

**Destruction and degradation
of the
Burmese Frontier forests**

Listening to the People's Voices

Pan Kachin Development Society

Karen environmental and Social Action Network

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Destruction and Degradation of the Burmese Frontier Forests:

Listening to the People's Voices

By Pan Kachin Development Society (PKDS)

And Karen Environmental and Social Action Network (KESAN)

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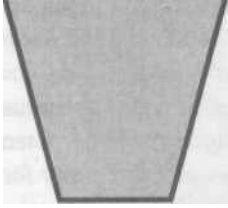
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Chapter 1

Introduction

In 1998, the World Resources Institute (WRI) in Washington published a highly alarming report on the state of the Burmese frontier forests. "Burma holds more than half of mainland Southeast Asia's closed forests - forests that have caused the country to be called 'the last frontier of biodiversity in Asia'", began the report. It concluded that this last frontier of biodiversity was seriously endangered. The findings of the report included, amongst others:

- * Burma's neighbours, having lost virtually all of their own original forest cover, relied increasingly on timber from Burma.
- * The rate of deforestation had more than doubled since the present military regime had come to power in 1988.
- * Wasteful and destructive logging by the regime, some of the ethnic minority groups, and foreign companies along the borders with China and Thailand, had resulted in massive soil erosion, sedimentation of rivers, increased flooding, and acute dry season water shortages.

WRI's information on the state of Burma's frontier forests, specifically on forest cover and the rate of deforestation in Kachin and Shan State (on the border with China), relied heavily on satellite data. What actually happened on the ground within these frontier states, or around forests in Burma as a whole, remained to a large degree unknown territory for the observer. Vast areas of the ethnic states in Burma remain closed to foreigners by the Burmese military. This was the result of the ongoing and disastrous political and ethnic conflicts and power struggles that have made the military regime of Burma, the State Peace Development Council (SPDC and before: SLORC), a pariah in the international community. As described in the next chapter, the problem of logging and deforestation takes place in the context of the complex political and military situation in Burma. The frontier regions, where the hotspots of biodiversity are located are controlled and contested by SPDC Army units, and a bewildering number of ethnic liberation groups and armies, some of whom have, and some

of whom have not signed cease-fires with the regime. This situation has made it a point of vehement discussion whether international environmental and development organizations should and could work in the country to support more sustainable development policies. A major international conservation organization, the Wildlife Conservation Society (WCS) is presently working in SPDC-controlled areas in collaboration with the Burmese Forestry Department to establish conservation areas. For most of the international organizations, working with the regime is still out of the question as long as democracy in Burma is repressed.

This dilemma has led a number of organizations over the past four years to develop alternative approaches. At the end of 2003, one of these organizations, the London-based NGO Global Witness published a report with the findings of then- 'undercover' research in Burma and the frontier areas. The report gives a poignant and once again disturbing analysis of Burmese forests as a 'conflict resource'. The exceptionally valuable and high grade Burmese timbers are resources that are extracted commercially for large short-term profits, by institutions and individuals ruthlessly exploiting the conflict situation.



Logging trucks on the road to China

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The chief beneficiaries are Burmese officials and Chinese companies. Meanwhile the Burmese and especially ethnic populations are deprived of many of their chief assets for sustaining livelihoods and for future development. Many ethnic organisations also seem caught in the need for short-term income generation and play along in the squandering of the forests. The end result? More and more environmental destruction and a continuation of the trends outlined in the 1998 WRI report.

The devastation, however, is not only environmental. Deforestation has its consequences for forests *and* for forest dwellers, including indigenous people and other forest users. It is on these forest dwellers that, in conjunction with the end of the political repression, the coming of democracy, and the empowerment of local communities, the development of future sustainable environmental policies should be based. But the lack of information on the forest dwellers and on the impacts of deforestation on their social and economic life is, if anything, even greater than the lack of information about the deforestation itself.

To address this information gap, representatives of two ethnic groups, from Kachin and Karen State, undertook the first research project, supported by grants from the Tropical Rainforest Programme of the Dutch Committee for the IUCN (NC-IUCN). The results of this research by the Pan Kachin Development Society (PKDS), and the Karen Environmental and Social Action Network (KESAN) in their home states, are presented in this report.

The reports of PKDS and KESAN are the first attempts to uncover the social impacts of deforestation and to relate them to environmental degradation. The research was undertaken in a very difficult and dangerous political climate. As a result, the researchers were forced to keep a low profile. The outcome of the research is therefore often uneven and remains impressionistic. These impressions are, however, sufficient to make us realize that what happens at this moment in the frontier forests of Burma has its implications not only on the terrain of nature conservation, but also on the terrain of the social and economic devel-

opment of local communities. With the logging and the deforestation a whole new economic and social reality develops, in which most people, having lost their traditional livelihood, are turned into casual labourers and a cheap labour force for local potentates and entrepreneurs. The loss of community forests is another outcome of the global dispossession that opens up even marginal territories to the dictates of the market economy. With this dispossession not only the environment, but also traditional cultures and social organizations disappear.

What this report, especially the contribution of KESAN, makes clear, is the positive role that the traditional cultures and traditional environmental policies can play in the formulation and implementation of sustainable forestry policies in Burma. Support for grass-root initiatives and for awareness-raising within local communities should be combined with the political campaigns for democracy in Burma, and with environmental campaigns to stop trade in unsustainable timber, to create an alternative for the present state of degradation and corruption. The future will show whether there is still time left, before one of the last hotspots of biodiversity in Southeast Asia is sacrificed to human greed and narrow-mindedness.

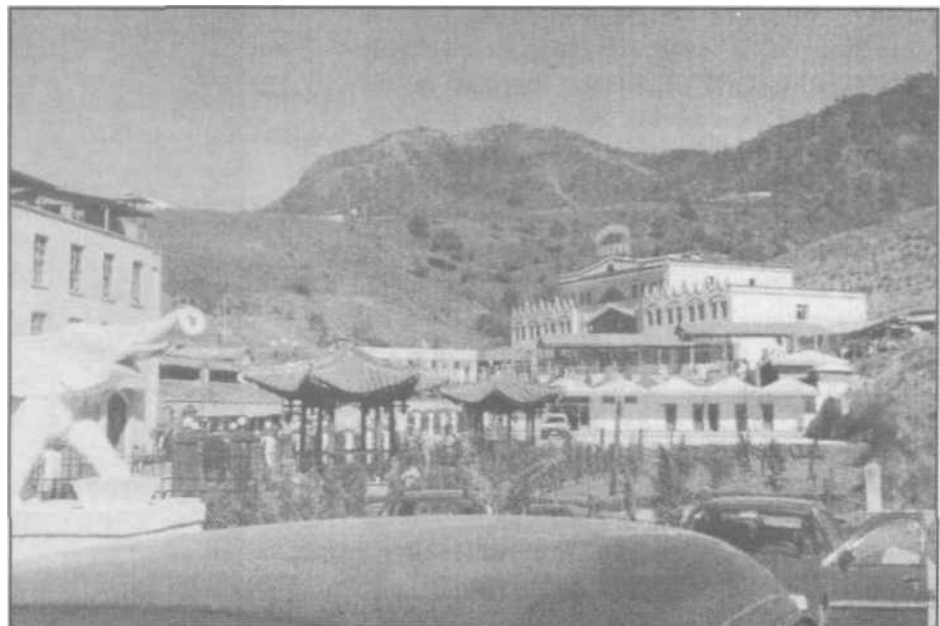
References:

J. Brunner. 1998. Logging Burma's Frontier Forests: Resources and the Regime.

World Resources Institute, Washington.

Global Witness. 2003. A Conflict of Interests: The Uncertain Future of Burma's Forests

Global Witness, London.



NDA-K controlled town on China border

Chapter 2

The Politics of Burma and Deforestation

Burma, or Myanmar as it was renamed by the military government in 1989, is the largest country on the mainland of South-East Asia, covering an area of 678,580 square kilometres. It is bordered by India, Bangladesh and the Bay of Bengal to the west, by China in the north-east, Laos and Thailand in the east, and by the Andaman Sea to the south.

Despite the fact that Burma is rich in resources, the country is very poor. Decades of destruction through armed conflict, political repression, human rights abuses, and government mismanagement have created great hardships for the peoples of Burma; especially in ethnic minority areas. It has left the country in a deep economic, social, and humanitarian crisis. Burma, once one of the wealthiest, developed and modern nations of Southeast Asia, had to apply to the UN for Least Developed Country (LDC) status in 1987.

Climatic conditions differ from region to region, and there is a wide variety of ecosystems. These include the snow-capped mountains of northern Kachin State, the rugged bare hills of the Wa region, the Shan highland plateau, the rice growing areas in the irrigated dry zone of the central plains, mangrove forests in the Irrawaddy Delta, and the rainforests and tropical islands of southern Burma. Burma is rich in minerals and natural resources, is one of the most fertile countries of Asia, and has wide biodiversity. Kachin State in particular has been listed as one of the worlds remaining 'biodiversity hot-spots' (Moncreif and Myat, 2002).

Burma is inhabited by a wide range of different ethnic groups, including Burman, Mon, Karen, Karenni, Shan, Wa, Kachin, Chin and Rakhine. Ethnic minorities make up over 30% of the population, which stands at some 50 million in 2003. Reliable statistics on population and ethnic groups are not available; the last comprehensive population census dates back to 1931.



Since the constitution of 1974, the country is administratively divided into 7 divisions and 7 ethnic minority states; Yangon, Irrawaddy, Magwe, Tenasserim, Mandalay, Pegu, and Sagaing Divisions, and Rakhine, Chin, Kachin, Shan, Karenni, Karen, and Mon States. These ethnic minority states make up 55% of the land area, but represent only a few of the largest ethnic groups.

The majority of the Burman Buddhist population lives in the central plains and valleys, where they practise wet-rice paddy cultivation. These include the river basins of the Irrawaddy, Sittaung, Salween, and Chindwin rivers. In contrast, the ethnic minority groups live in the hills and mountains that surround the central lowlands, where they have developed their own distinctive cultures and traditions, and

practise upland rice cultivation and rotational agricultural fanning systems. Before and during British colonization, these ethnic minorities were largely ruled by their local leaders, and maintained a relative independence from the successive traditional kingdoms in the plains.

Negotiations for independence from British rule started after World War II. The Burman nationalists, led by Aung San, wanted independence from the British as soon as possible. Ethnic minority leaders on the other hand, were concerned about the right of self-determination, and wanted to establish a system that would give them equal rights and protect them against domination by the Burman majority. Some ethnic groups wanted independent states for themselves. In 1947, the Panglong agreement was signed between Aung San and Shan, Kachin and Chin representatives, which formed the basis for a future Union of Burma. However, this agreement was inconsistent about the rights of different ethnic minority groups, and many ethnic groups were not represented.

All these factors ultimately led to civil war soon after the declaration of independence in January 1948, with a communist insurrection and army mutinies. The Karen National Union (KNU), created in 1947 out of Karen nationalist organisations dating back to colonial time, took up arms in January 1949.

Other ethnic groups came up in revolt at the same time. These included Karenni and Mon nationalists, who later formed the Karenni National Progressive Party (KNPP), and the New Mon State Party (NMSP) respectively. A Pao group in Shan State and

Rakhine and Muslim nationalists in Arakan (Rakhine) State also took up arms.

In 1962, General Ne Win took power from the U Nu government in a military coup, and created a one-party state led by the Burma Socialist Programme Party (BSPP). The constitution was abrogated, all opposition put behind bars, and people's attempts to organise themselves were severely repressed. All large industries and business enterprises were nationalised under the 'Burmese Way to Socialism', the BSPP's official doctrine, Burma was to become self-sufficient, and the generals isolated the country from the outside world.

By this time, the civil war had already spread to Kachin and Shan State, where the Kachin Independence Organization (KIO) and the Shan State Army (SSA) had started armed uprisings. *Both* of them were able to expand quickly, fuelled by the growing dissatisfaction among the Kachin and Shan population over the unequal position of ethnic minorities in the Union of Burma.

By the mid-1970s, the Burmese army had succeeded in pushing back the armed opposition groups from the plains and the Irrawaddy Delta and the Pegu Yomas into the hills and mountains of the border regions, using the infamous 'Tour-Cuts' campaign. This campaign is aimed at cutting the four links between the insurgents and the civilian population: food, finance, intelligence and recruits. The 'Four Cuts' strategy is directly targeted at the civilian population, which has been subject to harsh treatment and forced relocations to special sites near Burma Army camps.

After Ne Win came to power, relations with China deteriorated. These came to an absolute low after anti-Chinese riots in 1967, which China suspected were instigated or at least stimulated by the BSPP. As a result, China changed its initial careful policy towards the Communist Party of Burma (CPB), which had just lost its main base areas in central Burma, into an all-out support.

The CPB launched a successful invasion from Chinese territory into northern Shan State and quickly became the strongest insurgent army in Burma (Lintner, 1990). It forged a number of alliances with ethnic minority armed groups, including



Loading wood on truck

Wa and Kokang troops. These were given arms and ammunition in return for accepting the political leadership of the CPB. This policy was later applied to other regions, and caused a number of debilitating splits in ethnic minority organisations.

In 1976, the National Democratic Front (NDF) was formed; a new alliance consisting solely of ethnic minority organizations, including the KNU, NMSP, KNPP, KIO, SSA and some other smaller groups. Attempts to form a united front between the CPB and the NDF failed. Until its collapse in 1989, the CPB alliance rivaled the anti-communist and pro-western NDF alliance in strength. While the CPB and its allies relied on support from China, most of the NDF members financed their organizations by setting up tollgates along the Thai border. In Shan State, many insurgent armies were financed by opium taxation.

The BSPP's economic policy was a complete failure. Consumer goods were only available on the black market. Smuggling of these goods became a major source of income for ethnic insurgent armies based along the Thai border. Burma was facing a huge economic crisis, and in 1987 had to apply for LCD status. The BSPP decision to devalue a large amount of banknotes, officially to curb black market trade, further led to great resentment among the population. In 1988, a massive movement for democracy and human rights was initiated by students and other urban activists. They staged demonstrations and strikes in the cities and larger towns of central Burma, demanding an end to military rule and a multi-party system. On 8 August 1988 ('8-8-88'), millions of protesters over the whole country took to the streets. The army responded with brute force, killing thousands of unarmed protesters. In September 1988, the military set up a new ruling body, the State Law and Order Restoration Council (SLORC). After years of self-imposed isolation, the SLORC (that most observers claim to have been only a new name for the same old group of power holders), initiated a new 'open door policy', and sought to attract foreign investment and acquire foreign exchange. For elections in May 1990, the army allowed the formation of new political parties, the first time since it took over state power in 1962. The



Logging Papuan area

opposition National League for Democracy (NLD), led by Daw Aung San Suu Kyi, the daughter of independence hero Aung San, won a landslide victory. The military backed National Unity Party won only 10 seats, then the Shan Nationalities League for Democracy (23 seats) and the Arakan League for Democracy (11 seats).

The SLORC refused to hand over power and by 1992, the majority of political parties had been banned. Instead, the SLORC set up a National Convention that started to work on a new constitution in early 1993, under close supervision of the military. In 1995, the NLD decided to withdraw from the Convention in protest against restrictions. In an attempt to break the deadlock, the NLD, in cooperation with a number of ethnic minority politicians, set up the Committee Representing the People's Parliament (CRPP) in 1998. The military immediately responded by arresting many NLD and CRPP members.

After the crackdown of 1988, thousands of Burman activists fled to the jungle bases of ethnic armed opposition groups in the border area, mostly to member groups of the NDF. Here student activists formed the All Burma Students' Democratic Front to launch an armed struggle against the military government. This led to the formation of new alliances. In 1990, the Democratic Alliance of Burma (DAB) was formed, a new umbrella organisation of ethnic minority organisations and Burman opposition groups. Two years later, in 1992, the National Council of the Union of Burma (NCUB) was created and set

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up at the KNU headquarters in Manerplaw, near the Thai border. The NCUB consisted of ethnic nationality organisations plus members of political parties, and MPs-elect (mainly NLD) who had escaped a new wave of arrests after the elections of 1990.

In 1989, Wa and Kokang troops mutinied against the Burma CPB leadership. They formed new organisations based along ethnic lines and included the UWSA in Wa-inhabited regions of Shan State, the MNDA in Kokang in northeast Shan State, the NDAA in eastern Shan State, and the NDA-K in Kachin State. The mutiny spread quickly, and SLORC responded by offering cease-fire agreements to these new groups. The CPB insurgency was effectively ended.



Old DKBA logging camp (Sin Swein area)

The NDF tried to woo the mutineers into their camp but failed. Instead, the military pressure on other ethnic armed groups in the northern Shan State increased. The Shan State Army (in northern Shan State), an NDF member, signed a cease-fire soon afterwards. Other important NDF members, including the Pao National Organisation (PNO) (near Taunggyi in Shan State) and the Palaung State Liberation Party (PSLP) (near Hsipaw in Shan State), followed two years later in 1991.

The Burmese Army launched new offensives against the remaining NDF members. During 1991-92, heavy fighting took place in the mountains around Manerplaw, the KNU headquarters, but against the expectation of many observers, the KNU managed to hold its ground.

The KIO now proposed to start joint negotiations with the SLORC on behalf of the NDF. After failing to convince the NDF, the KIO signed a sepa-

rate cease-fire in February 1994. While the KIO argued that it was better to make a cease-fire first, and then find a political solution, others, including the KNU, wanted to have a political solution first before signing a cease-fire. The KIO was subsequently ejected from the NDF and the DAB. In 1995, two other NDF members, the NMSP and the KNPP, also signed a cease-fire, although the latter broke down after a few months.

Pressure on the KNU increased after the breakaway of groups of dissatisfied Buddhist soldiers, who formed the Democratic Karen Buddhist Army (DKBA). The SLORC responded quickly and offered the DKBA aid and territory. This ultimately led to the fall of the KNU's headquarters in Manerplaw in early 1995.

Cease-fire talks between the SLORC and the KNU during 1996-97 failed to produce results. The KNU maintained that it cannot sign a cease-fire without a lasting political solution. During the military offensive of the Burmese army that followed immediately after, the KNU lost most of its remaining territory.

It now has a number of small bases and with small-scale hit-and-run guerrilla tactics.

By the end of 2003, most of the large armed ethnic opposition groups had signed cease-fire agreements, except for the KNU, the KNPP, and the SSA-South. These organisations are all located along the Thai border. Smaller Chin, Rakhine, Naga and Muslim groups remained active on Myanmar's northern borders with Bangladesh and India. In early 2004, the KNU and the SPDC made a temporary verbal cease-fire agreement.

Logging and civil war

During the decades of civil war in Burma, all conflict parties have relied on the extraction of natural resources, mainly by logging and mining, to finance their armies. The scale of logging increased dramatically after SLORC came to power in 1988. The most

serious damage has been done in the ethnic minority areas along the borders with Thailand and China. These areas previously contained untouched forest reserves with various types of hardwood and tropical rainforests, and included many important watershed areas. The increased fighting along the Thai border in the late 1980s and early 1990s coincided with unsustainable and clear-cut logging practices by Thai logging companies,

In November 1988, the Thai government announced a total logging ban in Thailand after logging-related mudslides caused the death of 350 civilians. In December 1988, soon after the formation of the SLORC and the bloodbath of August and September 1988, Thai Army Commander Chaovalit visited Burma and returned with lucrative logging and fishing concessions. As a result of this trip, a large number of Thai logging companies, most of them well connected to high-ranking Thai military officers or powerful Thai politicians were granted logging concessions by the SLORC. Many of these concessions were located in areas controlled by armed ethnic opposition groups, including the KNU, NMSP, KNPP, and MTA.

From the SLORC's perspective, these logging concessions were part of a larger scheme to defeat the ethnic insurgencies. In 1991, U Nyunt Shwe, then Burmese Ambassador to Thailand, said: "We are selling [the logging concessions] to get foreign exchange. No one can deny that countries need foreign exchange. Had the deal not been sealed before the logging ban [in Thailand] then there would be political problems in Thailand. Therefore, politically you [Thailand] gain. Economically we [SLORC] gain, and politically and economically the insurgents lost." (Kramer, 1994) The sale of logging concessions in US dollars brought in much-needed foreign exchange. Annual income from the sale of these logging concessions might have been US \$112 million a year. In the 1990s, the total average annual timber revenue was US \$200 million and was the largest single source of foreign exchange (Smith, 1994).

Thai logging companies removed forest cover for guerrilla armies, and built strategic roads into hitherto inaccessible terrain. Furthermore, on a number of occasions the Thai army allowed Burmese troops to attack Karen, Mon and Karenni strongholds from behind, using Thai territory. In this way, the Burmese army quickly overran a number of bases that had been impregnable before. These "logging wars" were chaotic in nature and led to many conflicts between logging companies, ethnic minority armies,

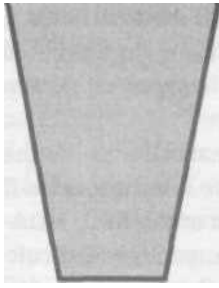
and the SLORC, and lasted until the mid-1990s. By that time, huge parts of Burma along the Thai border had been deforested by Thai companies (Kramer, 1994).

Logging also increased dramatically in northern Shan State and in Kachin State after the cease-fire agreements. Organisations such as the KIO, NDA-K and the SSA-North, found it increasingly difficult to finance their organisations, and became reliant on the sale of natural resources, mainly timber, to China. They claim to have no other alternative. After the cease-fire, the KIO lost control of the jade mines at Hpa-kant, which up until then was its main source of income.

The majority of the timber is cut by Chinese companies, who subsequently export the logs across the border to neighbouring Yunnan Province in China. In recent years, both the KIO and the NDA-K have also given out logging concessions to foreign companies, mainly Chinese but, reportedly, also Malaysian and Singaporean. These concessions were exchanged in return for road building projects in Kachin State, which is very underdeveloped and has poor infrastructure. Representatives of the KIO and the NDA-K say that since the government has made no efforts to develop Kachin State, they have to do it themselves. The only way to finance this, they argue, is by selling logging concessions (Moncreif and Myat, 2001).

References:

- Kramer, T. 1994. "Thai Foreign Policy Toward Burma 1987-1993". MA thesis, University of Amsterdam, Amsterdam.
- Lintner, B. 1990. "The Rise and Fall of the Communist Party of Burma (CPB)". Cornell University Press, New York.
- Moncreif, J., and H. Myat. October-November 2001. "The War on Kachin Forests." *The Irrawaddy* 9 (8): 14-17.
- Myanmar Forestry Department. 1991. Population statistics for May 1991.
- Smith, M. 1999. "Burma: Insurgency and the Politics of Ethnicity", Zed Books, London.
- Smith, M. 1994. "Paradise Lost? The Suppression of Environmental Rights and Freedom of Expression in Burma. London", *Article 19:13*.



Chapter 3

KACHIN STATE

by PKDS

An introduction

Kachin State is a dark green temple of closed forests, full of precious natural resources; notably jade and gold. The subject of many poems and songs, its beauties are far beyond those expressions, It is said that the forests of Burma are among the most resourceful in the world; inside Burma, the forests of our Kachinland are the richest of all.

Since the days of our forefathers many have given their lives, talents; all they had, to protect this resourceful land. Kachins lived without greed, earning their Livelihood and producing sufficient food using traditional methods of agricultural cultivation. Every year they grew crops for an annual harvest, and after each year they moved to another field (taungya) to plant new crops, returning once in ten years to each field.

In forty years of civil war, many of our Kachin people; men, women, and children, were only able to survive in the midst of war because of the forest. All Kachin know in themselves that the forest is the mother which offers shelter and food for the Kachin people. It has long been the safe operating area and home of the Kachin liberation fighters of the KIO and the NDA-K. Because the Burmese enemy was not familiar with the Kachin forest, the Kachin defenders could for a long time compete with the Burmese troops, despite the Kachin resistance forces having less weapons and smaller numbers.

An interview with a local in Laiza

"There were many kinds of wild animals. Tigers, antelopes, deers, bears, fowls, birds, monkeys, and more were abundant around here. Now they have gone. People are setting the forest on fire in the summer. Because of the fires the wild animals cannot stay in the forest and insects die. Medicinal shrubs are also wiped out."

"People say the logging business is for the development of the country. We can see no other development than the increasing number of good houses built for officers. People are still in the same situation as before. Deforestation is done by the people in authority. When we talk about deforestation and reforestation to them, they tell us to bring dollars. The KIO is planting trees, but only teak to be cut in the future.

Real reforestation means to grow a variety of trees that were wiped out. Religious leaders are preaching this in the churches. They should preach more about this. Everyone should grow at least one tree and look after it. Environmental conservation should be taught in the schools. Only then will the new generation know how to conserve the forest and have a healthy environment.

Hpung Ki Company is the biggest company from China engaged in the logging. At first it was supposed to build a hydropower electricity plant at Mali Hka. After eight years of extraction there is still no sign of the plant.

People cannot do logging business. All permits are issued to officers only."

The Kachin practice traditional medicine using resources from the forests and mountains of Kachinland. There are many different herbs with medicinal value in the leaves, stems, flowers, bark, berries, nuts, roots and fruits in the plants. Bird nests and other animal products, even some animal droppings, are used as medicine. The forest is the medicine store of the Kachin. Traditional Kachin herbal medicine can cure diseases and injuries as severe as broken bones and deadly wounds often better than modern medicine. Presently, this rich source of herbal medicine is in great danger of being wiped out. As some of the most useful species are becoming very difficult to find. Some of the best herbal medicine plants which are a world heritage can only be found in the very deep forest areas.

Kachin life is heavily dependant on the forest. Some people are taking advantage of the forests to get rich through the logging, mining and smuggling of natural resources like rattan cane, jade and wildlife products. Jade and gold mining, logging, overhunting and road building are especially threatening the Kachin heritage. Many Kachin are left wandering and rootless, having lost their livelihood resources along with the forests that have been destroyed before their eyes. The forest, rivers and land where our ancestors have lived for generations are being sold

off to the advantage of foreign and local businessmen and the national and state power holders. Businessmen from both inside and outside Kachin State hunt for resources like wolves in sheepskin, playing a game that destroys the land. Moreover, they create new hardships for the local people - leaving them without land and resources, unemployed and disadvantaged

The problems of logging and mining are closely related. Until the mid-1990s, gold mining was done only on a small scale, using manpower, with bamboo-made sluices and banana leaves and trunks. Up to that time the only logging done was for the construction of local buildings. Today, all kinds of powerful machinery are used with catastrophic environmental consequences. Mining concessions and logging contracts have been issued across Kachinland to companies from different regions.

The situation is not only the result of profit motives and bad administration. It is also a consequence of the political game playing of the SPDC. Stimulating migration to Kachinland in relation to 'economic development' is a way to break up Kachin social and ethnic structures. Destruction of the natural resources of the forest, sources of food, and other basic necessities threatens to extinguish Kachin culture

Because of this, we will discuss the following questions:

- 1 What problems are caused by the logging?*
- 2 Who benefits from the logging?*

The report is based mostly on interviews and other field research done mostly between April 2002 and July 2003. It looks at the strategies behind the logging, about the concessions, and about the endangered areas. It talks about the victims of the concessions, about exploitation of local people, and about the growing power of businessmen.



Logging business

At one time the forest was central to the life of the Kachin people. After harvesting their crops, villagers collected different types of mushrooms, and hunted birds and wild animals in the forest. In some places, villagers collected many kinds of forest products and vegetables and brought them to the market to sell. With the money they earned they were able

Logging news from Talawgyi and Sinbo (June-July 2003)

There are two districts under the KIO administration in the eastern part of Irrawaddy (Mali Hka) River, namely Man Maw (Bhamo) District and Sadung (Sadon) District. Logging business began in 1985, on a small scale in these two districts. Large-scale and intensive logging business started in 1994, extracting hundreds of thousands of tons per year. From 1990-1999, people from Kachinland (Kachin and Shan) were given permits for logging. The KIO did not allow the Chinese companies to log. Since 2000, logging permits have been issued to Chinese merchants from China and the local people are not allowed to log anymore. All the forests in Sinbo and Talaw Gyi area were given in concessions to the Chinese.

From 1985-1990, local people engaged in the logging business. Tax for a logging permit was paid to the KIO only. From 1994-2000, loggers had to also pay SPDC soldiers 1000-2000 Kyat per truck-load of logs apart from the permit tax. Since 2000, loggers have to pay SPDC soldiers at 200,000 Kyat per truck. The KIO has also increased the permit tax.

The biggest logging tycoons are: Lau Ying (Chinese from China), Leng Wun (Chinese from Myanmar), Yup Zau Hkawng (Jade Land Company - Kachin), and the boss of Hung Ki Company (from China).

From 1985-1990, about 10,000 tons of logs were extracted per year from Sinbo and Talawgyi forests. During 1991-1996, the extraction increased to many tens of thousands of tons per year. In 2002, the extraction was about 100,000 tons. Logs from Sadung District, Bhamo District and the Kfo General Headquarters area were extracted at the rate of 500,000-600,000 tons a year during 1999-2002.

In 2003, the extraction became even more intensive. One Chinese company extracted 2000 logs in 6 months. In June 2003 alone, about 40 to 50 thousand logs were piling up in Talawgyi and Sinbo forest (at the time of this survey). This is estimated to add up to many hundreds of thousands of tons over the logging season.

Logging concessions were given for October 2002 to June 2003. The KIO issued a statement that logging concessions would be stopped in the year 2003-2004, but some KIO officers illicitly allowed a few loggers to work in return for bribes,

to buy basic kitchen materials. However, with commercial logging, there have been big environmental changes, including loss of wild food and acute water shortages, forcing the villagers to turn their back on the old way of life and join the logging business.

In 1994, after the ceasefire the serious logging began, and after only three to four years it had expanded to every corner of the land, although in some areas it is smaller scale and hard to document.

The majority of the logging concessions now are held by Chinese foreign businessmen and people in authority.

A1 Logging companies and concessions

Today the word 'development' is very popular in Burma but in actual practice nothing positive happens, nothing changes to make conditions better for the Kachin and other ethnic societies. The national armies, the KIO and NDA-K are aware of the necessity for rapid development in Kachin society before outsiders have built too strong an economic position that disadvantages local people. They want to set up their own development projects in Kachin State. But, the armies lack the skills and money to run these projects. The imperial jade from the mining town of Hpakant, the main source of wealth for the KIO and Kachin society, is now under control of the Burmese government.

Opium production, a former *Logging trucks at checkpoint*

source of financing, is internationally prohibited and has been seriously cut back by the KIO which wants international support and credibility. To support their own development projects the KIO and NDA-K have turned toward the sale of the forests. Big scale logging started in the KIO area, after the ceasefire agreement in 1994, and in the NDA-K area in 1996,

Almost all the biggest logging companies are from China, which itself has a ban of logging to protect its own forests. Some well-known holders of logging concessions in Kachinland include the following *lauban* (an honorific title for boss or tycoon): Cing Shin (a company from Ten Chong), Cu Hi Jshau, Leng Wun, Hkang Lung (from Yin Jiang), Fan Du Shau (Yang Yin), Pong Han Chin, Lag Yin, Shing Leng Woon (from Loiye) and Lau Fu.

There are different reasons given by the authorities for the selling of concessions such as the building of roads and hydropower plants. As one example, the Jadeland Company was engaged to build a road between Bhamo- Myitkyina - Sumprabum. In winning the bid to build the road they were given a logging concession one mile wide on each side of the road being constructed.

In 2001, the KIO hired the Hung Ki Company to build the Mali hydropower station. In return the Jahta area was given as a logging concession to the Hung Ki Company. Now the concession has been extended to two Chinese companies, including the Hug Ki and Hung Hta companies. The KIO leaders have ordered local people not to do any logging in this area.

Sometimes villagers are persuaded by the businessmen to ask permission for logging. For example in 1996, the villagers of Jaumau in the NDA-K area were persuaded by a Chinese company to ask the NDA-K leader for permission to log in their forest. In return, the company would build a school, hospi-



tal and church in the village. The Chinese businessman also offered to build a road and to carry all the logs. In the end, however, the concession went to NDA-K officers and the village chief who privately sold to the Chinese and pocketed the profits; while the villagers were left without any benefits.

A2

Logging practice

When a logging concession is given to a Chinese company, Chinese workers move into the forest area for a period of months. They bring their own rice, but for their curry they usually rely on forest products and wildlife. They exhaust the forest with their hunting. When the logging process begins, the Chi-

nese first build a road for their trucks. Then they start cutting the trees into eight foot long logs (the size in which they can be carried loaded sideways on the trucks) with their chainsaws.

Where two or three Kachins have to work all day with their handsaws to cut one big tree, the Chinese with their chainsaws can speedily clear the forest. When the workers have to move the logs from places where the trucks can't come, they either carry them themselves to the trucks, or use elephants when available. The trucks carry the logs day and night into China.

In Sinboo, Ta Law Gyi and Shwe Gu areas, local people are allowed to sell teak. These people cut the teak with handsaws and sell to Kachin businessmen. But since the Kachin businessmen don't have much capital and can't buy many logs cut by the villagers they started taking loans from Chinese businessmen, buying more logs and therefore making more profitable business.

L

themselves. By river, the logs are brought to the

Nam San Yang area. Bullock carts are used again to take the illegal logs to where trucks can approach. After that, trucks carry the logs into China via Liza. Logging is still going on rapidly in the Wundwin area.

There are numerous toll gates on the main roads most people use, and also on the separate, secret logging roads in Kachin State. The majority of them are controlled by different SPDC army and military intelligence units, police, forestry department and customs. There are less KIO and NDA-K checkpoints.

As well as Laiza there are a number of other border crossing points where the timber is taken across to China: the Pangwa gate (check-point), Kambaiti gate, Hpimaw gate, Sa Ji gate, Sampai gate, Lrang Fang, Htaw Lang, Shi Chyang, Pa Wa Hku. La Kaining gate, Loi Ying Hai gate (Mai Ja Yang), and via the Hka Shang road and Lai Ying road (Mai Ja Yang and Loi je). It is most likely that there are other border gates where logs are brought to China that are unknown and until now inaccessible to our researchers, such as in the N'Mai Hku area on the border in the north of the KIO and NDA-K controlled territories.

Khindit area

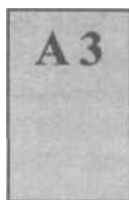
Khindit consists of three small villages, Hkindit, Bawmling and Bumring Zup around the town of Mai Ja Yang located on the Chinese border. There are about 20 households with a total population of 100 people. Approximately one third of the households cultivate wet fields and approximately two-thirds depend on dry field cultivation. A few people have horses, mules and water buffaloes. The entire village was burnt down by the military in 1962 and has since been re-built. In 1999, the village leaders granted a logging and charcoal extraction concession for their forest in return for electricity.

Key points:

- (1) *Average costs of electricity are 9 Yuan per week per household (higher than on the Chinese side of the border). Average expenses on kerosene were 4 Yuan per week before the installation of electricity.*
- (2) *Voltage is always lower than the standard,*
- (3) *Electric lamp-posts are only on the main streets.*
- (4) *The villagers have still not been informed about the terms of the concession agreement.*
- (5) *Young people and women feel that there is too much deforestation but cannot say anything to the village leaders.*
- (6) *The women have no voice in the village administration. A woman leader is chosen by the village leaders, not elected by the women. Women and young people hope that the village will progress better if their voice is heard. They wish to participate in reforestation for future generations.*
- (7) *There are no plans for forest conservation or reforestation.*
- (8) *The concession was granted for three years, but no written agreement was signed. This was four years ago, but logging and charcoal extraction is still going on.*
- (9) *The community forest is within a radius of 1 mile around the village. Apart from the community forest, the concessionaires continue to cut trees from the main forest. At present, the deforested area is already about 10 miles deep into the main forest.*
- (10) *The villagers grow fruit trees in the deforested area for subsistence, but not on a commercial scale. There is now a plan to grow bamboo and pomeloes. The seedlings will be bought from the Chinese factory, but on condition that the products must be sold to the factory at the price fixed by the latter.*
- (11) *Meteorological changes have been noticed since 2003. Streams are drying up in the summer and the climate is hotter.*

Dum Bau and Prang Ngawng Villages

- (1) *In these villages controlled by the KIO, a logging concession and electricity supply agreements have been signed with Chinese companies. The forest concession is four square kilometers. Logging activities started on November 24, 2002, three days after the concession was issued. At first, only large trees were logged. Now trees as thin as a Pepsi bottle are also logged for charcoal.*
- (2) *There are 24 households and 117 persons in Dum Bau Village. Among them 20 percent are young people; mostly students. Most have to leave school because they cannot afford the costs. The villagers cultivate paddy-fields. Some people do not own but rent their land. All households have small gardens to grow vegetables. People also collect vegetables and mushrooms from the forests and sell them in the market. There are many kinds of bamboo (ora, mai seng, u law, mai hka, mai hpyu, mai dading) in the forests. The shoots of many species are edible. There are many kinds of wild animals, but people seldom hunt them.*
- (3) *Dum Bau village can be reached after passing a KIA logging check point. There is a timber factory situated in a long and narrow valley by the village. There are no carpenters or skilled persons to manage business in the villages, therefore the villages cannot start their own sawmill. This situation compelled them to sell forest land to a Chinese company in exchange for electricity.*
- (4) *One high-ranking KIA officer owns a large fish pond. There is a hydro-electric generator operating just to supply the fish pond and the farm.*
- (5) *Prang Ngawng village is adjacent to Dum Bau Village. Villagers get electricity from China via Mai Ja Yang and Loije. Villagers pay for the electricity and the Chinese government maintains the supply. The villagers feel that the electric power is over-priced. There is no meter box,*
- (6) *There is enough water and suitable elevation to build hydro-electric generators to supply electricity to both Dum Bau and Prang Ngawng villages. However since the local Kachins lack skill in the operation and maintenance of the generators, they chose the alternative of buying electricity from China.*
- (7) *At the time of research (April 2003), wooden posts for electric cables were erected by the Chinese company. Villagers proposed to provide the posts, but the Chinese company did not agree and will charge for the posts at a higher price.*



Social problems in logging areas

Villagers are often unaware about the problems from logging because of a lack of education. The word 'development' is attractive to them. Many businessmen make use of this, and promise to build schools, hospitals, and churches to get their cooperation. Another method for enticing villagers to give up their forest is the promise of electricity for lighting. Again, the result is deforestation, leading to: not enough clean water, water shortages for farming, scarcity of firewood and of trees and bamboo used in house construction, and increasingly irreversible environmental changes.

Deforestation affects not only the forest, but also the social structure of Kachin life, Kachin used to live in collective ways, supporting each other. They did not need much money to travel since the structure of social relations extended throughout the villages. Any two Kachins were always in a kind of sharing family relationship with each other, considering everyone else cousin or brother, aunt or uncle. This beautiful and valuable social structure is now disappearing as a consequence of mining and logging. The state of mind, manner, and behaviour has changed among the young Kachins. Kachin culture is being further eroded because of the immigration of thousands of Chinese workers, many of whom entice and marry Kachin girls, often met in Chinese karaoke bars where the girls work as waitresses.

Who benefits from the logging?

Chinese and Kachin business

Chinese businessmen clearly benefit the most from the logging. They are present in all aspects of the business. Chinese workers use chainsaws which are not available to the Kachins. Kachins are not employed for loading the trucks. The workers are paid piece-wages. For instance, in Sampai area a businessman called Wu Leng pays workers 25-30 Yuan for each ton of logs cut, and Y 35-40 for one loaded truck. Kachins "benefit" from the logging only through the KIO's sale of concessions and the collection of taxes at the tollgates and through money made by the local people who are involved in cutting and destroying their own forests. Chinese business-



Kachin State

men make their biggest profits by processing the logs in sawmills and timber factories near the border region, and exporting the products.

Some Kachin businessmen join in logging concessions, but since they borrow their investment capital from Chinese companies, they have to sell them the timber for the price the companies offer. Many Kachin businessmen have been arrested for not having enough money to bribe Burmese army posts.

SPDC, KIO, and NDA-K

In the eyes of many, the KIO and the NDA-K are the organisations responsible for the excessive and non-sustainable logging in Kachin State. In actual practice however, the major part of income from the logging goes to the SPDC. The SPDC really controls

most activities in Kachin State, and if they wanted to stop it there would be little or no logging.

In one of our interviews, six timberworkers at Sampai-Jahta said that the logging was only possible through bribery of the Burmese army posts. If one doesn't pay, they can be arrested and jailed for logging, as has happened to some Chinese businessmen with insufficient funds for bribing the SPDC army. Another example of this was the Lin Fung Company, managed by Yang Hkyi Seng, and logging in

Gang Dau Yang in Jahta area and Seng Mai Pa. The Chinese had to give 2 million kyat to a Burmese army officer for his "travel allowance".

One of the interviewed said: "We have to give money to every SPDC army post that demands it. These demands are random. As for the KIO, they prescribe a limit for taxes at their posts, before the logs are sent to different parts of China via Dum Bung, close to the border. The KIO collects Y 150 per ton, and Y 500 per truck. One concession from the KIO costs Y 3000 (300,000 Kyats), logging being possible between September and April in the following year. However we have to pay a personal bribe of 1-2 million kyat to a senior SPDC officer for one convoy (or consignment) and then pay separate bribes to the forestry department, the police station, and all the army posts around."

One logger interviewed in Man Win village saw his trucks loaded with timber confiscated by Burmese Army troops in 2001, "I didn't have enough money to bribe them", he reported.

Logging news from Sinlum, Law Mun, Law Dan, Hpakawn (January 2003)

- (1) *This area has once been very rich in biodiversity. It had thick forests and was rich in flora and fauna. Rivers and streams would flow the whole year round. But after the commercial logging started, streams are drying up in the summer and wild animals have started to disappear.*
- (2) *Logging started in the year 2000. The logging concession is 38 miles wide and tens of thousands of acres. It includes Sinlum, Lum Ja, Mungka and Nmawk areas. In addition, some Chinese companies bribe the SPDC army camps and do logging in their territory too. Logging companies have to pay 3000 Yuan for a permit to the KIO, The KIO tollgate charges Y 500-600 for one truck load.*
- (3) *Most of the logging is done around Sama Bum, Lagyen Bum, Langda Bum ranges, About 30-40 truck loads of about 6 tons each are transported to Dumbung in China per day.*
- (4) *By estimation, about 4000 tons in 2002 and at least 5000-6000 tons in 2003 have been extracted.*
- (5) *People are watching with tears, the elimination of big trees that have been growing from the lime of their forefathers. But nothing can be done; the people with authority and the Chinese merchants benefit.*

Chapter 4

KAREN STATE

by KESAN

Introduction

Karen State, home to what were once lush and richly diverse forests is in the Southeast of Burma, sharing its eastern border with Thailand and other borders with Mandalay Division, Shan, Mon, and Karenni States. There are seven districts in Karen State. Three of the four northern districts: Mu Traw (Papun), Toungoo, and Doo The Htoo (Thaton), are the areas where research on the forest situation has been conducted, (see MAP on page 42)

Northern Karen State is comprised of both flatlands and mountainous areas. The Karen depend on flat rice paddy agriculture, traditional rotational farming in the highlands, and integrated orchard farming. These practices are suitable for the use of sustainable agricultural techniques and have been used for many generations.

The research shows that all three districts are facing similar situations and problems with respect to the degradation and destruction of forest resources. The areas were once rich in biodiversity, but now some species have become completely extinct, and many others are disappearing at alarming rates.



Transporting logs by cattle

In Karen State, forests are officially classified in two categories: reserved and unreserved forest land. The reserved areas were set up by the British during their colonial rule and remain under government control. The unreserved areas are supposed to be community forests belonging to villages. However in most places this is no longer the case and community forests are logged by other parties.

Several factors are a hindrance to the practice of traditional agricultural methods and are causing major depletion of the forests:

1. The war. All conflict parties have relied on the extraction of natural resources to finance their armies during the decades of civil war. This has been the primary cause of forest destruction in Karen State. The majority of the villagers in the three districts face forced relocations by the SPDC and have had to abandon their homes and traditional lifestyles.

They have little choice but either to go to the concentration camps where they must deal with forced labour, forced demand of food and supplies, unofficial taxes, and other human rights abuses; or to hide in the forests. The influx of

Internally Displaced People (IDPs) into the forests has put a great stress on forest management and conservation. In the forests, the villagers have few options for their survival and most resort to non-traditional forms of shifting cultivation. Where in traditional forms forest areas are left to fallow for longer periods, enabling the soil to recover, non-traditional forms are non-sustainable methods of farming that clear large areas of forest after *inadequate* fallow periods, producing low yields, and providing little

- food security. This situation has been pushed further because of a new SPDC strategy that allows the regime to maintain control of logging through local intermediaries, in this way ensuring cooperation on both sides of the front lines in Karen State.
2. Closely related to the first point is the impact of commercial logging. It has been a common practice for many years, with notable acceleration in the 1990s. Logging that should be done only in the reserved areas that are under government control is now encroaching and destroying the traditional community forests. The KNU also makes deals with the loggers, and villagers have lost their forest resources from their traditional community forests as well as have restricted access to reserved forests, resulting in conflicts with the KNU.
 3. Recent migration from the cities to the countryside has had great impact on the local communities. Uncontrollable migrants from the cities collect fuel and timber for trade in the city, and clear forest areas for unsustainable vegetable gardens.
 4. The routine setting of forest fires by the SPDC army to clear hiding areas of the KNU.
 5. Charcoal production.
 6. Land confiscation by the SPDC to set up commercial monoculture plantations, to build camps, and to develop infrastructure. When farmers shift from traditional agricultural practices to monoculture, the forest-use system changes from common property ownership to individual ownership; encouraging people to encroach on community forest areas, and causing more damage to already degraded forests.

Logging has had serious impacts on the Karen people and their traditional ways of life. The villagers rely on the community forests for timber, and non-timber forest products (NTFP) such as food, herbal medicines, and other plant resources. Women especially depend on the forest. They need to collect firewood, wild vegetables and other products daily, but the logging makes this more and more difficult, increasing time spent on travel and resulting in less time available for other daily responsibilities. Diminishing biodiversity threatens the practices of traditional healers who rely on forest resources. In addition, the forests have a very important role in religious beliefs and practices. When they are destroyed, the Karen can no longer practice their traditional beliefs.

Key points:

- (1) *A new strategy allows the SPDC to maintain control of logging through local intermediaries, ensuring cooperation across frontline conflicts.*
- (2) *There is some conflict between local villagers and the KNU over deforestation and lack of access to the forests.*
- (3) *Deforestation by means of logging, monoculture and forest fires has led to water shortages, which has affected farming. This has forced people to change their livelihood from farming to casual labour in logging, gold mining, on mono-plantation and other temporary jobs*

Deforestation has had great ecological impact on water quality and availability, and on meteorological conditions. Farmers who depend on irrigation from the rivers are facing the problem of poor soil quality due to nutrient-deprived water, with lower yields as consequence. In the dry season, there is a water shortage, and the rivers are at low levels during the rainy season. Integrated orchards and gardens are traditionally set up along the streams, however with the changed conditions, the plants cannot survive and die from lack of water. The quality of the water is greatly affected by the logging. Elephants and buffaloes are used by loggers to pull the logs along the course of the streams (that villagers use for drinking water and household needs) and pollute the water with earth and dung. Soil erosion on the banks alters the course of the rivers, and destroys gardens and orchards along the banks. The villagers have noticed an increase in air temperature and the weather can be quite irregular with increased droughts and flooding. These impacts jeopardise food security; farmers can no longer rely on their traditional agricultural practices. The unsustainable logging sets off a downward ecological spiral. Many are forced to abandon their farms and become daily labourers and elephant drivers for the logging companies, work in gold mining, practice unsustainable non-traditional forms of shifting cultivation and commercial mono-plantations, or cultivate temporary vegetable gardens.

Deforestation is not only causing serious ecological problems, but with the loss of the forests Karen cultural identity, indigenous knowledge, traditional beliefs and values are disappearing as well. This is a major concern of all villages visited in the course of the research.

Doo The Htoo District

Doo The Htoo (in Burmese; Thaton) district is located in the plain areas between Sittang River in the northwest and Salween River in the east. Most of the land area is flat with some mountains in the far north and slopes on the eastern side of the district near the Salween River. Many villages and agricultural lands are located along the basins of Dontkemi River (Baw Naw Klo in Karen) (Salween's tributary) and its tributaries such as Daw Za Chaung (Ta Uu Klo), Kyakat Chaung (Ter R'weh Klo), and other rivers like Bilin River and Theh Pyu Chaung,

At present, accurate data on forests in Doo The Htoo district are not available. According to the Myanmar Forestry Department statistics of May 1991, there are two major types of forests: Tropical Wet Evergreen; stretching from north-west to south parallel to the coastal line, and Mixed Deciduous Forests spreading out from the north towards the east, lying parallel to the tropical wet evergreen and covering most of the northern and eastern part of the district.

Research was conducted in three villages: Taung Lweh (Karen name Ta Uu Kee) in Bilin Township, and Kyakat Chaung (Ta R'weh Kee) village and Zee Woun (Saktaraw) village in Doo The Htoo Township

Total areas involved: Bilin and Doo The Htoo townships in Eastern Doo The Htoo (2 out of 5 districts)

Habitat types: Tropical Wet Evergreen forests (cool and very wet). Mixed Deciduous forest (hotter climate, less rain)

Wildlife present: wild buffalo, wild pig, 2 monkey species, bear, deer, squirrel, wild chicken and other small bird species

1. True status of the rainforest

The status of the rainforest has significantly changed over the last thirty years. Around 1970 many kinds of tree species were common, such as teak, ironwood, *Sgaw*, *Say Baw*, *Kyaw Kae*, *Thay Pa Hsa*, *Gaw* (species from Dipterocarp family), *La Ter* (another kind of Dipterocarp), *Padaunk*, *Thay Pomu Pwa*, and *Klaw Klay*. Different kinds of bamboo grew in the forests, such as *Wa Mee*, *Wa Klay*, *Wa Shu* and *Wa Bway*. Another type of bamboo, *Wa Klu*, very suitable for building houses, was planted by villagers near their communities.

According to the villagers in the district, there still live rare animals such as the rhinoceros, tigers, gibbons, hornbills, and *Toe Khae* (similar to but smaller than the hornbill) in the forests. The most common animals present are various kinds of monkeys (*Ta Uu*, *Wah Mae*), deer, barking deer, wild buffaloes, gaurs, bears, wild pigs, and many kinds of birds.

There are ten reserve forests in Doo The Htoo district. The British colonial government established eight of them; the other two reserve forests were set up by the KNU after Burma became independent. All of these reserve forests are in the five townships

administered by the KNU. *Da Thu Lu* reserved forest is in Kyaito Township. O Kan Gyee, Bee Lakan Gyee and Tagaylaw reserve forests are in Bilin Township. Kyakat Chaung, Pabein, Toe Bo Gyee, and Dernu are in Thaton Township. Kyo Sein reserve forest is located in Pa-an Township, and Kalamat reserved forest in Paling Township. Toe Bo Gyee and Demu reserve forests were set up by the KNU. The KNU declared Kyakat Chaung a wildlife sanctuary in 2000.

Currently the status of the forests has completely changed. The Doo The Htoo deputy district officer of the KNU, Saw Oh Shwe estimates that only about 15% of the forests are left. Even the reserve forests exist almost only in name, except for some remains in Bilin Township. According to a Bilin Township officer, the total area of the three reserved forests in his township is about 5,252 acres, of which 20% is actually still forest, mostly in Bee Lakan Gyee reserve forest. A small piece of forest is left in Tagaylaw but O Kan Gyee reserve forest is already cleared.

Populations of wild animals are dramatically in decline. Only a very few wild animals are found in Kyakat Chuang wildlife sanctuary. Villagers no longer see wild animals inside or outside the reserve forests. Rare animals such as the tiger and the rhinoceros are gone from the wildlife sanctuary.

Environmental conditions have radically changed. Rivers dry up in the summer, and have a lower level in the rainy season than in the past. People travelling in these areas can no longer rest in the shades of the trees and always have to carry their own drinking water.

Despite the serious degradation of the forest, logging continues. Together with the collection of firewood, the charcoal business, the expansion of mono-crop plantations, and regular forest burnings by SPDC soldiers, the remaining forests are in serious danger.

2. The importance of rainforest for local communities

The rainforest plays very important roles in the livelihoods of the local communities in Doo The Htoo district. Rotational farming is a vital part of agriculture, and depends on good forest to produce successful yields. Traditionally, villagers let the land lie fallow for at least seven years. Another kind of agriculture is irrigated paddy farming. The traditional irrigation system is very productive because there are lots of organic substances like leaves and other tree litter that drops and decomposes in the canal. This organic matter flows with the water into the field and fertilizes the paddy fields. Forests also provide good conditions and fertility for the local communities' orchards. Many villagers plant betel nut (areca nut), dot fruit, durian, coconut, jackfruit, plum mango (*Takaw Hsi Tha*), *Livistona speciosa*

The designated reserve forests have helped protect the land, but that protection has not been adequate. Most of the reserve forests, as much as 85%, have been felled for timber or for permanent conversion to cultivation. The KNU protected areas still provide habitats for some wild animals, but these areas are inaccessible for villagers. The only suitable logging area left in Doo The Htoo district is in Bilin Township. Here, since 1996, the SPDC has pursued a new policy to avoid KNU resistance to the logging. The SPDC loaned money through a state-owned logging company to local Karen elites who establish logging operations and sell the timber to the Myanmar Timber Enterprise (MTE). These elites also negotiate with the KNU to safeguard their operations. The KNU used to ambush state-owned logging business operating in their areas. But DOW it grants permission and taxes the loggers. This has caused tension between the villagers and the KNU because the loggers have access to the reserve forests while the local villagers do not.

(*Lo Htu*: have big leaves which look like palm leaves and are used for thatch), palm trees, sour grapefruit (*Shau Thee*), leech lime or kumquat, (*Shaunu Thee*), lime, pomelo (*Ma O*) and other species in the forest. These orchards are not only for household consumption but also provide extra income.

In addition to agricultural benefits, forests are sources of food (wild vegetables, fruits) and medicines. Most of the materials for buildings and basketry come from the forest.

Forests used by the community as a whole are called community forests. They also serve as pasture for the cattle.

Forests are very important in religious beliefs and practices. In the Taung Lweh village community, every year in May, a ritual ceremony is performed in a sacred part of the forest. Red and white cloth is wrapped around two big trees. No trees in the sacred forest may be cut down. This would lead to illness and death to the members of the community.



Transferring of logs to stockpile using elephant labour

3. Social and ecological impacts of deforestation on environment and local communities

Farmers face the consequences of meteorological changes leading to droughts and floods. Flooding kills most of the rice. What is left of the rice is destroyed by a tiny green insect. Another problem is a small caterpillar that eats the leaves in the night-time and stays under the rice in the day-time. When the rice produces the seeds, small caterpillars cut through the branches of the seeds and eat them. During harvest time (dry season), when it starts raining, the seeds get wet, sprout, and grow again, which is another major problem.

Since 1996, the situation has deteriorated. According to the villagers this was when deforestation led to changing climatic conditions. An average farm now produces 20 to 30 baskets of rice per acre, where it once produced 80 to 100 baskets of rice per acre. The nutritious qualities of the soil have deteriorated, "When we used the water from the river there was a lot of humus from the tree leaves and mud flowing with the water into the farm. This made the soil fertile", villagers explained, "When the river dried up we had to depend on rain in the rainy season. So we do not get the fertile soil." The diminished yields mean food shortages, and the people have problems to pay their taxes to the SPDC. Many farms were abandoned and people prefer to work as casual labourers in the logging and other enterprises to make their living.

Logging is not the only problem. People cut bamboo, bamboo shoot, and firewood for commercial purposes. Another problem is the deterioration of

Logging has caused:

- * *a serious threat to local biodiversity. For example traditional healers find it increasingly difficult to find medicinal plants; this could lead to loss of indigenous knowledge.*
- * *water shortages. The diminishing supply of water available for irrigation (which is more nutritious than rainwater) has led to declining rice yields in wet paddy cultivation.*

This causes a downward ecological spiral, since villagers are forced by insufficient rice harvests to become casual labourers in logging operations and other enterprises.

health care due to the logging. "My mother knew traditional medicine. Villagers came to her to be cured of their diseases, I assisted her and when she died, I became traditional healer in *Ta Uu Kee* (Taung Lweh) village. I collect medicine from the trees in the forest. Some patients I can cure with this medicine. But some patients I can't cure with this medicine. I don't charge the patients and accept anything they would like to offer me. Sometimes they give me foods and sometime they give me money." This traditional healer claimed that in the past he could find the medicine in the forest easily, but since the logging has started some medicine can not be found anymore. "I replant some medicinal plants and trees in my garden. Some disappeared medicine we now have to buy in the city." In *Ta Uu Kee* (Taung Lweh) village the elder is the only person who still uses traditional medicine. For many people traditional knowledge has been lost. They want western medicine, but it is very expensive. It is also extremely dangerous to have because the SPDC does not allow it, fearing that the medicine will be passed on to the Karen National Liberation Army (military wing of the KNU).

Impacts on women

In Doo The Htoo district the villagers have to deal with three different political groups: the KNU, the DKBA, and the SPDC. They are liable to have to do work for all three groups. Women and men have different roles for their work. One of the women in Kyakat Chaung (*Ta R'weh Kee*) village, Thaton Township, said that women have more work to do because their men are forced to serve as porters, security guards, and in other jobs for the Burmese Army; sometimes for 20 days a month. The remaining 10 days they are tired, sick, and bored to work on the farm. This changes the division of responsibilities traditionally shared by men and women, Although the Karen are family-based and involve both male and female input in most decisions and in cultivation practices, they are a matrilineal culture, thus the women are highly affected by changes in the forest. Both male and females have access to the forest, however females predominately spend more time, collecting forest products both for family-use as well as for extra income, and working on the land. With the decreasing forest products, they cannot collect enough to provide for extra income, and thus with lack of income they cannot send their children to school.

Women are responsible for the housework and are the primary house owners. Their responsibilities include taking care of the children, feeding the family,



Urban dwellers collecting timber from the forest and selling it in the city

feeding the animals, collecting water, collecting firewood, pounding rice, and cleaning. Additionally, they are responsible for all daily work when the men in the family have to serve for the military or be porters. The women also have to answer to SPDC military demand. The military will ask the women for firewood, building materials for their camps, night watch duty, and other jobs which conflicts with other regular tasks.

4. Main factors that threaten the practices of traditional forest conservation

Traditionally the local communities in Doo The Htoo district have their own system of forest management. In the customary traditions each village has its own community forests with clear boundaries. Within this community forest land there are rotational farms, irrigated farms, orchard farms, communal forest, pasture, and sacred forest. This system has worked very well until recently. Now however, many factors threaten or weaken the system. The main interrelated factors are logging, problems of forest management and access to the forests, the civil war, and the introduction of monoculture.

4a. Logging

Since 1973, the Burmese military government has been heavily logging the forests in Doo The Htoo district. This logging has targeted most of the reserved and communal forests. Logging in Bilin Township forests exemplifies the situation. In 1992, SPDC troops advanced to Bilin Township. They also made the area secure for logging by building roads and bringing in trucks, machinery, and other material. Since then, the military-backed logging operation exploited the three reserve forests in Bilin Township. However, continuing surprise-attacks on the logging operation by the KNU, the military arm of the KNU, did severe damages to hardware, personnel, and profits; thus the SPDC changed its strategy in 1996. This time it used local Karen businessmen (the 'log extraction group') to do the logging and to negotiate with the KNU, believing that the KNU would not attack their own countrymen. The SPDC-controlled Myanmar Timber Enterprise (MTE) loaned about four million kyat to each of the Karen entrepreneurs through U Bah Than, the MTE-manager in Pa-An township. Condition of the loan was the exclusive sale of the timber to MTE. Timber was collected at two central stockpiles, Dun Yay Seik and *Tor Prah*.

KNU district officials saw a chance to let the logging be of benefit to the KNU struggle. One senior KNU district reasoned: "The SPDC has a military force and they have occupied many of our controlled areas, one after another. So even if we didn't deal

with the logs extraction group the SPDC will do the logging anyway and there is no benefit for the KNU." The logs extraction group agreed to pay the KNU 5,000 Kyat taxes per each ton of timber. Then they could execute their operations without hindrance. Local villagers report that the KNU allowed logging in an area outside the reserve forests of ca. 31.25 square miles.

4b Forest management and access to forests

Granting logging permissions either inside or outside of reserved forests by the KNU is a controversial issue, and has led to conflict between the KNU and villagers in Bilin Township. The areas outside the reserve forests are supposed to be for public use. The reserve forests and especially teak and other hardwood trees, officially under the management of the SPDC forestry department, are under control of the KNU and are protected by forestry laws. The KNU have forestry laws that prohibit the cutting of trees in the reserve forest, on penalty of seven years jail or death for second offenders. The laws allow villagers to collect wood for household necessities outside the reserve forests. Burning forests violates KNU forestry laws and the violator must pay a fine. The villagers in Bilin Township area said: "We have no trees for building our house because of the logging, while the KNU does not allow us to cut one tree. But they allow the log extraction group to do logging." The local communities are not satisfied with the KNU, claiming that it is not fair that they do not even have the right to use timber for their domestic needs.

As a result, some villagers started illegal logging while there were still trees in the reserve forests. A few of them were arrested and taken for interrogation. The villagers reported that the lower ranking officials of KNU were intoxicated by alcohol-use and they treated the suspects

badly. Many villagers felt very unsatisfied with this. This state of affairs was reported to a well-respected KNLA officer, lieutenant colonel Htu Gaw, commander of 1st KNU brigade in Doo The Htoo district. He called for a meeting of all district officials, including the KNU forestry department, and told them: "If you don't give my children [the villagers] the chance to collect wood to build their houses, we can not resolve the conflict and will be distrusted by our own people," Finally the other KNU officials agreed to let local villagers to collect a certain amount of wood for building material in March 2002. As soon as access rights were conceded to local communities, illegal logging by outsiders also started to occur. Because of this, the KNU withdrew its permission after one year. The KNU district leaders said they would call another meeting and if necessary, issue another permission period. So far, the conflict between the KNU and the local communities is still unsettled. Thus the attempts of local people to conserve traditional forest management are discouraged by the official forest administration.

4c Civil war

As part of the SPDC 'Four Cuts policy', restrictions have been placed on the movements of villagers, Villagers are not allowed to do rotational farming outside a distance of a one-hour walk. They may work their fields only from 6 o'clock in the morning until 6 o'clock in the evening and everyone has to be back in their community by that time. If anybody is



Urban migration: burning off forest for easy collection of firewood in order to take back and sell in the city

seen walking at other hours he or she will be considered an enemy and faces immediate execution. This has seriously limited the availability of farmland and affected the traditional rotational cultivation, where plots are left fallow for seven years. Fallow periods have been reduced to three years, with detrimental effects on the fertility of the soil.

Another curfew usually issued just before harvest time prohibits farmers to leave their village for harvesting. They must wait at least 7 to 15 days before they can start harvesting. This leads to a considerable reduction in agricultural yields.

Besides these curfews, if there is any fighting between SPDC and KNLA troops near or within the area of a village, that village has to pay a very heavy fine to the SPDC. Every year in the dry season the SPDC troops burn the forest to clear KNLA hiding areas. This fighting method is very destructive to forest regeneration, especially to the fallow plots.

4 d Introduction of monoculture

Logging roads open access to the movement of SPDC troops into an area, and increase their control of local resources. In the village of Zee Woun (*Saktaraw*) farmlands and grazing land were seized by SPDC troops. They set up their bases on people's lands or turned them into rubber or sugar cane plantations.

The conversion of farmland or communal forests in mono-plantations for the production of rubber, sugar cane, cashew nut and sesame significantly changes the traditional forest system. It also leads to a cultural change in attitudes of farmers from self-sufficient agriculture to market-oriented plantations.

All of these factors have destroyed the self-sufficient livelihood of local people and forced them to change their traditional way of forest use and management. One of the local villagers from Taung Lweh village said: "Since the generations of my ancestors, we never thought of making money by selling the forest that we live in. We thought that the forests we live in are for rotational cultivation, and that some forest areas are to be kept protected for wild animals to live in and for our traditional hunting. But now since we logging we have started to think about making money from the forest."

The forest-use system is changing from common property ownership to individual ownership. This shift encourages more and more people to go out and encroach on forest areas and causes more damage to the already degraded forests. Many farmers have

become casual labourers in logging or on mono-plantations. More and more villagers are making money by cutting down small trees for fuelwood.

There is also a growing concern that the religious beliefs of the local people will be lost. For the Taung Lweh community their sacred forest area has become a lot smaller than before.

5. People's concerns and possible solutions

In May 2003, KESAN gave a workshop on environment training in Bilfin Township, near Taung Lweh (*Ta Uu Kee*) village. Before this, villagers in the Doo The Htoo district had never heard about environmental awareness. But the villagers present at the workshop, women and men, young people and elders, realized the consequences of the logging and deforestation. Their situation, they understood, depends on protecting the forests and their livelihood in their area. They planned to organize their villages for the protection of the villages' forest, rivers, and wildlife.

In Taung Lweh village, the elder responsible for making traditional medicine organized the youth in the village. His objectives are to school the youth in the arts of traditional healing, and to protect the forest as a secure habitat for animals and medicinal trees.

The training participants from *Ta Uu Kee* and *For Kee* went back to their village and shared their knowledge with the other villagers. They want to mark out a separate area for their community and revive the traditional forest management system. They are now planning to form a nine-member committee to take responsibility for forest protection. The committee will judge cases of violation of the forests and collect fines. The villagers decided everybody has to take responsibility for this area. "When we walk to go to or from our land, whenever we pass the village reserved forest, if we see someone cutting or something destroyed in this area, everybody has a duty to come back and report to the committee and the village headman." For three months each year there will be an open period in which the forest can be used by villagers, but only for basic necessities, not for commercial purposes. The sale of forest products is prohibited. The villagers have drafted a plan and now need endorsement from the KNU.

Mu Traw District (Pa Pun)

Mu Traw district is divided into 3 townships; Lu Thaw, Bu Thoe, and Dweh Loe Township. Lu Thaw and Dweh Loe Townships have 12 village tracks each while Bu Thoe Township has 11 village tracks. 10 village tracks in Lu Thaw Township are under control of the KNU. In these 'black zones' warfare with the SPDC and the DKBA however remains continuous. The remaining areas in Mu Traw district are contested for by the SPDC, the DKBA and the KNU. These areas are called conflict or 'brown' zones.

Total areas involved: mid and southern Mu Traw (more than 10 villages)

Habitat types: Tropical Wet Evergreen forests in mountainous regions (cool and very wet), Mixed Deciduous forest in the lowlands (hotter climate, less rain)

Wildlife present: Gaurs, wild pig, at least 5-6 monkey species, wildcats, bears, deer, barking deer, squirrel, and rabbit Large birds such as the hornbill, peacock and other bird species.

Status of the Rainforest

There are two major types of forests in Mu Traw district. They are Tropical Wet Evergreen (*K'ner Ko* in Karen), situated in the north covering Lu Thaw Township, and Mixed Deciduous forests (*Kaw Bway Ko*), in the south covering Dwe Loe and Bu Thoe townships.

K'ner Ko is situated on a higher altitude where the weather is colder and receives more rain in the rainy season (May - October) than in the lowland areas. There are many various valuable softwoods (such as *K'mar. Nee, Bwai, Thay, Mertrue, Thermay, Nah Pawchaw, Noe, Thay Htaw La, and Tha Kokwee*), pine trees, and a few different kinds of species from the Dipterocarp family (*Ghaw Thu, Ghaw Theray, Ghaw Gaw, and Gaw Wah*).

In lowland areas, various kinds of hardwood trees such as teak, ironwood, *Ktaw Klay (Padauk)*, species from the Dipterocarp family (*La Ni, La Terr, La Bar, Ghaw Thu, Ghaw Wah, Ghaw Gaw and Ghaw Theray*) are common.

In both types of forests different kinds of canes (*Ghee Thu, Ghee Gaw, and Ghee Ghoe*) are present.

Detailed records of fauna are not available. However local people say that Mu Traw district once was rich in wildlife: gaurs, wild oxen, wildcats, bears, wild pigs, squirrels, different monkey species, deer,

barking deer and rabbit. Big birds such as *Toe Kawk* (hornbill), *Toe Kay* (peacock), *Toe Pwa* (pheasant) and many other birds and different reptiles lived in this area. Rare species such as the tiger and the rhinoceros were found in the deep forests. Thirty years ago such diverse flora and fauna was found throughout the Mu Traw district forests, especially in the four reserve forests *Mae Wai, Htee K' Hsaw Mae* (Sinswe), *Kahilu* (wildlife sanctuary) and *Maw Lu* (Minanwe; KNU wildlife sanctuary). These forests were classified as reserved by the British colonial government and until recently the KNU followed this policy. But nowadays these forests and their biodiversity are largely destroyed. In *Maw Lu* wildlife sanctuary one of the villagers said: "Our ancestors told us there were a lot of big animals such as tigers, gaurs and rhinoceros in this area, but now we cannot find them. Bird species that we know such as *Toe Kay, Toe Kawk, Toe Ghei*, and wild fowl are nearly extinct." However, the local communities still know more than 80 mammal species and 75 bird species in this forest. *Maw Lu* wildlife sanctuary is a suitable habitat for animals because of its high cliff ranges, many small streams and creeks, and thick forests with big trees such as *Ghaw* (Dipterocarp family) where it is always cool and green. But now, as internally displaced persons (IDPs) are expanding shifting cultivation in this area, forests and wild animals are endangered. According to a local source, there are almost no trees left in *Kahilu* wildlife sanctuary. *Htee K' Hsaw Mae* reserve forest used to have many teaks, ironwood and other hardwood trees, but now these have all been logged.

From 1989 to 1993, most forests along the eastern side of Burma on the border with Thailand have been seriously degraded by logging. From 1996 to the present, logging and charcoal production is taking place in the south and moving up towards the

central part of the district, which is one of the best forest remaining areas.

The forests in the northern parts of the district are also degraded only because of IDPs' shifting cultivation practices.

2. Importance of the rainforest for local communities

The most important role of the rainforest for local communities in Mu Traw district is for agriculture. One senior leader of Mu Traw district estimated that 80% of the villagers practice rotational (swidden) cultivation and 20% practice rice paddy cultivation for their livelihood. Especially the rotational farmers depend mainly on the good conditions of the forest to produce satisfactory yields. The farmers grow rice and a variety of fruits and vegetables in different seasons. Even after the rice harvest, chili, yam, taro, cassava and other vegetables can be obtained from the fallow land. In one community in Lu Thaw district there are still 120 different kinds of food plants in rotational farming; in the past there were about 180.



Women collecting *Terr* leaves for income and building roofs

Local communities not only depend on cultivated plants but there are many uncultivated plants that they can get from the forests. In *Ta Paw Der* village, northwest of Lu Thaw Township, villagers can get more than 150 forest products as food from the forest. Most of the villagers rely and depend on the forest. Quoting a Pah Khae Pee village elder: "We stay in the jungle and we survive from forest products. We don't need to go to the city and buy things. We live in the jungle and we know that the forests are useful and important for our livelihood. If there is no forest we've lost our livelihood. There are different types of vegetables that people can eat, for example in the summer time, bitter cane, *K' Yeh* (*Caryota urens*) and wild vegetables. In the rainy season, we get *Por Du* (ginger family), wild bananas, mushrooms, bamboo shoots and wild vegetables from the forest. If there is dot fruit, cardamoms and honey we can earn income for our families."

Communities use forest products in many other ways. For example, the local people know that the forests are full of herbal medicines, which they use and depend on. *Na Par Kyaw* and *Noe* trees are used to treat malaria. Bark and leaves from one type of tree called *Takuk Hor* are used for pest control to kill insects that destroy rice paddies. These trees grow in very wet conditions.

Building material comes from the forest. Counting the number of different tools and materials made by *Ta Paw Der* villagers, at least 180 different kinds of trees and 30 different kinds of bamboo are used. One villager from another village said: "For building, money doesn't have to be spent for buying materials and tools in the city. The Karen people use *K' Hee La*, *Lo Lah*, *K' Haw La*, *Hter La* and bamboo for building roofs. For other building needs, resources are collected from the forest. In the higher and colder area (*K'Ner Ko*) pine trees are very important. Villagers use it for making light in the house and for night travel, and to make fire for cooking."

Forests are furthermore very important for the religious beliefs and practices of local communities. Karen people in Lu Thaw Township are famous for their traditional beliefs related to forests. Rotational cultivation alone implies many ritual ceremonies that are concerned with forests. If there was no forest, there would be no rotational farming, plant diversity, and the specific cultural identity, traditional beliefs and values of the Karen would disappear.

3. Ecological and social impacts of deforestation

The continuing deforestation by logging or non-traditional shifting cultivation in Mu Traw district has seriously affected people's livelihoods and the environment. (Shifting cultivation constantly shifts to new plots, while rotational cultivation uses plots that have been left to fallow for 7 to 10 years, and strictly follows customary laws and regulation.) The logging of hardwood trees caused total deforestation. The dung of elephants and buffaloes used to transport the logs pollutes the streams. The courses of the creeks have changed because they are used as routes for the transportation of logs by elephants and buffaloes. Polluted water has led to increasing death rates among fish. In the summer season, the loss of shade from the trees on the banks of rivers and creeks has also caused water shortages. Furthermore, the dryness makes it easy for loggers to instigate forest fires.

Due to the extremely high security risks of conducting research in villages it is not possible to give a detailed overview of social problems related to the logging. However, it is undeniable that there are many problems. Logging in Mu Traw area was initiated by the DKBA from 1997 to 2000. From DKBA territory it spread out to other areas. A villager from *Kalaw Hta*, in the north of Pa Pun city, told KESAN "Now many different groups of loggers are moving their logging concessions step by step up towards our village and rotational farmlands. The trees that we kept for building and farming have all been cut.

If you go to the logging areas you will see only bushes and very small trees. We have no trees to build our houses, schools and temples in the future. Even though the logging is in our village area, it doesn't give us any benefit. More than this, after logging in our village area finished, people who lived in Pa Pun city came and practiced non-traditional shifting cultivation, chilli, and eggplant farming on our village land." Villagers from other areas complained that the elephants and buffaloes that were working at the logging sites came into their village area and ate or destroyed their crops, betel nut trees and the plants in their orchards. Many villagers do not want the logging to take place in their area any more because, as they said: "Logging is a kind of work that destroys forest and if there is no forest, we have lost our livelihood."

In the west, logging takes place at *Mae Wai* reserve forest, which is situated on the west bank of Bilin River. According to the information obtained from a Karen freelance researcher this logging, run by Htoo Company, is causing lots of problems for local communities. It has destroyed the villager's traditional irrigation canal used for their wet paddies. The villagers did not have damages repaid by the loggers.

Apart from actual deforestation, logging in the south and west of *Mae Wai* contributes to the depletion of non-timber forests products. "Many people are cutting all kinds of cane for sale or consumption, so the cane species are nearly gone. Black cane is the one that has a lot of liquid, so the place where black cane is growing is cool, has a lot of big trees, and the river in this place is never dry", said a religious elder of *Klaw Hta* village. He added, "If the cane species are gone, the rivers will fall dry and the next generations will not know that there were once many black canes here." It is clear to the villagers that after the

forest is gone the wild animals will also be gone, Pati K¹ Haw Bleh, from the Dweh Loe township committee said "Now almost all the forests between *K'Ma Moe* at the Southern tip of Mu Traw district to Pa Pun city are seriously deforested by logging. In the past twenty years, there were a lot of big trees and wild animals. I could see peacocks or hear their crows, but now we can see nor hear them any more."

People can no longer hunt like their ancestors because the animals are disappearing. The *Ka Law Hta* village headman



Clear-cut for future dam development

said "In the past, people hunted using arrows and fished with small nets, but now they use guns and many different tools and techniques, so all the animals are disappearing."

It is important that the social and ecological problems resulting from non-traditional practices of shifting cultivation are addressed. In the northern parts of the Mu Traw district, shifting cultivation is found to be destructive to the forest because the increasing population of internally displaced persons can no longer follow the traditional methods and practices of rotational cultivation due to the long

standing civil war. As a result of their unsustainable practices, more and more pristine forests are badly damaged causing local temperature to rise and water level in the rivers to drop, even leading to dryness. Local people are losing their food security because the premature-used fallow plots deliver reduced yields. Pad Htoo Gay Hai, villager from *Kwa Mu Pwa Der* village said "Before when we used rotational farming in the mature fallow plots we could get a variety of fruits and vegetables. Rice yield was also good. But now we are very tired struggling with weeds in our degraded land and can't get much fruit to eat like in the past." Due to the low yields more and more people are facing food shortages and they have to go out and look for food elsewhere.

3. Impact on women

The degradation of the forests has special impacts on women. When the forests are gone, the weather becomes hotter and the rivers dry up. The plants that grow near the rivers shrivel and die. Traditionally it is the women, especially the mothers, who collect vegetables in the forest and prepare food for their family. But when these vegetables become rare, women have to go very far searching for them. They have less time and energy for their other duties such as caring for the siblings, animal husbandry and gardening.

Firewood collection is the responsibility of women in the mountainous areas. They usually collect only dried wood, bamboo, or dried branches once a year in the dry/hot season. But as forests are disappearing, firewood gathering is becoming a big problem for the women. They have to devote more time and

the returns are less. One of the women in *Day Bu Noh* village stated that "Before we could get firewood very easy. We didn't need to go far to collect firewood, but now because of more deforestation as well as increasing population [IDPs] in our area, firewood is difficult to find." Firewood is extremely important for food security. Firewood scarcity and increased collection time can reduce the number of meals cooked in a day, decrease the length of time food is cooked, and decrease the diversity of food eaten. This then leads to decreased nutrition and increases susceptibility to nutritional deficiencies and diseases.

Women have important traditional and religious functions. For example, they have to prepare rice and pack it in certain kinds of leaves for their husband to take to work or to perform ritual ceremonies. They usually use leaves such as *La Klue Baw*, *Ya Baw La* (one kind of banana), and *P'Dak La* (*Macaranga denticulata*). Shay La Moe, an Aunt elder, said: "Before, if we needed leaves to pack rice, we found them near our house. There were lots of *La Klue Baw* leaves. But now they are difficult to find so we have to walk two to three hours to get them." When they cannot get the right kinds of leaves, they have to use other kinds that are traditionally prohibited such as *Ya Wah La* (one kind of wild banana), *Ya Khea La* (one kind of wild banana), *La Kya*, and *La Klue Thue*. Women who disregard the traditional prohibitions are always in fear about their fate.

4. Main factors that threaten the practices of traditional forest conservation

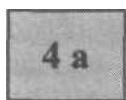
In the traditional system of forest conservation, forests are classified as protected forests, cultivated forests, communal forests, and religious forests.

Protected forests are watershed areas, wetlands, *Ta Day Doh* (area where two ridges meet), and *Tee Per Chu* (area between two rivers or streams). Cultivated forests are mostly mountainous or highland areas where rotational cultivation is practiced. Where there are flatlands, wet paddy cultivation is practiced. Communal forests are forests that belong to the community. People from the community have the right to collect their non-timber forest products, building materials and other resources they need.

Religious forests are specially protected because of animistic beliefs. For example, flat areas on the

mountain side which have springs and are always wet (*Na Oo Rhoo*), areas where 2 rivers meet (*Tee Per Cha*), and areas where two ridges meet (*Dah Dey Doe*). Because these watershed areas have spirits or souls that protect the animals and plants they are not cultivated.

The traditional forest system protects the forests from unsustainable exploitation. The survival of the traditional system depends on the survival of the agricultural practices. However, there are three main factors that threaten traditional practices; logging, civil war and territorial zoning in the southern part of the district and civil war in black zones, mostly in the northern part of the district. Although shifting cultivation directly affects the forests, it is not considered as a main factor since it is a consequence of the civil war.



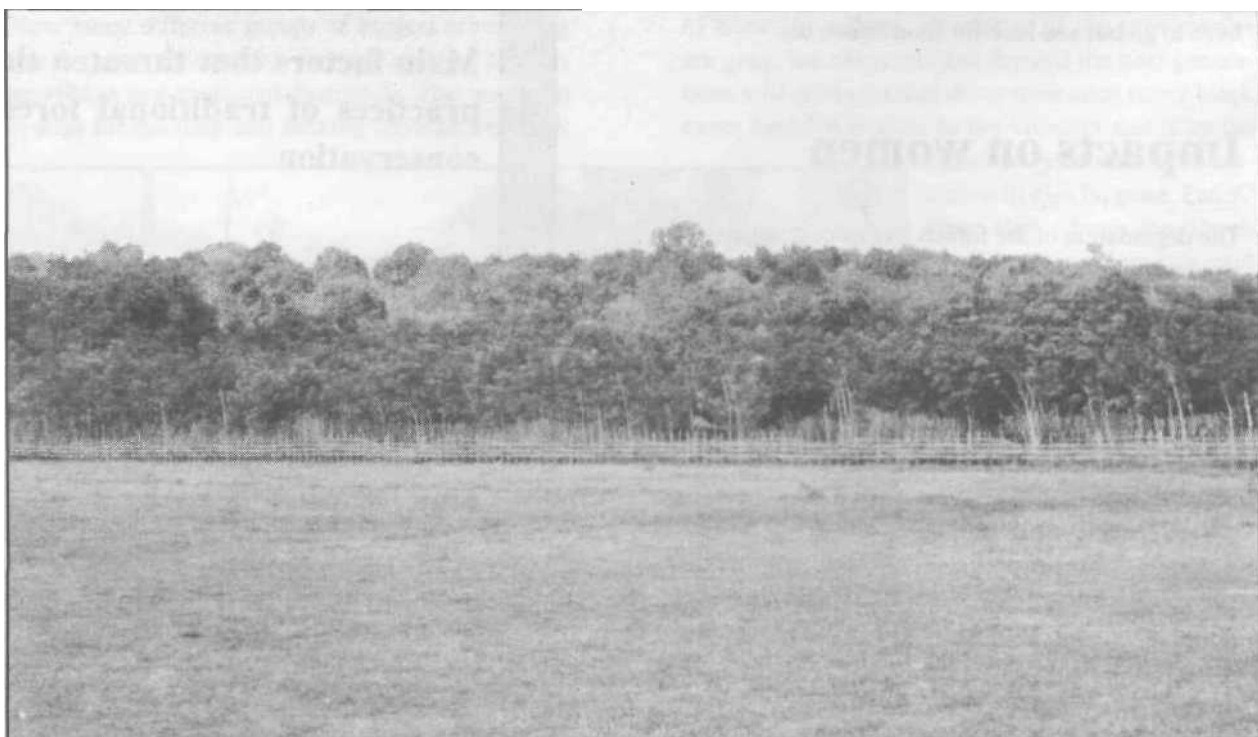
Logging

In the "brown zone" areas, the villagers, DKBA, SPDC and KNU all stay in close proximity. There is constant fighting between the groups and they gain control of different areas. Since the capture of the KNU headquarters at Manerplaw by the DKBA and the SPDC, the DKBA spread out into different areas and took control of many other territories held by the KNU. After 1996, logging began in many parts of Mu Traw district. The DKBA was the first to start logging in *Kahilu* wildlife sanctuary and within one

year it expanded its logging up north through *Htee K' Hsaw Mae* reserve forest and to Pa Pun areas. Its main targets were teak, ironwood and other hardwood trees. In 2000, after the big trees had gone, privately owned logging enterprises from the cities held by local elites moved in. They have to pay tax to the KNU in order to avoid conflicts between loggers and the KNLA, the military arm of the KNU, as well as pay timber tax to the DKBA or SPDC soldiers. All together there are 30 small logging enterprises operating in the area (*Kahilu*, *Htee K' Hsaw Mae* and Pa Pun), These enterprises log the timber left by the DKBA.

In *Mae Wai* reserve forest, Htoo Company is a major logging enterprise.

Their representative in the area is U Sai. Htoo Company, obtained a logging concession from the SPDC-controlled Myanmar Timber Enterprise (MTE). After an initial survey by U Sai, Htoo Company in November 2001 entered *Mae Wai* area with logging materials. Before starting their operations, they had ensured their safety with both the frontline SPDC troops and the KNLA. Locally, the SPDC uses the logging company's trucks for transport of military supplies, and asks Htoo Company to supply rice, boots, and other needs to the soldiers for free. For the KNU, the logging company has to pay them tax for their security. The company brought in about 30 - 42 logging trucks, 7-10 chainsaws, 1 crane, 1 dozer, 1 log dragger, and 7-11 elephants. Htoo Company only logs teak with over 5 feet circumferences and 16 feet height. The company was contracted to



Wasteland area: dried out and unable to use for cultivation (consequence of logging)

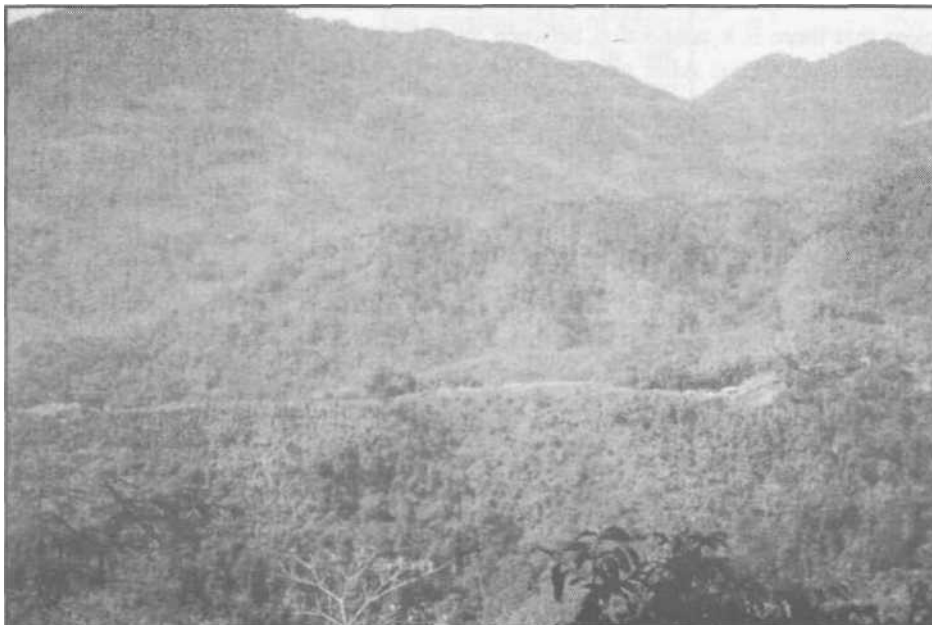
cut 10,000 tons of teak and 2,000 tons of ironwood during the 2002-2003 logging season. The figures for the 2001-2002 season are not known, Htoo Company has to pay tax of 30,000 - 40,000 Kyats to the KNU.

In the Pa Pun areas, logging now encroaches upon the different categories of communal forests, without understanding of their function. Villagers from *Kalaw Hta* village, north of Pa Pun, started to see the trees disappearing from the forest; forests that they depend on for building materials and rotational farming.

They worry that they will lose their livelihood. Because of the logging, poor people from Pa Pun also come in to clear land for shifting cultivation and to plant chili and eggplants.

The building of roads by Htoo Company at *Mae Wai* has destroyed farmlands and orchards. The local people were not satisfied because they received only small compensation from the company. The villagers from *Mae Wai* complained in a letter to the KNU Dweh Loe Township officer that logging was of no benefit to them. It didn't give them jobs because the Htoo Company uses its own people. They complained that the logging is destroying their environment, and also has little benefit to the KNU.

Impact on the traditional farming systems may even be greater because four streams that people use to cultivate rice may have become dry because of the changed meteorological conditions.



SPDC camp and road causing villagers to flee and become IDPs

the fields. This SPDC policy is killing off all traditional forest systems. In many cases of deforestation, the people involved are those who were forced to relocate.

All the logging business in Karen State takes place in conflict areas or so-called brown zones, as classified by the SPDC, which is contested for by different parties. (A brown zone is classified by the SPDC as an area where insurgents have access to. Anyone can be punished or killed on suspicion of aiding the insurgents.) One of the villagers in *Klaw Hta*, close to Pa Pun, told KESAN: "In the past, there were not a lot of people who did logging. From 1997 the DKBA came to do logging and they also brought weapons to protect themselves. Some villagers were involved in logging with the DKBA because they trusted them. The DKBA is fighting against the KNU so they help the SPDC in the war and when they have the opportunity they try to find ways to get revenue for themselves".

Business in brown areas often leads to the disempowerment of the local communities. People here have no voice or power. There are many sad stories related to logging. Some DKBA soldiers have forced villagers to transport logs with their cattle. In some cases people who protest are simply killed. People in the brown areas are caught between different political groups and are always living in fear. They do not have power to maintain their livelihood. It is also

4 b

Civil war in brown zones in the south

During the same time the logging business in Pa Pun areas began, the DKBA and the SPDC implemented the 'Four Cuts policy' by forcing people around Pa Pun and *Mae Wai* areas to move to relocation sites, where they are held under surveillance. About 60 villages were forcibly relocated and lost their traditional livelihood. They also have to face forced labor, and torture and murder when suspected of being KNU supporters. Moreover, the SPDC put many restrictions on daily activities. For example, people are not allowed to go out of the village to work in

clear that there is a connection between the relocation and the logging. After villagers were relocated, logging started.

In the last two years, more and more displaced people are coming back to their homeland and trying to re-establish their livelihood. It is difficult to know whether they will succeed since their community forests are gone. It is possible that people will abandon their traditional ways of living and start to engage more in illegal logging, since this is a fast way to make some money and fulfil immediate needs.

4 c

Civil war in the north

In Lu Thaw Township most of the villages are controlled by the KNU. There is continuous warfare. Villagers have to face killing, torture, relocation, destruction of their rice storage shelters and buildings by the Burmese military. Many villages are burned down and destroyed by SPDC soldiers, forcing the villagers to move to other areas, leaving their properties, livelihoods, land, and village. *Say Day, Pwa Gaw, Htee Moo Kee, Paw Day Ko, For Khei Ko, Ler Mu Plaw, Maw Poo, and Saw Hta* are all villages that have been destroyed by the SPDC army. Some villagers have fled to the jungle, others to Tongoo city or Pa Pun city, and many have fled to Thailand.

In 1996, the SPDC started the construction of a road for military purposes between *Ler Doh* (Kyaukkyi) city and *Saw Hta* (Lu Thaw Township) on the Thai-Burmese border. The road passes through *Mu Theh, Pwa Gaw, Gu Day, Plat Ko, Maw Poo* and *Saw Hta*

villages in Lu Thaw township. With the road construction, a lot of forest was destroyed and all the villagers had to move to other areas. Due to the conflict with the KNU, the road was only completed in 1998. On the road there are army camps in *K'Baw Tu, Pwa Gaw, and Maw Poo*. Only the military can use the road,

Villagers living in the area became internally displaced people. Some villagers stay in the jungle in groups of 3 or 4 families. They build small huts for shelter and always have to worry about security. When they stay in any place they have to do shifting cultivation for their survival. They cannot use traditional rotational cultivation methods.

In some hiding places deep in the forest, shifting cultivation is not successful. For example, small insects and wild animals destroy paddies, or the IDPs are not familiar with the specific properties of the soil. In the deep forest, trees are very old. When they are cut, plants and trees cannot grow well afterwards. Some other hiding places are close to military camps and in some places there are many landmines, so the villagers cannot safely cultivate their food.

Some internally displaced persons come to stay in other villages. But this causes a lack of farmland and problems for traditional rotational cultivation. Because of this, fields that used to lie fallow for seven to ten years are now cultivated regularly, and have diminished yields. This has happened everywhere in Mu Traw district. Fifteen years ago, in places such as *Bue Thoe* and *Kweh Play* mountain in Bue Thoe Township, and *Ler Wah Ko* mountain in Lu Thaw Township, there was no rotational cultivation. But now IDPs have to live in these areas and practice shifting cultivation, knowing that it will cause deforestation, and that the wild animals will come and

destroy their paddies. But as one IDP said: "If we did not do cultivation in this area we will not survive." The *Day Bu Noe* village headman said: "In the past our families stayed in the village, but when the SPDC came we had to move into the forest. We had to practice shifting cultivation in the forest where we never cultivated before. We build shelters for our families in the same place where we cultivate the land." The *Ler Htu Poe* village headman said: "If the DKBA and SPDC soldiers did not burn down our village, cut down our fruit trees



Exporting timber in Pa Pun area

and try to kill and torture us, we would not have come to the reserve forest. In the past, Mu Traw district authorities did not allow us to do cultivation or cut down trees in the reserve forest. Also they did not allow people to kill wild animals, cut down canes, and cut down the forest or bamboo in the reserve forest. Since 1997, we have had to flee to the reserve forest and earn our living in this forest because of the DKBA and the SPDC. We cannot go back. If we didn't earn our living in this forest, we cannot survive. In the east of Bilin River, the area is meant to be a wildlife reservation area. But since 1997, we have had to live in that forest and use its resources".

A village elder from *Dweh Loe* village (Dweh Loe Township) said that "In 1998 the villagers had to face small insects that destroyed the paddies. So in that year paddies didn't grow well. We still have a similar problem but we don't know how to solve it. Villagers have to go to Pa Pun city to buy rice. Since 2000, some villagers work in logging to be able buy rice and other basic necessities. Some people cut down canes and sell it in Pa Pun, We have to earn our income in a difficult situation for survival."

Because of the civil war and logging, the villagers have to face many difficulties to survive. Some people become internally displaced and some become refugees in Thailand, Many are killed or die because of hunger, and some become disabled; some are separated from their families. Young people are becoming uneducated. Even though they want to study, they do not have any opportunities. The forests that the villagers use and depend on are becoming deforested from logging, and the forests that are protected from use (reserved areas) have to become the areas for internally displaced people to use as shelter and for survival.

5 Local people's concerns and possible solutions

The *Klaw Hta* village headman said: "The logging areas were moved step by step up to our village so all our big trees around our village that we kept for building materials were cut down. Before becoming a logging area there were many wild animals, various kinds of vegetable or plant species were growing, and the villagers could use the forest for their livelihoods. But now you cannot see wild animals and wild vegetables anymore. If the logging continues we are faced with many problems for our livelihoods in our future,"

The spiritual elder of *Maw Thay Du* village: "In our village we did not allow people to cut down cane and cardamom to sell to other areas. But they could cut some types of cane to eat. We only allowed people to cut black canes to eat during times when we cleared the land for rotational cultivation and the rice harvest. Our great-grandparents said black cane has a spirit so they did not allow their children to cut or bring black cane to the village. If you cut it down to sell and bring it to the village, the spirit of the black cane will be disturbed and you will get sick with various kinds of illnesses, or may meet with natural disasters. In the sacred places where ashes are left of dead people we have to make sure that there is no fire. If there is fire in this area, the elders have to do a special ceremony with certain offerings. Now, because of you [the KESAN researcher] coming to tell us about the environment I have more energy to share and teach the young people about our traditional customs for the use of natural resources."

A villager from *Mau Lay Ko* village in Lu Thaw Township said; "Karen Office of Relief and Development (KORD) came and taught us about community development. We decided to plan to protect and conserve the forest around our village. We formed a committee to monitor this work. We divided the area into two parts; one part we can use for our livelihoods and practice cultivation, and the other part are not allowed to use. Because of the campaign of KORD, we now have more confidence to work for the future."

Headman from Klaw Hta Village; "Because of war and logging, the Karen have lost their properties and land. Our forests are gone, and some of us have become internally displaced people. Some have become refugees in Thailand. If war and logging still continue, we Karen people will disappear. We need a person who will take responsibility in solving the political problems and conserve the environment. At the local community level we will have a discussion with our communities, and we will create local community forest areas for our future needs. We will not allow any person to come and cut down or take vegetables or animals in the local community forest area. We villagers do not have the full power to make a local community forest area, so we request the local authorities in Mu Traw district to put pressure on the logging companies."

Toungoo district

Toungoo district is located in Northern Karen State. There are two townships in Toungoo district: Tantibin (Tontertu) and Thandaung (Dawpakkoe). The biggest river in Toungoo district is the Sittang River, which is close to the Rangoon-Mandalay railway/auto road that crosses the district. There are many plains (flatland) along the river up to the bottom of the hills. The hills and streams go up to the high mountain of Nattaung range. On the peak of Nattaung many Karen fought with the British against the Japanese attack in the Second World War. The watershed of Htee Wah Kee, next to Nattaung, is the best indigenous forest in Toungoo district. Total areas involved: central and southern Toungoo district (more than 20 villages visited)

Habitat types: Tropical Wet Evergreen forest in mountainous regions, and Mixed Deciduous forest in the lowlands.

Wildlife present: Wild pig, deer, 2 species of monkey, gibbon, bear, rabbit, wildcats, and some tiger. Large birds such as hornbill and peacock, wild chicken, parrot, and other bird species

1. The status of the rain forest

There are two types of monsoon forest in Toungoo district, mixed deciduous forest (*Kawbway Ko*) and tropical wet evergreen (*K'ner Ko*).

Mixed deciduous forest is located in the west of Toungoo district, starting from the flat area of the Sittang River (*Perrenlohklo*) bank and going half-way up the mountainsides. In this forest teak, ironwood (*Xylia dolabriformis*), *Klaw Klay*, *Ter* tree, and some other species from the Dipterocarp family grow.

Tropical wet evergreen forest is located in an area from the middle of the mountainsides into the high mountains such as *Thawthi Koe* (Nattaung) and *Pworghaw Koe* in the east of Toungoo district, next to Karenni State. This forest area is colder than the mixed deciduous forest and is misty in the rainy and cold season. Trees like teak, ironwood, *Klaw Klay*, and *Ter* do not grow in this area. Durian, a kind of fruit tree, divides the mixed deciduous forest from the tropical wet evergreen forest. Durian trees cannot produce fruit if it is either too hot or too cold, but is well adjusted to weather conditions on the warm border of the two forest types.

Reserved forest areas are found in some parts of the mixed deciduous forest, from the small hills down to the flat areas near the Sittang River. The use of the natural resources in this forest is under control of either the KNU or the SPDC. According to a KNU commander, there are nine reserved forests in Toungoo

district: Matindein, Chaungmange, Pyochaung and Tonbo (in Tantibin Township), and Pade, Karenchaung, Gwethe, Mehaw and Thandaung (in Thandaung Township).

Unreserved forest area, which includes regular rotational farmlands, integrated orchards and indigenous forests (old growth forest), are supposed to be the villagers' agricultural land but in reality is also controlled by the political groups. SPDC troops have seized the villagers' land for building their camps like Beryinaw military camp in Thandaung Township. Unreserved forest is found in some parts of all three forest types, from the hillsides to the top of the mountains.

In 2000, commercial logging was stopped in all reserved forests except for Mehaw because of the deforestation. In 2000, the local Lintho area of Thandaung Township KNU troops signed a cease-fire with the SPDC. Now this cease-fire group does logging in Mehaw reserved forest and sells the logs to the SPDC timber product enterprise (MTE).

In reserved forests few trees are left, and are still continuously cut for trade, building materials, and firewood. Unofficial logging with bullock carts still persists in reserved forests. Today, some areas of reserved forest have become flat farmland and temporary cash crop and fruit tree gardens.

In 2002-2003 commercial logging moved to unreserved forest areas. For example, a commercial logging area not very far from Paletwa SPDC camp is in the unreserved forest of Thandaung Township. The SPDC has ordered to clear-cut this area because a dam will be constructed on the Thaukyegat (Dayloh) stream just upriver of the Paletwa SPDC camp.

Some areas of unreserved forest are degraded and destroyed because the farmers cannot practice their traditional rotational fanning and were forced to practice shifting cultivation because of the initiation of the "Four Cuts policy" in 1975. In Tantibin Township, fanners who have been practicing shifting cultivation have cleared 38,823 acres of the old growth forest (Agriculture Census, 2001). The yield from this forest is only about five baskets of rice for each acre. In contrast, a good shifting cultivation plot will yield ten to twenty baskets of rice on one acre of land.

Additionally, SPDC troops burn the bushes around their camp and along their road of *Kawthinder-Busharkee* every year, at least three times a year. Because of the fires, eggs and habitats of fowl species are destroyed, small plants and seedlings die, and orchards of forced relocated people in many villages are destroyed.

Political conflict has caused forced displacement, which contributes to the degradation of the forests in Toungoo. It is estimated that due to the logging and the non-traditional shifting cultivation of IDPs, only around 25% of the unreserved forest areas and 5% of the reserved forests remain in Toungoo district. "In the hot season of 2003, 3,000 bullock carts of farmers who are not local people of Tantibin township collected about 12,000 living trees for fuel (firewood and charcoal) and shelter (timber, post and furniture)" estimated a KNU local forester who gave bullock cart passes for people collecting firewood. But a local villager in Aung Myin Ywa SPDC concentration camp said that some urban people and a few local people do not only collect wood for their household needs. They also collect wood to sell to the sawmill.

The land of local people and the habitats of local species have been destroyed by the civil war and the logging. One hundred years ago, there were numerous types of animals in the reserved forest of Tantibin Township. For example, wild elephants, several pairs of hornbills, gibbons (*Teryupwa*), peacocks, the rhinoceros, gaurs and some tigers lived in the reserved forest according to an interview with the elder people in one of the villages. The fact that the forest contained these animals indicates that once the forest was rich and healthy. But now there are hardly any of these animals to be seen in the reserved forest except for the peacock. The wildlife habitats are gone because of forest destruction. Peacocks are becoming a rare and endangered species too. As the SPDC policies and landmines threaten IDPs' traditional livelihoods, IDPs' agricultural practices and logging make the peacock live in fear.

2. Importance of the rainforest for local communities

Traditionally, the local people divide the forest into land for integrated orchard gardens, land for rotational farming, land for the collection of timber and non-timber forest products, grazing land for the animals, flat paddy farmland, and the land of old growth forest. Farmers and gardeners have relied on the forest for generations. They could not survive without the forest because the forest provides them with fuel, food, herbs, fodder, and shelter. Indirectly, forests maintain the quality of water in the wells, and keep the streams flowing fresh and cool. It

keeps the weather balanced so the fanners get good crops. There are three main sources of livelihood for the people in Toungoo district: flat paddy fanning, traditional rotational fanning and integrated orchard gardening. Local people traditionally conserved the forest through these three main livelihoods. People in Tantibin Township of Toungoo district know very well how to survive in the forest and how to use the forest sustainably. Flat paddy farmers do farm-



Stockpile

ing in the flat areas and they need the water from the streams and good weather conditions. In the hot season, they collect enough fuel for the whole year for cooking and making fire. Some of them collect the wood/bamboo for making or repairing their shelters, buildings or furniture. Many of them collect supplementary foods, herbs, and *Ter* leaves (leaves for making roofs) from the forest. Many poor people make an income by the sale of *Ter* leaves in the hot season.

Traditional rotational farmers do farming on the mountainside of forest areas. The products from rotational farming depend on weather conditions and whether there is enough time to let the plots lay fallow for at least seven years. They don't cut all the forests on the mountain. Traditionally, some forest areas such as the forest in the high mountains and cool and wet areas, the forest in the rocky valleys, and the forest near the village watersheds are kept intact. Mountain ridge is traditionally left and is believed to be used as passageways for the spirits. Old growth trees grow in these forest areas and many different kinds of animal species live there. Local people collect NTFPs such as seasonal food, herbs and honey in these forests. It makes life easier if one can get supplementary food from the old growth forests.

Most of the rotational farmers in Tantibin district make their houses and roofs with bamboo. They make basketry or household materials from bamboo and cane. Women collect sticky liquid from trees to dye their woven cloth. Farmers usually make bamboo traps around their farms. They mostly collect dead wood in the rotational farm for fuel. They do not do any logging in the forest.

Integrated orchard gardeners establish their gardens in the valley along the streams. They don't need to destroy the forest to make the garden. They clear some small trees and plants and they replant the terrain with local species of fruit trees. Every hot season, they have to irrigate the garden so water in the streams is very important for the orchards, especially for gardens with betel nut and durian trees. The shade of big trees is very important to protect baby plants from the sun in the hot season. Wild banana trees are important to maintain the water in gardens. The gardeners plant many different kinds of fruit trees. They don't clear all the wild plants and trees in the garden. They let

them grow up with the fruit trees and they let the betel pepper vine (its leaves are eaten with betel nut) climb up around the trees. Betel nut trees, betel nut leaves, mangosteen, durian, cardamom and coffee are fruit trees grown for income generation. The money generated on the market is used to buy rice and household necessities. Gardeners also collect supplementary food in the forest and use bamboo and wood like the rotational farmers.

All of the farmers and gardeners are totally dependent on the forest because it provides them with shelter, food, and medicine. Bamboo and wood provides building materials, household materials and fuel. The people use the bamboo shoots for food and some trees provide traditional medicine. The forest maintains the weather conditions and water supply necessary for rotational farmers, flat farmers and orchard gardeners.

3. Social and ecological impacts of deforestation on environment and local communities

Deforestation in Toungoo district has serious impacts on the people and the environment. It affects the local people's livelihoods both directly and indirectly. They are directly affected by the disappearance of non-timber forest products used as food and to obtain income. They are also indirectly affected by water shortages caused by deforestation. For example, in the Tantibin Township deforestation has affected the local people's livelihoods as well as the local environment. Because of the destruction of the forest, it is very difficult for the local villagers to obtain building materials. One of the villagers in the Aung Myin Ywa SPDC concentration camp said: "I needed to build a house, so I went to ask permission from the KNU leader. I had permission to cut wood, but I didn't find any that was good enough to make house posts." In the hot season of 2003, a KESAN researcher saw the villagers in Shansinboe village cut the *Ko Ka* trees, which are trees planted since at least before their grandparents, which give shade in the village. Now they are being used to make house posts and are used for timber. Today, only the few local villagers who have money to buy timber on the market are able to build houses.

Fifty years ago, Yinsha village was close to the reserve forest and it was easy to collect firewood. At that time most people collected dead wood rather than living wood to use as firewood. But now most people collect greenwood for firewood. Today, the

villagers who don't have bullock carts face the big problem of having to travel greater distances to collect firewood, at least a mile; this takes up a lot of time. Since the forests are being destroyed, villagers have to go very early in the morning to collect firewood. It gets too hot to collect the firewood in midday and afternoon, and then they aren't able to carry the wood. "I don't have a bullock cart, so it takes me half a day to collect firewood. Some days I can not go to be hired for daily work to earn rice for my family", said a widower from the flatlands.



Women collecting palm leaves for income and for building roofs

Ter leaves play an important part in the livelihood of local people in the plains during the hot season. During the summer, *Ter* leaves are collected for trade or used to build roofs. However, official logging before 2000 has destroyed many *Ter* trees in the forest. Also since about 2000, the urban poor people have been cutting *Ter* trees for making bean gardens and building shelters. A relocated villager said: "When I saw urban people from Tantibin town cut the *Ter* forest for bean gardens and shelter, I felt very disappointed. Every year loggers burn the forest and the fire burns all *Ter* leaves, so I get less *Ter* leaves." With many *Ter* trees being destroyed, it has affected the local people's livelihood.

Impacts on Women

Women especially face the difficulty of making a living after the destruction of the forest. The daily work of women involves childcare, cooking, cleaning the house, gardening, feeding the animals, and collecting water, firewood, *Ter* leaves and food (bamboo shoots, mushroom, cane, small fish, crabs, and shrimps). Women are more in touch with the forest than men because of these daily activities. It is women that have to collect firewood. "Now it takes us half a day for me to collect firewood and it is at least one mile away from my village to the reserved forest. It takes more time for me to collect firewood so I don't have enough time to do other work to make money to feed my children," said a woman in the concentration camp Aung Myin Ywa. Many poor women have a problem in collecting *Ter* leaves because urban poor have practiced slash and burn to make cash crop gardens in the reserved forest. It is hard for them to collect the *Ter* leaves to use for roofing and to make a small income for their family.

"I collect *Ter* and I sell 100 *Ter* leaves, shingle and thatch, for 700 Kyat. Sometimes I exchange them for rice and fish paste. But because people do slash and burn to the forests, I am very upset because it is very hard for me to collect *Ter* leaves and make my living" said a displaced woman in Shansiboe village. The daily collection of food has also become increasingly difficult. "In the past when I went fishing I caught small fish, shrimps, and crabs enough for one or two meals. Today when I go fishing, I get only decayed tree leaves" said a woman of *Wahloh* village in Tantibin Township.

A villager in Malagoon said that after 1995 the water level of his well has obviously lowered and it nearly becomes dry in the hot season. In the flat area of Tantibin Township the quality of water from the wells has declined. This means that it takes more time for the women to collect water. After the logging started, the water in the wells lowered every season. The villagers dug the wells deeper but the water did not come up higher. Before 1975, the water in the well was high but now there is just barely enough water to use. They cannot use it to create vegetable gardens and use for their animals. Some wells are nearly dried up. Poor villagers who use one well for four or five families have to wait until the water level rises again. Elder people in this area said that big trees give shelter and absorb the water. Since the big trees were cut down it is too hot and the streams are drying up, as well as the water in the wells. Many villagers asked KESAN to give them advice on how to get back more water in their wells. Some local villagers have their integrated orchards or betel nut gardens along the streams. The fruit trees rely on the water of the stream. Logging leads to the drying-up of streams and some gardens are destroyed. When people do logging with elephants, buffaloes or cows, they pull the logs along the streams and destroy the small fruit trees in the vil-

lagers' garden. The villagers in *Soiloh* (Lunbu) said that because loggers pull the logs through their gardens, they couldn't replant the nursery trees. The elephants destroy the betel nut gardens. Also when the people who log with buffaloes and cows cannot find any more big trees, they cut down the trees in the villagers' gardens. Villagers keep some big trees around the garden for shelter for the small fruit trees and to use for building a house whenever they need them. There is no security for the villagers' gardens. The loggers come and take their betel plants and take their fruit in their gardens. "Since the logging, I could not afford to plant the betel pepper vine", said an elder person in *Htee Loh* village.

Furthermore, villagers said that theft occurs where there is logging. Some villagers reported that they lost their properties, which they left in the huts in their gardens and in the farms.

The drying up of streams because of the logging meant that villagers could not water their gardens in the hot season and their baby fruit trees died. "Half of my betel nut garden was destroyed in 2000.) couldn't survive with my garden so I took a job as an elephant worker" said a villager in *Soiloh* village. The villagers have to change their lifestyle and become elephant workers or do small-scale mining in the rivers.

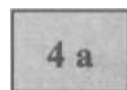


Sugarcane mono-plantation

Deforestation also means less flowers and fruits. One woman in *Peh Taw Day* village (reserved forest) said that people from outside come to collect firewood even from fairy trees that Karen people are afraid of and respect. There are less of these trees that produce fruit for the birds. Animals are disappearing, not because they are hunted excessively, but because they have less food and shelter due to the logging.

4 Main factors that threaten the practice of traditional forest conservation

Logging and civil war are the main, interrelated factors that threaten the practice of traditional forest conservation.



Logging

Logging started under British rule and continued under independence, but wasn't as destructive as it is now. The KNU commander of Toungoo district said: "Before 1975, the KNU controlled all the reserve forests of Toungoo district, Karen Slate. Since 1975-76, when the Burmese government initiated the 'Four Cuts policy' in Toungoo district, we lost control over the reserve forest." Logging destroyed some parts of the reserve forests, which are in the fiat areas, and near the car road. Logging which began in 1962 has since destroyed the lower part of the forest of Tantibin Township. In 1988, the SLORC

gave out logging licenses to citizens of Toungoo district. Many rich people/elephant owners applied for logging licenses. For example, Saw Pwe Lah's son got a license from SLORC. To practice logging officially and without disturbance, he also went to get permission from the KNU. After he had permission from both sides, he made a truck road into the Chaungmange reserve forest that is close to Metindein reserve forest, in 1991. He had to transport the teak trees to SLORC

stockpiles for free and had to pay SLORC 2000 Kyat for one ton of wood. He also paid the KNU 1000 Kyat for one ton of wood. During one year (1991-1992), he sold 2000 tons of wood privately. After one year, the SLORC changed his logging license and he was ordered to sell only to MTE which paid him less. He did logging in Chaungmange forest and later he moved to Metindein forest. From 1992 to 1997, he produced another 6000 tons for SLORC. Other elephant owners such as Aung Htun, Mae K'taw, Kwa Po, Po Ton, Thawkyia, Paya, and Pado-

hko, continued to practice logging in Chaungmange and Metindein reserved forests until 2000. One elephant owner said that if you did logging officially, you had to pay many groups which cut deeply into your profits, "When I had a logging license, I paid SLORC 2000 Kyat, KNU 1000 Kyat, woodcutters 200 Kyat, elephant workers 700 Kyat, road makers 600 Kyat, crane drivers 500 Kyat, and truck drivers 2000 Kyat per one ton of wood. A total cost of about 7,000 Kyat. I sold one ton of Group One (high grade) wood for 8000 Kyat, and I made 1000 Kyat profits for one ton of wood. But when the SPDC took back the logging license. I paid less to the workers and the KNU so the total cost was 3500 Kyat. But the government pays me only 4000 Kyat. So I make only 500 Kyat per one ton of Group One wood. The SLORC sells the wood to Singapore \$300 US dollars per ton."

After 2000, good trees became rare and could only be found in hard to reach places. All elephant owners stopped logging. But since then people from villages close to the cities have practiced unauthorized logging of the remaining trees. They use buffaloes and cattle to pull down the logs from the mountain-side into the flat area, and then they use bullock carts to carry the logs to the sawmill or to their village. Normally, local farmers are allowed by the KNU to collect fuel and timber in the hot season for their shelters. Most of the farmers collect wood for their private needs but a lot of urban people also collect wood for commercial purposes. The KNU local forester of Tantibin Township, who gives out bullock cart passes, said that about 3000 bullock carts collected wood in the forest of Tantibin Township in 2003. He estimated that nine thousand big trees would be cut down if one bullock cart didn't take more than three living trees. Trees are cut every year so the forests can not recover, and the condition of the forest become very poor. Both official logging and unofficial logging overexploit the forests leading to major deforestation. One of the villagers in the *Htaw Ma Aye* concentration camp said that some villagers collect wood and they send it to Nat Ywa sawmill, Peryahwya saw mill, and Zeryasgyi sawmill. Some people make firewood or charcoal and they sell it in the city. The bigger trees in the forest are disappearing quickly because of the people collecting wood to sell. Every hot season trees are chopped down and the forests are burned so the small wood can not recover in the forest. Some urban people come and cut *Ter* trees for short-term vegetable gardens.

Conflicts have risen between loggers and local villagers. One of the elephant masters said that at first the villagers didn't allow him to make a truck road that crossed their orchards. He went to consult with



Women weaving palm for building roofs for income

the headman and paid compensation. But the villagers couldn't survive without their gardens. "Elephants of the loggers destroyed my orchard gardens", said Saw Cigray in *Soiloh* village. The elephants ate and destroyed the fruit trees and plants in me gardens. Moreover loggers pulled the logs over the baby fruit trees so the villager's gardens were destroyed. Some loggers stole the villagers' fruit trees, betel nut and betel pepper vine. They also cut down the wood that the villagers keep in the garden to shade their gardens.

When unauthorized logging started with bullock carts, loggers burned the rotational farms of the villagers in *Soiloh*. For example two loggers burned Naw Ku Ku Paw's rotational farm in the afternoon of March 18, 2003. She has to clear another plot in the forest to get enough rice for next year. It wastes her energy.

4 b

Civil war

Logging and political conflict are interrelated in this area. Almost all villagers in Toungoo district were forcibly relocated to the military camps many times from 1975 to 2003. 52 villages of Tantibin Township have been forcibly relocated to the SPDC concentration camps near the military camps. "In 2000, my village was burned by the SPDC army Light Infantry Battalion 39 and we were forced to move thirteen miles to a concentration camp near the SPDC

army camp" said a villager in *Soiloh*. Villagers in the concentration camp are restricted in their movements by the SPDC and cannot come back to work in their garden. The villagers have to abandon their villages, their orchard gardens, and their rotational farming areas. Some of them follow the orders and go to the concentration camps, but some of them hide in the deep forest. Both the relocated people and displaced people cannot practice their traditional livelihoods anymore. Most of them became shifting cultivators, but some of them became casual labourers in logging or mining. They are afraid to return to work in their villages because SPDC troops will shoot them on sight.



KESAN forestry campaign

In the concentration camps, villagers have to do forced labor. For example, the SPDC ordered around one hundred villagers of *Klerlah* village to clean the bushes along the dusty truck road in the frontline from *Kawthinder* to *Buhsar Kee*. A thirteen-year-old boy in *Mawpader* village said; "I have to carry my own food to go clean the SPDC *Kler La-Mokchie* truck road. I am very afraid of the landmines because I heard that some porters were injured and died because of the landmines."

In March 2003, the SPDC built a new camp near *Kerserdoh* village. The SPDC troops demanded food, made villagers from *Kerserdoh*, *Hteeloh*, *Yinsha*, *Shansiboe*, *Zeepyugoon*, and *Tawgon* do forced labor, and tortured some villagers. Moreover, villagers in the concentration camp also have to pay porter fees and have to pay for security at night. One villager said "I have to pay 100 Kyat per month for nighttime security." Another villager stated; "I have to pay 500 Kyat per month to the SPDC for porter fees." One of the villagers in *Soiloh* said that before his village was burned he had to pay 2,500-5000 Kyat per month to the SPDC for porter fees. Flat

paddy farmers have to sell their rice, 12 basket of rice per 1 acre. The SPDC pays the villagers only 300 Kyat per basket, while the market price is 1500 Kyat. For this reason, many farmers don't have enough rice to survive and have to do logging to get extra money,

The SPDC also sets a curfew for the villagers and limits the time they can spend outside the camp. "I have to pay 100 Kyat per month for a pass to work outside" said a villager in *Soiloh* who is now staying in a concentration camp. Food in the concentration camps is scarce. Some become casual labourers; others practice shifting cultivation or set up short term vegetable gardens. Curfew, forced labor, requisitioning of food and supplies, unofficial taxes, torture, and extra judicial killing makes the villagers stay in fear and has changed the villagers' traditional livelihoods.

ing of food and supplies, unofficial taxes, torture, and extra judicial killing makes the villagers stay in fear and has changed the villagers' traditional livelihoods.

Many internally displaced people have fled into the deep forest on the mountains of *Tantibin Township*. These internally displaced people have practiced shifting cultivation since 1975, so a lot of old growth forests have been destroyed. Since 1992, to now, the villagers of 25 villages near the *Kawthinder-Buhsarkee* road were ordered to move to the concentration camp at *Kawthinder*.

Most of them were afraid to go because they had seen and heard about

bad experiences in the concentration camps done by SPDC soldiers. They preferred to flee into the deep forest. There are now six thousand LDP's in the deep jungle of *Toungoo* district who degrade the old growth forest by shifting cultivation more and more every year (Estimate of the Federation of Trade Unions of *Kaw Thoo Lei* (FTUK)). But, even though they destroy the forest, a villager of *Seidowko* reflects that they "do not get good crops from their farms because there are many kinds of pests in the old growth forest that destroy the crops".

Another problem is the landmines that SPDC as well as KNU troops lay in the forests near abandoned villages. This upholds many villagers to return to their farms and gardens in their own village.

In the hot season, the SPDC burns the terrain along their roads for security at least three times during the season. The fire spreads to the forest and destroys orchards and rotational farms near the truck road areas. Some villagers in *Playhsarloh* said that when the SPDC set up a camp near their village, they burned the bushes around the camp and the fire spread through the forest. The fire burned the topsoil

of the forest and burned their orchard gardens. Moreover, the villagers noticed that erosion of the stream occurred in the rainy season after the burnings. The fires also destroy many bird nests.

Many villagers of Toungoo district have faced confiscation of their land. The SPDC has confiscated land for mono-plantations, for building their camps, and for construction of a dam. Land confiscation destroys local people's traditional livelihoods and forces many people to become daily workers. According to KESAN interviews, every year the livelihoods of people in the reserve forests are getting harder and harder since logging has destroyed the forests, and the villagers' lands have been confiscated for mono-plantations by the military government.

In Tonbo reserve forest of Toungoo district, the military government gave out logging concessions. After the logging the villagers in the forest created orchard gardens. Later the military government confiscated the gardens and planted teak and other mono-plantations.

Many villagers lost their farmland with the building of SPDC military camps in Beryinaw, near Thandaung Gyi town, and *Kawthinder*. The SPDC also seized land for building dams. When the SPDC built the Perthi dam from 1993-97, two villages were relocated and their land was destroyed. "After the SPDC seized my land. I became a daily worker and I got 250 Kyat a day. I didn't get enough money to feed my family. Rural development projects that are done by the SPDC also include land confiscation so many people are afraid of these projects. Every year, my livelihood is harder to obtain, so in 2000 I went to be a logger at Merhamyen, Moywa Township. But timber fell on my shoulder, and I had to go to the nearby hospital" said a villager in Tonbo reserve forest. Currently the SPDC plans to build a new dam on Thaukyegat stream above Paletwa SPDC camp. The dam area is now in process of being cleared. If the dam is constructed, six villages will lose their gardens and the villagers are very worried.

5. People's concerns and possible solutions

A youth leader from Tantibin Township said that if they wait until Burma gets democracy and the military government changes, the forests will be gone and there will be no forest for the coming generations. He recognized that something needs to be

done now to save the forests.

The villagers said that they need empowerment from political groups to conserve their forest. One of the elder people in *Playhsarloh* who participated in the forest campaign recommended that "What the KESAN trainer talked about forest conservation is fit to our community and the young people in my village need to learn about this issue." Another person in Klerlah village said: "*Thulei Kawwei* magazine [published by KESAN] reminds us how the elder people used the forest with care.

It is very useful for the young people to read this to get more knowledge for a positive way of living in harmony with the environment. In Burma the SPDC government censors outside information."

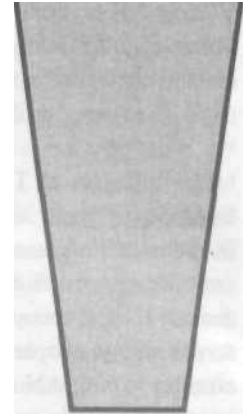
KESAN held an environmental workshop in Tantibin Township. The participants in this workshop said that the environmental knowledge and forest conservation ideas are not new knowledge. "The elder people practice this knowledge and the workshop reminded us of this knowledge." Some participants said that in the current situation, they couldn't replant trees in the forest, but each family could plant one or two trees in their garden to use for firewood, "In the forest, we need to stop logging and take the wood that is just enough for our household needs. We need to protect our forest from fire, so more trees can grow up and more animals will come back to the forest."

According to all interviews, local people want to practice their traditional livelihood peacefully. They can not suffer the oppression and discrimination by the military government anymore. Many people hope that a democratic government will come to Burma soon. A Karen civilian in Tantibin Township of Toungoo district, who was accused and tortured by SPDC soldiers in March 2003, expressed that "I am not the only person that the SPDC tortured. Many Karen civilians faced the brutal abuses from SPDC soldiers. As we are Karen civilians the SPDC always accuses and abuses us. We cannot suffer this anymore. We hope the dictatorship of Burma will step down. We need a democratic government very soon." If the civil war in Burma ended, the villagers would be able to practice their traditional livelihoods and the forest will come back again because there will be no fear in people's lives

Chapter 5

Conclusions and Recommendations

By KESAN



In conducting this preliminary research KESAN sought out to find the people's perspective on forest issues. Not only finding the status of Karen State's rainforests, but also determining the local peoples' main concerns and their ideas for possible alternatives to resource management.

Throughout the three districts that the research has covered, it has been found that the forests are disappearing at an alarming rate, leaving the majority of both the reserved and unreserved forests bare. Local communities are witnesses to a huge decline in fauna and flora in their forest areas. Water levels are decreasing and the small streams are drying up. The local climate has changed with a significant rise in local temperature.

The ongoing civil war, commercial logging (both official and unofficial), uncontrollable migration and encroachment of the non-local poor into the forestland, routine setting of forest fires by the SPDC, charcoal production, and land confiscation by the SPDC to use for commercial mono-plantations, their military camps and to develop infrastructure (i.e. dams), are undeniably the main factors to blame.

These factors are not only destroying the rainforests but also creating environmental and social problems that are completely ruining and eroding the traditional livelihood system of the local people. Farmers are forced to abandon their land, becoming daily labourers; many for the logging businesses. Their income is sporadic and provides so little wages that they can barely feed their family. Many youth are leaving to seek jobs in the cities and in Thailand, becoming exposed to problems such as drugs and human trafficking.

These changes in the socio-economic structures of the local communities have had great affect on the traditional forest conservation practices of the Karen people. Once a system which purpose was to maintain the lives of the forests and its dwellers has now

become greatly disrupted and abused. More and more people are disregarding their traditional knowledge in forest conservation; most have little choice. Traditional knowledge is increasingly becoming difficult to pass on from the elders to the younger generations.

Despite all these problems, all is not lost. The research has gained some light of hope from the local people. The communities are aware of the problems and want to try and protect their forests. They already have environmental knowledge and know about sustainable forest conservation. They have traditional forest management systems with designated protected, cultivated, communal, and religious forests, and despite difficulties some farmers can still practice sustainable traditional methods.

The communities are willing to restore their forest management practices and have been asking for the recognition and respect of their rights. "If they [leaders] wait until Burma gets democracy and the military government changes, the forests will be gone and there will be no forest for the coming generations." They recognize that action must be taken now, and that it cannot wait until the political situation is stable.

In some villages they plan to mark out a separate area for their community and revive the traditional forest management system. "For 3 months each year there will be an open period in which the forest can be used by villagers, but only for basic necessities, not for commercial purpose". "In the current situation, we couldn't replant trees, but each family could plant one or two trees in their garden to use for firewood". "In our forest, we need to stop logging and take the wood that is just enough for our household needs. We need to protect our forest from fire, so more trees can grow up and more animals will come back to the forest".

These small-scale environmental initiatives by the local people are essential for successful changes in forestry management practices.

Local community empowerment is very important. Campaigning and activities which KESAN has done in these communities, has proven to have sparked an interest with the local people, raising awareness about the importance of the environment, their forests and the need to manage forests sustainably. "What the KESAN trainer talked about forest conservation is fit to our community and the young people in my village need to learn about this issue".

"*Thulei Kawwei* magazine [published by KESAN] reminds us how the elder people used the forest with care. It is very useful for the young people to read this to get more knowledge of positive living in harmony with the environment. In Burma the SPDC censors outside information".

Karen forests are rich in biodiversity and it is important that they are conserved and utilised sustainably. Prevention of cultural and biological erosion is essential and the revitalization and restoration of the traditional forest conservation system is the beginning of an end to the destruction of the remaining forests. "If war and logging still continue, we Karen people will disappear. We need a person who will take responsibility in solving the political problems and conserve the environment".

Recommendations

- * Campaigning and awareness raising using materials such as environmental magazine, workshops, and seminars, to inform the local communities about environmental issues and allow them to express their ideas through this forum.
- * People empowerment: small scale, local development and training.
- * Small-scale environment initiatives run by local people are an important, good beginning for successful forest management. The use of local knowledge and traditional practices in sustainable management is essential.
- * Leaders and policy holders are needed, who are knowledgeable about forest management and are sensitive to the local people's needs and practices.
- * SPDC, cease-fire or non cease-fire groups need to recognize and respect local customary rights, land rights and common property

rights in the context of forest use, management, and conservation.

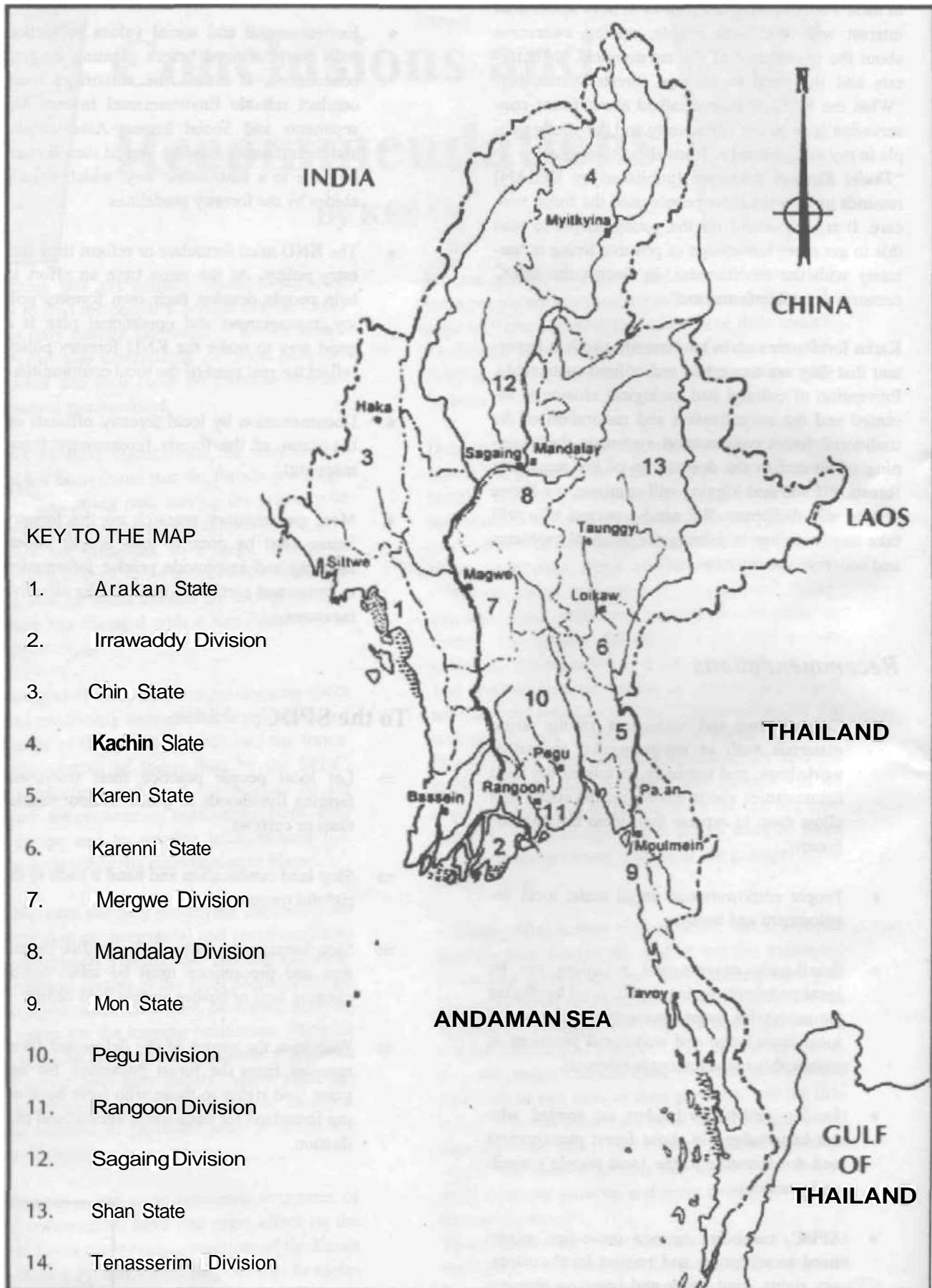
- * Environmental and social values protection must be prioritized before granting logging concessions. It means the authorities must conduct reliable Environmental Impact Assessments and Social Impact Assessments, and then if areas must be logged then it must be done in a sustainable way, which strictly abides by the forestry guidelines.
- * The KNU must formulate or reform their forestry policy. At the same time an effort to help people develop their own forestry policy, management and operational plan is a good way to make the KNU forestry policy reflect the real need of the local communities,
- * Documentation by local forestry officials on the status of the forests (community forest mapping).
- * More participatory research on the forestry issues must be done to gain deeper understanding and to provide precise information to concerned parties in order to take effective measures.

To the SPDC:

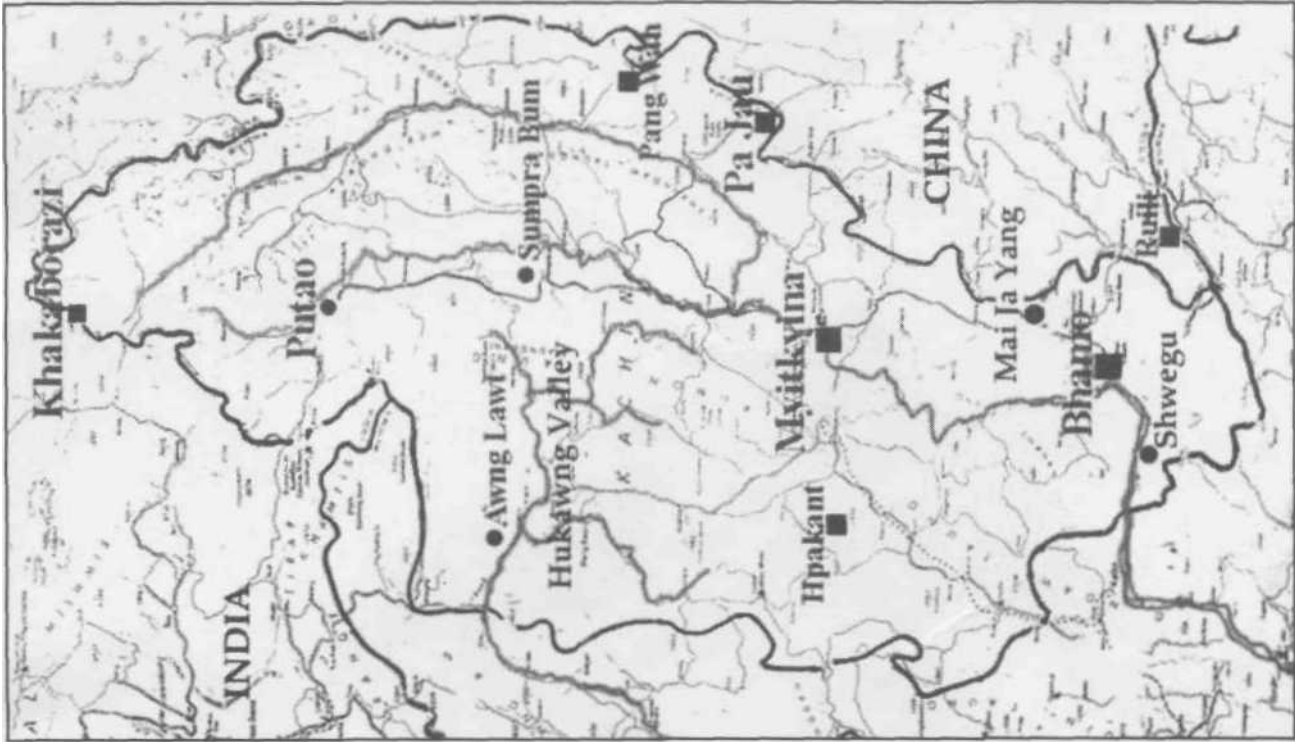
- * Let local people practice their traditional farming livelihoods in peace without restrictions or curfews.
- * Stop land confiscation and hand it back to the rightful owners.
- * Stop burning the forest or forest fire protection and precautions must be taken before clearing land or bushes around their camps,
- * Withdraw the names of the deforested forest reserves from the forest protection list and grant land rights to those who have been using forestland for sustainable agricultural production.



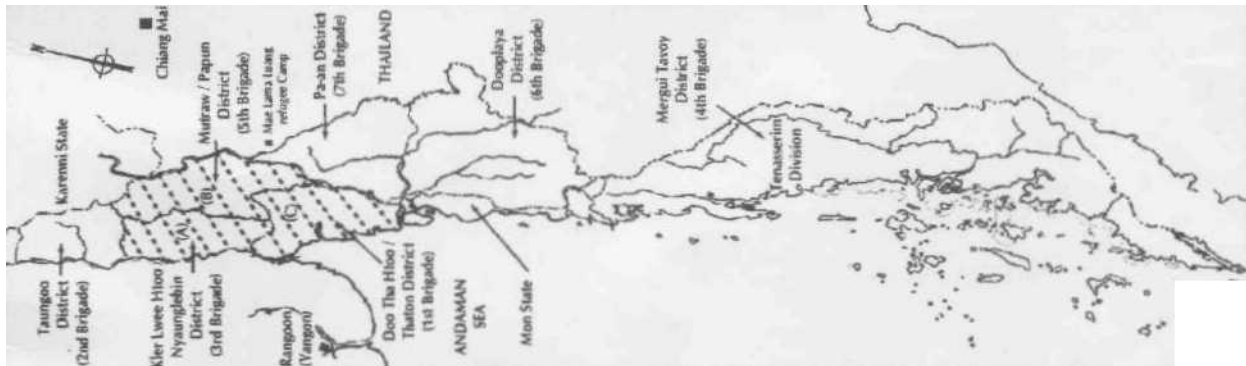
Burma / Myanmar: National State & Division Boundaries

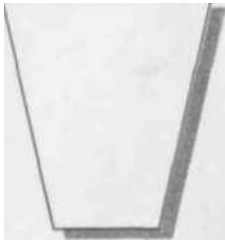


Map of Kachin State



Map of Karen State





Abbreviations

BSPP	Burma Socialist Programme Party
CPB	Communist Party of Burma
CRPP	Committee Representing People's Parliament
DAB	Democratic Alliance of Burma
DKBA	Democratic Karen Buddhist Army
IDP	Internally Displaced Person
KDA	Kachin Defence Army
KIA	Kachin Independence Army
KIO	Kachin Independence Organization
KNLA	Karen National Liberation Army
KMT	KuoMinTang
KNPP	Karenni National Progressive Party
KNU	Karen National Union
LIB	Light Infantry Battalion
MNDAA	Myanmar National Democratic Alliance Army
MTA	Mong Tai Army
MTE	Myanmar Timber Enterprise
NDAA	National Democratic Alliance Army
NDA-K	New Democratic Army - Kachin
NDF	National Democratic Front
NDL	National League for Democracy
NMSP	New Mon State Party
NTFP	Non-Timber Forest Products
SLORC	State Law and Order Restoration Council
SPDC	State Peace and Development Council
SSA	Shan State Army
UWSA	United Wa State Army

PKDS Pan Kachin Development Society

KESAN Karen Environmental and Social Action Network

