Karen communities that have cooperated in the work of the Chomthong Highland Conservation Group, the Hmong Environmental Network, the Karen Network for Culture and Environment and the Inter-Mountain Peoples' Education and Culture in Thailand (IMPECT) Association. This research project received excellent support from the Forest Peoples Programme (FPP).

The text of this report presents the background of the project, the research process and the results of carrying out the research in eight chapters: 1. Introduction; 2. Geographical and Ecological Background of the Study Areas; 3) Baseline Data on Tribal Groups and the Study Communities; 4) Indigenous Customary Use of Natural Resources; 5) Traditional Cultural Practices; 6) Biodiversity and Community Rights: The Need for Legal Reform; 7) Conservation and Sustainable Use: Community Adaptation; and 8) Summary and Recommendations.

The authors hope that this report will be useful to highland communities in their efforts to continue sustainable natural resource and biodiversity management. We also hope that it will be useful to other interested social sectors (especially government agencies) and persons who wish to understand and study the indigenous knowledge of the Hmong and Karen tribes, whose way of life is linked to natural resources and biodiversity. In addition to this, we hope that this report will communicate learning, sharing and the promotion of cooperation between government agencies and non-government organizations that have a role in supporting community organizations and peoples' networks in the highlands. Understanding and acceptance can lead to cooperation in solving the problems of tribal and indigenous peoples so that natural resources and biodiversity management in the highlands will be sustainable.

Report Authors
August 2006

1 Introduction

Rationale

In northern Thailand, there are a number of tribal and ethnic groups residing in highland areas. They are referred to by the majority ethnic Thais and the Thai government as “Thai hill tribal people” or “hill tribes.” These ethnic groups include the Karen, Hmong, Lisu, Lahu, Akha, Mien, Lu’a, and others. The total population of “hill tribes” is around 1.2 million. These peoples have tradition, culture, language, belief, and ways of life that are distinguished from those of the lowland people. They have vast bodies of knowledge and local wisdom about living in their forest environment, such as rotational swidden agriculture, managing sacred forests, taboo forests, and religious-use forests. Many of their customs are relevant and appropriate to natural resources and environmental management. They practice traditional regulations and conventions for controlling, conserving and using resources in a sustainable manner, but these are not known and understood by the government sector or the general public.

In the past forty five years, the government has declared various forest policies and laws. All these legal frameworks have effectively laid legal claim to the lands cultivated and resided on by tribal peoples, making them law breakers. They suffer from government law enforcement of various kinds, such as being arrested and threatened. The government has exercised many measures that have gradually become more radical and violent against the hill people both at the policy and field levels. The government is also still unfairly characterizing tribal people as lazy, drug-smuggling, and forest destroying people in school textbooks, newspapers, radio, and television, which negatively impacts on tribal societies.

Positive developments, however, have recently started to take place. In 1997, the country adopted a new Constitution (the present one). Articles 46, 56, and 76 recognize human rights and dignity. These Articles note the rights of local communities in managing its natural resources and in developing and operating community organizations based on people’s culture and traditional institutions. They also require the participation in decision-making of the people and communities who are to be affected by government projects and policies. On the international front, the government has endorsed and ratified several important international treaties such as the UN Charter on Human Rights, the Convention on the Rights of the Child, the Convention for the Elimination of Discrimination Against Women, and the Convention on Biological Diversity.

Most tribal communities have their own culture, folklores, traditions, knowledge and wisdom in managing life. This is manifested in practices such as rotational swiddening and profound respect for sacred forests, taboo forests, ritual forests, etc. There are many customs that are relevant to the management of natural resources and the environment. Complex mores have been developed to govern these practices on the part of the villagers. However, these governing rules are not known and comprehended by the authorities and the public. Outsiders often have an image of highlanders based on unfair stereotypes propagated by the mass media, which have negative impacts on hill peoples. Natural resource management by highlanders, likewise, is also misrepresented. Consequently, this Project aimed at collecting and analyzing data and information to be used in efforts to educate the public and to campaign for government policy changes concerning their approach in dealing with the indigenous peoples who live in and with the forest, in line with the Convention on Biological Diversity, particularly Articles 8(j) and 10(c). The research project was intended to address the above problems and find solutions to them through collaboration between the researchers and the communities using a Participatory Action Research (PAR) approach.

For these reasons, the Association of the Inter-Mountain Peoples’ Education and Culture in Thailand (IMPECT) and the Forest Peoples Programme (FPP) in collaboration with the Karen Network for Culture and Environment (KNCE), the Hmong Environmental Network(HMEN), and the Chomthong High Areas Conservation Group joined together to conduct this research project on “Indigenous Knowledge and Customary Use in Sustainable Biological Resource Management by Indigenous Communities: Case Studies of Hmong and Karen Communities, Northern Thailand”. The project was carried out with the expectation that this study would be a tool for compiling and analyzing data and facts by the communities and local

researchers themselves. It is hoped that the research outcome will be disseminated and will provide a tool for the Thai government to amend laws and policies in order to create a new approach to dealing with tribal and indigenous peoples and other forest dwellers, and to start implementing Articles 8(j) and 10(c) of the Convention on Biological Diversity.

Article 8 (j) encourages States, “as far as possible and as appropriate”, and “subject to national legislation, to respect, preserve and maintain knowledge, innovations, and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practice”.

Article 10(c) encourages States, “as far as possible and as appropriate: to protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation and sustainable use requirements”.

This study focuses on the language of Article 10(c). Initial work by the CBD Secretariat has recommended that in order to comply with obligations under this article, States must ensure that national legislation and national policies account for and recognise, among others, indigenous legal systems, corresponding systems of governance and administration, land and water rights and control over sacred and cultural sites (Section 6).¹

The study can also contribute information to address the implementation of the CBD Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity adopted by COP7 in 2004, particularly the following provisions: that sustainable use is enhanced by supportive policies, laws and institutions at all levels of governance (Principle 1) and that indigenous and local communities should be empowered to manage biological resources and their “rights” over and/or “stewardship” (emphasis added) of biological resources should be recognized and reinforced (Principle 2).²

The study is also a response to the CBD Secretariat’s and Parties’ call for information and case studies on the experience and initiatives of indigenous peoples on the sustainable use of biological diversity and efforts to implement article 10 of the Convention (Decisions V/24 and VII/12).

Objectives

1. To study and document the knowledge, customary use and traditional practices of the Hmong and Karen peoples in managing natural resources and biodiversity for conservation and sustainable use.
2. To study the adaptations of the highland communities’ natural resource and biodiversity management to the country’s legal framework, policies, and various developmental processes.
3. To build awareness and enhance the strength of community organizations so that they could develop their own operational plan for natural resources and biodiversity management in the future.
4. To present the findings and recommendations via a public campaign and advocate for policy and legal changes in line with the Biodiversity Convention’s Articles 8(j) and 10(c).
5. To provide information and suggestions to the Thai Government on ways and means to start the implementation of Article 10(c) of the Convention on Biological Diversity.

¹ Secretariat of the CBD (1997) *Traditional Knowledge and Biological Diversity*. UNEP/CBD/TKBD/1/2) at 11 and 12 <http://www.biodiv.org/doc/meetings/tk/wstkbd-01/official/wstkbd-01-02-en.pdf>

² <http://www.biodiv.org/doc/publications/addis-gdl-en.pdf>

Research Scope

Scope of the Study Areas

This study covered two selected tribal groups: the Hmong and Karen. Two communities for each group were chosen to represent the two levels of development introduced by outside development agencies. One category was communities in which outside development agency had continuously entered the community leading to significant changes in way of life of the villagers. The other category was communities that had closed themselves to outsiders. There had been a great deal less interference from outside agencies. In this category, the villagers depended very directly on natural resources and still practiced their traditions. The details of these two types of community in each of the tribal groups are as follows:

Karen

Category I: Ban Mae Pon Nai, Moo 15 Tambon (subdistrict) Ban Luang, Chomthong District, Chiang Mai Province. This village has 3 village clusters: San Din Daeng, Ban Huay Wauk, and Ban Klang.

Category II: Ban Khun Ya, Moo 19, also at Tambon Ban Luang, Chomthong District, Chiang Mai Province.

Hmong

Category I: Ban Mae Ya Noi, Moo 18, Tambon Ban Luang, Chomthong District, Chiang Mai Province.

Category II: Ban Mae Sa Nga, Moo 14, Tambon Mae Na Chorn, Mae Chaem District, Chiang Mai Province.

Scope of the Contents

Community baseline data

History of the tribe, ethnicity, settlement, community conditions, number of households, population, beliefs, traditions, language, way of life, social structure, kinship and interpersonal relationships of the people in the community and basic infrastructure of the community.

Data on natural resources and biodiversity

Physical condition of various types of natural resources and biodiversity that exist in the communities such as soil, water, forest, springs, vegetation, and wild animals, in terms of the size or amount and type of the resource.

Information on resource management and indigenous knowledge

- Land ownership and occupation, form of inheritance
- Knowledge and wisdom in natural resource and biodiversity management
- Beliefs, mores, traditions, paradigms, and ideologies
- Practices and activities in daily life
- Conservation and sustainable use of natural resources

Data on laws and policies affecting the indigenous people communities

Positive and negative factors affecting indigenous peoples, policies and law amendments and changes, developments and measures introduced by government agencies in highland communities.

Directions, guidelines, demands, and suggestions of the community

This is summarized in the conclusions and recommendations to the responsible agencies concerning policy change and implementation of the Convention on Biological Diversity (CBD).

Scope of Time: the study took 13 months: October 2004 - October 2005

Research Methodology

This study employed a Participatory Action Research (PAR) approach, which emphasizes the mutual learning process of all partners involved, beginning with the analysis of the problem, planning and carrying out the research project, and summarizing the research outcome. The research team, composed of both the project researchers and community participants, started the study by brainstorming ideas and trying to link the content to the method to be used. They together designed the research tools. In the field, the researchers facilitated the data collection and analysis, presented the preliminary findings in village forums, and participated in other activities related to resource management organized by the villagers throughout the whole process.



Recording map coordinates in a notebook

Research Methods and Tools

The researchers collected data on traditional knowledge and customary use in sustainable natural resource management, analyzed the external situation and pressures, and linked them to the village's level of community identity. At the same time, the research team organized a process in the community to address and decide how to best be able to explain their lifestyle and resource use to the Thai and larger society. In terms of data gathering, they employed various methods, such as *focus group discussions* during times when villagers had free time, by learning from particularly knowledgeable people, and breaking into groups such as men, women, or elders. These groups conversed with the researchers, who led the discussion, observed and recorded important data that arose. Another method that was used extensively was *semi-formal interviews*. The researchers often carried on natural conversations with knowledgeable people as a way of collecting data, recording the interview using cassette tapes, videos and cameras, to which the interviewees had consented. Another method was *personal observations* of the communities' way of life during the research period. The researchers surveyed the communities and joined in activities in accordance with the different cultural traditions of the communities. The last method used was *physical confirmation of the data* in the target areas by recording biodiversity density in the different types of forest (done through rough observation of the number and abundance of species present in different forest types) and the usage of natural resources in the communities.

Choosing the Target Community

The researchers discussed the choice of villages with the community core leaders of the Chomthong Conservation Group and Hmong community leaders in Chomthong District according to the characteristics required by the study. These village names were then submitted to the Chomthong Highland Conservation Group Oversight Committee and the Hmong Environment Network Oversight Committee, as well as the Highland Mapping Project Oversight Committee, who had some additional comments before approving the names. Following this, the Highland Mapping Project Oversight Committee carried out a survey of the

selected villages and listened to the opinions of the villagers in those communities in order to make a final decision jointly with them.

Community Meetings and Data Gathering

At this stage, the team held a meeting in each village to share and discuss with the communities the conceptual framework and research topics of the Project. The aim was also to make the communities aware of the problems confronting them and the significance of the study. These forums were also opened for discussion about the communities' cultural heritages such as philosophy, ideology, perspectives, and traditions, both in concrete and abstract forms. There was also an effort to encourage a mutual learning process between communities. One outcome of this process was a list of the villagers representing their community who joined the team as community researchers. These people also acquired skills as community resource people on the issue of natural resources and biodiversity. The next step was the organization of workshops on the project's conceptual framework and research skills for community researchers. Following this, project researchers and community researchers jointly developed the data gathering tools and carried out data collection in the target communities.

Analysis, Testing Data and Writing the Research Report

From all the data that was collected, the research team categorized and validated the data and then invited relevant parties such as leaders of the communities under study, tribal network leaders, project staff, and consultants and experts to analyze, validate and test the data a second time. After this step, the project and community researchers wrote a draft report, which they submitted to a team of experts for peer review. The research team also selected those findings that were essential and easy for villagers to understand and presented them to village leaders in the project areas. Follow-up actions to protect and maintain biodiversity-relevant traditional knowledge and customary use were also discussed.

Information/Data Sources

Secondary Data: The team studied documents including articles, academic papers, meeting and seminar reports to acquire data and ideas for the conceptual framework of the research project.

Primary Data: The team collected data and information from personal sources such as villagers, community leaders, and knowledgeable persons. This was done through both formal and informal conversations with individuals and groups. The group interviews were forums in which the participants could analyze and discuss the community's and tribal group's ideas, experiences, and philosophies. Two of the participants were research team members and community researchers. The gathered information was constantly transcribed if it had been tape-recorded. Other raw data from interviews was verified and analyzed before being electronically stored. During the fieldwork period, information was continually analyzed with the participation of the communities.

Benefits of the Research Project

The main benefits that accrued from the research project include:

- The target group learned about research on knowledge, wisdom, traditional practices, and sustainable uses of natural resources, and about various positive and negative situations that affect tribal and indigenous peoples in highland areas, including at the policy level and in terms of domestic and international laws. The target communities became better informed about the situations affecting the highlands and indigenous communities so that they could identify positive and negative factors and their desired changes to policies and laws at both the national and international levels.
- The target group learned an approach and process for planning for the sustainable use of natural resources and biodiversity into the future. This approach and planning process is intended to help them evaluate the activities of outside agencies to decide whether or not participation will be in line with sustainable use or not, and to possibly develop their own plans in the future.
- Recommendations were developed for the policy level concerning community development and the recognition of the communities' natural resource and biodiversity management systems as well as the

rights of indigenous peoples in Thailand in order to promote changes at the policy level in line with Article 10(c) of the CBD.

2 Geographical and Ecological Background

The site of the study area is in the highlands of the western part of Chomthong District, Chiang Mai province, in the Northern Region of Thailand. It is located in the Thanon Thongchai Mountain Range and is covered with tropical forest very rich in biodiversity. These highlands are inhabited by two groups of tribal and indigenous people, the Karen and the Hmong. These two groups have different languages, culture, customs, traditions and beliefs. Historically, the Karen have lived in that area for more than 250 years, while the Hmong founded villages there 60 years ago. Presently in the highlands of Chomthong District, there are more than 50 communities, located at a distance of one to five kilometers from each other. The size of these communities ranges from 7 to 250 households. The villagers make their livelihood through farming and foraging, depending on the existing natural resources and biodiversity. The agricultural land of the villagers is found around the villages and in the valleys, where they have wet rice fields, gardens, and fruit orchards. In some areas there are government reforestation sites with pine trees along the mountain ridges and at river sources. There are offices for various government agencies such as the Royal Forest Department and the Royal Project Foundation in certain locations. In some areas, the traces of past opium poppy cultivation can still be seen. Currently, almost the entire area is reverting to natural forest cover. Roads have been constructed between all the communities with the exception of Mae Pon Nai, which still lacks a road leading to it.

The general topography of the study area covers three sub-watersheds, the Mae Ya, Mae Pon and Mae Sa Nga watersheds. (The latter watershed is located in the adjacent district of Mae Chaem, Chiang Mai province.) The communities are located at altitudes ranging from 580 to 1,450 meters above sea level. These mountains have many hill complexes and both steep and shallow slopes.



Mae Pon watersheds

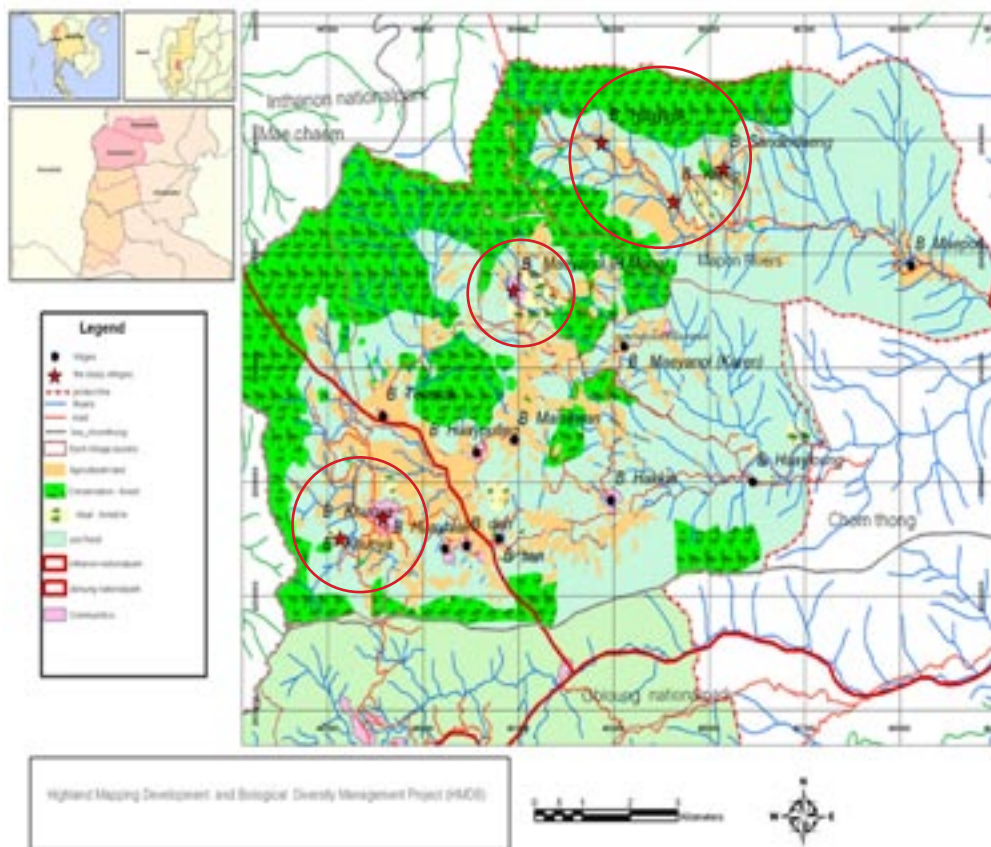
Geographical features in the Mae Ya and Mae Pon watersheds include Mae Ya Waterfall, *Doi* (Mount) Hua Seua, *Doi* Pha Tang, and *Doi* Pha Khao Luang. These features are not far from the peak of *Doi* Inthanon, the highest peak in Thailand at 2,565 meters above sea level. The Inthanon forest is the source of many important waterways, such as the *Mae* (River) Klang, *Mae* Pa Kaw, *Mae* Pon, *Mae* Ya, Mae Chaem, *Mae* Tae, *Mae* Tia and *Mae* Pae, all of which flow into the *Mae* Ping. All of these rivers flow from west to east to join the Mae Klang, which is an important tributary of the Mae *Ping*. The Ping River in turn flows into the Chao

Phraya River, one of the principal rivers of the country. The climate in the highland areas is cool throughout the year. Rainfall is seasonal.

The Mae Ya and Mae Pon watersheds are small sub-watersheds with very fertile natural resources and a variety of forest resources. In the high altitudes, headwater forest predominates with evergreen and mixed forest. Lower down is pine and diptocarp forest with a high level of biodiversity. These forests have a high economic value due to the presence of iron wood, white pine, *Shorea*, *Pterocarpus*, *Ormosia*, red palu, *Michelia longifolia*, and *Lagerstroemia*. There are also many kinds of beautiful wild orchids, such as Fa Mui (*Vanda coerulea*), Chang Daeng (*Rhynchostylis gigantea var. rubrica*), and Rongthaw Naree (*genus Cupripedium*). The forest at this elevation is very humid, with widespread moss and lichens. Various edible greens and fruit trees are also found.

There are still wild animals found in the area. In the Mae Ya and Mae Pon watersheds, there are mountain goats, barking deer, tigers, gibbons, wild pigs, wild chickens, rabbits, wild dogs, foxes, masked palm civet, slow loris, monkeys, birds, rodents and insects. There are also a variety of aquatic animals, such as shellfish, shrimps, crabs, fish, eels, frogs, toads and insects. However, these animals are found in much fewer numbers now than in the past as a result of overhunting by both highlanders and lowlanders, and deforestation caused by outsiders. These fauna resources are of great value to the communities and to the nation. Presently, the populations of wild animals are decreasing and some species, such as wild elephants, deer, gaur, and some bird species, have become extinct in this area.

Parts of the Mae Pon and Mae Ya watersheds were declared part of the Doi Inthanon National Park in 1972, and other parts have been declared part of the Chomthong National Forest Reserve. The force of law is now used to inspect and strictly control the villagers in the highland areas.



The Mae Ya and Mae Pon watersheds and the communities under study (Ban Mae SaNga not shown)

3 Baseline Data on Tribal Groups and the Study Communities

The Hmong and Karen Tribes in Northern Thailand and the Study Communities

The peoples living in the highlands or the Thai Highlanders in Thailand are made up of various ethnicities, such as Hmong, Mien, Akha, Karen Lahu, Lisu, Lu'a, and others. They mainly reside in the north and northeast of Thailand, and make up 3,429 communities, 164,637 homes, and 186,413 families, with a total population of approximately 1.2 million (Highland Communities Administration, 2002). Thai Highlanders reside in twenty provinces, including Chiang Mai, Chiang Rai, Mae Hong Son, Lampun, Lampang, Nan, Phrae, Kanchanaburi, Prachuap Khirikhan, Phetchaburi, Rachburi, Suphanburi, Tak, Phitsanuloke, Phetchabun, Sukhothai, Uthai Thani, Phayao, Loey, and Kamphaeng Phet.³ This study was carried out by Karen and Hmong peoples.

The Karen People

History

The Karen make up the largest group of indigenous highland people in Thailand. They are scattered throughout fifteen provinces in northern and western Thailand. Historically, they migrated from Mongolia and Tibet, entering Thailand about seven hundred years ago. The majority of Karen people reside in Burma. Due to the lack of peace in Burma, the Karen have increased their migration into Thailand, making their homes in highland valleys. The Karen make their living by planting rice and various vegetables using shifting cultivation. They also practice irrigated farming where possible, constructing terraced rice fields. In addition, the Karen raise pigs, chickens, cows, water buffalo, and elephants to be used as food, in ceremonies, for sale, and to hire out for work.

Ethnicity

The word "Kariang" is the term that Thai people in the lowlands commonly use to refer to the Karen, but the meaning of the word is unclear. The Northern Thai people refer to the Karen as "Yang," and Europeans use the term "Karen." In this document, the word Karen will be used to refer to this indigenous group, as it is the most commonly used word in international English-language documents. The Karen in Thailand can be divided into four groups: (1) the Skaw Karen, who refer to themselves as Pga k'nyau, meaning "person," and make up the largest group of Karen in Thailand; (2) the Pwo Karen, who refer to themselves as "Plong;" (3) the B'ghwe Karen, who call themselves Ka-Ya; and (4) the Tawng Ou Karen, who refer to themselves as Pa-o and live in Muang district of Mae Hong Son province. All of the Karen in the study area were Skaw Karen, or Pga k'nyau.

Language

There is much variation between the languages spoken by each group of Karen. It is generally assumed that the languages of the Skaw, Pwo, and B'ghwe Karen are similar in structure, but they are mutually unintelligible. It is interesting to note that Skaw and Pwo may have received influence from languages in the Mon-Khmer family, particularly from the Mon language.

The written language was developed later by missionaries who had come to spread Christianity among the Karen and were looking for a way to facilitate bible study. There are two written forms of Karen language, that is (1) "*likwa*," which is based on the Burmese alphabet and is favored by followers of the Protestant religion, and (2) the "*liromae*" or Roman alphabet, which is favored by Roman Catholics. The Thai alphabet is generally not used to write the Karen language because the sounds of Karen cannot be represented well using Thai letters.

Population

Based on data gathered in 2002, the Karen form the most populous indigenous group within Thailand with a population of 437,131, and makes up 47.54% of the total hill tribe population, or 36.41% of the total highland population. The adult male population totals 151,186, the adult female population totals 147,168,

³ According to data collected by the Highland Communities Administration of Thailand in 2002, Hill Tribe Welfare Office, Office of Social Welfare and Human Security.

male children total 70,193, and female children total 69,584. There are 1,912 Karen villages in Thailand, 87,628 homes, and 95,088 families spread throughout fifteen provinces. The highest concentration of Karen populations are found in Chiang Mai, Mae Hong Son, and Tak provinces, respectively.⁴

Village Governance Structure

In Karen communities, the person with the most significant leadership role, that of cultural leader, is referred to as the “hi kho.” The hi kho is responsible for decision-making in matters of community ceremonies and for settling disputes regarding culture and customs. The title of hi kho is passed down through family lines, from father to son, so that even a small child is accepted as an adult. The hikho’s role involves making decisions and judgments regarding offending sexual behavior, which mainly consists of premarital affairs. The hi kho also judges in cases of stealing, destruction of others’ property, and offensive behavior. Punishment is usually dealt out in terms of a fine, which is then divided out between the village elders. In cases where the leader is incapable of making a decision on his own, there is discussion among the community elders, and official government representatives are also included.

Karen communities are currently integrated into the official government system. Leaders are elected to serve the roles of village leader, vice-village leader, sub-district administration members, village committee members, and other offices that are supported by the government. These positions serve as liaisons to the government and as community representatives. In some villages, the traditional hi kho leader is elected to also serve as official leader.

Economic System

The Karen people follow a simple life style, relying on local resources to pursue a life that is independent and self-sufficient. Each family stresses the importance of having enough rice to eat, which is the highest self-sufficiency goal. Livelihoods in Karen communities are provided by shifting cultivation, terraced rice fields, kitchen gardens, cash cropping, foraging for forest products and animal husbandry.

Social System

Family: Karen families are nuclear families, and are not very large. This is because, according to Karen culture, there can be no more than three housewives per household. If there are more than three, they must split up to form a new family unit. The youngest daughter must remain at home to care for her parents in their old age, and she will receive the largest portion of the inheritance. Lineage is matrilineal, and it is believed that the house belongs to the woman. If the mother of the house should die, the house must be torn down, and a new one built. Only children and grandchildren along the matrilineal line participate in ceremonies to present offerings to the ancestors. Mothers and fathers ensure fairness when dividing their inheritance among their children. The inheritance may consist of land, livestock, money, and tools. These are divided up evenly, except when a child shows no interest in the work and well being of the family, in which case he or she will receive less. A child who offers to take care of the parents in their old age will receive the larger portion. This is generally accepted by the children and by Karen society. If there is a dispute that cannot be settled within the family, the hi kho and the official village leader or community elders will work together to consider the case and make a decision.

Marriage: Karen communities are strictly monogamous. When a young couple falls in love, a marriage ceremony is held, and the groom goes to live with the bride’s family. Adultery and premarital sex are forbidden. Even when one’s husband or wife passes away, taking a new spouse is rare, particularly within the first three years. It is believed that remarrying is disrespectful and will disrupt the deceased’s spirit in the afterlife. Divorce is rare. Disputes between husbands and wives are addressed through discussions and reasoning, with the parents of both parties assisting in smoothing things out.

⁴ The Highland Communities Administration of Thailand, 2002, Hill Tribe Welfare Office, Office of Social Welfare and Human Security.

Religion and Beliefs: The religious beliefs of the Karen within Thailand fall under two categories, that is:

1. *Ancestor Religion:* Traditional Karen believe that all matter has its owner. There are spirits of water, of the forest, and of trees. There are both good and bad spirits. If one's behavior is good, one will not be punished by the spirits. The most important spirits are those of the ancestors: the spirits of grandparents and great grandparents who have passed away and continue to protect their grandchildren. The grandchildren, in return, must care for them by paying respects through a ceremony called "aw khæ." This ceremony must be conducted with care and attentiveness as committing any error is considered to be very bad. This ceremony is conducted many times throughout the year, and can be quite a burden. Nowadays, two groups have emerged, that is:
 - a) Those who care for the ancestors (aw khæ) in the truly traditional way, conducting ceremonies to offer pigs and chickens to the ancestors and asking that they protect the family in return. There are very few practitioners of these old ways remaining in each community.
 - b) Those who no longer care for the ancestors (chæ toe sii). A kind of plant is placed on the body of each member of the family that relieves them of the duty of having to care for the ancestors. They still continue to conduct other ceremonies, however, such as paying respects to the spirits of the land and fields and releasing harmful influences.
2. Those who practice mainstream religions that were introduced into the community within the past seventy years. These are new beliefs that differ from the traditional ones, and can be divided into two categories:

Buddhism: Buddhism is a religion that incorporates various spirit beliefs and thus harmonizes with traditional Karen culture. For example, the Buddhist practice of making merit for spirits is similar to the Karen practice of caring for the ancestors (aw khæ). Once Karen people convert to Buddhism, they discontinue the practice of aw khæ and instead make merit for the spirits of the dead at the Buddhist temple. Old beliefs are thus easily integrated with new ones, as can also be seen in a number of other ceremonies.

Christianity: Many Karen are Christians. Once converted to Christianity, the old beliefs and ceremonies are discontinued in favor of Christian practices. It is thus easy for practitioners and does not cause confusion. Traditional beliefs concerning ceremonies, family and work are erased, which causes traditional culture to fade considerably.

The most important belief of the Karen, regardless of religion or other beliefs, is belief in "Ta Thi Ta Toh", the Lord of Moral Principles. The Karen believe that every action and word, whether good or bad, done in secret or in the open, is seen by Ta thi ta te a, who can judge and punish us according to our actions.

The Hmong People

History and Origins

Hmong is the word that the Hmong people have used to call themselves since ancient times. Hmong culture is close to that of the Chinese. Hmong fall under the Sino-Tibetan family, of which the Mien are also a part. Hmong elders tell how the Hmong migrated through mainland China to Hunnan province, along the Yellow River and the Yangtse River. Afterwards, the Han Chinese migrated in from the North and invaded the Hmong lands. Many battles ensued, and in the end the Hmong were defeated. The Hmong people thus dispersed, and went into hiding in the forests and mountains. They finally fled south into Vietnam, Laos, Burma, and Thailand.

After some groups of Hmong migrated down into Southern China, they divided into three groups. The first group migrated into Northern Vietnam and into Nong Het, Laos, the second group entered Laos through Sam Neua, and the third group passed through Laos and Burma, and finally entered Northern Thailand. Hmong people came to Thailand around 1840-1870, entering through several points. The Hmong people in Thailand can be divided into three groups according to differences in dress and language.

1. **Hmoob Ntsuab** can be translated as Green Hmong or Blue Hmong, from the blue-green color of the women's skirts. Outstanding characteristics of their dress are that the men wear long black pants with embroidery along the cuffs, an embroidered indigo belt (*siv liab*), and a long-sleeved shirt with embroidery along the sleeves. The men's shirt is short, and the right panel crosses over the left, with embroidery along the bottom. The women wear hand-embroidered skirts decorated with blue-green batik designs.
2. **Hmoob Dawb** means White Hmong. A special characteristic of White Hmong dress is the white skirt that the women wear. The men wear flared pants similar to those worn by the Chinese. Aside from their white and black skirts, the women may also wear pants similar to the men's.
3. **Hmong Quas Npab** means Hmong with flared or striped sleeves. Their dress is easily discerned by the fact that, while the men dress similarly to the White Hmong, the sleeves of the women's blouses are decorated with wide stripes from the shoulders to the wrists.

There are currently 253 Hmong villages in Thailand, with 19,287 families and a total population of 153,955. They can be found throughout thirteen provinces, with the largest concentration in Tak, followed by Nan, Chiang Mai, Chiang Rai, Petchabun, Phitsanuloke, Phayao, Kamphaeng Phet, Mae Hong Son, Phrae, Lampang, Loey, and Sukhothai.⁵

Language

Experts place the Hmong language into the Mon-Khmer (Austro-sinetic) Tai, Sinetic language family. Some believe that Hmong-Mien is a branch of the Sino-Tibetan language family. Hmong is a monosyllabic, tonal language. It differs from Chinese in both vocabulary and in pronunciation, although many words are borrowed from Chinese, Thai, Lao, and other ethnic groups with whom the Hmong have had contact. The Hmong in Thailand speak a language that is similar to that spoken by Hmong in Southern China.

Beliefs and Religion

Hmong in Thailand believe in the traditional religion of ancestors and various spirits, along with Buddhism and Christianity. Most adhere to the traditional religion, which is comprised of beliefs and rules that govern the morality and behavior of community members. The things that Hmong hold sacred, beginning from those closest to the individual and moving outwards, include the following: (1) house spirits (*dab klua hauv vaj tse*), (2) ancestral spirits (*puj yawm txwv koob*), (3) shaman (*txiv neeb*) and general spirits, (4) malicious spirits (*yawm txwg nyoog*), and (5) spirits with the power of birth or creation (*yawm saub*). These beliefs inform the behavior that makes up the practices and ceremonies that are the essence of being Hmong. Ceremonies are similar in principle, but may differ in detail depending on each group and clan.

Community Governance Structure

Hmong governance falls under two structures, that is the official structure and the traditional structure.

The Official Governance Structure: The modern system of village governance, or the official structure, is set up according to the state system. There is a village leader, an assistant village leader, a village committee, and the members of the sub-district administrative office who work together to oversee the development and governance of the village.

The Traditional Governance Structure is composed of three levels:

Family Level: The Hmong social structure places great importance on the family unit. This includes not only those family members living under the same roof, such as grandparents, parents, and children, but also those who fall under the authority of the head of the family such as children who have set up separate households. The father is considered the head of the family, and has the authority to make decisions on various matters such as the clearing of new farmland, the day on which planting will commence, and teaching and disciplining the children. The mother supports agricultural activities, cooks, cares for the children and livestock, and collects seeds for the next year's planting. The grandparents provide instructions for the various ceremonies on which the younger generations lack knowledge. They also care for the grandchildren and guard the house.

⁵ The Highland Communities Administration of Thailand, 2002, Hill Tribe Welfare Office, Office of Social Welfare and Human Security.

The Clan Level: The clan level of governance is used among those belonging to the same clan, with the same last name. Culture plays the role of providing direction and punishment through ceremonies that involve the entire clan. This is one reason why each Hmong community is generally made up entirely of member of just one or two clans. This structure governs social behavior, both on the political, economic, and religious levels. It also serves to strengthen the internal clan structure, as each member respects and defers to their elders and family members.

Village Level: Governance on the village level is based of the participation of the various clans within the village. According to custom, each individual within the community is the owner of the village. In reality, however, control over the home and agricultural land falls under the heads of families. Beliefs surrounding customary laws are used to govern, with each person respecting the clan elders. This promotes love and honor between community members. Whether a dispute occurs at the level of the family, clan, or village, customary laws are used to solve the problem and to ensure justice for both parties.

Economics/Agriculture

In the past, the Hmong system of agriculture was primarily used to meet family consumption needs. Currently, however, due to improved transportation and assistance from government and non-government organizations to promote agricultural and community development, Hmong people have changed their way of life significantly. The traditional system of agriculture for self-sufficiency has been given up in favor of commercial agriculture, and food is produced more for the market than for family consumption.

Background of the Research Sites

Mae Pon Nai Village

Settlement history

Mae Pon is a Karen village divided into two main sections: Outer Mae Pon (Mae Pon Nok) and Inner Mae Pon (Mae Pon Nai). Mae Pon Nok is called “*Mae Po Khlo*” in the local Karen language. Mae Pon Nai is further divided into three areas. (1) Ban San Din Daeng, or “*Haw Kho Khaw*” Daeng in the local language. The village has twenty-seven families, with a total population of 122 (sixty females and sixty-two males). (2) Ban Klang, or “*Thi Mue Khla*” in the local language has nineteen families, with a total population of ninety-four (thirty-eight females and fifty-six males). (3) Ban Huay Wok, or “*Tha Eu Dee*” has eight families, with a total population of forty-three (fourteen females and twenty-nine males). This research project focuses on the three areas that make up Mae Pon Nai, or Inner Mae Pon, as the other section of the village is further away and close to lowland Thai people.

Mae Pon Nai is located at Moo 15, Ban Klang Sub-district, Chomthong District, Chiang Mai Province. The area was formerly inhabited by Lu’a people, as evidenced by the remnants of pottery found in many places. The villagers refer to these places as “*ker wa lo*” or Lu’a cemeteries. About 200 years ago, Karen people established the community of Thi Mue Khlo, meaning “mango stream.” The community is now called Ban Klang, or “*central village*.” The villagers’ ancestors migrated from two areas: Mae Hong Son Province, and Ban Pa, in Chomthong district of Chiang Mai Province. The first settlers consisted of only two families; their neighbors migrated into the area afterwards. During World War II, the village site was moved twice to evade the Japanese into what are now referred to as deserted villages, or “*Dae law*.” The first of these deserted villagers is called *Dae Law Tha*, and the second is *Dae Law Phaw Suai Daw*.

After the war, the villagers moved out in three groups. The first group moved to Huay Nok Village, and was later joined by families from Mae Chaem and Mae La Noi. The second group moved to Khae Law Klo, where they lived for thirty years before moving on to Ban San Din Daeng. This area is considered by villagers to be unsuitable for habitation, however, as it is located inside *day meu ber* (taboo) forest. The third group has remained in Ban Klang up until the present day.

The community continued to grow, and a portion of the villagers eventually split off to form a separate village. This was done to make access to the fields easier. Both villages are part of the Mae Pon Watershed. The Mae Pon River is the lifeline of the villagers and makes farming possible, as it flows all year round. When

young people in the village marry, they often move to join their in-laws in nearby villages such as Ban Khun Ya, Ban Khun Klang, and Ban Pa.

Village Location

To the North: Ban Pa Khaem, T. Ban Luang, A. Chomthong, Chiang Mai

To the South: Ban Huay Luang, T. Ban Luang, A. Chomthong, Chiang Mai

To the West: Ban Mae La Noi, T. Ban Luang, A. Chomthong, Chiang Mai

To the East: Ban Muang Klang, T. Ban Luang, A. Chomthong, Chiang Mai

These communities were declared part of the Doi Inthanon National Forest in 1978.

Governance

Ban Klang, Ban San Din Daeng, and Ban Kuay Wok all fall under the jurisdiction of Ban Mae Pon, Moo 15, T. Ban Luang, A. Chomthong, Chiang Mai Province. The village head is Mr. Surasak Kianpatiwong. In addition, Ban Klang has one assistant village head. Ban san Din Daeng has one member in the sub-district administration. Ban San Din Daeng and Ban Huay Wok also each have one customary head who serves as a cultural leader.

Topographical Characteristics

Mae Pon Village cluster is situated in a mountain saddle, and the surrounding forest is in excellent condition. The forest is mainly dry dipterocarp (*ker ner pa*), with montane evergreen forest (*ker ner meu*) in Ban Huay Nok. Many streams flow through the area and form the source of the Mae Pon River. The surrounding mountains are tall and steep.



Domesticated animals in Mae Pon Nai

Climate Conditions

The weather in Mae Pon Nai is generally quite cold. The tropical rain forest areas are cold during the winter season from November to February. During the monsoon season, rain falls from May to October.

Roads

The village is rather isolated, with no regular vehicle access. The only road entering the village is the eighteen-kilometer road from Chomthong to Mae Pon. It is paved for five kilometers, unpaved for six kilometers, and becomes a mere footpath for the last seven kilometers. The last section of the road remains a footpath in the present day, although it is accessible by motorcycle.

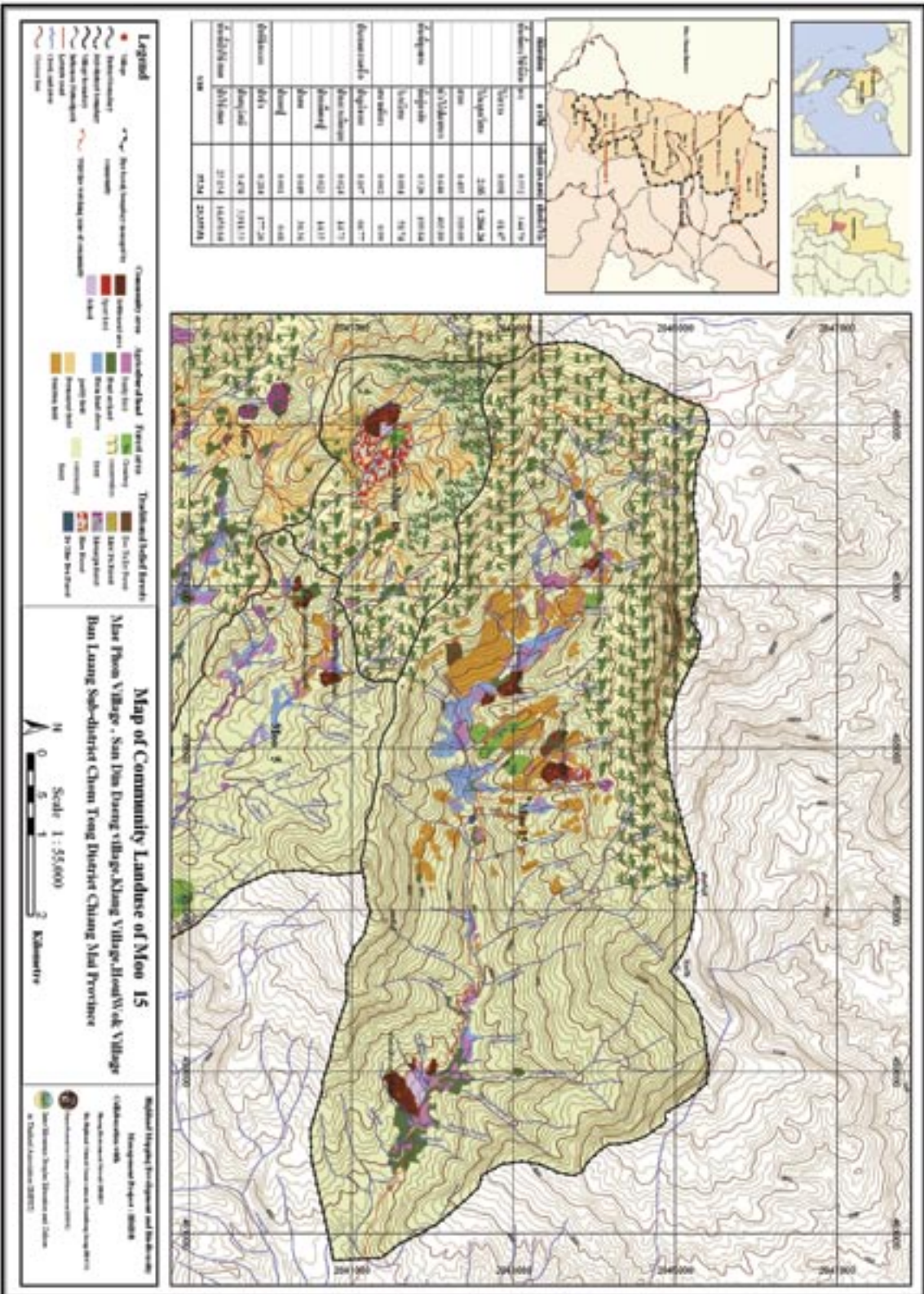
Religion

Residents of the Mae Pon Village cluster mainly follow the traditional ancestral religion. There are also some Christian families who still continue to retain certain traditional religious beliefs at heart. Christianity is currently spreading due to proximity to the missionary center in Ban Mae Pon. In Ban Klang, four families are Christian, and fourteen practice the traditional religion. In Ban San Din Daeng, there are eleven Christian

families, and ten practice the traditional religion. All residents of Ban Wok Village continue to practice the traditional ancestral religion.

Economic System

The economic system of Mae Pon Nai Village consists mainly of agriculture, particularly swidden cultivation, without commercial emphasis. The villagers in all three sections of Mae Pon Nai Village practice swidden agriculture, planting rice and other vegetables. Fields are left fallow for periods of three to five years. The swidden areas with the lesser fallow periods tend to be those closer to the lowland fields. Gardening promotes self-sufficiency and reduces extra monetary expenditures. Jackfruit, mangoes, bananas, and sugarcane are planted along the edges of fields. Livestock includes pigs, chickens, cows, water buffalo, and goats. Cloth and baskets are woven for family use. Most of the plants eaten on a daily basis are gathered from the forest. For this reason, the forest is considered an important food source for the community. Community members thus have many rules and beliefs governing the gathering of forest products such as mushrooms, bamboo shoots, wild fruit, and vegetables. Hunters trap and shoot small forest animals such as birds, mice, squirrels, bamboo larvae, fish, snails, and freshwater crabs.



Map of Mae Pon Nai community land use

Khun Ya Village (Nya Si Bue Khi)

Settlement history

Khun Ya is also a Karen village, and is called “*Nay Se Bue Khi*,” meaning “dense wild banana grove” in the Karen language. In the past, the area where the village was established was a dense grove of wild bananas, so dense that it was difficult to penetrate. The original settlers who founded the Khun Ya community belonged to three families: Mr. Pu Aw (Paw Jiri); Mr. Paw Pi (Paw Phlae Phaw); and Mr. Puu Chekorn (Paw Pu Peng).

As in Mae Pon Nai, and indeed most highland areas, it is assumed that the area around Khun Ya was formerly a Lu’a settlement, based on artifacts such as pottery, jewelry, and beads found in many places. About two hundred years ago, the area became home to a Karen community called “*Khae Law No Law Si*.” It was located about five kilometers from the present village, and is said to have been quite large. The community was struck by a terrible small pox epidemic, in which many people died. The villagers thus dispersed, setting up several new settlements in the Mae Ya watershed area. One of these new settlements was in the Khun Ya area. This village was moved a total of four times in its history, each of the four village sites being referred to as “*khae law*,” or “the old village.” The names of these four village sites from past to present are *Khae Law Se Chi De*, *Khae Law Ke Wa Sa Mu*, *Khae Law Se Che*, and the current village of *Nya Si Bue Khi* (Khun Ya Pa Kluay).

Village Location

To the North: Ban Tin Tok, Moo 5, T. Ban Luang, A. Chomthong, Chiang Mai
To the South: Ban Khun Tae, Moo 5, T. Ban Doi Kaew, A. Chomthong, Chaing Mai
To the West: Tha Pha, T. Kong Khaek, A. Mae Chaem, Chiang Mai
To the East: Ban Huay Hia, Moo 23, T. Ban Luang, A. Chomthong, Chiang Mai

Governance

Khun Ya Village falls under the governance of Moo 19, Ban Luang Sub-district, Chomthong District, Chiang Mai Province. The village consists of two satellite villages, old Pa Kluay Village, and New Pa Kluay Village. There are 78 families, making up a total population of 358 (195 males and 163 females).

The cultural leader, or hi kho, is Mr. Chai Yo Kianbunchu, and the village head is Mr. Wornsit Udomphraiwan. There are two community members in the sub-district administrative office, and seven committee members. There is also a housewives group and a youth group that conducts various activities.

Topographical Characteristics

Khun Ya rests in a mountain saddle, with hills rising up to the North and the South of the village. The area is surrounded by montane evergreen forest (ker ner meu), which remains in excellent condition. The village is located in the Chomthong National Reserved Forest, which was established in 1970. It is 1,200 meters above sea level. Many streams pass through the area, and it is the source of the Mae Ya River. Some areas are used for agriculture, and include both terraced rice fields and upland farms. The soil is loose and sandy (haw kho chaw che sui), and is not well suited for agriculture. Water is also insufficient for agriculture in the hot season. A road runs through the village, connecting it to the other villages in the area.

Climate Conditions

Khun Ya remains generally cool through out the year. In the rainy season, rain falls from May to October. The winter season is quite cold, and in some years, frost appears causing the banana leaves to die, but with no other serious damage. The weather begins cooling down in November, and remains cool throughout February.

Roads

There are three roads suitable for automobile traffic leading into Khun Ya Pa Kluay village. However, only one of these is accessible throughout the year. The other two cannot be used during the months with heavy rainfall.

Buddhism and Traditional Beliefs are compatible, in that Buddhist ceremonies may be harmoniously integrated within the traditional belief system. Among this group, there are five families who continue to care for their ancestors (aw khae), and fifty-three families who have cut themselves off from their ancestors (chae toe si).

In the case of Christianity, once villagers convert to Christianity, traditional beliefs disappear. Beliefs and ceremonies fall under two sects of Christianity: ten families follow the Protestant religion, which was introduced into the village in 1986, and seventeen families follow the Catholic religion, which was introduced in 1976.

Economic System

The economic system of Khun Ya involves reliance upon nature. The main occupation is farming, which takes the form of terraced rice fields and swidden agriculture. Emphasis is not placed on commercial farming. Agricultural activities may be categorized as follows:

- *Gardening*, which takes two forms: 1) fruit, such as bananas, sugar cane, mangos, jackfruit, plums, Asian pears, and papayas. Gardens are generally located around the village perimeter, and around the rice fields. Edible wild vegetables are also planted. Corn, cabbage, chili, and eggplants are grown for family consumption. Commercial farming is not emphasized, although excess produce is sometimes sold. 2) Commercial crops include cauliflower, cassava, and peanuts.
- *Animal Husbandry*: The villagers of Khun Ya believe that animal husbandry is a good form of insurance, ensuring family security. For example, if one is in need of emergency money, livestock can be sold. Commonly raised animals include cows and water buffalo, which can be sold for family income, pigs, chickens, and ducks, which are used for consumption and in ceremonies, and cats and dogs, which are used to guard the house and to catch mice.
- *Handicraft Production*: Common handicrafts include basket weaving, the weaving of cloth, and blacksmithing. Work in these areas is divided according to gender. Women weave cloth bags and skirts for the family, and men weave rice baskets and various containers and make agriculture tools such as machetes, spades, axes, and shovels, as well as traps to catch birds, mice and fish. This reduces family expenditures and preserves the beautiful art and culture of the Karen people.
- *Gathering Forest Products*: The forest is an important food reserve for the community. The community has various rules and beliefs regarding the use of forest resources, which include mushrooms, bamboo shoots, wild vegetables, fruit, and small animals such as birds, mice, squirrels, bamboo larvae, fish, snails, and freshwater crabs.

Mae Ya Noi Village

Settlement history

Mae Ya Noi is a Hmong village. It was established before World War II, in approximately 1937. The founders of the village moved from Ban Huay Sai in Wieng Pa Pao district of Chiang Rai Province. They originally established their new village at Mae Raet, in Mae Chaem District of Chiang Mai Province, where they lived for three years. After that, they moved on to Mae Ya Noi in Ban Klang Sub-district, Chomthong District, Chiang Mai Province. Mr. Chia Neng Saewa led nine other families in founding the community. Other clans such as Saesong, Saelee, and Saeya eventually joined them. Approximately twenty-six other families had previously settled in nearby Ban Khun Klang. After living in Mae Ya Noi for three to four years, Mr. Chia Neng was killed by bandits. This was a traumatic event for the villagers, and a leader by the name of Kamnan Toe proposed that the villagers band together in Ban Khun Klang for more effective security and management.

The villager of the Saewa clan moved to Ban Khun Klang and the Saeya clan moved to Mae Raet. About seven years later, in around 1949, the Saewa clan who had moved to Ban Khun Klang moved back to Mae Ya Noi. The Mae Ya Noi settlement had been moved about one kilometer from the original area. It has remained in its current location for the past sixty-six years. After that, villagers from Ban Khun Klang, Ban Mae Raet, and some who are apparently from Thoeng District of Chiang Rai Province came during World War II. At that time, Ban Mae Ya Noi was a satellite of the Karen village of Ban Mae Ya Luang. In 2002, Mr. Suchip Saewa was selected as the new village head. He filled the position for one year before resigning. Another election was held, and Mr. Ya Pao Saewa was selected as the new village leader, and remains so up until the present.



Mae Ya Noi Village



Mae Sa Nga Village

Topographical Conditions

Ban Mae Ya Noi is located on a mountain saddle. The village is surrounded by tropical rain forest (*hav zoov dub, hav zoov ntsuab*), which remains in good condition. Mae Ya Noi is located at Moo 18, Ban Klang Sub-district, Chomthong District, Chiang Mai Province and is 1,260 meters above sea level. Most of the area is comprised of steep mountains, with a little flat land along the mountain streams. The majority of the land is hill evergreen forest, with other tropical rain forest types in some places. The weather is cool all year round, very cold in the winter with continuous rain throughout the monsoon season. Mae Ya Noi Village was declared a part of the Doi Inthanon National Forest in 1972.

Village Location

To the North: Ban Khun Klang, Moo 7, T. Ban Luang, A. Chomthong, Chiang Mai

To the South: Ban Huay Pu Ling, Moo 5, T. Ban Luang, A. Chomthong, Chaing Mai

To the West: Ban Mae La Noi Kariang, Moo 12, T. Ban Luang, A. Chomthong, Chiang Mai

To the East: Ban Tin Tok and the Mae La Noi Royal Project, T. Ban Luang, A. Chomthong, Chiang Mai

Roads

The road entering the village was constructed by the government in 1983. The goal in constructing the road was for convenience in eradicating the cultivation of opium. Opium eradication activities were conducted in Ban Mong, Mae Tia, Pa kluay, Khun Klang, and Mae Ya Noi. There are now three all-weather roads leading into the community.

Religion and Cultural Practices

The entire community of Mae Ya Noi adheres to the traditional ancestral religion (*ua da khua*). It is a village that has preserved its traditional culture quite well. The way of life, culture, and ceremonies have not changed significantly compared to other Hmong villages.

Agricultural System

In the past, residents of Mae Ya Noi practiced self-sufficient farming, including upland rice and corn, opium cultivation that was mostly used as medicine or traded for necessities of Hmong daily life and animal husbandry. After the opium substitution programs, the villagers of Mae Ya Noi began planting substitute crops as introduced by the government, including cool-season vegetables, fruits and flowers. Villagers also plant traditional crops such as pumpkins, green beans, cucumbers, chilis, bitter melon, loofa gourds, jicama, taro, ginger, galangal, peanuts, potatoes, sugar cane, corn, and sesame. In addition, hemp is planted for use in making clothes and in conducting ceremonies. Villagers also raise horses, cows, water buffalo, sheep, pigs, ducks, and chicken, although dogs and water buffalo are raised less as land is no longer readily available, and they can no longer be left to wander freely as in the past.

Mae Sa Nga Village

Settlement history

Mae Sa Nga is a Hmong village. The villagers began entering the area before World War II in around 1939 from the area of Mae Chaem, across from Sao Daeng, in Chaem Luang Sub-district. Mr. So Chau Sae Her, Mr. Ju Na Sae Chang, and Mr. Sai Su Sue Song were the leaders who brought their families to settle in the area. Eight years later, they once again began migrating to various new areas in search for an optimal location. During World War II, the community dispersed in many directions, and in 1981, they regrouped in Mae Sa Nga Village. At that time, the village had not yet received official status, so no official village leader was recognized. There was only a sub-leader named Mr. So Lue Seng Chao, who looked after two villages: Mae Sa Nga and the Karen village of Ban Mae Mu (Moo 4). He held his position for seven years. In 1995, the villagers petitioned for official status, which was granted in 1996. Mr. Song Lue Seng Chao was then appointed as village leader, and Mr. Jong Sua Sae Lee and Mr. Je Phue Sue from the Karen community of Ban Klang were appointed as vice-leaders. These positions were held until 2001, when Mr. Wiraphong Chiwinitisakun attained his current position of village leader.

Topographical Characteristics

Mae Sa Nga Village is located in a mountain valley, and is surrounded by hill evergreen forest (*hav zoov*

dub, hav zoov ntsuab) that remains in good condition. The village is located at Moo 15, Mae Najorn Sub-district, Mae Chaem District, Chiang Mai Province. The area around Mae Sa Nga village was designated as National Forest Land (*Pa Mae Khan, Pa Mae Wang*) in 1967. The village is 1307 meters above sea level. It is surrounded by steep mountains, with a few flat areas along the mountain streams. The majority of the forest is hill evergreen, with partial mixed deciduous forest in some areas. There is heavy rainfall in the monsoon season, and the winters are quite cold, due to the fact that the village is in a mountain valley close to the Mae Sa Nga River.

Village Location

To the North: Ban Mae Hae, Mae Aw, T. Mae Najorn, A. Chomthong, Chiang Mai

To the South: Ban Huay Khao Lip/Mae Mu Moo 4, T. Mae Najorn, A. Chomthong, Chaing Mai

To the West: Ban Mae Aw, Moo 10, T. Mae Najorn, A. Chomthong, Chiang Mai

To the East: Ban Mae Hae Neua, Moo 3, T. Mae Najorn, A. Chomthong, Chiang Mai

Roads

There are two all-weather roads leading into the village.

Religion and Cultural Traditions

Nearly all of the Northern Mae Sa Nga villagers still practice the traditional ancestral religion (*ua da khua*). Some community members, however, have converted to Christianity (Catholicism and Protestantism).

The Village Agricultural System

In the past, Mae Sa Nga villagers practiced self-sufficient farming, including upland rice and corn, opium cultivation [same as previous page], and animal husbandry. After the opium substitution programs, the villagers of Mae Sa Nga began planting substitute crops as introduced by the government, including cool-season vegetables and fruits. The villagers also continue to plant traditional crops, similar to Mae Ya Noi. In addition, hemp is planted for use in making clothes and in conducting ceremonies. Villagers also raise horses, cows, water buffalo, sheep, pigs, ducks, and chicken, although, like in Mae Ya Noi, dogs and water buffalo are raised less as land is no longer readily available, and they can no longer be left to wander freely as in the past.

4 Indigenous Customary Use of Natural Resources

The Karen Tribe

The Meaning of “Natural Resources” to the Karen

According to Karen thinking, even though there is no exact term for ‘natural resources’, there are many similar terms. For example the phrase, *ta ter law palaw*, means ‘something created.’ Another is *ta ba ter*, meaning “something that must be created.” Things that occur naturally can be denoted by the phrase, *ta ler aku taw kawae* (things arising spontaneously). For things occurring naturally, the Karen use *ta* (‘thing’) which is used as a prefix to refer to all objects. It has the special sense of ‘things that are unseen’, a supernatural force or power that creates all the natural things that are essential to the world and are interrelated, supporting each other directly and indirectly. Humans are also living beings that rely on natural resources for their survival, in terms of food, shelter, medicine, and clothing.

All natural resources have a *ta* as its owner or master. The Karen honor the *ta* as the owner of all natural resources for all time. Humans are not their owners. However, according to the Karen, things found in nature are generally considered things to which people have open access unless there is an announcement or some sign indicating that someone has rights to them. There are traditional ways that show when someone has made such a claim. Whenever someone wants to use natural resources, they must perform activities to contact the supernatural protector to ask permission and its blessing. The following sections describe how the Karen customarily use resources within this context.

Forest Resources

Definitions and classifications

The Karen define “forest” in two ways.⁶ The first is *ta pga* (old forest), an area of dense tree growth with considerable fertility and plant and animal diversity. Such forests are vast and are the sources of streams, mountains and other things. This forest cover creates moisture. Such places are believed to be inhabited by different spirits, including forest and tutelary deities, and are feared by human beings. The second definition is *ta bo* (young forest), an area with few large trees, possibly an area that was once used for agriculture or raising livestock, or an area where tree growth is difficult. *Ta bo* can eventually become *ta pga*. *Ta bo* forests



De Paw Thu: a spiritual ceremony carried out by the Karen of Northern Thailand where the umbilical cord and placenta of a new born is placed into a bamboo box and tied to a tree in the village forest. The baby’s soul will be living in deep relationship with the tree, which will be protected forever.



Khun Ya villagers calling the *khwan* of an elderly person using a dry tree stump, which is believed to be able to communicate with spirits

⁶ Information from village forums for in Khun Ya Pa Kluai and Mae Pon Nai

⁷ Information provided by Mr Pati Johni

have considerable diversity in terms of plants and insect life. Various types of wildlife are found here as well but the area is less fertile than a *ta pga* forest. The Karen also refer to *se kho ta pga* (big trees, old forest). This refers to old stand, fertile forests that are useful to humans and wildlife.

The meaning of *ta pga* covers a range of things including soil, water, forest, wildlife, mountains, cliffs, and rocks. These are so closely related as to be inseparable. According to the Karen, people cannot be separated either from the forest or from wildlife, since they are connected from birth through aging, injury and death. Trees are considered as parents.⁷ A newborn child's umbilical cord is placed inside a bamboo joint and tied to a tree, symbolizing how the tree will guard the child's *khwan* (spirit). Similarly, when an old person falls sick, that individual calls for his *khwan* on the stick as a part of a life-extending ritual. There are also rituals associated with different types of trees when someone dies.

The Karen have a number of different forest categories, distinguished according to topography and climate, humidity, vegetation and sometimes slope and altitude. When Karen see the physical attributes of a forest, they can say immediately what kind of forest it is.⁸

According to elevation and climate

There are three categories of forest based on elevation, physical characteristics and climate. The first is *ker ner meu* (montane evergreen forest), which can be found on mountaintops near Khun Ya and Huay Wok (Mae Pon Nai). Among the dense vegetation are vines, moss, ferns, and bananas. Such forests are mostly watershed sources with a high moisture content on the ground. Sometimes bogs accumulate.⁹ The second category is *ker ner pa* (evergreen forest), which can be seen near Ban Klang and San Din Daeng (Mae Pon Nai). With dense forest growth and tall trees, the climate is even more humid than in *ker ner meu* forests. Vegetation indicating this kind of forest include various bamboos, pines, as well as oak and orchids (*Bauhinia*). This category has the most fertile soil. Food that can be found here includes bamboo shoots, mushrooms and various birds and rodents. The third category is *kaw be kho* (deciduous forest), found in some agricultural areas of San Din Daeng (Mae Pon Nai). This forest is characterized by rather sparse and low tree growth. The trees found here are mainly hardwoods that shed their leaves during each hot season. A great deal of the soil is rocky, gravelly, or sandy and the climate is dry and hot from March to May. Also found in this environment are greens and mushrooms, bamboo, *Shorea robusta*, and *Shorea siamensi*.¹⁰

Villagers in the study area stated that there were zones between the different kinds of forests. These zones were called *pga achoe* (forest area) and were not clearly any one kind of forest. Rather they were mixed forms of the two forests. The size of these transition zones, whether between the *ker ner pa* and the *kaw be hko* or between the *ker ner pa* and the *ker ner meu* depended on the topography and climatic conditions in the area. The study group stated that these transitional zones had flowers that aggravated allergic conditions easily.

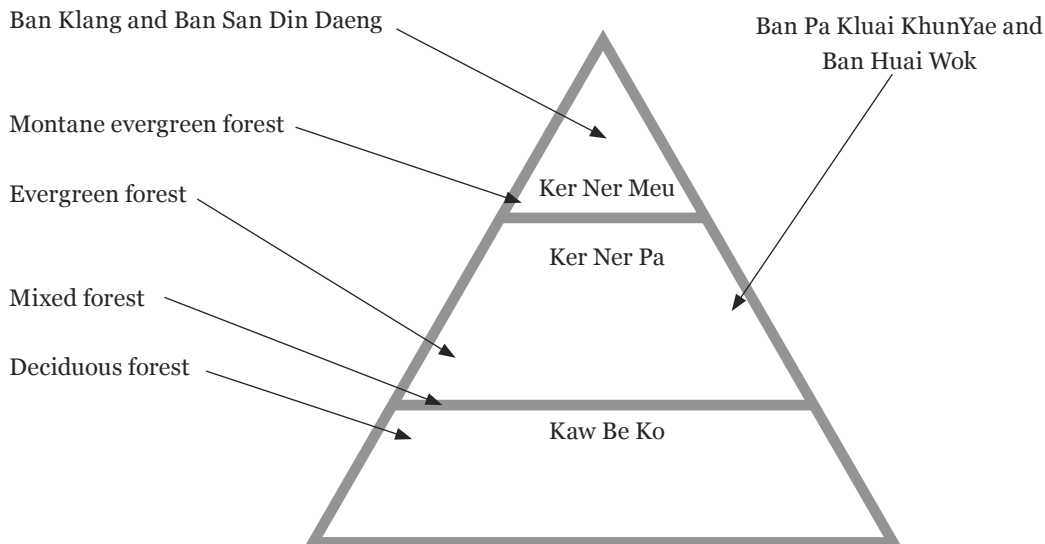
⁸ Interviews with villagers in Khun Ya Pa Kluai and Mae Pon Nai

⁹ Data from Nai Maw Che Loetsakuntham, 63 years old

¹⁰ Information from Nai Maw Che Loetsakuntham, 63 years old, villager of Ban Khun Ya Pa Kluai

Classifying forests according to altitude is related to the Karen way of life. The *ker ner meu* (female *ker ner*) is located at altitudes higher than that of *ker ner pa* (male *ker ner*). *Ker ner meu* is always compared with being female while *ker ner pa* is always compared with being male. The male has the female as the head of the house and extols her as the higher. Similarly, when tracing genealogies, the female line is more important. So when a name is given to the forest at the highest altitude, where streams begin, The Karen consistently associate the lush verdant forests at the highest altitudes with femininity. This is consistent with the Karen worldview in which the woman is given honor as the household head.¹¹

Illustration of forest types by altitude



According to belief

The Karen also make many distinctions on types of forest according to belief. There are some forests that a community has declared as taboo and cannot be used to perform any activities that will intentionally disturb the ecology. Often there are frightening stories or accounts regarding such places that have been passed down.

The *pga ta deu* (taboo forest) is one category of forest based on belief, which people from the community or elsewhere cannot disturb by clearing for any use. The people believe that powerful spirits known as *ta meu* or *ta kha* inhabit the forest. There might be other guardian spirits of sacred things or tutelary deities who want to protect the forest. *Pga ta deu* forests include *day meu ber* (a kind of frog), characterized by the presence of water or a marshy area surrounding a small hill or mound. The top of the hill has a ridge resembling the shell of a turtle or an island. The kind of forest in such places is believed to be inhabited by powerful spirits. Persons speaking badly of the place or of clearing it for cultivation will fall violently ill.¹²



Ker Ner Meu forest



Kew Be Ka forest

¹² Information provided by Mr Prasert Trakansuphakon

¹¹ Information from Mr Chuphinit Kesamanee and Mr Prasert Trakansuphakon

Pga maw pu (salt lick) refers to an area that has saline soil and in some parts of it there is standing water throughout the year. It is believed that a powerful water spirit (*na thi*) resides here. The area cannot be cleared nor can the water be used. The reason is that this place is where wild animals, such as deer, barking deer, or other larger animals, come to hide and to feed. *Ta de do* (long narrow ridge forest) is characterized by a forest atop a wide ridge. Such areas are used as trails by animals and by humans. It is also believed that spirits (*ta meu and ta kha*) travel along these ridgelines. If anyone builds a house or a shelter or performs any other activity here, it will obstruct the path and greatly offend the spirits so much that the violator might die as a result. "The actual reason may be that these places are unsafe for travel or for staying overnight because of strong winds. Also in the past it might have been easy for bandits to hide in such places to rob passersby."¹³ *Pga thi per thaw* (water coming out of a hole) is characterized by having springs that are the source of streams that flow all year. It is believed that water spirits (*na thi*) reside here. Drawing water for drinking must be done a good distance away from such places to avoid disturbing the water source. *Pga Swa Kho* (cemetery) is the place that corpses are brought for cremation or burial. The people believe that the spirits of the departed are located here. No one can live or farm in these places. The Karen believe that the worth of those who have died is equal to that of those who are alive and so the place of the dead must be respected as much as the place of those who are alive. The last type of *pga ta deu* is *pga ta ngaie loh pu* (ritual area forests), where rituals such as the *ta wi do* (controlling certain dangerous or evil spirits) are conducted by members of the community. The spirits here are regarded as particularly dangerous. Usually dogs are sacrificed to propitiate these spirits. This type of forest is not used and people in general stay away from it, but it is considered especially dangerous for pregnant women and villagers with *weak koe La* (spirit), who are therefore absolutely forbidden from entering this area.

A second category of forest based on spiritual beliefs is *du ta* (forests with powerful spirits). The villagers in the study area call these forests *tu ta eu*. These are areas that the villagers had once cultivated but where there had been experiences dangerous to their family life during the year they used that area and occurring each year for a number of years, or each member of the family experienced problems. If this occurs, it is believed that the spirit is forbidding further cultivation in that area and the villagers will be afraid to continue farming there. This is similar to what has occurred in Ban San Din Daeng.¹⁴ The informant said that once a villager cultivated such an area. Although the rice grew well, the farmer died before the harvest and was unable to taste his rice grown there. If people die in this way several years in a row, the people call it *du ker mae* (widow's forest).

The third category of forest in this class is *du pga* (forest to be protected and safeguarded). These are forests that protect ecological fertility in the main area for the village. The villagers all know that while such forests are to be protected, they can be used for various kinds of food. However, no big trees should be cut or new areas cleared for cultivation.

The *du pga* is a refuge for wild animals and has high ecological fertility.¹⁵ It also serves as a barrier against which the Karen will not expand their cultivation areas. The Karen say, in this regard, "*du pga o di ba ter re pha thaw mee su le der kaw we*" (If the *du pga* forest is happy, it is home to crickets and cicadas). Another such saying is "*du pga o di ta yeu di li lu no khae bo a sui*" (If the *du pga* forest causes you to think about the forest, then the squirrels and tree shrews have a place to live). Another is "*se pga o di kraw ker li sa pga o di ta mi di*" (If there are still big trees, it will protect against storms. If there are still elders, it will build happiness).

The *du pga* is similar to the *pga thee na khwa kee* (headwaters) or *thee kho me*. The *thee kho me* is forest surrounding the headwater springs above agricultural areas. These are areas of fertile forest that are moist all year. It is believed that the spirits of the forests and mountains inhabit these areas, that they are the source of the headwaters, and that they should be conserved and not used for agriculture. It is forbidden to

¹³ Information provided by Mr Prasert Trakansuphakorn

¹⁴ Information provided by Nang Ngoen Lilaphanasawat, aged 44

¹⁵ Information provided by Mr Prasert Trakansuphako

disturb or perform any activity in any of these areas. Villagers have heard this prohibition and followed it well from the past to the present. As long as this belief exists, and Karen indigenous knowledge is revived, there will definitely be no trespassing into these forest areas.

According to use

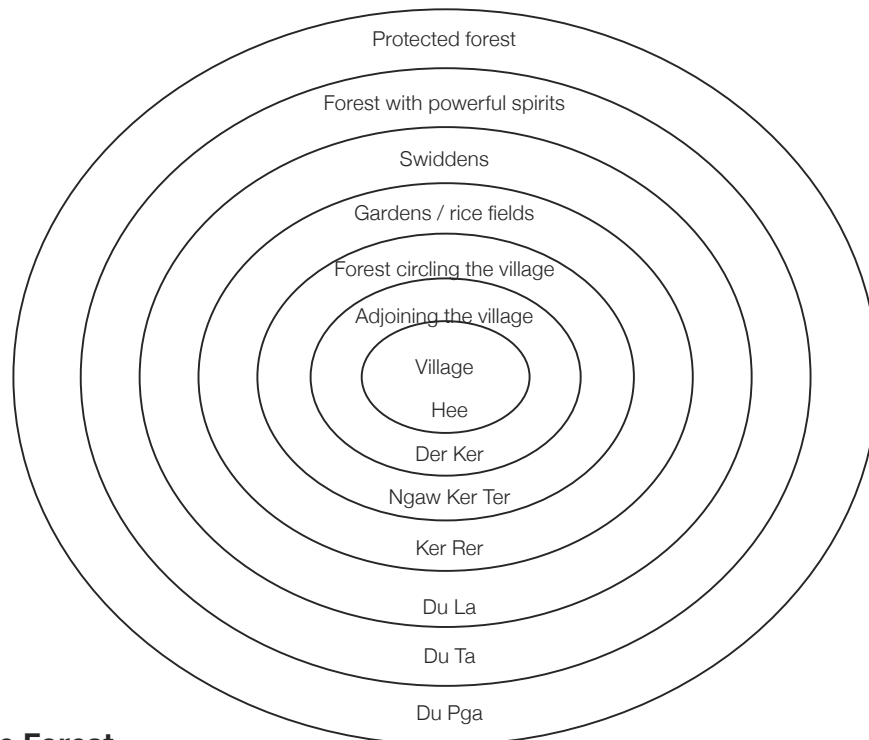
The Karen also categorize land, including forests, based on its usefulness to them. The Karen find it essential to rely on forest resources for their livelihood. Sayings regarding this include “to live with the forest, rely on the forest, you must protect the forest.” “If we are to live in the forest sustainably, we must protect it.” This can be compared to taking care of oneself in order to survive. Part of protecting the forest is passing these beliefs on to younger generations, the children and grandchildren. The forest is zoned into different areas with regulations for use, encompassing all the area associated with the village, called *du ser waw*. This is comparable to the current concept of the “community forest”.¹⁶ The *du ser waw* of a community includes all the taboo forests, conservation forests and agricultural land. The community manages these areas using a variety of methods. Based on interviews with villagers from both areas, *du ser waw* can be further subdivided into the following categories:

- *hi or yi* (the village). This is the area for building houses, rice silos, and for other public purposes.
- *der ker* (adjoining the village). This forest is set apart from the village but not too far. In the past it was used for the purpose of expelling suffering. It is also preserved as the area where the umbilical cords (*de paw tu*) of children are kept.
- *ngaw ker ter* (forest circling the village). This forest is kept to shade the village. The village animals, such as pigs and chickens, find food here. This is also used for conducting rituals to propitiate the spirits such as the *se k okra*, the *wit a*, and the *ser ta*.
- *ker rer* (gardens and wet rice fields). This area is appropriate for wet rice farming (in villages that practice it), growing vegetables and fruits.
- *du la* (swiddens). This area, where rotational shifting cultivation (*keu*) is practiced, is adjacent to the settlement area, wet rice land and gardens. The fallow land is also in this area, where the soil recovers after cultivation. *Du la* does not protrude into drinking or household water sources. It is important that the swiddens are not too far from the village, the rice silos, and the fences. In the past this area would be selected by divination or according to the interpretation of dreams. There were many ways to do this and the specific practice depended on the local community. In Karen culture there is a preference for using wood from this area for building houses, silos, fences, and various other purposes. This was possible because the Karen did not use big pieces of lumber for house construction.¹⁷
- *du pga* and *du ta* (watershed source forests and taboo forests). Details are discussed in the section on belief forests above.

¹⁶ Information provided by Mr Prasert Trakansuphakon

¹⁷ Information provided by Mr Prawit Nikonuaichai

LAND USE, BY PURPOSE



Using the Forest

Forest resources are valuable for people in that they are the source of all the four main needs of humans: food, habitation, clothing and medicine. When the Karen look for food, they do so according to the season and divide periods for consuming certain forest products appropriately. When one kind of edible plant is abundant in the forest, they do not consume much of other types of produce. Other plants, such as certain wild bananas and greens are used for animal feed. They might gather these species for human consumption only during the dry season, from January to April, when other food is not readily available. They follow certain ways of collecting forest produce, with a focus on sustaining the supply. They only collect what they need to eat. Collecting more than necessary is viewed as wasteful. Examples of plant life that they collect are mushrooms (*ku*), bamboo sprouts (*bo*), greens (*ta der ta la*), and spices (*ta ner mu*).

The Karen build houses from wood. In the past, they built small temporary houses that were not very durable. At present, they prefer to use hewn lumber to build houses and rice barns. They also use wood for other purposes in their daily life, including basketry. Baskets are usually made out of green bamboo and rattan. They also use the bark of a kind of jute (*paw*) when it is sufficiently pliable for basket-making. They do not take the bamboo all from the same clump when making different kinds of baskets, mats, or woven house walls. The Karen have taboos against using many types of wood for building houses. For example, *se ker deu*, which is considered a tree of the dead and also is a soft wood, is inappropriate for building houses. The sacred fig, the banyan, and *Hopea odorata* are all believed to have fierce lords. If someone cuts down a sacred fig tree, that person must ask forgiveness by sacrificing one pair of chickens (one rooster and one hen) and a bottle of liquor. The Karen also believe that this is the tree of human life. When someone is born, the person must always pass by such a tree. This tree can indicate the life and death of people. A Karen story tells that before a Karen is born, the individual must sign an agreement with the tree stating how long his or her life will be in years, months, and days. When that time is up, the person must go back (the person must die).

Another taboo is that trees struck by lightning must not be cut down because it is believed they have poison inside. If a house were to be built out of such wood, the family would be unhappy. The villagers say that since lightning is hot, houses should not be built out of such wood. The *se ya mae* is where the Lord of the Land is believed to reside and protects this tree carefully which is why it is not used in house-building. There are many other taboo trees such as those with termites or ant nests, trees wrapped in vines, trees on which lac is forming, trees with cavities or hollows, trees which have fallen on other trees, trees which make an

unnaturally loud sound when they fall down, downed trees which have barb-like projections coming out of them, trees that collapse by themselves, downed trees that split open, downed trees from which the stump repositioned itself upright, and trees on whose stumps rituals have been performed. If wood from these types of trees is used to build a house, it is believed that the people living inside will be unhappy, they might lose money, they will fall ill often, or experience some other troubles. Also it is believed that if they are removed from the forest, there will be a more serious impact on wildlife than when other types of trees or wood are removed.

Besides these many taboos, there are also beliefs regarding days when felling trees is forbidden. These include the Buddhist holy days on the 8th and 15th days of the rising moon and the 8th and 15th days of the waning moon. Some people continue to believe in taboos for specific tree cutting on certain days. At a deeper level of interpretation, these taboos show that some trees are not used for building houses because their wood is soft.

Firewood is used to prepare food and also to stay warm at the cool times of the year. The Karen have taboos and customs regarding firewood. For example, *se doh deu* is believed to be a tree of the dead and its wood is used to carry the dead. It is forbidden to use the wood because doing so will make people unhappy. The Karen believe that if wood from the *chaw thu mae* tree is used for firewood, the family's chickens will go blind. If the wood from the *ton khoh* tree is used for firewood, the tree's spirit will cause the family to be unhappy. Wood used in rituals, such as from the *kepaw thu* and the *ta per chaw* trees, will make people unhappy or fall ill if used for firewood. Both the two study villages still followed these customs strictly. From the perspective of conservation, the wood or trees not used as firewood are preserved to enrich the ecological system, and thus benefit humans and other living beings.

The Karen use the forest to graze their animals. They divide grazing land into two categories: areas near the house or the village settlement area, such as swidden fields; and forested areas that are far from the settlement and cultivated areas. These forests are in the *kaw be kho* category.



The forest is a source of food for the villagers' domesticated animals

The Karen sometimes use wood to construct fences, although they generally allow their livestock to roam freely. Most fencing is to keep livestock out of their cultivation areas.

Ceremonies traditionally performed by the Karen are conducted in the forest and rely on certain trees. The tree that is involved in the ceremony serves as the representative for the Lord of the Land. The villagers take food and drinks as offerings to the tree used in the ceremony.

Forests also provide people with a place for fun and relaxation. Forests are shady and also home to many types of animals with different calls. When one goes walking in the forest, it is fun and enjoyable. There is also a process of learning about the plants and animals.

Natural dyes are another form of indigenous wisdom that makes use of forest produce. They use natural resources, such as tree bark, to make dyes. Making dyes is women's work. Men's involvement is forbidden. The Karen believe that if pregnant or menstruating women participate in dye-making, the color will not stick to the cloth or it will run easily. However, at present in the two study villages, making natural dyes is no longer popular since the people said it was too difficult and time-consuming.¹⁸

In addition to natural dyes, there are parts of wild animals that can be used for personal decoration. These include elephant tusks, shells, bird feathers, and the wings of insects.

There are many types of plants and trees that the Karen know have medicinal benefits. They are used as pharmaceutical preparations for curing and preventing diseases as well as providing extra energy. Others stop bleeding or strengthen the khwan and provide moral support and encouragement. Roots, leaves, stem, and flower can all be used, depending on the plant.

Wildlife

Definitions and classifications

The word "animal" is denoted by the phrase *ta po ka by* the Karen. This refers to two types of creatures, *ta mi la* or *ta po ka pga pu* (animals that live in the forest), and *ta po ka pga leu aw* (domesticated animals in the community).

In the Karen language, "wildlife" is sometimes referred to by different names. Some villages refer to wildlife as *ta mi la*; however, villagers in Mae Pon Nai and Khun Ya referred to wildlife as *cha po kaw po* or *tap o ka pga pu*, meaning animals that no one controls or owns. These animals forage for their food as they are born naturally in the forest. This includes big animals, small animals, and insects. The Karen believe that wild animals and the forest are related to each other. If they do not have the forest, they cannot survive. Similarly, if there are no wild animals, the forest will not have as much diversity. Animal dung serves to fertilize the trees and plants. Some animals eat the fruit or seeds of plants which they deposit elsewhere, allowing the plant species to be spread. Water animals that live in the forest are referred to as *thi ka*.

The Karen divide animals into a number of categories. For example, some animals are considered high status (*acho aker maw ko*), such as tigers, barking deer, jungle fowl, wild cattle. Great care must be taken in hunting these high status animals. At some times of the year, such as when the village is conducting rituals, they cannot be hunted at all. These are strict rules that must be followed according to tradition. The Karen believe that representatives or spirits of the animals, or water and land spirits, can take the form of these animals, hence their high status. All other animals with no special status are called *ta mi la*.

Animals can also be categorized according to the meaning of their name.¹⁹ By this, animals are divided into two categories: *cha po* and *ker po*. *Cha po* (children of the stars) refers to animals with wings that are able to fly. These include animals around the house such as birds, butterflies, chickens, and various insects. *Kaw po* (children of the land) refers to animals that cannot fly and includes domesticated animals as well as aquatic animals.

Animals are also categorized according to their natural habitat.²⁰ Animals that live in water are called *ta le thi*. *Thi ker cha* refers to the Lord of the Water that cares for and protects that kind of life. *Thi ker cha* is believed to be kinder than the Lord of the Land, *ker koe cha*, as seen when fishing since one can always return with a large number of aquatic animals. This is because when aquatic animals give birth, they produce such

¹⁸ Interviews with Nan Kubu Loetthamasakun and Nang Bupaw Chokkitpraisan, from Ban Khu Ya Pa Kluai

¹⁹ Information provided by Mr Prawit Nikonuaichai

²⁰ Interviews of the groups in the community study groups

a large number of eggs that a single animal multiplies itself many times over. By comparison, land animals give birth to only a few at a time.²¹ Animals that live on land are called *ta le ko*. These include animals that are born on and live only on land, in the ground, or in trees. *Kaw ker cha*, the Lord of the Land, looks after these creatures.

The Karen believe that people as well as animals and insects collectively have 31 *khwan*. Aquatic animals have five *khwan* (shellfish, crabs, fish, toads, shrimp), animals that burrow in the ground have four (mice, small and large porcupines, moles), animals that crawl have six *khwan* (monitor lizards, chameleons, scincoid lizards, turtles, geckos, snakes), winged animals have four *khwan* (wild jungle fowl, birds, hornbills, Indian pied hornbill), four-legged animals have nine *khwan* (gibbon, wild boar, barking deer, deer, serow, guar, rhinoceros, cat and lion), and insects have three *khwan* (crickets, cicadas, spiders).

Regulations to conserve wildlife

Good relations between wildlife and human beings must be maintained by regulations so as to conserve animals in the forest. Hunting must be practiced according to traditional rules that place limits on the catch.

The ritual “Propitiating the Lord of the Land” (*pha thaw me kho*), for villagers from Khun Ya and Mae Pon Nai, shows their respect for the Lord of the Forest and the Lord of the Mountain to inform them about the villagers’ intentions in entering the forest to hunt. The ritual is performed at each meal before they eat. The food is divided—the rice is set apart from the side dishes, which are put in leaves. These leaves are placed on stones. The villagers believe that they are then safe from any danger.

Those performing these propitiary rites must be the most senior elders and they must be male because men have the major responsibility for affairs away from the house. Women are excluded from performing this ritual and if only women go into the forest there is no need to perform the ritual. This is because women are the caregivers responsible for managing the household. According to the villagers, women used to perform this ritual as well. However, frightening events such as strong thunder and heavy rains occurred soon afterwards and these were taken as omens that women should no longer do this.^{22]}

Using Wildlife

Most wild animals can be used for food. However, there are some that cannot because those animals are inappropriate for food or are taboo animals according to the beliefs of the Karen. There are taboos and actions that must be performed when hunting in the forest.

When wild animals are captured, the meat must be divided between all the villagers so that everyone who went hunting receives some. They believe that anyone on the hunt deserves some of the catch. For example, if one barking deer is caught, the meat must be divided so everyone can share. If there is only one hunter, the meat must still be divided with the neighbors. If one hunter kills two birds while another does not kill any, they must share the birds, one for each. In hunting land crabs or fish, those who capture more must share with those who capture less.²³ They say, *ta chi o pi ta do o naw* (if there is little we eat a little, if there is a lot we share). This means that living together must be done by depending on each other; building love and care-giving will sustain the Karen people and will also maintain a good relationship between them and the forest as well as the wildlife. This will ensure their survival into the generations of their children, grandchildren, and beyond.

There are many taboos concerning hunting wildlife. For example, hunting and foraging is forbidden on holy days and during certain festivals. Certain people, such as pregnant women and their husbands and newlyweds are forbidden from hunting certain animals. Families in which a death has recently occurred are forbidden from hunting for one month after the death. Certain bad omens, such as unnatural behavior by domesticated animals, will also prevent hunting. Bad omens in the forest can halt a hunt. Certain animals cannot be killed,

²¹ Data from Nang Ngoen Lilaphonawawat, from Ban San Din Daeng

²² Ban Khun Ya

²³ Information provided by Nai Mae Che Loetthamasakun, Ban Khun Ya Pa Kluai

either out of compassion (e.g. a jungle fowl with chicks) or out of fear that it is the manifestation of a powerful spirit (e.g. mountain frog). All these beliefs contribute to regulate and limit hunting.

Before hunting, a ritual is conducted to predict the success of the hunt. Another ritual is done to propitiate the Lord of the Land, telling him their needs and thanking him with whisky and a chicken. No loud or coarse noises should be made in the forest on a hunting trip in order not to demean its sanctity. Incantations can be used to call wild animals. However, the Karen do not like to use them because they are unnatural and sinful. When hunting, animals should not be toyed with. A large animal cannot be hunted after one has just been killed. If three of any large animal have already been killed, no more of that kind can be killed for the rest of the year. Land animals and aquatic animals cannot be eaten together. Some meat and vegetable combinations are also forbidden.

In addition to food, certain wildlife species are used for many medicinal purposes. The use of herbal medicines is now less common than in the past. Wildlife are also used for making predictions. The behavior of some animals can sometimes predict climatic conditions that might occur that day or later in the year. Parts of wildlife, such as tiger skin, snakeskin, and deer horns, are used to make musical instruments.

Soil Resources

Definition and classifications

Based on interviews in many forums and with many groups in the study area, it can be concluded that the word "soil" has three meanings for the Karen. The first is *haw kho* (soil), used in the sense of dirt, appearing either in clumps or finer particles. The second is *kaw* (earth), the area on which animals and humans live as well as the place on which crops are cultivated and on which forests are located. The third meaning is *haw kho khler* (the world), the entire planet earth, including both land and sea.

Soil is classified according to the crops that can be grown on it. *Haw kho bler* (old termite hill soil) is clumpy, red clay soil. The owner of this land will collect the brush and grass in this area and burn it. This kind of soil is suitable for growing such crops as sweet potato and chili. *Haw kho u law ngu* (soil that has been burnt for a long time) is soil in an area in which the vegetation has been burnt down to the roots, changing the area into a shallow pit. The soil is black with pinkish streaks. This kind of soil is suitable for growing such crops as taro and various other tubers. *Haw kho chaw che sui* (soil with tree roots) is soil that has hardened into something like flat sheets. The soil is in fine particles and appears as if there were air holes. The soil is not firm and is not suitable for growing any type of crop. *Haw kho ler kler mae* (sandy loam soil) is soil that has gravel and sand. It is unsuitable for any kind of cultivation. *Haw kho ti nit u* (soil on the edges of the water) is soil alongside streams, like black loam but more clayey. This is suitable for growing sugar cane.²⁴

Soil can also be classified according to its components, such as color, texture and flavor. *Haw kho su* (black soil) is suitable for growing crops as it has many nutrients. This can be identified by the extremely lush vegetation growing on it. *Haw kho kaw* (red soil) is less suitable for cultivation. The soil quality is poorer than black soil, but some types of red soil are fine for cultivation. Red soil is clayey. *Haw kho wa* (white soil) is suitable for cultivation in some areas but other sites lack nutrients and nothing can be grown there. *Haw kho phi* (clay) is appropriate for the cultivation of a limited number of crops. However, its agricultural usefulness is limited because of poor drainage. Among the crops that can be grown on it is wet rice. *Haw kho chaw che sui* (bird's nest soil) is hard soil full of tree roots and other debris with a low level of nutrients, and is inappropriate for cultivation. *Haw kho mae* (sandy soil) has few nutrients and can be used to grow only a few crops. Its quality is inferior to that of the other soil types.

Haw chi (sour soil) is found mostly around salt licks. Animals, both wild and domesticated, such as cattle and buffaloes, like this kind of soil, as it has a high level of calcium and makes them grow strong. *Haw kho bla* (bland soil) is mostly without nutrients, making it unsuitable for growing crops. *Haw kho haw* (salty soil) is appropriate for only certain crops.

²⁴ Prasert (1997), p. 81

Using Soil Resources

One clear use of the soil is that it is the habitat of both plants and animals. The soil itself can also be used productively to make utensils such as pottery. The soil is also the source of things used as clothing or for decorations, such as Job's tears seeds, which are sewn onto the married women's outfits. The cotton used to weave the cloth is also a benefit of the soil.

Following are details on managing soil resources regarding cultivation, such as by rotational swiddening. Information is provided on the annual cycle and the terms used. *The kheu* (swidden field) is an area of land cultivated for one year. Upland rice is the main crop but other crops are also grown that can be harvested the entire year, such as taro, other tubers, corn, squash, cucumber, chili, eggplant, Job's tears, as well as flowers. Some crops can still be harvested the following year. As the *kheu* regenerates, the trees grow and there is much natural diversity, different from that of a forest. *Chi* (recovering swidden) are fields that were once cultivated but are becoming reforested. Trees grow as the years pass. In the Northern Thai dialect, this recovering field is called *pa lao* or *ra sak* (i.e. fallow) and refers to areas on which shifting cultivation was carried out about 5-7 years previously. These fields are a source of food, wood for household use, and medicinal herbs. These can be differentiated into three categories. *Chi bo* (young fallow) was cultivated 1-3 years previously. Initially the trees are small but there is a wide diversity of species. The young fallow is a refuge for small animals, such as jungle fowl, barking deer, and field mice. *Chi lu thaw* (old fallow) is a field 4-7 years after cultivation. Benefits to be gained from this field are using the trees as poles for fences around houses or gardens. Wild animals come here for shelter because the trees are growing sturdy. Birds roost and various animals find food here. *Chi ya aplo* (complete fallow) is a fully regrown swidden, about 8-10 years after cultivation. Wood from the trees here can be used as pillars for house construction. The trees are starting to flower and reproduce. Both animals and humans can find food here. There are herbs and various vegetables. Many types of wild animals can live here.

The soil is used as the place of cultivation. There are gardens, wet rice fields, swidden fields and cash crops in the communities. The Karen have ways to recognize if the soil is good for cultivation. Good soil is indicated by a number of physical characteristics that can be easily observed, such as bright green vegetation, healthy trees, tall grass, the presence of earthworms and insects, the presence of certain tree species, such as *se ngeu sa*, and the presence of certain varieties of bamboo.

^{25, 26}Some types of soil, such as mud, have medical properties. When a child gets overheated and is unwell, putting mud on the child's forehead and cheeks will help lower the fever. At present, however, this custom in the study villages is practiced less than before.

Spiritual rituals related to the soil

Within the agricultural system, there are many rituals related to the soil. The ritual "Propitiating the Lord of the Land in the rice swiddens" is carried out to ask the blessing of the Lord of the Land. Another ritual is "Predicting what land should be used for agriculture". This is carried out in many ways.²⁷ One way is to take a stick about two meters long from the person who wants the prediction made, poke it into the soil and pray, "if this plot is appropriate for cultivation, and gives good yields, please make this pole longer than before; or if the yields will be bad please make this pole shorter than before." Then the pole is remeasured. If the pole is longer than before, the field will be cultivated. If it is shorter, then it will not be cultivated because it will be a waste of time. Another way is for that person that intends to cultivate to make a small start clearing a field (*phae law kheu*). If the person dreams that night, the dream will be interpreted for good or bad omens for swiddening that field. Good dreams are about water, elephants, mountains, cliffs, and floods, planting rice, and people bringing seeds to the dreamer. In such cases they will conclude there will be no obstacles to planting rice and getting a good yield. In the case of bad dreams such as hunting bear and stone deer, burning and thunder storms, it is believed that cultivating that field will result in poor rice yields and obstacles will be met.

²⁵ Yellow rice can be caused by nutrient deficiencies, particularly nitrogen, or by certain diseases.

²⁶ Information provided by Nai Tulu Silakunphrai, 52 years old

²⁷ Information provided by Nai Tulu Silakunphrai, 52 years old

The *bwaw kheu* ritual (ritual to nurture the swidden) is held when the rice sprouts and the entire field is green, at about two months of age. There are also many smaller versions of this ritual for different purposes, such as asking for blessings, warding off threats, propitiating fire, nurturing the rice soul, and propitiating the field to chase out evil. These rituals all make use of the same procedure, differing only in the wording of the prayer indicating the purpose of the ritual. The *leu ta* ritual is used to call for blessings at the start of the process. The purpose is to ask for blessings from the guardian spirit so that the rice will germinate and grow well with a good yield. The offerings include one chicken, two bottles of liquor, two fistfuls of betel, two cigarettes, chili, salt, and lime. The prayer is as follows: “Lord of the World, Lord of the Earth, today we feast you. Please come down and drink the liquor and eat the rice. Please have the rice grow well so that we and our families will have full rice barns.”

The *sae ta* ritual is done to ward off threats. The prayer is: “Oh field, now that we are planting you, there might be wild animals—barking deer and tigers calling, pythons passing, and centipedes crawling that could hurt you. Today we feast you so that you may be in peace and cool shade may return to you.” The *leu me* ritual is done to propitiate fire. The prayer is: Oh Fire! We use your burning and flames, the trees fall, the bamboo comes down, and you are hot and blazing. Today please be at peace and cool. Do not send your heat to the rice. Do not spread your heat to the other crops in the swidden.” This ritual is both to thank the Lord of the Land and the Lord of the Mountain and to ask for forgiveness for burning the swidden.

There are also rituals propitiating spirits to reverse soil degradation and yellow rice.²⁸ If the rice crop is poor, the villagers believe the soil has turned bad, they organize a ritual to reverse the situation. A section of bamboo stem is implanted in the ground at each of the four corners of the field to serve as a pipe. The Karen believe this will release gas in the soil (*haw kho ker sui*) so that the rice will become healthier.

One particular ritual highlights the relationship between soil (as earth) and social interactions. This is called “Asking Forgiveness from the Earth Mother Goddess after Sexual Misconduct”. The Karen believe that if premarital sex occurs in the community, this is so serious that forgiveness from the Earth Mother Goddess must be sought. If not, the people in the community or in that family will have bad experiences. Interpreted at a deeper level, this indicates the respect of the people for each other and for the natural environment. This custom is still adhered to rigorously in the two study villages.

Water Resources

Definitions and classifications

Water in the Karen language is called *thi*. They see it as a vital resource that can be compared with blood for living beings. Water brings life to all that is alive, from plants and animals to humans. All depend on water. This dependence of living things on water can be direct or indirect. Plants, for example, rely on water to grow. Humans, besides using water to stay alive, need plants to eat to grow and develop. The Karen believe that there was water on earth before anything else. Other things, such as land, forests, and wild animals all came later. This underlies their consciousness as they protect the forest. They believe preserving the forest is like preserving water as the forest and water are closely related. If there is no forest then there will be no water. Conserving water is like preserving every living thing.

The Karen give particular importance to water by comparing other things to water.²⁹ For example, when a child is born, the fontanel is soft and not yet firm. They call this the *kho thi*, meaning the “water head.” They believe the *khwan* resides in the *kho thi*. This is referred to as the *kerla kho thi*, which means, “the brain khwan water pushes up.” This comparison is significant since it is compared to a spring in which a water source is pushing up, which has equal importance with the *khwan* since it is the source of a water resource. Thus, the Karen never destroy water sources. They do not disturb springs or the area around a spring. This is because they believe that if the *khwan* of the spring flees, it will not return. Thus there is the saying, *kerla kho thi me khoi law koh ler ngaw chaw mo ker ner*, meaning “the *khwan* of the fontanel flees, a juvenile female chicken must be sacrificed.”

²⁸ Yellow rice can be caused by nutrient deficiencies, particularly nitrogen, or by certain diseases.

²⁹ Pati Johni Odachao

Based on their experience in natural resource management, the Karen have found that if they clear brush and trees in the rainy season, the plants will die. Therefore, they do this in the dry season. In their rotational shifting cultivation system, this allows the trees and brush that have been cut to draw out the water instead of making the water level go down. The plants and trees can adjust to this. Then when the rainy season comes and there is precipitation, water is drawn into the stalks and new shoots form. This is natural resource management based on indigenous wisdom, reflected in the saying: “*wa me wa ler a ser che khaw thi khaw ler a daw* (Sweep firebreaks along their length, cross the water where it is shallow.” It means when we sweep firebreaks, it must do at minimised impact area and we cross the river, should select the must safety zone.

The Karen divide water into four main categories according to ecological factors. The first is *thi do klo* (rivers), large waterways formed by the confluence of smaller ones. Many rivulets converge to form a river, which is characterized by flowing throughout the year. Water from rivers is mainly used for agriculture and for consumption. The second is *thi pho klo* (streams), smaller waterways that originate from not-too-distant sources in the hills. Streams increase moisture for the environment considerably. Streams may flow throughout the year or may dry up during the hot season. There are two types of *no* (swamps). *No pado* are large bodies of water that do not dry out any time in the year. The water can be used for agricultural purposes. *No po* are small bodies of water, like ponds. Mostly they are where aquatic animals and amphibians live. Some hold water the entire year while some only have water during the rainy season. Finally, *po lae* (seas) are very large bodies of water. The villagers are unfamiliar with them although they have heard about them and know that the water is salty and that salt can be extracted from it. They have also heard that seas are home to a wide variety of life, particularly aquatic animals as well as some plants.

Furthermore, the Karen have seven categories of water based on their spiritual beliefs. *Thi khwa di* (water source) is water that seeps out of large trees, creating a damp and muddy area under tall trees. Wild bananas grow here along with pandanus and other species. The Karen believe that *thi khwa di* serve as hiding places for many kinds of animals. There is vegetation on which they can survive. Animals include birds, rodents, as well as other large and small animals and plant life of all sizes. There are plants that people can use as food and for medicinal purposes. *Thi kho* (spring water) flows out of the mountain slopes and ridges. This water is clear, clean and safe for drinking. *Thi mae ker la* (crystal water basins) are wells or ponds in which the water is clear and clean, like a mirror. There is no channel the water flows out of. Like rivers in general, if it rains heavily, they will overflow their banks since the amount of water exceeds the capacity of the pond. The Karen believe that a *thi mae ker la* has a spirit protecting it. No one should disturb these basins in any way. If anyone does so they will be punished. The Lord of the Water is called *ter ro na thi* and is believed to be very fierce. *Thi per thaw* (springs) are springs from the ground that create moisture and usually serve as the source of a stream. They are believed to be protected by fierce spirits. *Na u ru* (water coming out of a hole) is water that comes out of holes in the ground in large quantities. It is believed that the Lord of the Land protects them. Anyone who disturbs them will be punished by the Lord of the Land. *Maw ko* (hot springs) can be used for medicinal purposes. Finally, *thi cho thaw* (Water oozing out from the ground) is water coming up out of the ground creates a very moist area around it.



Thi per thaw spring, believed to be protected by a fierce spirit

Using Water Resources

Water is used by all living things including humans, animals, and plants to sustain life. The Karen believe that supernatural beings require water in the same way. This shows that water is essential for people, animals, plants and the supernatural. Interpreted at a deeper level, this shows that all these things are related, especially that humans have a relationship with everything else. Besides showing that water is essential to sustain life, people cannot survive without animals or plants. Furthermore, people must rely on the supernatural to survive. Because the Karen believe that supernatural beings protect humans, plants, and animals, they conduct many rituals and have many beliefs regarding water. For example, wet rice farmers perform the *leu thi khoh* (nurturing weirs and canals) ritual just before the planting season so that the spirit of the weirs and canals will provide water and fertility (*muau kheu*). In the two study villages, this is still strictly practiced. There are taboos against transferring water from one waterway across to another or changing the course of waterways, for fear of angering the Lord of the Water. After blocking the flow of water to find fish, the water must then be allowed to flow as before.

In the beliefs and culture of water management used by the Karen, they have a profound level of indigenous wisdom in the sustainable, management of water ecology systems. These beliefs are the basis of their management methods. For example, no one can interfere with watershed source forests and proper respect to *na thi* must be paid; even though no one can see it, it is believed to be the Lord of the Water. In terms of conservation, they also recognize the important of aquatic animals to the water source. If there are no aquatic animals, the ecological system will become unbalanced. This might eventually make the area uninhabitable.

There are also rituals regarding the household consumption of water, such as using water on auspicious occasions, water is seen as refreshing and cheerful. At weddings, water is thrown on the guests to refresh them. When the bride and groom enter their new home, water is poured on their feet as they walk over stones. This is so they will lead a life as fresh as cool water and that their love will be as steady as rocks. Much the same is done when building a new house. In funerals, the body is washed in the belief that it will have a good rebirth. They also put new clothes on the corpse. If a villager is out of the community overnight when someone dies, when that person returns he or she must wash their feet to avoid trouble for him/herself. Interpreted at a deeper level, this shows how the bad is washed away before returning to one's house. Turmeric and another fragrant herb, *Acacia rugata* are mixed with water and given to elders as a sign of respect.

The Karen also have taboos against defecating or urinating in water, throwing rocks in water, and sticking poles in mud, for fear of angering or hurting *na thi*, the Lord of the Water. If it becomes apparent that someone has become ill due to offending *na thi*, one of a number of rituals must be performed to propitiate the angry spirit. Different offerings are used for each of these but, regardless, after the ritual one is expected to recover. Holy water (water over which a spell has been said and then blown on) is sometimes use to treat various diseases and injuries and can protect against many kinds of fierce spirits.

The Hmong Tribe

The Meaning of "Natural Resources" to the Hmong

Although there is no word in the Hmong language specifically denoting natural resources, there are several phrases that mean the same thing. For example, *Tej yamib txwm ntuj tsim teb rauTxawm muaj* means things that arise by themselves naturally. From the Hmong viewpoint, things found in nature are available as a common property resource. The Hmong believe that this is so until there is an announcement or a sign of some kind indicating that someone has already claimed them. The Hmong generally use traditional signs, such as poles stuck in the ground to show someone has made use of it. Even though natural resources are characterized by being openly available, there are supernatural beings that own and protect these resources (sometimes called the Lord of the Land). Whenever people (i.e. Hmong) want to make use of natural resources, certain activities must be done to communicate with these beings to ask permission and blessings from the protector. The Hmong place particular importance on forest, land and water resources.



Roob toj siab (high mountain) forest



Hav zoov nuj txeeg (Cold Forest)

Forest Resources

Definitions and classifications

The word for forest in the Hmong language is *hav zoov*. This is a general term covering all land except areas used for agriculture and for settlement. At the same time, there are many words for different types of forest in Hmong, categorized according to altitude, lushness, spiritual beliefs, and the floral characteristics.

According to altitude

The Hmong traditionally divide forests into four categories based on the altitude and topography. The first type is called *roob toj siab* (high mountains), *roob hav zoov lub* (black forest mountain) or *roob hav zoov ntsuab* (green forest mountain). These forests are located atop tall mountains where the climate is cool and moist all year. There are mosses, lichens, and vines on the trees and their branches. Animals found here are gibbons, monkeys, and pigeons (*Nquab ntsuab*: 'wild green mountain bird'). The soil is loose with dark topsoil (*tseem av*).

At lower elevations are forests the Hmong call *roob ntav toj*, which contain a mixture of both deciduous and evergreen trees. During the rainy season, the forest is bright green. During the dry season, the forest will be a mixture of greens and yellows because the trees are adjusting to the climate and reducing their water

intake. Species of trees found in this forest are *Dipterocarpus tuberculatus*, *Dipterocarpus intricatus*, and oil tree (*Dipterocarpus alatus*) as well as various bamboos. Wild animals include turtles, monitor lizards, chameleons, birds, and jungle fowl. The soil is black, mixed with gravel. This type of forest, together with the warm weather, is quite suitable for growing upland rice in swidden fields.

Roob Ntav Toj Forest

Further down the mountain is forest the Hmong call *taw toj* (foot of the mountain). This type of forest is a transitional stage between roob ntav toj forest and *te tia* forest (the fourth category). This deciduous forest includes such species as *Dipterocarpus intricatus*, teak, *Dipterocarpus tuberculatus*, and bamboos species with big knots along the length of the stalk. Mostly the soil in the *taw toj* forest is rocky with low fertility, with vegetation growing slowly. The Hmong refer to this soil as *av khaub xib* (dry soil). One noteworthy characteristic of this kind of soil is that many types of mushrooms grow well in it. The wildlife is much the same as found in the *roob ntav toj* forest.

Taw Toj Forest

The forest at the lowest altitudes is called *teb tiaj* (valley forest), *ruab tiag* (land in the valley), or *ruab rag* (also land in the valley). This type of forest is found in the lowlands. These forests sometimes flood as a result of the presence of lakes or swamps in the rainy season. The tree species found there are therefore flood tolerant, such as *Caladium*. The soil has an ample layer of topsoil and is quite fertile. Often the soil is clayey, referred to by the Hmong as *tseem av*. This soil is suitable for paddy rice cultivation because it absorbs water well.

Teb Tia Forest

Surrounding the two study villages, Mae Ya Noi and Mae Sa Nga, there are *roob toj siab* (high hill) or *roob hav zoov ntsuab* (green forested hill) forests. Also, there are roob ntav toj forests west of Mae Sa Nga, where the villagers cultivate their crops, as well as east of Mae Ya Noi, between it and Mae Ya Noi Karen. There is no *taw toj* (foot of the mountain) forest in either of those villages.

According to lushness

The Hmong also have categories of forest based on the types and lushness of the vegetation that are not necessarily consistent with the categories based on altitude. *Hav zoov txiag* (cool forest) or *hav zoov ntsuab* (green forest) refers to humid evergreen forest. Vegetation in the forest includes mosses, lichens, vines, elephant skin tree, rattan, *Caryota*, different types of bamboo, and many evergreen species with soft wood. *Hav zoov nuj txeeg* is old forest with tall trees wrapped in vines, although not necessarily covered with moss as well. Lichens are more common. This forest is habitat to many wild animals. This forest can be found in different altitude zones, either *roob toj siab* (tall hill) forests and *roob ntav toj* forests. The study found that this type of forest surrounds Mae Ya Noi while it is found southwest of Mae Sa Nga.

Hav txiv yeem is well-developed secondary forest. There are two types. *Hav txiv yeem laug* refers to secondary forest roughly ten years in age that has almost recovered to being a tropical evergreen forest. This forest is identified by its vegetation, including vines with small stems that wrap around the trees, and a ground cover of smaller vegetation. Most trees are as thick as a person's thigh. This is found surrounding the study villages, such as west Ban Mae Sa Nga where it can be seen clearly. *Hav txiv yeem mog* is similar, except that the trees are smaller. These forests are four to ten years old. Grasses and tree saplings such as the kong tree, Imperata grass, and Siam weed (*Eupatorium odoratum*) grow beneath the taller trees. Wildlife includes barking deer, wild boar, and jungle fowl that prefer this type of forest because the grasses give them cover.

Hav moj sab is forest found between valleys and foothills. It is characterized by trees intermixed with grasses and bamboo. During the dry season, the leaves fall off while in the rainy season, the trees blossom and new leaves sprout, making the forest very green. Tree species include oil tree (*Dipterocarpus alatas*), *Dipterocarpus tuberculatus*, and *Dipterocarpus intricatus*, as well as bamboos and grasses. Wild animals include turtles and monitor lizards. Mushrooms grow well here and many are found. Turtles also eat mushrooms. The forest is characterized by dense vegetation of many types and is found often around *roob ntav toj forests*.

Hav qub teb (brush forest) is found in all areas left unused, often swidden fields abandoned for two or three years. Small trees are scattered among different grasses and bamboos. Wild animal species include barking deer, wild boar, and different types of birds. This forest is found in both study villages.³⁰

Hav Quav Poj or *Hav Qub Teb Quav Poj* is the Hmong name for land that was cultivated a long time ago so many times that the large trees could not grow back. Any trees are likely to be small but most vegetation is grasses such as crabgrass (*Dactyloctenium aegypticum*). The soil is compacted with low fertility. Wildlife includes rabbits, quail, and snakes.

Hav txiv yeem, *hav moj sab*, *hav qub teb*, and *hav quav poj* forests are all fallow swidden fields. As a result they are easy to find in all areas.

According to beliefs

There are also categories of forest related to the worldview or spiritual beliefs of the Hmong, which regards certain forests as taboo areas. These are areas that people (Hmong) should not enter, disturb, or perform any activity in because of the place's sacred nature. Those who disregard the taboo might get sick and die or face some other danger. Examples of forests where rituals are performed include Forests for Propitiating the Lord of the Land. The trees in this forest are large and beautiful with nice-looking branches, none of which are dead. There should be no scars on the trees and they should stand straight up. This is the proper setting for powerful spirits to help protect the community so it will have a good life. They should also protect the land, the forests, and the wildlife. In Mae Ya Noi, this forest is at the end of the village.³¹ There is also Forest for Making Vows to the Lord of the Water Source. This forest is believed to be related to the *teng hav te* ritual. This ritual is done at two levels. At the village level, it will be performed in the forest around the community's watershed source. At the household level, the area chosen for this ritual is near the family's fields. This ritual is done to thank nature and the guardian spirits who provided protection so the forest cover remained fertile and the water source flows well the entire year. Communities with water source problems give this ritual considerable importance. At Mae Sa Nga, this ritual is carried out at the household level and is conducted in the rice fields every year.³²

Taboo forests include Cemetery Forests Where the People and Their Spirits Are Laid to Rest. This forest cannot be used for any extractive purpose, such as cutting trees or hunting. If anyone violates this injunction, the Hmong believe that individual will receive bad *karma*, which will play out in the lives of that person's descendants. Every village has this kind of forest, including both study villages.³³ Forests Near Three Headed Mountains are taboo areas for agriculture and for human settlement. The Hmong believe that the Lord of the Land in these places has strong powers that humans cannot withstand. *Dawm* (forests near ridgelines) are located between two adjacent peaks. The forest in such areas is unsuitable for farming or human settlement. The Hmong believe that the path of dangerous forest spirits runs through these forests. *Hav Xa Dab* (forest near spirit habitation) are also taboo because the Hmong believe there are dangerous spirits here who trouble human beings. This is also the area where infants who died just after birth are buried. No one is allowed to go near here or pass close by because the Hmong believe that they might be hurt by the dangerous spirits. Forests with Vines Winding Clockwise Around the Trees must be avoided for settlement and for farming.

³⁰ Cher Ko Group Interview 6Th December, 2004

³¹ Chokchai Wiwathanaphanakun, 7 December 2004

³² Cho Sua Sae Lee, 20 December 2004

³³ group interview, Ban Mae Sa Nga and Ban Mae Ya Noi, 2004

The Hmong believe that dangerous spirits live here making it impossible for people (Hmong) to settle. *Hanv Tsua* or *Pob Tsua* (forests near cliffs or caves) are taboo for people to urinate, defecate or to do bad things in. If anyone does something deemed disrespectful, the Hmong believe that the Lord of the Land will make the violator unhappy. *Tsag Toj Pob* (forests with eroded topsoil) are taboo for pregnant women and people with weak *khwan*.³⁴ The Hmong believe that if a pregnant woman goes there, something bad will happen to the unborn child making it sick. In areas with one peak coming out of the side of another, called *Roob Sib Nyom* (forests where two peaks collide), the Hmong do not allow houses or farming. They believe that there is more than one Lord of the Land here in overlapping zones not belonging clearly to one or the other. As such, when people (Hmong) settle there, they will fall into the same kind of situation.³⁵

It should be noted that these belief forests can be found in any of the other forest categories described previously, as they are sites with specific characteristics. Some villages may not have some or all of these belief forests. In the two study villages, cemetery forests and forests with eroded topsoil (*tsa toj pob*) were found.

The Hmong also have names for categories of forest based on the main plant species found there, such as *hav tsawb* (banana forest), *hav xyoop* (bamboo forest), *hav qheeb* (Imperata grass forest), *hav maj mum* (needlewood (*Schima wallachii*) forest) and *hav thuv* (pine forest). In the study villages these types of forests are located near settlement areas and are easily found. They tend to be at different distances from the village. For example, if one finds a *hav tsawb* (banana forest), there should be another nearby close to streams above or below the village. The *hav queeb* (Imperata grass forest) is found a bit further away from the banana forest. The *hav maj mum* and the *hav thuv* forests are in the deciduous forests still further out.³⁶

Using the Forest

The Hmong are a group that lives intimately with the forest, whether in terms of food, firewood to use as fuel, wood for building their houses, or a variety of other uses. In the study villages, the people depend on the forest, whether tropical evergreen or deciduous forest because the forest is nearby and convenient.

As a result, the Hmong have a profound indigenous wisdom about the forest. They know of and use many plants with medicinal properties for treating such things as mending fractures, treating gall stones, treating numbness, sprains and stiffness, and as an antidote for poisons. The Hmong also know how to use the different parts of many wild animal species for treating physical ailments.

In using forest resources, the Hmong differentiate some roles and duties along gender lines. For example, women are responsible for collecting medicinal herbs and edible plants, while men are responsible for hunting, performing rituals, and collecting wood for house building or making tools. Collecting firewood is the responsibility of both men and women.

Using forest resources in these ways is a part of the normal way of life for the Hmong. However, in collecting forest produce or making other use of such resources, the aim is not simply to collect as much as possible. Belief in the Lord of the Forest and the Lord of the Land limits what they can do. Through this strategy, the Hmong conserve forest resources and do not use them wastefully. The traditional practices of each ethnic group include teachings and advice from the elders that are transmitted to the younger generations. These practices have been followed carefully until the present time.

Sometimes certain practices have become so familiar that those carrying them out do so without thinking about why these traditions exist. For example, when collecting firewood in the forest, the wood should not be dragged. The Hmong believe that this will annoy the Lord of the Land. This might actually be a means for preserving the trees in areas where small trees are growing and should not be cut down. Firewood should be cut cleanly, rather than roughly breaking off branches or knocking down trees. The Hmong believe that this might disturb the Lord of the Land.³⁷

³⁴ Khwan is a Thai term that corresponds somewhat to the Western concept of the soul. It refers to a person's guardian spirit(s).

³⁵ Data from documents of the Hmong Environmental Network, IMPECT 2003

³⁶ Group interviews in Mae Ya Noi, 25 January 2005

³⁷ Chong Wang Seng Chao, 8 March 2005

Other taboos apply when collecting forest produce, do not say bad things about the produce such as “this plant is inedible” while collecting it. When collecting or picking a wild plant, just take one. Be careful not to step on or cut those that are not picked. The Hmong believe that everything has a lord. If we do something bad, we will suffer the consequences. According to the elders, yong ua na yong li yong “the forest will do as it is done to.”³⁸

When cutting wood to make a coffin, no wood may be cut along the way there or back and thrown away. Not even one cut can be made in jest. The Hmong believe that this will not bring good fortune or it would signify that one was making his or her own coffin. The reason for this may be that although some resources are necessarily used, the others must be conserved.³⁹ If the top of a tree has broken off, that tree may not be cut down. The Hmong believe that the tree’s poor destiny caused the top to break off. The family that uses wood from such a tree will suffer.⁴⁰ Fires should not be started when the sun is setting. The Hmong believe that starting fires at dusk will make animals think that the sun is not setting and that, consequently, they will not sleep. Then they might fly into the flames and die. But if this must be done, permission is asked from the Lord of the Land.⁴¹ If one sees mice take leaves to place next to trees, branches, or along rock piles where one is walking, it is a sign to stop for a rest. The Hmong believe that this is a bad omen and that the traveler must return to where he or she started at once or some danger might arise. The Hmong believe that when the mouse places out the leaf it is a warning from the Lord of the Land or the ancestral spirits that the journey into the forest should be abandoned.⁴²

Wildlife

Definitions and classifications

According to the Hmong way of thinking, wild animals are a part of the forest and as such are a publicly available natural resource. The Hmong believe that there are supernatural beings that protect wild animals. When they go hunting, they are obliged to organize rituals to determine omens and to thank those powerful beings. However, they are not required to request permission to hunt from each other.

The Hmong classify animals by many features. For example, *Tsij Qus* refers to wild animals and *Tsij nyeg* refers to domesticated animals. Animals are also divided into classes of large and small, four-footed and two-footed, land animals and aquatic animals, insects and snakes.⁴³

Using Wildlife

In Hmong life, eating wild game is not as difficult or complicated as is eating the meat of domesticated animals. All that is required is a ritual requesting permission of the Lord of the Land that protects the forest. Once a wild animal has been captured or killed, its flesh can be eaten without further ado. However, for domesticated animals, some kind of ritual must be conducted to use animals as things before family members can eat the meat. Hunting jungle fowl is done according to the needs of the household.

The Hmong have a wide body of indigenous knowledge, equipment, and tools regarding hunting. They employ a variety of hunting and trapping techniques, which can still be observed in the study villages. They use different techniques to hunt in different forests. For example, they prefer to hunt wild boar in brush forests. Traps are made to catch mice and birds from wood, bamboo, sticky tree sap, and hemp twine. Insects are used as bait.⁴⁴

The Hmong also have many taboos about hunting. For example, if a strange animal is encountered, it should not be killed. The Hmong believe that the spirit of one’s father, mother, or ancestors might have returned to meet them.⁴⁵ If a large snake is encountered, it should not be killed. They believe that it is a powerful Lord

³⁸ Chong Wang Seng Chao, 8 March 2005

³⁹ Chia Sae Ya, 25 January 2005

⁴⁰ Chong Wa Seng Chao, aged 58 years, 8 March 2005

⁴¹ IMPECT network 2003

⁴² IMPECT network 2003

⁴³ Information from the IMPECT network

⁴⁴ Data from Nai Ka Tua Sae Wa, 3 December 2004

⁴⁵ Kaen Sae Ya, aged 56 years, 26 January 2005

of the Land. Killing it will disturb the community.⁴⁶ If you shoot an animal and see one of its bones fall, but the animal escapes, this is a bad omen. The hunt should be abandoned.⁴⁷ When people hunt together, and an animal cries out, it should not be killed. The Hmong believe it is begging for its life.⁴⁸ Barking deer and other animals entering the village is considered a bad omen. The Hmong believe that those animals should not be killed because animals belong in the forest. If they come into the village and they are killed, the village will grow unhappy. In the two study villages, this belief is still strong.⁴⁹ They also do not boil wild game with aquatic animals and do not cook venison with mushrooms.⁵⁰ There is a Hmong saying, "Do not mix the flesh of land animals with that of aquatic animals." This teaches one not to hunt more than is necessary.^{51,52}

There are also animals that are not permitted to be killed, such as barn owls (*laub nyug*). The Hmong believe they are spirit birds and that to kill them risks the person's life. The peacock (*yaj yuam*) should not be killed because its bile is believed to be poisonous; if the bile sac breaks and someone eats it he will die. In addition if one eats it with friends they will be much disturbed.

Soil Resources

Definition and classification

The common word for soil in the Hmong language is *av*. However, the word *din* is also used, and has many meanings. As the villagers in Mae Sa Nga remarked: *Din* means an area of land for settlement, agriculture, and for rituals. *Din* also means the world, including all living and non-living things and those things emerging naturally or those that are made by humans.⁵³

As with forests, the Hmong have many different classification systems for soil. For example, there are four categories of soil based on color, texture and use. *Tseem av or av peej thwv* (sticky rocks) is soil with a solid color, usually black or red. If the soil is mixed, it is made up of little seedlike bodies. The fertility of such soil is high. Mostly these soils are clays or clay mixed with sand or loam. The Hmong also refer to this type of soil as *av rog*. There are two types of *tseem av*. The first is red soil that is not hard. No matter how deep down one digs this soil is very good for cultivation. The soil in Mae Ya Noi is mostly of this kind. The other type is a light red soil that is rather hard. If one digs deep, the soil will harden when it dries. This type of soil can be used in cultivation only during the rainy season when it is not too hard.

Av suab thwv is sandy soil that is light yellow or white. This soil will be good for cultivation initially but cannot be used for a long period of time. There are two types of *av suab thwv* soils. The first is *av mong taum* (legume seed soil). This kind of soil is characterized by small-sized gravel, the size of the tip of one's thumb. No matter what is planted on this soil, it will grow poorly. This type of soil is found around Mae Sa Nga.⁵⁴ The second type is *av suab tv*. This type of soil has fewer rocks mixed in. Cultivation will be good but not as good as *tseem av*. Some places around the study villages have this kind of soil.

Veej cuam suab is partly sandy soil. Mostly it will be like *tseem av*, making cultivation better than with *av suab tv*. Mae Sa Nga's cultivation area is mostly this kind of soil.⁵⁵

Av khaub Thwv (dry soil) or *au ntxaug* is hard topsoil mixed with sand. Tree leaves wither on this soil and it is poor for cultivation. This type of soil is found in areas of *roob ntav toj* forests.

In addition to these four types, there are other soil classifications, such as red soil, black soil, yellow soil, and yellow-white soil.

⁴⁶ Chao Ko Sae Ya, aged 62 years, 27 January 2005

⁴⁷ IMPECT network 2003

⁴⁸ IMPECT network 2003

⁴⁹ Chia Sae Ya, aged 60 years, January 2005

⁵⁰ Nai Bra Her Seng Chao, aged 57 years, 7 March 2005

⁵¹ Nai YuaPhu Chuai Yang Thamornrungruang, 18 February 2005

⁵² Nai Bra Her Seng Chao, aged 57 years, 7 March 2005

⁵³ Group Interviews at Mae Sa Nga, 8 March 2005

⁵⁴ Group interviews in Mae Sa Nga, 3 February 2005

⁵⁵ Group Interview, Mae Sa Nga, 3 February 2005

The Hmong believe that soil or an area of land might have certain special characteristics. There are taboos against entering and disturbing it in any way for fear of the supernatural powers there causing sickness or devastation. Taboo soils include termite hills on eroded topsoil and the area around a burial ground where the spirits of the ancestors are found. No one can enter such an area to perform any activity. The Hmong believe the Lord of the Land there is fierce. Anyone violating the taboo or his or her family will fall into danger. For example, the spirit might cause a pregnant woman to have a miscarriage and become ill or a person with a weak *khwan* might become unwell.

Using the Soil

Soil is an important natural resource for the Hmong's way of life. Besides its use in cultivation, the Hmong use soil both as a location and as an object in building houses. They also use soil in rituals. In building houses and establishing villages the Hmong will start by assessing different aspects of the environment. For example, the nature of the mountains and their relation to the proposed site might be inauspicious and problems might result. Once a suitable site is chosen, they follow a process with rituals been handed down from their ancestors involving the sacrifice of chickens and the examination of the bones for omens. The traditional Hmong calendar is also consulted to choose an auspicious time for house building. Further rituals are conducted in order to propitiate the Lord of the Land and ensure the safety and happiness of the family or community.⁵⁶

The Hmong also choose areas for cultivating crops based on a combination of the suitability of the site for the crop to be planted, as well as divination and the observation of certain characteristics that indicate whether or not the Lord of the Land there is kind or mean-spirited.

Areas appropriate for cultivation must have a cool climate and sufficiently flat or sloped like a wok. The soil must be loose. Vegetables and fruits grown as cash crops can be cultivated on any kind of field. Herbs can be gardened on areas used for swiddens or wet rice fields, as can household vegetable gardens. Upland rice must be at the level of the dipterocarp forest in an open area so that the grains will be large. Cornfields should be in areas where the climate is cool and moist.

Cultivation in the Hmong way of life is done cooperatively by families and relatives. Men choose the location, set the time for cultivation, and choose the crops. The women support the men in this by preparing herbs and food.⁵⁷ Hemp (*maj* in Hmong), identical to marijuana except lacking narcotic qualities, is something the Hmong have used for a long time, considering it an important crop to their way of life. They use hemp in rituals, such as funerals, propitiating the Lord of the Sky, and making merit to the Spirit of Buffaloes. Hmong also use hemp as an herb and for other purposes.



Hemp Field



Cloth Made from Hemp

⁵⁶ information from Cher Ko Sae Ya, aged 62 years, Mae Ya Noi and Nai Chong Wang Seng Chao, aged 58 years, Mae Sa Nga

⁵⁷ information: Blaher Sengchao, 57 years old, 20 December 2004

The Hmong make use of soil for some pharmaceutical preparations.⁵⁸ They also use clay to make figurines of certain animals for use in rituals to avert catastrophe or to protect distilling liquor from theft by the spirits.⁵⁹

Water Resources

Definition and classification

The Hmong word for water is *dej*. Although, this word is used in many situations, it does not always have the same meaning. Water is inseparably connected with the way of life. According to Mae Sa Nga villagers:

Water does not only mean the liquid we use in our daily life, such as for household activities. Although water is used by the Hmong for cultivation and rituals, the same word can be used also to show feelings, such as “water of the heart” or kindness.⁶⁰

Water is divided into four categories by taste and source. *Dej kua taub* is water with a yellowish color of rust. This is found where there is peev thwv soil. This water cannot be used for drinking. In the study villages, this kind of water was only found in a few areas near the swidden fields or wet rice land.⁶¹

Dej kua ntxhai is clear water with a sweet taste. It is found in sua tu soil in a topography called *ntav toj teb* or *roolo toj*. This water is good to drink. *Dej yeb toob txuab* is water that is clear in color but with a sour or salty taste. It is found near limestone mountains. Drinking a lot of this water can cause gall or other stones to form. *Niam dej* (river) is a natural source with clear and clean water. It is found in areas known as *roob toj siab*. This water is good for drinking. In the study villages, it is found in Mae Sa Nga where a stream passes about 400 meters from the foot of the village.⁶² Two streams flow past the two sides of Ban Mae Ya Noi.

The Hmong have many beliefs about water and water sources. These are related to taboo forests, which contain water known as *qhov dej txhawy*. The Hmong believe that they are forbidden from going near or playing in this kind of water. This includes rafting there or throwing rocks into pools of water. Another kind is *hav iav*, which is a pond or lake with water in it the entire year. The soil is muddy around the lake or swamp (*pas-zaj*). The Hmong believe that the Naga, called *Se Thaj Tuam Vaj* and believed to be the guardian of the water, lives there. Another kind of water is *qhov dej saug*, which is where water disappears into rocks. The Hmong do not know where this water emerges on the surface. The Hmong believe that this area is another place where the Naga is found, as well as other dangerous things. Thus, there is a taboo against playing in the water or throwing rocks into such a place or into a lake with no waterway flowing in or out. The headwaters of a stream is also a taboo area. The Hmong believe that each such place has a powerful guardian spirit protecting it. Anyone who violates the taboo could easily die.

Using Water

In the study villages, the use of the streams in the two communities is for household use in daily life. The water is also used for other purposes such as cultivation and performing rituals, as well as being a source of food. In the streams, the Hmong find fish, crabs, and frogs as well as freshwater algae and various greens. In the past, the Hmong dug channels in the ground or used bamboo piping to channel some of the stream water into the village. But now there is a village water supply system that distributes water for community and agriculture use.

The Hmong still perform rituals associated with water, such as the *teng hao te* ritual.⁶⁴ They use water in a conservationist way according to their traditional beliefs and taboos, which exert a controlling influence on

⁵⁸ Source: Mai Sae Wa, 80 years old and Sua Sae Li, 66 years old, 28 January 2005

⁵⁹ Source: Nai Phuchuai Yua Thanom Rungruang, 17 February 2005⁶⁰ information from group interviews in Mae Sa Nga

⁶¹ Information from Cher Ko Sae Ya, 62 years old, 5 September 2004

⁶² information: Wiraphong Nitisakun, aged 38 years, 8 March

⁶³ information: Group Interviews in Mae Sa Nga and Mae Ya Nong 2004

⁶⁴ information: Group interviews in Ban Mae Ya Noi and Mae Sa Nga, 6 March 2005

their behavior so as not to use resources too greedily as this might cause problems for others. Taboos related to water include taboos against building a house directly adjacent to a stream, taboos against washing the clothes of a menstruating woman or infant child in a stream, and taboos against using a curry ladle to dip water out of a stream to drink. They honor and act according to their traditional rules regarding water very strictly and do not disturb taboo areas. These taboos seem to have the dual purpose of conserving water resources and the diversity of aquatic life.⁶⁵

5 Traditional Cultural Practices

The Karen

Natural resources management according to the culture and traditions of the Karen tribe as practiced in everyday life is done with a conservationist bearing that builds sustainability. This begins with the assumption and manifestation of ownership that leads to a system of management. Gendered division of labor builds family relationships related to natural resource management while methods of natural resource restoration lead to the passing on of these traditions.

Resource Ownership

Forest Resources

Forest land can be occupied by individuals or families, or by communities. Individuals or families can occupy only the smallest areas of forest land, such as the brush land at the edges of fields and the headwater forest above the wet rice fields (as outlined in Chapter 4) The Karen believe that natural resources should be used as common property resources. In practice, the management of a certain area rests with the owner of that area, meaning that the owner controls whether and when other people can use that land for agricultural purposes. Using the land for other purposes can be done jointly, such as gathering firewood or edible greens. In these cases, it is not necessary to tell the owner. However, if one needs to use large trees for building a house, the landowner must be informed in advance. In both case study villages, villagers still conduct themselves according to these customs. Usually, the owner of a piece of land cares for the forest nearby by, for example, planting bamboo or trees that hold the topsoil or trees that create moisture. For example, in Ban Huay Wok, Mr. Sawang (who has since passed away) planted many bo trees in different areas.

Community level occupation of the general forest area in the community is considered a proprietary right of the community. Resources are to be used to the benefit of the entire community, whether for hunting forest animals or gathering forest plants or other materials for house building, fencing, handicrafts or tools. Everyone has equal access to use the forest. Actual use is related to how it is used and the method of laying claim. For example, when traveling in the forest, upon finding a bee hive or wasp nest, a mark is made (called a *tamanaw*) or a wooden stake is turned towards the bee hive to show others who come afterwards that this area has already been claimed. To reserve land for farming or to claim wood to build a house, a machete is used to make a mark in the tree. Others who see this mark have a great deal of respect for it, and believe that anyone who then takes this tree is stealing it. The Karen believe that no good can arise out of such a theft.

Caring for and controlling the use of the forest is the duty of the entire community. When farmland is cleared and burned, firebreaks are constructed with care to prevent the burning of other forest. People must take turns watching the fire and must help each other put out fires in other forest areas by finding fire-fighting equipment such as machetes, hoes and water receptacles and helping until the fire is back under control. This means that in Karen communities there are no fires that cause the loss of natural resources.

Regulations for Joint Management

Forest resources in general are not considered to be owned by humans. Anyone is able to use those resources provided they follow the traditional regulations of the community. For the most part, community members will follow these regulations out of respect for the community's rules, beliefs and joint agreements that have already been accepted.

⁶⁵ information: Group Interviews in Mae Sa Nga and Mae Ya Nong 2004

There are guardians of the regulations who operate at many levels. At the community level, the guardian is the village leader called *hi kho*, who is a traditional leader and the main guardian of the village code. For example, when the planting season arrives, the *hi kho* will set the date and time and prepare the New Year ceremony, called *nee saw kho* in advance by telling the people in the community to prepare themselves. After this, the *hi kho* reminds them to act well, to work hard and not to create situations that bring trouble to the community. When the time comes to choose the area to plant the swiddens, this is done with respect paid to the natural resources, which are requested to share their bounty and help build good things with the families and the community. Mae Pon Nai still conducts these ceremonies. Khun Ya practiced these ceremonies in the past but currently, due to a lack of land, their swiddens hardly move from year to year and the village leader's role has diminished. New regulations have been developed in the new era instead.

Wildlife Resources

Wildlife are considered a communal resource by the Karen. When a large forest animal is hunted, it must be shared with neighbors in the community. There are regulations governing the hunting of forest animals to prevent over-hunting. No more animals can be taken than can be eaten at one time. It is the duty of the men to hunt large forest animals. Indigenous knowledge and traps are used in the hunting of certain animals. To steal an animal from a trap is considered bad. Hunting is done in season depending on the animal but mainly after the harvest season. Women mainly hunt aquatic animals.

Land Resources

Land is a productive resource and the most important asset. Land allows the people to have food, to build a culture that sustains life, and to practice a system of agriculture that has resulted in the accumulation of a body of knowledge on land management with limitations and taboos on various practices. This system of land management has been passed down over a long period of time from the ancestors. The Karen system of land occupation is based on sharing and using the land sustainably.

Land Occupation

At the family or individual level, land is passed down from parents to their children and grandchildren or from one generation to the next. For example, with the Karen system of swidden cultivation, there are fallow areas for subsistence farming that each household has claimed as its own. The fallow land is left to regenerate itself. However, if a household is unable to use all of the fallow land earmarked for cultivation in a particular year, they can allow other people to use that land without demanding compensation. This is a way of sharing and helping each other. The study found that both case study villages have encountered external pressures due to government policies that have caused the villagers to make changes to their methods of swidden cultivation. They now have to plant repeatedly into their fallows, which is in great conflict with their past method of planting. This has forced them to diversify their incomes with off-farm work, such as day labor outside of the community. Khun Pon Nai village has a large number of members that work outside the community.

Each household maintains its own land and other people are not allowed to farm that land. Everyone in the community knows the boundaries of each household's land. If someone needs to use someone else's land, s/he must ask permission from the owner first. This regulations are still respected in the case study villages, but have been adapted to the changing situation. The Karen believe that to sell land is extremely bad because they cannot produce land themselves. Land is their life. Anyone who sells their land will never prosper as much as others.⁶⁶

⁶⁶ Mr. Joni O-doechao



Sign announcing the boundaries of Karen land

Housing sites are shared among relatives. If someone needs to move in with another relative, if that relative agrees and that area does not belong to anyone and occupying it will not cause trouble for anyone else, then that person can ask the other villagers for approval and so make use of that area.

Decision-making for resource management at the community level is done by the community leader. The leader also resolves disputes between people in the community. This leader is the main person who decides the area to be used for swidden cultivation each year, along with the members of the family using the swidden field. Practices in both case study villagers have been adapted as needed. Presently, land occupation has an integrated management system that can be clearly seen, such as swidden cultivation where the management rights lay half with the community and half with the individual. There are other portions of land used publicly, recent developments for these villages, such as for the school, the sports field and other uses. The right to manage these pieces of land rests with the community.

Soil conservation and improvement

Conserving and improving soil quality is important. Farming using the method of swidden cultivation has very little negative effect on the topsoil and is therefore in and of itself a type of soil conservation. When planting upland rice, small holes are made with a stake and the seeds placed inside the holes. When it rains, the topsoil washes down to cover the seeds. In addition, the fallow period protects the topsoil in a sustainable manner. In wet rice land, farmers will apply cattle and buffalo manure if they have it, or some people will graze their cattle and buffalo in the harvested fields in order to improve the soil. If the soil is very poor, some farmers will gather tree and bush branches from nearby brush and make a pile on the field, which they then burn to ashes to nourish the soil.

Labor exchange

Community members give each other assistance in the area of labor “*Ta ma deu ma ka*” or labor exchange is the traditional way that the villagers use to help each other in farming. Labor is divided according to gender with men and women having different roles. For example, men climb trees to cut the branches from them, build fences, build shelters in the fields, and plow. Women plant, weed, and harvest the rice, and care for the planting seeds. In Khun Ya and Mae Pon Nai, labor exchange is used in each step of agricultural production, as taught for many generations. People will mainly help other people within their network of relatives first, and then help out neighbors, starting with clearing the field to making firebreaks, then planting the rice, weeding, harvesting, and transporting the harvest home from the fields. Each time a family receives help from someone, they must return that help within the same planting season. However, in some cases, there is special help given to disadvantaged members of the community such as widows or households with few laborers or those in poor health. In this case, there is no requirement to return the help they receive because the labor is given as charity. In addition to production work, people will contribute labor for all aspects of the community’s life, such as house raisings, weddings, funerals and other events. These practices contribute to community unity and to optimize the use of human and natural resources.

Water Resources

River headwaters are the resource that feeds everything that has life and is the main input in agriculture. The Karen share the use of this water resource by damming the water so it flows through irrigation channels into the stepped wet rice fields and to other agricultural areas. Water is not considered to be a resource that belongs to any one individual. Water is always used in a communal fashion.

At the family and individual level, if the water is needed for a single field owned by one family, and comes from a small stream, then the owner of the field has the main role in managing the water. If another person needs to use this water source as well, then s/he must negotiate with and ask permission from the original user. However, for harvesting aquatic animals, it is not necessary to inform the landowner in advance.

The management of water by more than two families is done using the traditional *meuang fai*⁶⁷ irrigation system. This system implies that the people with wet rice land closest to the irrigation channels receive water first, followed by the next closest, and so on. In the case study area, Khun Ya Pa Kluay is still using this system since the community mainly cultivates wet rice. Where reservoirs are used collectively for watering gardens, everyone has to help keep the reservoir clean and help manage the water should it become polluted. It was found that when there is a severe conflict between people in the village it may become necessary to perform the water-drinking oath-taking ceremony. From whichever reservoir water is taken, the two families in conflict must not drink or consume water from the same reservoir. This ceremony has taken place in Ban Khun Ya Ma before.

Resource Access and Management

Gendered Division of Labor

Natural resource management by the Karen is usually divided between men and women. There are clear differences in the roles. Men have a greater role outside the home than women. The roles of men and women both have an underlying link to natural resource management.

The fact that men have a greater role outside the home than women is directly related to natural resource management. Marking off and claiming land is the direct role of men. However, women are still involved in the background, since before making a decision, the men must consult with the women. When they have reached an agreement, the men will go to mark off the area for cultivation. Caring for headwater forest is the responsibility of men. Usually, the headwater forest will have only a few owners, or even only one owner. The family head will manage the area with help from his wife and children. Hunting large animals is also the direct role of men. After the rice is harvested, men will invite each other to go on a hunting expedition. The game is shared equally between all who went on the expedition because the spirits of the animals that are caught, called "*thi keu jaa keu keu jaa*", want everyone to eat.

Making irrigation channels is managed jointly by people in the communities that use common irrigation systems. Sharing of water is done as seen fit, since each person has a different amount of land. Water must therefore be shared equally. Drinking water is managed jointly within the community. When the water is used for drinking, it must be protected so that it can be used continuously and sustainably. Aquatic animals that live in the rice fields are public property. Whoever sees them can take them to eat. Anyone catching aquatic animals must not harm the rice and may not take any other products from the rice field.

Women have a role in selecting and collecting plant seeds. Seeds are stored over the stove or in the kitchen. In addition to cooking food, the kitchen is also a room for storing planting seeds. In this room, objects used for storage that are woven from rattan and bamboo, such as mats, baskets, and winnowing baskets, are smoked over the stove in order to dry them, to darken their color and to protect them from insect damage. Storing planting seeds over the stove or fire pit also allows the smoke to protect them from insect damage.

⁶⁷Meuang fai is a Thai term referring to a community-managed system of irrigation, mainly used for wet rice production. Usually, community members jointly select one person to manage the system and decide who will receive water on which day. All wet rice land owners will pay this individual an honorarium for his/her services.

The second level over the stove is used for baskets or other newly woven goods and baskets that store the planting seed. The seed is wrapped in cloth. Some planting seeds might be tied suspended from the mantle of the fireplace, while some might be stored in the rafters. Each type of seed requires different levels of heat and moisture for storage. Heat from the stove helps to control moisture, to keep it at levels appropriate for certain types of seeds. The smoke from the fire smokes the seeds and protects them from weevils and other insects, mice, rats, and mold. Storing different seeds in different places is knowledge based on the natural properties of each type of seed and has been passed down from our ancestors.

The diversity of food crop seeds kept by each family is the outcome of sharing and exchanging seeds within the community and between communities. For example, the Karen may exchange seeds with Hmong and lowlander villages. The role of women as the seed savers in the community is very important, since the women are the ones who select and store the seeds. Men are not very careful or as good at such fine work as women. The Karen women therefore have a great deal of knowledge about selecting and storing planting seeds.

In terms of decision-making, women and men consult with each other before making any decisions. This is a way of respecting each other and reduces the number of mistakes. Superficially, men could seem to have a greater role in managing natural resources than women, but in reality, women are actively involved behind the decisions made by men. Therefore, it can be said that decisions are made together, so that they can live together sustainably.

Resource Conservation

Forest Resources

Because the forest resources are limited, the Karen tribe has methods of using those resources to their maximum benefit while maintaining their sustainability into the future. For example, trees must be appropriate to the uses for which they are selected. Trees used for houses for example, must not come from an area of taboo forest and the ecology must not be destroyed by their removal. Forest resources are used to their maximum benefit. The main method of care and management is to protect against forest fires and to follow beliefs as outlined in Chapter 4.

When collecting different kinds of plants in the forest, one must think about their suitability for cooking. For example, if a rattan shoot is already too big, it is not suitable for cooking because only a small portion of it can be used and is not worth the lost resource. That shoot must be left to keep growing. Collection of forest plants must be dispersed, rather than always from one area. For example, when collecting bamboo shoots, one should not collect from only one clump but rather from many clumps in order that some shoots will grow into mature bamboo and so that one's children and grandchildren will also be able to collect shoots there. In the case of taboo forest, absolutely no one is allowed to enter it.

Caring for herbal plants begins with collecting herbal medicines. Only the amount that is needed will be collected. Collecting more than can be used is believed to be wasteful. There must be some left to regenerate. A really important thing is to prevent forest fires, since this can destroy the forest ecology. Taboos for making herbal medicine according to the beliefs of the Karen include that herbs should not be collected on Buddhist holy days or during certain phases of the moon, on a day that a child in the village is born or on a day that someone in the village has died. Furthermore, women should not collect herbs while they are menstruating. If any of these taboos are broken, the medicinal herbs gathered will lose their sacredness and have little or no power. In order to gather the herbs, permission must be asked of the Lord of the Land and tobacco or coins left in place of the herbs.

When building a house, the main principle used to choose trees is that they must be of an appropriate size and must be easily and conveniently cut without destroying the surrounding ecology.

Hunting and Fishing Practices

Villagers in Khun Pon reported that hunting certain species of wildlife is currently banned in their area. Despite the hunting ban, they rarely see these animals anymore as they may have hidden themselves due to

fear of being hunted since their numbers began to fall. The natural habitat of these animals is also greatly reduced compared to the past, mostly due to externally-led deforestation and belittling of traditional community rules and regulations by mainstream society.

In the way of life and customs of the Karen, wildlife are considered to be a common property resource. This means that anyone is able to use this resource to his/her benefit. However, there is one rule that the Karen follow. If it is a large animal then it must be shared among the community. For example, if anyone kills a barking deer or a wild pig, then they must give some to their neighbors to eat as well. For small animals like birds and rats, if a group of friends go hunting together and one friend cannot accompany them, then the others will share what they have with him. Another rule is that no hunting of forest animals is allowed during the breeding season. This is a commonsense rule, that there should be no shooting during the breeding season, that the Karen have practiced since the time of their ancestors.

Fishing occurs more in the dry season than in other seasons, because in the rainy season the water in the streams is high and it is hard to fish. The Karen do not have modern fishing gear. The rainy season is also the main agricultural production season and the Karen do not have time for fishing. Fish stock conservation is the natural outcome of this practice. There is a period when fishing is prohibited. The Karen will not fish between June and August. This is the period when the fish spawn so the fishing prohibition allows there to be a greater number of fingerlings.

Transmitting Knowledge and Local Wisdom

From the study of the knowledge and local wisdom in the case study villages, we are able to learn from the wisdom of the ancients, a great deal of which is still being transmitted and practiced. In the past, the transmission of the knowledge and worldview of the Karen as related to biodiversity management was not done by writing it down or collecting it by any means. It was transmitted through the thought processes and cultural practices of the community in carrying out their daily lives, by means of stories, legends, proverbs, songs, fables and ceremonies and, the most important way of learning, through the practice of their own system of agriculture. This system of agriculture is very detailed in terms of culture and beliefs that have a relationship between people and animals, people and natural resources and people and the spirits. These relationships cannot be seen or touched. Rituals are performed at every stage of production and are a clear reflection of the people's beliefs. These ceremonies are done to ensure economic returns and peace and blessing in the community and the family.

The Karen have many beliefs and philosophies related to the forest. Beliefs are like a fence. A good, strong fence protects the crops that are inside it. The beliefs of the Karen are expressed in their care, management and preservation of the forest and based on the philosophy that everything has an owner, God (Yawa), who created all things. This can be seen in the following proverbs:

- "*Oh thi keu teu oh kaw keu teu kaw.*" which translates as "If you drink the water, you must protect the water. If you eat from the soil, you must protect the soil." This means that if anything provides a benefit to us, we must protect it so that we can use it for as long as possible.

- "*Oh kaw keu taw kaw mae sae ta doe oh maw keu waw kae.*" which translates as "If the topsoil can be preserved, the gaur will return to the salt lick." This means that if the forest soil can be used and preserved, herds of gaur will return to live there.

- "*Oh deu keu taw lae. Oh ya keu taw kua.*" which translates as "If you eat frogs and toads, preserve the river banks. If you eat fish, preserve the pools." This means that the habitat of animals we want to eat must be preserved if we are to use them sustainably.

- "*Jaw keu chaw phoe oh kaw mi oh kaw si si da ah ji.*" which translates as "The little elephant eats happily from the earth. Eat from the earth, creep, crawl, grasp gradually." This means that the little elephant eats happily from the earth because it must walk and eat slowly. This is like the method of swidden cultivation of the Karen tribe. This teaching is repeated in another way:

- "*Ta khi seu nee pga teu si. Ta kha seu la pga si.*" which means if the rice becomes difficult to grow or expensive to buy or the rice fields are dry and rain does not fall in season, even after three years of this people probably will not die. They can still eat vegetables, tree shoots, and grass leaves. Ta kha means that without water, there is no rice and no fish, and everything will die except the little ants and termites, as in the following proverb.

<i>“Ma si sae ah phoe teu ngaie</i>	<i>ma si waa pho teu ngaie</i>
<i>Thi phoe oe leu pga seu rae</i>	<i>no pho oe leu pga seu rae</i>
<i>Sae phoe waa phoe mae law khrae</i>	<i>thoe phoe yeu phoe oe teu sae”</i>

This proverb translates as “Do not kill tree seedlings. Do not let the bamboo seedlings die. Water around the forest, bogs around the forest, in the small hollows in the trees, in the big crevices of the trees. Water can stay in the bogs because of the tree hollows and the small tree roots.” If the bamboo and forest trees dry up and die, it means that the water will dry up and the nestlings and small rats will die.

“*Pga teu phae law ploh keu jeu keu loe.*” which translates as “Do not cut trees on the mountains, do not farm on the peaks, because they are the home of the forest spirits and the mountain spirits.” This is based on the accumulated experiences of our ancestors who taught it to their children and grandchildren, to use when caring for and conserving the forest so that they could live in balance into the future.

The forest provides immense benefits, such as materials for building houses, and so many other benefits. Everyday life depends on the forest, the soil and the water. The Karen believe that if the forest is conserved, then the soil is conserved. If the soil is conserved, then the water is conserved. These things are all related and linked to each other. Conserving the forest, soil and water sustainably is done using appropriate methods. Different areas are clearly divided into, for example, community forests, usable forests, conservation forests, and dae paw forest (see community maps in previous chapters). These classifications are a way of conserving the forest sustainably. Not conserving these resources is like destroying your own life. Conserving the soil, water and forest is related to ceremonies and ancestral beliefs. For example, trees that are used as offerings for the spirits of the cows and buffalo (*ta peu jaw a thoo*) are not allowed to be cut or used for anything else. If anyone breaks this taboo, s/he will be punished by the guardian spirit or the spirits of the forest and mountain. (See details in Chapter 4.)

The Karen also have many proverbs and verses that reflect their beliefs about water. “*Loh mae mae phi loh thi thi si*” translates as “Play with water and the water will go dry; play with fire and the fire will go out”. This proverb means that if one interferes with the water, blocks the water, pumps the water, or eats all the aquatic animals, then all the water will dry up. These actions cause too great a disturbance to the water and the forest that reverberates all the way through to the tree stumps and the birthplace of the forest and the water.

There are also beliefs and philosophies about wildlife. The Karen tribe bases its culture on nature both directly and indirectly. Forest animals are one thing in their system of utilization. Sometimes, using and caring for a thing is linked to other resources. The forest is the home of the animals. Animals have a relationship with the life of people and are the completion of people. If all the animals in the forest were gone, nothing would be wholesome. In the end, everything would die because when the animals die, everything will become extinct. People would not have food or nutrients. It would mean the end of everything because our prosperity and existence depends on the animals, as shown in the following proverb: “*Kae ngee kae baa*” translates as “The strength of our body – if we do not have animals – is gone.” This means that people are not complete without animals, it is like people missing parts of their body.

In addition to proverbs and teachings about nature, the elders of the Karen show their perspective on the changes to their way of life adopted by the younger generation, to serve as reminders about the beautiful customs and traditions that have been passed down to them from ancient times.

<i>“Pga mee leu pleu mee leu pleu</i>	<i>pga pga leu pleu pga leu pleu</i>
<i>Pga mee leu pleu deu yeu deu</i>	<i>pga pga leu pleu deu yeu deu</i>
<i>Pho saa khae ee teu deu leu</i>	<i>teu keu mee keu pgaba leu”</i>

This translates as “The elders in the past, in the past; the old people in the old times, in the old times; the elders in the past forbade raising fish; the elders in the past forbade raising fish. Children nowadays do not keep the taboos, and they do not live a long time.” The meaning of this is that in the past, Karen communities had a simple way of life and lived with nature. The rules, customs, traditions and beliefs in each local area were practiced following the teachings as they had passed them down. In the present time, communities are

more open and many new things have come in from the outside. Children and youth have forgotten their culture and local bodies of knowledge. In particular, personal manners have greatly deteriorated.

<p><i>“Pga mee leu pleu mee law chaw</i> The elders in the past were different, <i>Ku nee ae doh ae bae thaw</i> They wore long skirts, <i>Law kae leu phoe saa theu pblaw</i> Children in this period</p>	<p><i>pga pga leu pleu pga law chaw</i> the elders in the past were different, <i>sohsae ae doh chae bae thaw</i> the men wore long shirts, <i>ku nee soh chae kae la jaw maw”</i> wear short skirts and shirts above their waist.</p>
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The meaning of this verse is that the customs and way of life of the people in the past and in the present are different. For example, in the past, skirts were always long. Shirts were also long and covered everything. People dressed very orderly. The new generation wears clothes that do not cover themselves up and look disorderly. This proverb compares the mode of dress between older generations and the new generation.

The Hmong

When the Hmong manage natural resources, they do so in accord with their traditions and customary way of life. This is because the Hmong way of life is characterized by living with the forest. They have long depended on the forest and its resources. This has resulted in the Hmong trusting in their customs and traditions when making use of nature. These beliefs have taught the Hmong to respect nature as well as the Lord of the Forest and the Lord of the Mountain on all occasions. The Hmong act in this way when collecting forest produce, cutting trees, or even just traveling through the forest. As a result, their indigenous knowledge is still transmitted from generation to generation and is still practiced at the present.



Roob toj siab forest



Roob ntav taj siab forest



Hav Qua Teb forest

Ownership, Access to Resources, and the Spiritual World

Forest Resources

Living together with the forest, as the Hmong do, is closely involved with their beliefs about using resources sustainably for the community. Their beliefs are integral to their way of thinking about ownership. The Hmong believe that a supernatural being is the lord of all natural things, be it soil, water, forests, or even wild animals. As a result, if the Hmong want to use forest resources, they must perform a ritual to request permission to do so. These beliefs and practices are based on their thinking that they are joint owners and that all Hmong have a right to use all natural resources and they influence how access is gained to use resources.

Forest management is a part of the Hmong belief system and it is based on relations between the people, the forest, and the supernatural. The Hmong refer to *Xeeb Teb Xeeb Chaw* (Lord of the Forest, Lord of the Mountains)⁶⁸, who controls the use of natural resources.

The Hmong, besides having a worldview linking them with the forest, respect the environment and natural resources. This can be seen in their belief in the Lord of the Land. Whenever the Hmong settle anywhere, they must sacrifice something of whatever they have on hand to the Lord of the Land. Besides foraging for forest produce, such as greens, herbs, and dyestuffs, as well as hunting, the Hmong respect resources belonging to others. Even though forest resources are considered a part of communal property, there still is the condition that no one from outside the community can cut wood in its area. This is a mechanism for working under a way of thinking aimed at sustaining natural resource availability. This approach has worked since long ago until the present.

As for areas called *hav qub teb* (brush forest) and *hav quav poj*, which resemble a brush forest, the Hmong regard such areas as private property that, although once used, has started to be reforested. They still consider it private property. Others can go there for using the resources, such as searching for food, herbs, firewood, or for hunting. However, they cannot use the area for farming unless they are permitted to do so by the owner.⁶⁹

Soil Resources

The Hmong believe there is a relationship between the structure of clans and of families. Based on studies in the villages selected, three levels of ownership were identified.

Open Land. The Hmong believe that the Lord of the Forest controls such areas. As a result, both villagers and non-villagers can make use of this land.

Village-Level Land. This includes the area of the village, the school, roads, ritual areas, and cemeteries. Only villagers can use this land.

Household-Level Land. This includes the swidden fields, paddy fields, and gardens. Outside of household members and relatives, anyone who wants to use this land must request permission from the owner for which there will be no charge of any kind.⁷⁰

Water Resources

From an examination of streams or water sources located in the study villages, there was no procedure for saying who owned waterways. However, the villagers believed that the *thep tu ti* (Lord of the Water) was the owner. In actual practice, when deciding water usage, the Hmong will see who used the water source before and who is using it at present. If someone else intends to use a water source, the people who have already used it must be notified. However, streams to be used by the community for consumption, rituals, or

⁶⁸ information: Chia Sae Ya

⁶⁹ information: Group interviews, Ban Mae Sa Nga and Mae Ya Noi, 2005

⁷⁰ information: Group interviews, Mae Sa Nga and Mae Ya Noi 2005

for other purposes are considered to be community property.⁷¹ There is also the stipulation that no one can enter watershed source areas in the forest for any activity, whether hunting or fishing, cutting down trees, or gathering greens to eat.

As a result, managing natural resources by the Hmong, including forest, soil, water, and even wildlife resources, is based on a recognition of the inseparable relationship between these resources. The examples discussed above, regarding the forest, show beliefs serving as mechanisms that reflect the thinking that there is joint ownership of the natural environment. The Lord of the Land or similar supernatural beings represent an authority higher than human beings. The taboos act as mechanisms to control resource use and to enable an equitable sharing of resources by all members of the community. At the same time, there are restrictions against making use of resources belonging to others and to people from elsewhere. However, for some resources, the thinking of the Hmong on their ownership overlaps with their kinship system. In such cases, access may not be fully open, especially in the case of distant relatives. An area of the forest used for rituals, thus, is only for use by community members. Agricultural areas such as swiddens, paddy fields, and gardens can be used only by household members. At the same time, the area around these fields can be accessed by anyone, including villagers and people from the outside.

Access and Gendered Division of Labor

Hmong indigenous knowledge on natural resource management includes taboos, rules, and traditions based on customary beliefs. Natural resource management by the Hmong is an integral part of their way of life. Although these rules might not be written down, members of the study villages followed these rules by various procedures. When the Hmong use natural resources, they are obliged to act according to these beliefs, which thus control their behavior. When someone does not use a particular type of forest in the customary way or does something wrong in any forest, it might result in their own life or the life of a family member being endangered. This shows that the way of the Hmong is not a formally established structure. These beliefs are operational principles under which the management is conducted.

The role of men and women differ. It is mostly the men's role to decide and to be responsible while the women support them. In the area of forest use, men (heads of household) have the role in deciding about building houses, fences, and hunting animals. The women have the role of collecting greens and fruits for family consumption, for animal feed, and for medicinal purposes. Both men and women help each other in collecting firewood.

In regards to soil or land, men (heads of household) have the role to decide which area will be used and to organize rituals to inform the Lord of the Land. They also select the crops to be grown and the time and date for planting. With regards to swiddening, including burning the forest and the underbrush, sowing the seeds, building fences, and harvesting the different crops, both the men and women cooperate. Collecting the different types of seed, that is the responsibility of the women (female head of the household).

Managing the use of community water sources is the role of the knowledgeable and the elders (heads of household) in the community. They select the site and organize the management system. Men are also responsible for sources of agricultural water.

In addition to the roles of men and women, there are also knowledgeable people or spirit doctors whose role it is to perform rituals regarding the use of forest, soil and water resources. These include the *dong seng*, *teng he*, *dey*, and *fee yeng* rituals as well as others for firebreaks, propitiating the Lord of the Land, selecting the site, and a ritual prior to collecting medicinal herbs. Besides this, they also play the role of selecting trees to use for coffins and picking the burial sites for the elders who die.

This shows that using natural resources in the Hmong way of life follows a division of labor, with men and women each being responsible for certain tasks.

⁷¹ information: Group interviews, Ban Mae Sa Nga, 20 December 2005, and Mae Ya Noi, 4 December 2005

Restoring and Conserving Natural Resources

According to the Hmong way of thinking, they do not only consider the use of resources. They also believe that their customary wisdom revives and conserves them and insures their sustained use. For example, the *dong seng* is a divination ritual or sacrifice designed to invoke the Lord of the Land to protect land resources and forest resources to shelter the members of the community so they will have good land, forests as well as wildlife. Conducting this ritual starts with selecting a tree to be the *dong seng* tree. This tree must be tall with a straight and good-looking trunk, with ample branches, none of which are dead or deformed. This tree should also be in a suitable location. Then the guardian spirits are invited to the selected tree. There is an old account that a long time ago there was a spirit named *Yaeng Chaeng Su Hu*. This spirit selected other spirits to protect the various assets of the world of humans. Then it turned out that there was still one place with no guardian spirit. The question was who would protect and guard this area. Mostly they agreed that it should be *Yaeng Chaeng* or as this spirit is also known, *Tu Ti*.



Dong Seng Ritual



Tow How De Ritual

Rituals conserving biodiversity

One of the most important Hmong rituals is the *dong seng*. In conducting this ritual, four guardian spirits are invited:

- 1) *Tu Ti*, Lord of the Land, Forests, Hills, and Plants
- 2) *Sasaeng Ti Chu*, Lord of Wildlife
- 3) *Fu Saeng/Yao Saeng*, Lord of Dangerous or Meat Eating Animals, such as tigers; this lord looks after dangerous things
- 4) *Chu Seng Long Met*, Lord of the Underground or Under the Earth's Surface

The *dong seng* ritual is done at the community level and is considered a unifying ceremony. This ritual is performed annually about 4-5 days after the New Year's celebration. Every household in the community makes preparations to participate in it. It enhances the relationship between the community members, nature (soil, water, forest, wildlife), and the supernatural (Lord of the Land) so that the ecological balance is maintained.

In the area of the *dong seng* forest, there is a taboo against anyone entering and using the area, whether for hunting, collecting herbs, or cutting trees. The villagers believe that if they do not honor the pact with the supernatural, they will endanger their home and their community. This ritual is performed annually in Ban Mae Ya Noi.⁷²

⁷² information: Chokchai Wiwathanaphanakun 2004

Another ritual, *teng hao te*, is conducted in the area of the village's watershed source. The purpose is to give thanks and to propitiate the Lord of the Water who protects and keeps the forest lush and the watershed source flowing for the entire year for the benefit of the community. This ritual is particularly important for communities where water is scarce, so as to ensure a yearlong supply. The spirit, such as *thu ti* or *se ta tua wa* (the spirit of water), invited by the ceremony is responsible for the soil, forest, and water. After the ritual, everybody helps be to particularly careful so that forest fires are controlled and do not spread to the watershed forest.

As a result, the area of the watershed source forest cannot be disturbed. There can be no hunting, collecting of herbs, or cutting of trees for any reason. The spirit will punish any offenders by making them fall sick. When this happens, the person must perform a ritual propitiating the spirit in order to recover. In Ban Mae Sa Nga this ritual is performed every year.⁷³

In summary, it should be noted that the Hmong way of thinking based on their belief system is not only about resource use but also includes reviving and conserving resources. Their indigenous wisdom sustains resources as a part of their way of life. Importantly, the belief system is based on respecting nature through traditional activities and culture that is integrally linked with the forest.

Transmitting Culture and Local Wisdom

With the way of life tied to nature, the Hmong have customs, rituals, beliefs, teachings, and proverbs about natural resources, their usefulness and how they should be conserved. The older generation transmits these teachings to the younger generation which puts them into practice. These appear in two forms.

The first is transmission through rituals, such as by learning the steps of the ritual, starting with making preparations to finding the needed equipment, and goes on to include the actual steps in doing the ritual, such as what animals are needed. This is a kind of participatory learning. Information is transmitted by learning from an expert who teaches the steps. When this is done, after one has completed the training and can put it into practice, the person must pay a teacher's fee. This fee varies from teacher to teacher because their knowledge and expertise are not the same and because they do not all teach the same things. The reason for having this fee is because the student can put the learning into practice in order that good things will accrue to that person's family. The fee that must be prepared for each ritual is as follows:

- *Fee Yeng*: 4 silver coins, 1 pair of chickens, 1 bottle of liquor
- *Teng Hao De*: 4 silver coins, 1 pair of chickens, 1 bottle of liquor
- *Dong Seng*: 4 silver coins, 1 pair of chickens, 1 bottle of liquor, mulberry paper
- Learning about medicinal herbs: 600 baht, 1 set of cloths, mulberry paper, and a picture

The second is transmission through proverbs, sayings, poetry, songs, ritual chants, and riddles.

Some traditional songs include the following:

Cast us dej tob ntses nuj ntses niag nyob
Dej ntiag ntses nuj ntses niag khiav
Deep water with fish in it. Muddy water, the fish floats.

Txuag siav ces siav ntev txuag zam ces zam tshiab
Txuag xyoob ces xyoob ntev txuag ntoo ces ntoo siab
Never erring, life is long, keep clean and your clothes will stay new
Care for the bamboo, they will be straight, care for the trees, they will be tall

This means that if you want the forest to be fertile, you must care for it well just as you care for your own life.

⁷³ information: Cho Ssua Sae Li 2004

The beliefs of the Hmong are mechanisms for controlling and managing resources. The Hmong treat them as important and transmit them, along with the rest of their indigenous learning system, to younger generations. This is done because the natural resources will not be sustained unless the younger people are brought into the Hmong learning network. Passing on this information stresses the value of natural resources and the traditional body of knowledge. This can be seen in the system of the teacher's fee. Even though the fee in economic terms is small, it does give it value in emotional terms. This will also ensure that the rituals are more carefully practiced.

In addition, transmission orally by proverbs and various teachings stresses the cultural identity of the Hmong. It instills a feeling of togetherness in managing natural resources that is passed on to the younger generations. More than just natural resource management, this teaching helps the younger generation lead their life in an appropriate way. This can be seen in the Hmong having many stories, proverbs, and teachings used and taught at different times and places as is suitable.

6 Biodiversity and Community Rights: The Need for Legal Reform

The main objective of this chapter is to examine the connections, synergies and incongruities between indigenous and local knowledge, customary use and law related to biological resources and domestic as well as international laws that Thailand has ratified.

Background

In June 1992, Thailand signed the Convention on Biological Diversity (CBD) at the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil. The cabinet resolution of 28 October 1997 ordered the Ministry of Foreign Affairs to ratify the CBD. Thailand officially ratified the CBD on 29 January 2004 as the 188th ratifying member.

The CBD is the main international treaty on the conservation and sustainable use of biological diversity. The Convention is legally binding, in that signatory countries are obliged to implement its provisions. The Convention is administered by the United Nations Environment Programme, and has three main goals: the conservation of biodiversity, sustainable use of the components of biodiversity, and sharing the benefits arising from the commercial and other utilization of genetic resources in a fair and equitable way.

The CBD became effective on 29 December 1993, and covers all the earth's ecosystems, species and genetic resources. Under the Convention, all States (Parties) have committed to undertake national and international measures aimed at achieving the three objectives above. Parties are required to develop national biodiversity strategies and action plans, and to integrate these into broader national plans for environment and development. This is particularly important for such resources as marine and coastal biodiversity, forest biodiversity, terrestrial ecosystems, inland water, and agricultural diversity, all of which are considered to be vital to human sustainable development and to the conservation of the global environment. It should be noted that the CBD places a strong emphasis on the promotion of the role of local knowledge and the participation of indigenous and local communities in biodiversity conservation.

Research findings

Relevance of the CBD

The sections of the Convention on Biological Diversity (CBD) most relevant to indigenous peoples' rights are contained in Articles 8 and 10 of the Convention (see Chapter 1). Relevant concepts from Article 8(j) for this research project include:

- Traditional knowledge: the ways in which indigenous communities practice everyday life, and cultural traditions passed down from ancestors, including their belief system, ideas, language and cultural practices.
- Innovations of indigenous communities, whether practical or artistic;
- Practices of indigenous communities on conservation and management of natural resources.

Under Article 10, Sustainable Use of Components of Biological Diversity, the government is required to protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements. “Customary use” can be defined as indigenous customs, both as local customs that are enforced as a local law, and customs or traditions which are practiced but have no legal enforcement. Most indigenous communities have traditional management systems regulated by customary rules that have been practiced for many generations. If these customary laws are relevant to natural resource management, the State is urged to take appropriate and effective measures to protect and support their continuance. The State should not intervene or enforce laws and regulations in contradiction to these customary laws.

Laws must be in harmony with current cultural practices. For example, the Karen’s traditional agricultural practice of swidden cultivation should be endorsed by the State, and subsequently protected by law. The state should disseminate information about this local custom in order to increase public awareness and understanding.

Factors that Obstruct Respect for Customary Use and Access of Indigenous and Tribal People to Natural Resource Management

Customary use of resources cannot be respected if people’s rights and access to resources is not guaranteed. The Thai state has not given indigenous communities a significant role in the management of local biodiversity resources and has not taken appropriate steps to implement these two articles of the CDB, due to the existence of obstructing policies, laws and regulations. These include the **Forest Act** of 1941, which defines as “forest” any land to which no individual has laid legal claim. This greatly extended the boundaries of the forest throughout the country. As long as no individual had laid legal claim to the land, that land was immediately considered to be “forest”, even if the land in question was not actually forested. Since the highland areas where tribal people lived had not been surveyed and no title deeds had been issued, they were now considered forest and State property, negating the land and resource rights of the tribal peoples. Subsequent laws and the promulgation of the Land Code of 1953 have had no effect in addressing the definition of forest areas.

Following this, the **Wild Animal Conservation and Control Act of 1960** created areas for the conservation of forest animals by banning people from occupying, cutting trees, or clearing land on which their livelihoods depended. The **National Park Act** of 1961 created more areas where people were not allowed to perform any activities. When these national parks were created, communities living in those areas were not informed or consulted, leading to significant problems. The **National Forest Preserve Act** of 1964 allowed local officials to demarcate the boundaries of protected forest themselves without consultation with members of the public, effectively turning many villagers into illegal trespassers.

Building on this legal framework, the Cabinet adopted a **National Forest Policy** in 1985 that aimed to have forest area be not less than 40% of the area of the entire country, with 15% as conservation forest and 25% as economic use forest. This policy also promotes and supports forest plantations by the private sector for industry and pulp mills and developed a forest development plan. It also established the “National Forest Policy Committee” with no participation of representatives of indigenous and local communities.

Specifically impacting on tribal people in Thailand is the **National Master Plan for Highland Communities and Environmental Development and Drug Control**. This plan was first enacted in 1992 and is currently in its third phase, from 2001-6. Indigenous peoples’ organizations and academics advocating human rights have protested continually against it since the second master plan was introduced in 1997, on the grounds that it was developed without the participation of tribal people and that it advocates forced migration, limits tribal development, and controls the way of life of highland peoples. The principles of the Master Plan are flawed in a number of important ways. They are essentially racist and based on prevailing and unfair stereotypes of tribal people depicted as destroyers of the forest and drug smugglers. The Plan inconsistently promotes modern agricultural practices that are known to be ecologically harmful and are not in line with traditional agricultural practices, while at the same time insisting on security and sustainability in natural resource management. Furthermore, agricultural extension work is rendered useless by subsequent forced relocation. The plan also employs a divide and rule strategy by splitting up weak

communities into temporary groups, campaigning to reduce the birth rate in the highlands, and preventing new land from being cleared. Not only does this Master Plan not promote the sustainable management of natural resources, it also contravenes a number of articles of the Thai Constitution, particularly those articles that provide legal protection for communities to participate in the use and conservation of natural resources.

The most recent policy affecting tribal people and access to natural resources is a **Cabinet resolution** passed in 2000 on conservation and usage of biodiversity that endorsed access to genetic resources, bio-safety, and appropriate technology transfer and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources in accordance with the principles and objectives of the Convention on Biological Diversity. A National Committee for the Conservation and Usage of Biodiversity was established to oversee this process; however, there was no public participation in the setting up of the committee, and so it has not benefited tribal peoples as they still remain marginalized in the policy development process.

Factors Supporting Customary Use and Indigenous and Local Communities' Access to Natural Resources

The Thai Constitution of 1997, dubbed the "People's Constitution", has a number of sections that support indigenous peoples' access to natural resources and biodiversity. For example, Article 46 states, "individuals who form into traditional, local communities have rights to preserve and revive their customs, local knowledge, arts or culture at the local and national levels; and to participate in the more balanced and sustainable management, maintenance, and utilization of natural resources and the environment. This would be in accord with the enacted law". Other Articles, including 56, 59 and 76(1) guarantee the rights and liberties of all Thai people to participate in the development of their local communities, including in the area of local natural resource management, a key component of decentralization. Allowing communities the right to manage their own natural resources is an important means of strengthening democracy. According to the provisions of the Constitution, communities should be the primary managers of resources in their own locale, such as local forest, grazing land, or coastal resources. Communities have the right to co-manage larger resources such as watersheds jointly with government offices and other communities by means of public hearings and participation in meetings on relevant issues such as industrial zoning or mining concessions. In theory, these articles of the Constitutions should be a sufficient basis for the implementation of Article 10(c). Currently, however, no appropriate laws to implement these constitutional articles have been developed and the public has no genuine opportunity to effectively participate in the decision-making process on natural resources. The last avenue for natural resource management by communities is through local government agencies, which represent and defend the interests of the communities they serve.

Furthermore, Section 56 states that all issues concerning natural resource and environment should be open to people's participation. If the actions or inaction of a local government have a negative impact upon the environment, people have the right to sue a State agency, State enterprise, local government organization or other State authority (Section 56, paragraph 3). Section 62 of the Constitution also states that a person has the right to sue these agencies.

In addition, Chapter 9 has eight Articles (282-290) that clearly state that people should have the opportunity to participate in local government, through the removal of officials and employees of a local government organization, and to participate in the development of policies for their own governance as part of the decentralization process, as well as public participation in the selection of personnel administration of local government organizations by means of an elected committee.

Another area of the Constitution that supports people's participation in accessing natural resources is its provisions for access to government information, supported by the Official Information Act of 1997. The Official Information Act gives all citizens of Thailand the right to request disclosure of information. The law defines the term "information" as all information that conveys meaning, regardless of whether the information is tangible or intangible. Information thus may be buildings, documents, reports, books, maps, drawings, photographic negatives, sound and video recordings, or computer data. Previous to this Act, all information was the property of the office at which it was stored, and not open to public scrutiny. The purpose of the Act is to guarantee government transparency and accountability and to enable people's participation

in the formulation and implementation of government policy.

In the same vein, the Constitution grants the public the right to participate in national development by means of public hearings. However, no laws have yet been passed to enable this provision of the Constitution and the public is reliant on a government decree on public hearings dating from 1996. These regulations open a channel for the public who are negatively affected by government projects to be able to request the provincial government to hold public hearings in the case where the project's implementation in the field has negative impacts on the environment, culture, livelihood, safety, way of life or has caused some other loss to the community or to society.

One of the main thrusts of the Constitution for increasing people's participation in governance is its mandate for decentralization, increasing the rights and authority of local government offices. The Constitution clearly states that all local government organizations shall enjoy autonomy in laying down policies for their governance, administration, personnel administration, finance, and shall have certain powers and duties unto themselves. Their legal powers and duties include the conservation and restoration of local culture, local natural resource management and conservation, and capacity-building and training for local people whether through the formal or informal education system. The main challenge is the implementation of these positive provisions of the Constitution.

Conclusion

The most important international law relevant to indigenous communities and their access to natural resource is the Convention on Biological Diversity (CBD) while the most important national law is the Constitution. There are many sections in the Constitution that encourage community organizations and local government offices to participate in natural resource management. However, in practice, these sections are still far from being implemented. The current Constitution has opened up opportunities for public participation at the local administration level. However, this is of no use if local communities are not aware of their rights. The local administration is a body for addressing local people's needs and interests, and should be used as a vehicle for people to both learn about and exercise their rights.

In reality, in Thailand there is little political will to implement key laws regarding indigenous rights to natural resource management. There has been no revision of relevant forestry laws to bring these in line with the CBD and Constitution. The government continues to strictly enforce forestry laws, resulting in the arrests of tribal people and the relocation of communities out of the forest. These actions contravene international law and the Thai Constitution. It is clear that State officials at all levels should be trained on these laws, so that they can understand and be aware of the substance and implications of national and international laws. This remains difficult, as policy makers do not see this as important.

7 Conservation and Sustainable Use: Community Adaptation

Tribal people are bound to natural resources and biodiversity since these are necessary for every aspect of their daily lives. At the same time, conservation is required for biodiversity resources to be available to communities in the long term. Some of the Karen and Hmong's conservation methods are easy to explain while others are more complicated, and are based on beliefs, customs, and rituals.

The main trends of so-called "development" from outside view tribal people as having many problems, such as being backward, lazy, lacking in enthusiasm, or generally "underdeveloped". The outsiders generally take the position that they must manage these problems "by extending the cultivation of only a few cash crops, and developing public health, education, politics, and various leisure arts. While all these things are good, they all share a single characteristic – the discarding of indigenous knowledge and way of life that were formerly held to and passed down as though they are completely insignificant".⁷⁴

⁷⁴ Ajahn Chaladchai, page 388

The results of all this past development work for tribal people in the highlands has been great changes to their way of life and methods of production. The acceptance or rejection of various external factors by villagers in the communities has varied in each community. These communities' experiences in adapting to the work of outside agencies, however well-intentioned, are important lessons for people in the communities themselves and for those who have created these changes, whether international organizations, government agencies, non-governmental organizations, or private businesses.

External Pressures

According to research findings from the case study communities, each of the villages has continually received negative impacts from government policies. This trend began in the past with the Thai government's policy of promoting the cultivation of opium in the highlands as a means of collecting tax revenues from opium production. This led to the widespread practice of opium cultivation among highland communities, using farming methods that turned over the soil and planting repeatedly on the same soil over a long period of time. These methods were traditionally considered to be wrong because they are inappropriately adapted to the nature of the land.

The various five year National Economic and Social Development Plans, beginning in 1961, combined with policies to eradicate opium and promote substitute crops, resulted in many projects being introduced into highland areas. From 1985 to 1990, the Thai-Norway Highland Development Project was implemented in the case study area.

Later, the Thai government implemented the Master Plan for Highland Community and Environmental Development and Drug Control, from its first version in 1992 to the current third version, which will be in effect from 2002 to 2006. This plan is used as an important instrument of policy by the government to manage "hill tribes" and highland communities. The Thai government still shows a lack of trust in highlanders to refrain from using illegal drugs, cutting down trees, and destroying the forests.

All of these policies share a common objective: to change the lives of highland communities to conform to the expectations of outsiders. This constitutes an entirely top-down approach to planning, implementation, and decision-making, with no true participation from affected communities. Villagers have been made to be passive targets of government policy.

The influence of outside factors has resulted in profound changes in highlanders' ways of life and production systems. Community members have variously accepted and rejected these outside influences through a variety of means. Their common goal is survival and being able to live in the land on which their ancestors have resided for hundreds of years.

Adaptation within Case Study Communities

Historical Relationships between Highland and Lowland Communities

In the past, both highland and lowland peoples shared similar economic characteristics, in that they both planted rice, raised livestock, and relied upon forest resources. Their relationships were thus mutually dependant. Highlanders and lowlanders frequently visited one another, staying in each other's homes, and performed hired labor for one another. Through their closeness, they developed empathy. Highlanders and lowlanders often called each other *siaw*, indicating a close friend who can always be relied upon.

The mutual dependency of highlanders and lowlanders and feelings of friendship gradually decreased due to a number of factors. Road expansion meant that travel to and from the highlands could be done in the same day, reducing overnight stays. Property prices in the lowlands increased and lowlanders began selling their land and buying cars and fancier houses, whereas highlanders saw no change in their economic status. Changes in agricultural systems in both the highlands and lowlands reduced the need for labor exchange between the two groups. Finally, the myth that highlanders destroy the forests and watersheds, leading to drought and flooding in the lowlands, was propagated through many channels. While the first three factors had a detrimental effect on highland-lowland relationships, the last factor mentioned above sealed the fate

of inter-ethnic relations, leading to escalating tension between mountain people and lowlanders. Divisions of “them” and “us” thus appeared, having no prior historical basis. This is an important lesson for both highlanders and lowlanders who used to be siaw, friends.

The Entry of Outside Officials

Over their history, a number of outside agencies have entered the villages in the study area. Many projects were introduced during the Opium Eradication Era to improve basic infrastructure and welfare services to highland communities and to promote cash crops for opium substitution. The government supported these projects with the three-fold aim of preventing highland communities from supporting the Communist Party of Thailand, reducing opium cultivation, and preventing the practice of swidden agriculture, which was seen as destructive to the forest.

The Doi Inthanon National Park was declared in 1971. The establishment of this park affected villagers in Mae Ya Noi and Mae Pon Nai, who were then forbidden to practice swidden cultivation.⁷⁵ There have been arrests in neighboring villages for defying this ban. The main result of the park for these villages was labor out-migration as access to ancestral lands became very limited.

The introduction of religions different from people’s traditional beliefs has also had an impact on the communities’ customary use and traditional practices. Khun Ya, Mae Pon Nai, and Mae Sa Nga have been influenced by Christianity, which has resulted in discontinuation or an initial devaluing of the communities’ traditions beliefs and practices. Over time, however, many groups adapted their new beliefs to the traditional beliefs of the communities.

After communities began to experience problems such as disputes over natural resources, lack of public understanding of highlanders, and reduced agricultural land as a result of conservation activities, non-governmental organizations (NGOs) such as IMPECT (in Khun Ya Pa Kluay), and peoples’ networks such as the Northern Farmers’ Network (in Mae Ya Noi and Mae Sa Nga) came in to strengthen and empower villagers to face these outside challenges by assisting them to raise awareness of their rights, to realize the importance of participating in, or understanding and assessing the projects and activities affecting their communities, to organize into community networks to address various problems, and to seek appropriate livelihood choices.

The free market system currently operating in communities within the study area such as Khun Ya Pa Kluay, Mae Ya Noi, and Mae Sa Nga, has brought about the following challenge: the cultivation of cash crops requires high capital inputs for the purchase of seeds, fertilizers, and pesticides, which must be used in ever-increasing quantities. To meet the demands of the market, villagers must also increase the area of land under cultivation. This leads to both positive and negative impacts. Communities have more cash income, but at the same time, villagers have no bargaining power with middlemen or business people who purchase their produce. They also have no say over the price of their produce. This puts them at a clear disadvantage. These changes in their means of production affect their ways of life and natural environment in a number of ways.

Other government institutions such as schools, public health facilities, and the Department of Provincial Administration have entered into villages with the aim to fulfill the goals of national development policy. They have also played a significant part in changing the ways of life of highland communities. These institutions have affected each of the villages in the study area. There were various developments such as the roads that entered the area in 1979 and running water in villages. Later developments included telephone lines and kitchen appliances, which brought greater levels of comfort and convenience to communities.

⁷⁵ When National Parks are established over land where villages already exist, whether ethnic Thai or tribal villages, in some cases villagers have been forcibly relocated. In most cases, villagers are permitted to remain on their land but given no legal status and tenure is very insecure. Furthermore, for villages practicing swidden cultivation, the government refuses to validate the practice of swiddening and tenure over fallow lands. Therefore, villagers practicing a ten-year fallow would be left, after the establishment of a national park on their lands, with only one-tenth of the land they considered to be theirs, the piece of land they happened to be cropping that year.

On the one hand, these government offices operated out of good intentions, bringing new choices to communities in terms of new agricultural systems and possibilities to enjoy a better quality of life. However, their interventions lacked community participation. Outside “experts” were brought in to work in the communities, to do the work for them. Villagers were merely the recipients of these outsiders’ good intentions. Villagers were followers who had no knowledge of the end goals of the projects or were forced by the law to join in the projects. Community development based on top-down assumptions caused many complex problems, including the use of agricultural chemicals in highland areas, intensive use of land, water, and forest resources, labor migration of young men and women, lack of control over the price of produce, debt, and an overall decrease in feelings of safety and security.

Changes within the Communities

In order to adapt to the new situation created by outside agencies, communities have recently started to formally codify their forest classifications and laws for use and conservation in order to be more easily understood, recognized, and accepted by outsiders. They are also joining in networks and organizations at the local and national levels to demand the right to manage their own resources, and their rights over their ancestral land. They are conducting public awareness campaigns to promote accurate understanding of indigenous peoples’ ways of life among the general public.

The process of formal codifying rules for resource use to make them acceptable and understandable to outsiders has been long and difficult, but the villagers saw the necessity of doing so in order to maintain their traditions and counter the perception that their resource management techniques are ineffective and backwards. Some of these new community rules that are different or more strict than their traditional customs include the construction of fire breaks and maintaining lookouts to prevent forest fires, the clear (to outsiders) demarcation of conservation and taboo forests, agricultural land and residential sites, and prohibiting the hunting of most forest animals. This formal codification was in some ways aided by the fact that many traditions that involved or resulted in village migration have been abandoned. This is partly the result of infrastructure development and partly the result of conversion to Christianity or Buddhism. Houses are now built to be permanent, rather than semi-permanent as in the past.

Villagers in some communities (e.g. in Khun Ya) have adapted their agricultural techniques to place more emphasis on integrated fruit orchards and pesticide-free crops, as well as growing indigenous plants in kitchen gardens rather than collecting them from the forest. Many Karen communities are also increasing their area of wet rice land to reduce their need for upland rice from swidden fields. Swidden fields are still important, due to the much greater diversity of crops grown there, but both the amount of land planted and the length of the fallow have been reduced, and swidden fields have been moved from the high mountain ridges to lower elevations. Over one hundred varieties of plants are grown in traditional swidden fields, providing food throughout the year. The fact that full use of swidden agricultural systems is no longer allowed has led to a decrease in plant varieties, and a decrease in the health of certain species. This forces villagers to rely increasingly on food purchased from the market. The reduction of land area available for agriculture has also made it nearly impossible for villagers to raise cattle and buffalo and very few of these are found in the study area at the present time. It can clearly be seen in Hmong villages that there has been no accompanying expansion of agricultural land. What was originally rotational land is now used on a permanent basis according to promotion by the Royal Projects. When the same land is planted again and again over the course of many years, communities face a new problem: they must rely more and more intensively on agricultural chemicals. The cost of production rises accordingly, and the pesticides pose health risks to the community. It is clearly evident that among the Karen, reducing the fallow land area and the length of fallow periods of the swidden fields has led to problems of weeds taking over the rice. The growth of rice is stunted because the natural regeneration process of land has not been sufficient. Communities are thus experiencing the problem of decreasing rice yields and crops are becoming insufficient for family consumption. As a result, more and more people have had to leave the village to seek wage labor in the cities. Particularly in Ban Mae Pon Nai village more than anywhere else, the young people have had to travel to the cities in search of work.

One of the most difficult situations to arise is conflicts over water resources. Due to government policies, highlanders have reduced or abandoned swidden agriculture, which used little water, and adopted cash

cropping, which uses a much greater amount of water. At the same time, lowlanders have also increased their water consumption, due to expansion of wet-rice land, dry season cropping of soybeans, tobacco and other crops, and the establishment of fruit orchards. This has also largely been a result of government policy. Reforestation in the form of pine monocultures and the loss of biodiverse swiddens with water-retaining plants such as wild banana have further stressed remaining water resources and many streams are drying up. The State and the general public have been led to believe through continuous government sponsored media and information that “hill tribes in the watershed areas are destroying the forests.” Highlanders, meanwhile, observe that they have practiced swidden agriculture for hundreds of years without the streams running dry and that water shortages have started to become a serious problem after the introduction of new agricultural systems and pine plantations. This is a problem that needs to be urgently addressed but the current tone of confrontation on the part of the government and lowland communities prevents the formulation of a just and effective solution.

The Establishment of New Community Organizations

A number of new organizations have been established that involve the study villages. Some of these organizations serve to advocate for highlanders (and others) mainly at the national level. The Northern Farmers' Network is a conglomeration of mainly Karen farmers that advocates for the rights of villagers to live in the forest, for the Community Forest Bill, for land rights in forest areas, and for the right to practice swidden agriculture. The Northern Peasants' Federation is made up of groups in the North who are facing various problems, and have come together to form a solid base to increase their bargaining power with the government. They are concerned with issues such as the use of land areas outside the forest, the price paid for crops, agricultural debt, community forestry issues, and problems arising from government development projects. The Assembly of Indigenous and Tribal People is a conglomeration of seven different ethnic groups in Northern Thailand. Their goal is to build a forum for learning, for analyzing various problems, and advocating for solutions. They particularly focus on the issue of Thai citizenship for stateless people, and for a say in community development projects.

Other organizations operate primarily at the local level. The Karen Network for Culture and Development - KNCE was founded in 1997 through discussions between Karen leaders from various provinces who came to the conclusion that the way of life and production practiced and taught by the ancestors is a valuable thing, harmonious with sustainable living practices. They came to the agreement that they must organize to pass on the teachings of the ancestors, return to a simpler way of life, become self-reliant and self-sufficient, honor one another, respect the spirits of nature and the universe, and adhere to the moral system passed down from the ancestors. The Hmong Environmental Network was founded in 1992 to address various problems facing Hmong communities, including the declaration of protected areas (national parks, wildlife reserves, and protected waterways), the promotion of new agricultural techniques that emphasize cash crops, the negative perceptions of the Hmong held by the general public, and the mental tension caused by the discrepancies between external lifestyles and their own culture. The Hmong Association for Development in Thailand was founded in 1995 to coordinate and promote development, to raise standards of living, preserve culture, and search for development alternatives to ensure the sustainability of human and natural resources. The Fourteen Village Network for Natural Resource and Environmental Conservation was founded in 1991 with financial support from Forestry Unit #23. The objective of the Network is to serve as a focal point for discussion on issues in each community, with emphasis on community management and conservation of land, water, forest, and wildlife. Ideas are exchanged and solutions to problems sought. The Network meets once per month. The Karen of five watershed areas (the Mae Pae, Mae Tia, Mae Tae, Mae Ya, and Mae Pon watersheds of Chom Thong District, Chiang Mai Province, covering the Ob Luang and Doi Inthanon national Parks and comprising forty villages with a total population of approximately 8,000) organized themselves into a group called the Highland Natural Conservation Group of Chomthong District in 1992. They organized to pass on the conservation ethics of their ancestors, to respond to the government's policy of establishing forest conservation areas, and to prove how people can co-exist with forests. The Mae Sa Nga Watershed Network was established in 2002 with the objective of enabling network members to work together, effectively manage both internal and external problems facing communities and build understanding both inside and outside communities, to conserve, rejuvenate, and manage natural resources, and to promote and support the passing down of indigenous knowledge to the new generation to strengthen the capacity of network members and community organizations to work effectively.

In the case of the Karen communities in the study area, Ban Khun Ya Pa Kluay and Ban Mae Pon Nai villagers have been members of the Highland Natural Conservation Group of Chomthong District ever since its inception. They have participated in various activities, which have built up community members' strength so they can prove that they can live with the forest sustainably. Their culture has been strengthened, so that community members are proud of their culture and make efforts to pass it down to future generations. They have joined regional and national networks and partnerships, such as the Karen Network for Culture and the Environment, the Tribal Assembly of Indigenous Peoples in Thailand, the Northern Farmers' Network, and the Northern Peasants' Federation to call for acceptance of their rights to their ancestral land and forests, and for the state to change its policies and respect local practices, for the maintenance of bio-diversity and the long-term survival of both people and wildlife. Most recently, they have joined the Highland Mapping Development and Biodiversity Management Project, so that community members can participate in the creation of their own maps.

The Highland Mapping Development and Biodiversity Management Project, a collaborative project among communities, IMPECT, and supporting NGOs, is one of the most recent projects to work in this area. The



Forum to build understanding about creating a community map



A villager points out the boundaries of his community's agricultural land

work of this project concerns resource and environmental management in Hmong and Karen villages in Chomthong District, and focuses on combining the use of Global Positioning Systems (GPS) and indigenous local knowledge to make maps. The communities make their own maps according to the ways in which they define their land areas. This differs from official government mapmaking, which is done without the participation of villagers and without their understanding of the maps' contents, which can lead to conflicts between the communities and the government.

The project aims to develop the government's understanding of the communities' ways of life and their management of natural resources. The content of the maps that the project makes with villagers defines land areas clearly, and most importantly, community members fully participate in the mapmaking process. This leads to understanding of the maps' contents, and to how the resources on each type of land, for example, conservation forestland, forest for community use, and various types of agricultural land, should be managed.

Conclusion

Indigenous People communities engage in the use and conservation of biodiversity in ways that are valuable, relevant and appropriate to the community's way of life and ecology. The entry of outside individuals or agencies for any reason must be done with great care and thought taken to the impact on the indigenous community. Respect for cultural diversity, and acceptance of the way of life of tribal people living in the forest must be the true basis of any outside interventions. Past interventions have been top-down and have generated a host of new problems. Villagers have always been skeptical to the changes pressed upon them and have responded in different ways: by guarding themselves and resisting against them, going along with the current of change or joining in with things they did not understand. For the past two decades the highland indigenous people hilltribes have taken various initiatives and set up new organizations to educate outsiders about their way of life and to advocate for their rights to coexist with the forest.

8 Summary and Recommendations

Summary and Observations

There are differences in the customary use of natural resources and biological diversity between the different tribal groups in terms of their conventions and methods. These differences stem from the different cultures, traditions and beliefs, as per the examples in this study, between the Karen and Hmong. In any case, both of these tribal groups share the same conceptual basis for the sustainable use and conservation of biological resources.

When comparing natural resource management between the government and villagers, we can see that there are significant differences, both in thought and in action. The villagers have a system of thinking whereby they can use and conserve resources concurrently. "Oh der ker taw" translates as "eat and preserve". The people in the community participate and use the land on a rotational basis as per their regulations, taboos and ceremonies. They believe that the spirits own the resources. People who find it necessary to interact with nature in any manner do so under the limitations that the Karen call "ta deu ta thu", which means "conventions, taboos". These limitations allow for biodiversity to be maintained or even increased; for example, in swidden fields, a great variety of mushrooms sprout from the tree stumps. There are also a large variety of trees and grasses that grow in the fallows. Both wild and domesticated animals forage, hide and breed in the fallows. This is considered to be "joining with nature in creating". In areas used for rotational farming, leaving nature to itself with no human intervention decreases biodiversity. The villagers have reflected on this, saying, "Many varieties of mushrooms that grow from tree stumps, such as ker deh pgaw (lome mushrooms), ker ee ker chu wa (white mushrooms), and ker yae na, (*Auricularia auricula-judae*) have almost disappeared from our area since the area of swidden cultivation decreased. Many kinds of grass, forest vegetables and earth mushrooms found in the kaw be ko (deciduous) forest have decreased in number. Without swidden cultivation to open up the land, the mulberry and wild banana plants are gradually decreasing. The villagers hold that these plants store moisture and the absence of large specimens is causing the water in the streams to dry up completely."

The government, on the other hand, has an approach that views conservation as a self-contained process in which people should not be involved, with the government acting as the sole arbitrator and caretaker. There is no participation by community members. In the two protected areas overlapping or adjacent to the research sites, there has been promotion of cash crops, such as cabbage and carrots. In order to reduce the agricultural area, these crops are repetitively planted with fertilizer and chemical pesticides with the goal of maximum profits. This results in complex problems that are difficult to address and to solve.

The Thai government has only just ratified the Convention on Biological Diversity in January 2004, and has not yet interpreted most of the articles of the Convention for implementation. So far there has been only information provision to inform people that the government has ratified it and it is thus an urgent necessity for the various involved government agencies to cooperate and work to establish an implementation plan for each of the articles of the Convention. This is needed in order for the Convention to result in real impacts at the local and national level, to achieve the objectives of the Convention and to ensure its implementation.

Article 10(c) of the Convention on Biological Diversity urges States to “protect and promote the customary use of biological resources according to traditions and culture, as in line with the conditions necessary for conservation and sustainable use”. All indigenous peoples have distinct identities, which are passed to the youth from past generations. The revival of community identities involves review by the community members of the aspects of their lives which are particularly relevant to biodiversity use and conservation, but which are being lost from the community. It involves seeking out the stories and origins of our ancestors, how they have used resources, why they have used them the way they have, and passing knowledge on from the elders to the youth. This needs to be a somewhat formal process, through “schools of culture and local wisdom” to which all members of the people, or those from outside, can have access. Such a school or education center could be encouraged to become part of the local administration systems.

Thus all signatory governments must implement positive measures as part of their obligations to protect the rights of indigenous peoples and minority groups, both through the actions of the government and actions of individuals within the government. These “positive measures” should include policies and programmes to protect the distinctive identities of these social groups, especially through protection of the right to development of culture, language and traditional religious ceremonies and beliefs with the full involvement of all community members.

Cultural rights may relate to simply one aspect of a way of life, but they also relate more widely to use of lands, resources and traditional practices such as fishing, hunting and residential patterns. This broader application of cultural rights may be a specific use in the special case of indigenous peoples, where the protection of their cultural rights must include positive measures to protect their way of life. In addition to this the government must ensure the participation of minority groups in the process of making decisions that will impact on traditional activities and the right to manage natural resources.

Recommendations

Recommendations for government agencies and local government institutions

1. The government must promote and support the activities of local communities and/or indigenous peoples in the conservation and revitalization of their regulations, rules, customary use and cultural norms, so that the communities can manage their lands and contribute to sustainability, according to Articles 46 and 56 of the Thai Constitution.
2. The government must respect the way of life and practices of indigenous peoples in relation to the sustainable management of natural resources and biological diversity. This includes providing secure land tenure, recognizing rotational farming, recognizing cultural rights and the traditional knowledge systems of indigenous peoples – accepting their value and diversity.
3. The government should review relevant policies and laws, namely the Forest Act, the Wild Animal Conservation and Control Act, the National Park Act, the National Forest Preserve Act, the National Forest Policy, the National Master Plan on Development of Highland Communities, Environment and Drug Control, and Cabinet resolution in order to adjust laws which conflict with the Thai Constitution and the Convention on Biological Diversity and facilitate the legal implementation of the Convention.

4. There should be support and pressure for research into tribal bodies of knowledge, with research reports implemented and disseminated among the public so that they can understand the real situation in the highlands and address and change negative perceptions about highland communities. The contents of the research results regarding the traditional knowledge of indigenous peoples in the management of biological diversity should also be introduced into the local school curricula to contribute to sustainability and retention of knowledge.
5. It must be ensured that all government agencies involved in work which impacts on indigenous communities gain knowledge about indigenous communities and ensure opportunities for communities to participate in the process of development and allow them to determine their own ways of life.
6. The government should create a working group or an independent oversight commission, with the participation of indigenous and local community representatives, to guide and evaluate the work of various agencies in implementing the Convention on Biological Diversity.
7. The government must act in accordance with the Constitution in regards to natural resource management and biodiversity. Local administrative organizations such as the Tambon (Subdistrict) Administrative Organizations and Municipal Offices must have a clear approach for recognizing constitutional rights.
8. The government should pass the Community Forestry Bill into law.
9. The government should issue legal land titles to highland communities over the agricultural lands they have traditionally used in order to improve security of tenure and resource management.
10. The government should review its policies to extend cash crops and monoculture farming that negatively impact on the way of life of tribal and indigenous peoples.
11. The government should recognise indigenous and local communities' conservation initiatives.
12. The government should promote a participatory process for the self-determination of tribal and indigenous peoples and develop social indicators to measure the satisfaction and well-being of tribal society.
13. The government should act in complete accordance with all of the international conventions and treaties to which it is a signatory.

Recommendations for non-governmental organizations and people's organizations

Indigenous Peoples' organizations and supportive NGOs should strive to establish a strong and motivated cooperative network, with the power to make demands and act as leaders in calling for the rights of communities to determine their own way of life and protect their traditional and inherited knowledge and practices, through the implementation of the following activities:

- a) Dissemination of the terms of the Convention on Biological Diversity, to provide communities with understanding and knowledge of the CBD.
- b) Capacity building in transmitting and strengthening indigenous peoples' and local communities' practice of traditional knowledge in line with the relevant articles of the Convention. Such traditional knowledge includes cultural transmission techniques, indigenous innovations and cultural adaptations, and indigenous practices related to the sustainable use and conservation of natural resources.
- c) Follow-up and reporting on the implementation of international covenants, international agreements and laws to which Thailand is signatory and committed to implementation, as follows:
 - (1) The International Covenant on Civil and Political Rights, in particular Article 27 which commits all Parties to protect the rights of members of cultural, religious or language groups, and the rights of members of minority groups to use their own languages.
 - (2) The International Covenant on Economic, Social and Cultural Rights, in particular Article 11, which commits all signatory governments to protect the right of every individual to a livelihood sufficient for their needs and the needs of their family, including the right to food, to clothing, and to residence. The Committee on Economic, Social and Cultural Rights has interpreted this Article in a statement in 1991 as follows: "relocation or forced removal from one's residence is in contravention of this Covenant except in exceptional circumstances and in line with commitments under international law". This stated right to continued residence is relevant to the right of indigenous peoples to their lands and cultivation areas. Organizations working for the rights of indigenous peoples and indigenous peoples themselves should place importance on calling for the Thai government to implement its obligations under this Article and provide reports to the Committee on Economic, Social and Cultural Rights regarding

- the relocation and forced removal of highland peoples from their homes and lands from the mountains to lowland areas to determine whether or not this is in contravention of Article 11.
- (3) The Convention on Biological Diversity in Article 8(j) and Article 10 (c) implies that the Thai government is obligated to protect indigenous peoples' access to biological diversity and resources in at least four areas under the convention: traditional knowledge; innovations; customary practices; and protection and promotion of the traditional use of biological resources.
 - (4) The Convention on Elimination of All Forms of Racial Discrimination. Actions that are in contravention of this convention are detailed in 25 Articles, which can be divided into three sections. The first section, Articles 1-7, deals with the definition of racial discrimination, policies of governments and the elimination of all forms of racial discrimination through the use of legal measures, the justice system and necessary administrative measures. If current laws related to legal equality are not yet sufficient the government should review them and establish effective measures to oppose racial discrimination, including educational measures and information provision. All signatory governments and other agencies and organizations must condemn any propaganda that reflects a belief in the racial superiority of any particular group. Signatory governments should also take immediate measures to eliminate intimidation or any other action that falls under the category of racial discrimination and in contravention of the Universal Declaration of Human Rights and the rights established in Article 5 of that Declaration. The second section, Articles 8-16, deals with the Committee for the Elimination of Racial Discrimination and the reporting duties of signatory governments. It also deals with the work of the Committee and the process for receiving complaints. The third section, Articles 17-25, refers to the process of ratifying the Convention, and amending or changing it.
 - (5) Realization of the principles of the Thai Constitution in practice. Indigenous peoples' organizations should use the authority they have under the Thai Constitution to organize themselves within their communities to self manage their natural resources and environment.

Recommendations for indigenous peoples (villagers in the communities)

1. Community organizations and networks (highland and lowland) must cooperate strongly and effectively in the management of natural resources, be able to prove themselves capable and be able to share their knowledge and methods with interested people. Such sharing of knowledge through the creation and use of 'cultural space', and seeking opportunities to present traditional knowledge, concepts, wisdom, beliefs and practical rules for the use of natural resources will be a mutual learning process and will facilitate better relationships and perceptions in the future.
2. Immediate declaration of the existence of community forests by communities, even though the Community Forest Act has not yet been passed into law. Indigenous communities must raise awareness among all their members that the right to determine their future and their way of life is a basic human right. Indigenous peoples have a way of life which is intimately connected to the forest, a way of life which is in line with nature and biological diversity, and thus they can not be removed from the forests or relocated to areas without forests. The declaration of community forests recommended here must be done according to the steps outlined in the Draft Community Forest Bill, and be implemented according to the criteria and regulations in order to prove that indigenous communities have reason to and ability to conserve forests in a sustainable manner and in line with the intentions of the Royal Constitution of Thailand. Such ways of living are both ancient in their existence, and in line with the intentions of the current Constitution.

The final conclusion of the researchers is that the stated recommendations must be effectively and rapidly implemented.



Part of the 10c research team in Thailand



This research project studied the sustainable, customary use of biological resources by highland communities in Thailand in terms of both the sustainable use and conservation of these resources. By examining the knowledge, customs, and traditions practiced by the Hmong and Karen tribes in the management of natural resources and biodiversity, the project identified how highland communities have adapted to the impacts of externally imposed laws, policies and development processes. The study has the further objective of being used to lobby for the effective implementation of government policies in line with Article 10(c) of the Convention on Biological Diversity (CBD).

Bibliography

- Chuphinit Kesamnee. 1996. The potential of the Karen in managing soil, water and forest resources. Tribal Research Institute, Public Welfare Department, Ministry of Labor and Social Welfare : Chiang Mai.
- Prasert Trakansuphakon. 1997. Transmission of indigenous knowledge concerning Karen communities' shifting cultivation systems.
- Phenthip Thuaprakhone. 1997. Research results presented to be evaluated for the position of expert researcher on the Karen tribe. Tribal Research Institute, Public Welfare Department, Ministry of Labor and Social Welfare : Chiang Mai.
- Manas Sawan. 2001. Social science and humanities research methodology. Odien Store : Bangkok.
- Somphope Lacharote. 1994. General knowledge about and background of the Karen tribe. Tribal Research Institute, Public Welfare Department, Ministry of Labor and Social Welfare : Chiang Mai.
- Somphope Lacharote. 1992. Research article: "The Role of Karen Women". Tribal Research Institute, Public Welfare Department, Ministry of Labor and Social Welfare : Chiang Mai.
- Anan Kanchanaphan. 1994. Research in the cultural dimension. Northern Cultural Resrach Sub-committee and the Fine Arts Promotion Department, Chiang Mai University. Ming Muang Press : Chiang Mai.
- Chaladchai Ramitanon. 2002. Thai social dynamics in the eyes of academics. Women's Studies Center, Faculty of Social Science, Chiang Mai University. Ming Muang Press : Chiang Mai.
- Inter-Mountain Peoples' Education and Culture in Thailand Association. 2001. Biodiversity management by the Karen tribe. Unpublished document.
- Inter-Mountain Peoples' Education and Culture in Thailand Association. 1999. Hmong indigenous and local knowledge. Unpublished document.
- Hmong Environmentla Network. 1998. Dong Seng: Hmong wisdom for preserving the forest. Document prepared for conducting the dong seng ritual in Mae Sa Mai village.
- Prasit Leepreecha. 1994. Hmong proverbs and teachings. Center for Indigenous People and Development, Social Research Institute, Chiang Mai University.
- Inter-Mountain Peoples' Education and Culture in Thailand Association. 2001. Biodiversity management by the Hmong tribe. Unpublished document.