

STRUCTURAL ANALYSIS
OF
DEFORESTATION IN CAMBODIA
(with a focus on Ratanakiri Province, Northeast Cambodia)

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List of Abbreviations

ADB	Asian Development Bank
ARD	Associates in Rural Development (Consultancy)
CG	Consultative Group
DAI	Development Alternatives Inc (Consultants)
DF&W	Department of Forestry and Wildlife
EU	European Union
FAO	Food and Agriculture Organisation
ICCPR	International Covenant of Civil and Political Rights
IDRC	International Development Research Centre of Canada
ILO	International Labour Organisation
IMF	International Monetary Fund
INGO	International Non-Governmental Organisation
IO	International Organisation
MAFF	Ministry of Agriculture, Forestry and Fisheries

MoE	Ministry of Environment
NGO	Non-Governmental Organisation
NTFP	Non-Timber Forest Products
PRDC	Provincial Rural Development Committee
RCAF	Royal Cambodian Armed Forces
RGC	Royal Government of Cambodia
SNC	Supreme National Council
UNDP	United Nations Development Programme
UNHCHR	United Nations High Commission for Human Rights
UNTAC	United Nations Transitional Authority in Cambodia

Executive Summary

Cambodian forests have long provided village people with materials for construction, fuel, medicine, and food, and have served as a place of refuge in times of unrest. The forests provide important biodiversity and ecological functions. The Tonle Sap lake and the Mekong river, which are both central to the Cambodian economy and to the livelihoods of many Cambodians, are dependent upon the surrounding forest cover. Timber is also Cambodia's most valuable resource in economic terms and can provide government coffers with annual revenue. The forests are also the most easily exploitable natural resource. This fact is demonstrated by the dramatic decrease in forest cover in Cambodia over the last thirty years. It is estimated that forest cover has decreased from 73% in 1969 to 58% in 1997. Some observers put this latter figure as low as 30-35%. Much of this deforestation has occurred during the 1990s, with a sharp acceleration in loss after 1992 and Cambodia's entry into the global market. It is predicted that if the rate of deforestation continues, Cambodia's forests may be commercially logged out by 2003.

Deforestation in Cambodia is a political issue. In recent years forest resources have been devastated by war, corruption, political rivalry, and military control, encouraged by the demand of neighbouring countries. Timber revenue funded both sides in the prolonged civil war between the Khmer Rouge and the Phnom Penh government. Cambodian political, military and business elites have privately benefited from the sale of these state resources. It is a major concern of international donors that only a small fraction of logging revenue reaches the legal economic system.

Jurisdiction over forests is assigned to the central state authorities who may delegate to provincial authorities. In the past the central authorities have shown little capacity for actually managing the forests in a sustainable and productive way, and particularly in a way that benefits the local people. The state has attempted to justify the need for the centralised state administration, expropriation and exploitation of the forest lands, resulting in the alternative, much more damaging exploitation witnessed in the forests in recent years. Weaknesses that hamper the state include the lack of consistent forest policy or workable forest law, and the inability to enforce the law.

Local people have no legal, or extremely circumscribed, rights to forests. However, the local communities who rely on the forests for their subsistence needs are usually the first to feel the devastating impacts of deforestation. Logging has brought few employment opportunities to local communities, but numerous human rights abuses. It has led to problems in supporting rural livelihoods and it has frequently led to the alienation of people from lands, highlighting the lack of land security held by local communities. Such impacts have been particularly evident in Ratanakiri Province in the Northeast of Cambodia. A densely forested province sharing borders with Vietnam and Laos, Ratanakiri is largely inhabited by minority ethnic groups who rely on the forests to meet their subsistence needs. These groups are particularly vulnerable to damage from logging not only because of their reliance on the forests, but also due to their marginalisation from the dominant society and the central decision-making bodies.

From 1995 the campaign to prevent illegal logging and uncontrolled deforestation in Cambodia has begun to unfold with increasing commitment from the Royal Government of Cambodia in partnership with the international community. Forestry reform has become a condition of aid, and reviews of the forestry sector have been carried out and recommendations made. Concrete measures to tackle the problems of deforestation are being undertaken by the government, international organisations and NGOs. However, as the case studies from Ratanakiri demonstrate, there is still a long way to go. The most important lesson that can be learnt from

the Cambodian experience is that good state management cannot simply replace bad state management. Local communities can, and must, play an essential role in all aspects of forest management.

SECTION ONE

THE CAUSES AND EFFECTS OF DEFORESTATION IN CAMBODIA

1.1 INTRODUCTION

Cambodia is a predominantly low-lying country that occupies the central plains of the lower Mekong valley, but is bordered on three sides by densely forested mountain ranges. Forests in Cambodia tend to be located around the periphery, in the highland areas as opposed to the lowland areas where paddy rice is the norm. Forests are among Cambodia's most important natural resources. In 1992 the Earth Summit report for Cambodia described the country's exceptional qualifications to develop as a 'green lung' of Southeast Asia. However, this optimistic viewpoint has been greatly challenged over the last decade. The rate of deforestation in Cambodia since 1992 has increased with alarming rapidity and at largely unsustainable levels with severe economic, social and ecological implications. Consultants have estimated that Cambodia's forest cover has fallen from 13.2 million ha (73%) in 1969 to 10.6 million ha (58%) in 1997, although some observers feel this latter figure to be an overestimation. The World Bank has estimated that if the current rate of deforestation continues, the forests of Cambodia will be commercially logged out by 2003.

1.1.1 Ratanakiri Province, Northeast Cambodia – an Overview

- *Ratanakiri Province borders Laos and Vietnam making it of particular interest in terms of trans-boundary biodiversity conservation, but also making it particularly vulnerable to the exploitation of forest resources by these neighbouring countries*
- *The Province boasts relatively high forest cover, although this is rapidly diminishing in area and quality*
- *The province is an important watershed area. The Sesan and the Srepok rivers flow from Vietnam through Ratanakiri and, together with the Segong river from Laos, contribute 15% of the delta flow of the Mekong river. Fisheries biodiversity and productivity is high, with over 200 species occurring naturally in Ratanakiri, and the two rivers are important spawning grounds for species migrating from the delta and the Tonle Sap lake*
- *The Province has a low population density of approximately 90,000 people. Seventy-five per cent of the population of Ratanakiri is made up of eight indigenous ethnic minority groups. Ratanakiri and Mondulakiri are the only two provinces where indigenous minorities are a majority. These indigenous groups form 1% of the total Cambodian population*
- *The indigenous highlanders are marginalised from the dominant decision making processes of Cambodia in terms of ethnicity, language, livelihood practices and geographic position. Literacy rates are less than 10% among highland men, and around 2-3% for women*

1.2 THE WEALTH OF FORESTS

- *In ecological and environmental terms the Cambodian forests are invaluable. They protect the soils, stabilise the watersheds, and regulate water flows and local weather systems. Cambodia is particularly dependent on its forest systems due to the unique hydrological systems of the Mekong River and the Tonle Sap lake. Both play a critical role in the economy and ecology of the country. The water systems provide spawning grounds for the fish populations, and nutrients and irrigation for the rice fields. Forest tracts themselves are often high in biodiversity, harbouring many endangered species including elephant, tiger, clouded leopard and Cambodia's national animal, the kouprey.*
- *Forests are central to Cambodia's reconstruction after years of civil war. They may be considered as one of the country's most valuable economic assets and can provide an important source of revenue for the government. In purely economic terms, the Forest Policy Reform project estimates that the maximum annual sustainable yield of Cambodian timber is 500,000m³, probably less. Based on the*

newly imposed royalty rate of US\$54 per m³, this could generate up to US\$27,000,000 per year, to which export and other taxes can be added. Cambodian forests also have the potential to attract international tourists, particularly in the Siem Reap area and in the Northeastern provinces of Stung Treng, Mondulakiri and Ratanakiri

- Forests in Cambodia have long offered rural Cambodians essential livelihood benefits, supplementing agricultural or fishing activities by providing construction materials, medicines, foods, and market goods. The harvesting of wood and non-wood products for these traditional purposes is widespread, and forests are part of the common property resources to which Cambodians have always had access
- Forests are also important in terms of the historical and cultural associations they hold for the Cambodian people. Cambodian Buddhism places great value on the forest as part of the natural order of existence. Among the highland people of the Northeast, local forests are central to their belief systems

1.2.1 Case Study – Forests and Local Livelihood Systems, Ratanakiri Province

Traditional resource management in Ratanakiri Province has been based on subsistence agriculture reliant on a relatively low population density and high availability of natural resources particularly forests. In general the highlanders are 95% self-sufficient from what they grow and collect from nature. Economic indicators that concentrate only on the 5% of the indigenous economy that reaches the cash economy will fail to give an accurate representation. Economic indicators must be based on the 95% subsistence production.

The livelihood system of the Ratanakiri highlanders may be divided into three components:

- *Land (swidden cultivation, also known by the derogatory term 'slash and burn')*
- *Forest (collection of non-timber forest products and building materials)*
- *Natural fisheries and water resources*

Most of the highlanders practice a system of swidden agriculture supplemented by hunting, fishing and the gathering of forest products such as bamboo, rattan, wild fruits, and forest vegetables. Swidden cultivation takes place in areas of secondary forest surrounding village sites. This is a form of agricultural rotation which uses fallows of regenerating natural forest to restore soil fertility. Plots of land (chamkars) are cleared from the forest and farmed for several years. They are then abandoned as fallow to regain their fertility before being farmed again. On the red soils of the central plateau each family may have 3-5 plots on which they rotate. Fallow periods of 10-15 years are observed, after which the forest regrowth is cleared and burned. While this practice appears visually destructive, it is a stable and sustainable form of food production in uncertain or difficult conditions and at low population levels.

Secondary in importance to the swidden fields are the 'collection forests' or areas of old growth forests from which non-timber forest products are obtained for use as construction materials, dietary supplements or medicines. The forest is considered to be a common resource and several villages may share the same collection forest. Such swidden and forest collection systems often represent a highly efficient adaptation to variable, difficult and uncertain conditions. Equally important is the belief that resident spirits inhabit some forests, and taboos generally exist as regards the use of products from those forests.

With this livelihood system the destruction of old forest is minimised because:

- *Boundaries set in the past by village elders are recognised between adjacent communities. Members of a village may cultivate anywhere within their own village boundaries, but will not cross into the territory of a neighbouring village for fear of retribution from the spirits*
- *Membership in the community is the primary pre-requisite for rights to cultivate land within the communal boundary*
- *Forests believed to be inhabited by spirits, or which are sites of burial grounds are protected by communities*
- *Large areas of old growth forest are maintained for the collection of forest products outside the village cultivation boundaries*

A 1996 study of Poey Commune in Ratanakiri Province by Dr. Jefferson Fox of the East West Centre found that, regardless of the size of a village, the ratio of population to area (within traditional boundaries) was more or less uniform at around 30 people per km². This indicates a level of equitability in the way the traditional system shares land between communities. Within the village boundary around 8% of the land may be under cultivation at any one time. The rest will be under fallow, appearing as a mosaic of secondary forest at different stages of regeneration. An analysis of satellite images for Poey Commune indicate that under this system old growth forest remains at 50% cover, secondary forest is 40%, current cultivation is 5%, and the remaining 5% consists of roads, residential areas, streams, lakes and so forth. The sustainability of this system depends on maintaining a low population density and the traditional communal tenure system. In order to accommodate increasing populations, the traditional tenure system may be used as the basis for land-use planning for agricultural development (see Appendix 1).

The traditional agriculture system of swidden demonstrates a high level of complexity combined with a reliance on the forest resources.

- The traditional agriculture system is very high in biodiversity. Forty-eight upland rice varieties have been documented for Kavet communities alone. In addition, 148 varieties of other crops were found integrated with the upland rice. These traditional varieties represent a tremendous potential resource for the scientific community and crop improvement schemes
- No external inputs (apart from human labour) are used during cultivation. Thus the watershed is kept free from contamination by pesticides and chemical fertilizers
- Compared with modern agriculture, productivity per unit area appears low at first glance. However, when compared with the destruction of resources in order to maintain the high productivity required by modern agriculture, the sustainability of the swidden system is favourable. It relies on the forest to replenish soil fertility in situ
- The highly diversified and complex agriculture system ensures that the scarce labour resources in the family are evenly distributed throughout 10 months of the year. It also minimises the risks from crop failure due to drought and pest attack
- Traditional cultivation requires zero or minimum tillage, which helps to protect the soil from erosion
- The small plots cleared for cultivation are surrounded by dense secondary forest which arrests runoff and soil erosion during rainstorms
- Forest rapidly regenerates when the field is fallowed, as the seed sources from the surrounding forest are close by

Agriculture development programmes which aim to increase productivity and food security of highland groups would need to take into account the complexity of the existing swidden system in meeting the diverse needs of the local community.

1.3 THE ROOT CAUSES OF DEFORESTATION

Deforestation is often associated with rural poverty and population growth, which force rural people to encroach into forest areas in search of new arable land and products from the forest to supplement low incomes. In 1998 ARD stated that with the current population growth rate being in excess of 3%, the population of Cambodia would double within the next twenty-five years, resulting in greater pressure on forest lands. The production of fuelwood and charcoal to supply urban populations is also conducive to over logging in the forested supply areas close to roads and rivers. However, although rural poverty and the clearance of forest for agricultural purposes has traditionally been pinpointed as the main cause of deforestation in Cambodia, it is not the root cause behind the onslaught being experienced by Cambodia's forests today.

The prolonged state ownership of forest resources in Cambodia has contributed greatly to the problem of deforestation through the inability, or desire, of the state to manage this resource in a way that benefits the Cambodian population as a whole. The decisions about the forest are shaped by the priorities of the state, with who the rural Cambodians now have to compete for the right to access and use this resource. Today, the mandate for forest management rests formally with the Department of Forestry and Wildlife (DF&W) within the Ministry of Agriculture, Forestry and Fisheries (MAFF). The Ministry of Environment (MoE) has responsibility

for forest land within protected areas. However, a clear, systematic and transparent process for making and coordinating land-use allocations does not exist at the national level, and responsibilities for the enforcement of decisions are not clearly defined.

Over the last thirty years the inability of the state to manage the forest resources for the greater good has been largely due to continuing war, political rivalries, corruption. Strong regional demand from Thailand and Vietnam, and a lack of funds, institutional capacity and willpower on the part of the central and local-level authorities has fuelled this situation. As a result Cambodia has witnessed extensive logging and severe deforestation through the predominance of illegal harvesting, processing and export operations under the protection of powerful people and the military. Log production in 1997 reached the highest levels ever in Cambodian history with 4.3 million cubic metres being cut over 7 million hectares. Illegal timber felling accounted for at least 92% of total production.

- **Civil War** – Cambodian forests were exploited to fund both sides in the prolonged civil war between government forces and the Khmer Rouge. Global Witness estimated that the trade between the Khmer Rouge and the Thai timber companies generated between US\$10 million - US\$20 million per month. In June 1994 the Royal Government of Cambodia (RGC) also decided to give a monopoly on timber exports to the Ministry of National Defence as part of a strategy to use timber revenues to finance the civil war. The Economist reported that the ‘fighting is serving as a cover for profiteers on both sides, whose weapons are chainsaws and whose victims are trees.’ The fighting also has another long-lasting implication, particularly regarding the ability of local people to use the forest. A review by the Cambodian Mine Action Centre in 1996 broadly estimated that 35-40% of forest land could be dangerous due to the presence of land mines, fighting, or uncontrolled, armed gangs.
- **Political Rivalries** – Resource control has long been an important source of political patronage and the tenacity of this patronage system in the form of ‘crony capitalism’ has had a destructive effect on Cambodian forests as they are traded for loyalty. The elections in 1993 and 1998 refuelled the need for political alliances, and the election campaigns were largely funded through logging. Timber has also been used to finance the building of political and military power-bases.
- **Corruption** – To some extent corruption practices have emerged out of economic necessity. Low government salaries, frequently in arrears, have resulted in absenteeism, moonlighting and the use of corrupt methods to make ends meet. Corrupt individuals at every level of society can stand to earn vast amounts of money from the timber trade.
- **Military Control** - As a result of the civil war and political rivalries, the Cambodian armed forces (RCAF), split along party lines, have since been left in control of much of the forest in Cambodia to the extent that they are self-supporting units, frequently acting autonomously of the RGC. The revenues from military logging operations tend to bypass the national budget, and rather than being used for the ‘greater good’ are used to build personal fortunes. This situation has meant that there has been a prevalence of guns in the forest, and attempts at forestry supervision by the appropriate officials has often met with intimidation, and, in some cases, murder.
- **Investment** – As a result of the above factors, genuine business investment in Cambodia has been discouraged. The most lucrative deals are those which provide rapid returns but are not necessarily in the best long-term interests of the country.
- **Regional Dynamics** – Cambodia’s neighbours, Thailand and Vietnam have played a large part in the deforestation process. Having both suffered high rates of deforestation themselves (Thailand during the 1970s and 1980s, and Vietnam largely due to the ravages of the Vietnam war) both have turned to Cambodia to satisfy their demand for timber. Thailand was heavily involved in the timber trade with the Khmer Rouge in the early nineties, but in recent years Vietnam has largely usurped Thailand as the biggest importer of illegal Cambodian timber, largely through the Northeastern Province of Ratanakiri.

Over the last decade the RGC has pursued its goal of modernisation through trade, investment and industrialisation, much of which has relied on the exploitation of the country’s natural resources. Increasingly these resources are being taken over by commercial enterprises (with or without legal licences) without any protection of the rights of traditional users, and without effective regulatory systems to ensure sustainable use. Traditional community access to forest resources has been eroded rapidly in recent years through the privatisation of these resources to commercial interests.

- **Over-allocation of land** - The principal means of wresting the forests from the local communities is through the allocation of concessions. The RGC has allocated over 63% of forest lands as forest concessions to international investors but there are few procedures ensuring that such allocation is

being done in a rational manner, incorporating social, economic, environmental or cultural considerations, or with consultation with local villagers. Global Witness has countered that the Forestry Department considered only 2.2 million hectares of forest suitable for sustainable commercial logging. Thus it would seem that much of the land now granted is unsuitable for commercial logging.

- **Limited Institutional Capacity** – the capacity and capability of the central institutions to plan, manage, monitor and enforce the laws in the forestry sector are severely handicapped by interventions of powerful people and the predominance of the military in illegal harvesting, transportation, processing and exporting of forest products. The legal, policy and regulatory frameworks are complex, and the institutional structures are bureaucratic and top-down. Low numbers of trained personnel and scarce funds and other resources are all a serious constraint to forest and land management. The management plans drawn up for the controlling of forest operations are largely flawed and ineffective.
- **Inadequate Development and Administration Funds** – The RGC has inadequate budgetary funds for rural development, to maintain military security, or to pay salaries at sufficient levels.

1.3.1 Case Study - Deforestation in Ratanakiri Province

An increase in deforestation in Ratanakiri Province may be traced to the early 1980s:

- *During the period 1980 – 1993, the socialist government of the People's Republic of Kampuchea exploited the forest in order to finance reconstruction and basic infrastructure development. The area and the quality of forest in Ratanakiri began to diminish, although at relatively low rates*
- *After the 1993 elections, economic liberalisation policies led to a dramatic increase in anarchic and illegal timber exploitation as there was little capacity on the part of the Government to control markets and illegal timber operators. An exponential increase in deforestation countrywide resulted. With each wave of logging in Ratanakiri during the 1990s, the size of logs being transported out of the Province became smaller and smaller, indicating that the quality of the forest and timber reserves were becoming dangerously depleted*

The swidden cultivators in Ratanakiri Province take the brunt of the blame for the problems of deforestation in the Province, and the state solution is for such 'primitive' methods of agriculture to be abandoned in favour of 'development' schemes including forestry concessions, agricultural plantations and hydroelectric projects. As a high-ranking official explained to Colm, 'Sixty to seventy per cent of forest destruction is due to swidden cultivation. All ethnic minorities are doing this destructive swidden. If we don't receive investment companies in Ratanakiri, in ten years there will be no good forests left.'

However, there is overwhelming evidence to suggest that the cultivation practices of the highlanders are not the main cause of deforestation in the Province.

- *The highlanders of Ratanakiri have been practising a form of swidden cultivation for generations, yet Ratanakiri remains one of the most heavily forested areas in Cambodia. Forest cover was maintained at around 92% up until 1979 when the country was opened up to outside markets. This suggests that deforestation has less to do with upland cultivation practices as with outside economic factors*
- *Researchers believe that the swidden system has been largely sustainable due to the relatively low population density, abundant lands and forests, and richness of the volcanic soils*
- *Highlanders lack the equipment to cut large trees on a vast scale. Their swidden fields are normally cleared out of areas of secondary forest rather than old growth forest*
- *During periods of rapid deforestation, the stream of logging trucks at the Vietnam border indicates that it is not the indigenous minority people who are the main perpetrators*

It is undeniable that swidden cultivators can contribute to deforestation, but the evidence indicates that their impact is small compared with the impact of outside economic forces. In fact swidden can actually contribute to watershed management and biodiversity conservation. However, the 'balance' of village swidden systems and forests is beginning to change rapidly due to current political and economic conditions. Swidden becomes a less sustainable system when forest resources become scarce or when people are relocated from their customary lands. For instance, in Yeak Laom Commune near the provincial centre of Banlung, land pressure is intense and there is virtually no old growth forest left. The swidden farming system in this area is breaking down due to weed invasion and decreasing soil fertility. Similarly, in Kok Lak Commune in the north of the

province, forest areas in the buffer zone of Virachey National Park are being converted to unproductive *imperata* grasslands by a combination of slash and burn farming and uncontrolled burning. This unsustainable situation can be traced to the relocation of these farmers from their traditional lands in the core zone of the national park to much less fertile lands where they had no established tenure system.

In short, the main factors which are observed to undermine the sustainability of the swidden system are:

- Relocation from traditional lands where tenure and management systems have already been established to new lands where there is no clear tenure or viable management system. Management systems take several generations of trial and error to develop, by which time much damage to the environment can occur
- In communities located close to the market centres of Banlung and Bokeo, the advent of the cash economy has brought with it an increasing desire for individual profit. This, combined with intense pressure from immigrants and business people to buy up land, has led to the loss of much of the productive land of the communities, escalating internal conflicts and the breakdown of the social structure and decision making capacity of the communities
- Diminishing land and forest as a result of in-migration by lowland Khmers and informal land sales, the encroachment and granting of land concessions on indigenous lands, and natural population growth within the communities results in unsustainably short fallow periods, increasing weed invasion and decreasing crop yields. Under these conditions communities will be tempted to clear areas of old forest to supplement their yields

In the last decade economic development in the form of timber and agricultural concessions, in-migration, and land-speculation have been occurring in a rapid and haphazard way, with no reference to customary highland land use. The total area of Ratanakiri granted as concession land for forestry, agribusiness and National Parks, is 115%, demonstrating the haphazard and uncoordinated nature of land use planning by the Central authorities. None of the planning has taken into account the livelihood needs of the indigenous highlanders. Management of the forest concessions has been virtually non-existent, allowing for a vast amount of destructive, illegal logging. A fundamental issue that must be considered is whether it is ethical to grant any kind of concessions on indigenous people's customary land in the first place.

- In 1995 the then two Prime Ministers, Hun Sen and Ranariddh, granted a 50 year concession for 1.4 million hectares to an Indonesian logging company, Macro-Panin. However, the Macro-Panin concession failed to begin operations due to continued insecurity in Cambodia, leaving open swathes of forest for those wishing to take advantage of it
- The majority of logging operations in the Province have reportedly been controlled by the local police and military. During the period 1997-8 over 200,000m³ of logs were illegally exported from Ratanakiri to Vietnam
- There have been eyewitness accounts of incursions by illegal loggers and rattan collectors into Virachey National Park, many encroaching directly from Vietnam
- In 1998 a 60,000 hectare concession in Ratanakiri Province was awarded to HERO Taiwan company and in April 1998 Pheapimex-Fuchan was awarded a 350,000 hectare concession directly bordering Virachey National Park. Both companies have a less than spotless reputation with regard to concession management
- In addition to the logging concessions, forest land has also been give over to oil palm estates, coffee plantations, and small-scale speculators (see appendix for case studies). This not only reduces the amount of forest land, but it encroaches on the customary lands of the highland peoples, and has forced many to venture into new forest to cut their swidden fields
- The Sesan and the Srepok rivers are proposed for hydropower feasibility studies funded by ADB. The most viable of the proposed projects (the lower Sesan II and the lower Srepok II) would flood approximately 6% of the province area, losing paddy land and forcing the relocation of approximately 10,000 people. Deforestation in Virachey National Park may result as the displaced people try to find alternative land to farm
- The land law outlines possession rights for agricultural land but not for forest land. Extension of cash cropping with a strong emphasis on individual land title may also be contributing to deforestation within

the province. People are clearing forest on which to grow crops permanently to signify possession of land. The increase in the production of crops such as cashew nuts suggest that the province will experience long-term productivity problems as such crops are notorious for draining nutrients from the soil

1.4 THE IMPACTS OF DEFORESTATION

In general terms the effects of logging and deforestation in Cambodia are wide ranging.

- **Environmental impacts** – Cambodia still possesses some of the largest tracts of lowland evergreen forest in mainland Southeast Asia and areas of high biodiversity containing many endangered species. Logging destroys habitat and can devastate forest areas. Logging also encourages other environmentally destructive activities such as colonisation, commercial hunting, and clearance for agriculture. In Virachey National park hunters kill tigers using home-made landmines in order to obtain bone for the traditional medicine trade
- **Economic impacts** - In 1997 over \$185 million worth of timber was illegally felled, equivalent to almost half of Cambodia's \$419 million total annual budget. Only 12 million reached the treasury. In 1998 this sum declined to only \$5million, despite a sharp escalation in illegal logging leading up to the July elections. The continuation of deforestation at the present rates will result in the loss of a valuable economic asset for the RGC
- **Livelihood impacts** - Cambodia's staple foods of rice and fish are threatened by the effects of deforestation. The hydrological systems of the Mekong river and the Tonle Sap lake may be severely affected through siltation, causing a decrease in fish populations. Soil erosion reduces the amount of productive arable land. An increase in the occurrence of floods and droughts will also affect livelihood security. Other impacts include shortages of fuelwood and forest products to provide subsistence
- **Land Conflicts** - Rural communities have always had access to common property resources, but as these are some of the areas that the state is granting as concessions to private companies for their exclusive right to exploit, the rights of these communities to access forest areas and collect forest products becomes increasingly unclear. Conflicts over forest use are escalating between rural people, commercial timber operators, agricultural concessionaires, and protected area managers
- **Land Alienation** - As local people become alienated from their lands, there may be increasing apathy and a limited sense of responsibility towards natural forest-areas. State appropriation of land and forest leaves little incentive for local communities to manage these resources in a sustainable manner. Land alienation also leads to increased poverty and often forces people to degrade land they do have access to, or to harvest forest products illegally in the areas to which access is denied
- **Human Rights** - Both legal and illegal timber operations in Cambodia operate without regard to the rights of the rural population. The population are not consulted when concessions are awarded, they are denied access to forest land preventing them from obtaining timber for construction and fuel, and are sometimes forced from their land at gun point. Civilians, journalists and forestry officials have also been threatened and even murdered by illegal loggers. (see Appendix 2)

1.4.1 Case Study – The Impacts of Deforestation and Logging in Ratanakiri Province

Deforestation and logging, as experienced in Ratanakiri Province is not only unsustainable, degrading and destructive, but it is happening in an unplanned fashion without reference to land zoning or customary land use, and has brought few development or employment opportunities for the local inhabitants.

Much of the logging in Ratanakiri Province has occurred in the old growth forests used for the collection of non-timber products or in those believed to be inhabited by spirits. The destruction of the collection forests through logging has had immediate and noticeable effects on the daily livelihoods of people. Villagers complain that logging activities have limited the availability of certain forest products. In some areas close to logging sites wildlife has become scarce. Villagers attribute this to disturbance caused by the sound of the chainsaws, and the destruction of habitat. Women observe that forest fruits and vegetables are becoming harder to find as the trees disappear. Ponds have dried up making fishing more difficult, and the loss of trees with which to make coffins or those from which to extract resin are common complaints of villagers living in close proximity to logging areas. Hurried logging has tended to leave behind devastated forests, with felled but rejected or

uncollected timber remaining, or blocking roads and pathways. Bamboo and rattan are destroyed in the clearance of logging roads.

The forests have long served as a refuge during periods of conflict, and are an integral part of the swidden system. Furthermore, many villages have historical and cultural attachments to the lands and forests they inhabit. Villages tend to be situated on land that is significant through identification with ancestors. Tales of ancestors often closely relate to the local geography, and burial grounds are usually located in forested areas. Logging can completely alter or obliterate this landscape in addition to destroying areas or species of local significance.

Practices related to land use and resource access are often regulated by social taboos which ensure a certain order and reduce the possibilities of conflict. If, for example, villagers want to farm within the boundaries of a neighbouring village, the elders have to meet to negotiate, and a sacrifice will be held. In addition, numerous rituals are held before any encroachment of the environment, to appease the spirits who may otherwise become angered. Spirits are invoked through a 'sen' over a rice wine jar, a small animal is sacrificed, and family and neighbours feast and drink together. Large trees are often considered to be the homes of spirits. If these spirits are disturbed or irritated, the effects will be felt by villagers by way of sickness or death. Logging teams tend to be unaware of such taboos, and hold little regard for spirit forests. Villagers describe their fear of reprisals from the spirits, when spirit forests are logged, or when fishing or hunting takes place in areas where these activities are traditionally forbidden.

Stories have begun to emerge linking the breakdown of bulldozers and the deaths of loggers, crushed by felled trees or overturned trucks, to angry spirits. More disturbingly for the villagers, it is believed that when the loggers leave the area the spirits take revenge on the villagers. There have been reports of villagers suddenly falling ill or dying after witnessing logging in nearby areas. In order to appease the spirits, some villages have offered frequent sacrifices, a practice that is taking an increasing financial toll on village reserves.

Logging has done much to undermine traditional village solidarity, fuelling individualism, competitiveness, conflict and power struggles. The arrival of logging companies offering money has resulted in many instances of collusion between individuals and loggers, with villagers working for individual profit rather than for the benefit of their community. Such behaviour has often been encouraged by logging teams visiting individual farmers in their fields to ask for their assistance in return for money or timber. More long-term co-operation has also occurred, particularly when villagers have previously worked outside of the villages, for example as soldiers, and have then become involved in logging activities. These people perhaps have less sense of allegiance to the village, and also have a good knowledge of the forest areas, thus making them a valuable resource to the logging teams. In addition to undermining village solidarity, logging has also encouraged conflicts between villages as disputes have arisen over the rights of loggers to access tracts of forests, or to build roads.

SECTION TWO

AN ANALYSIS OF CURRENT POLICIES AND SOLUTIONS

2.1 INTRODUCTION

A legal logging industry would create additional forest revenue for the government, improve prospects for long-term political stability, improve investor confidence and protect the environment. The prevalent forestry regime of the 1990s, with its relationship to civil war, corruption, patronage, environmental degradation, and human rights abuses, has been pin-pointed as a key impediment to the process of reconstruction and sustainable development in Cambodia. In particular, the fact that only a small fraction of logging revenues has reached the legal economic system has been a situation of great concern to the international community, and the major donor countries. However, the last five years have seen the beginnings of positive developments as regard forest policy reform in Cambodia, developments that still have a long way to go, but which have brought together a variety of stakeholders to work together towards improved forestry management in Cambodia.

2.2 AID CONDITIONALITY

The logging and deforestation problem became an issue for the international donor community for financial as

well as ecological reasons. After the 1993 elections the international community made sizeable commitments of financial and technical assistance to Cambodia. However, the awareness of the magnitude of logging revenues being diverted from the national budget began to cause extreme concern among donor countries. The International Monetary Fund (IMF) was the first international organisation to respond to the RGC diversion of logging revenues from the Ministry of Finance to the Ministry of Defence. In November 1995 the IMF postponed the making of a US\$20 million loan to Cambodia, citing as the reason inadequate forest management and protection, and the failure of the government to channel official logging fees to the central budget. A lack of inaction on the part of the RGC led to a freezing and finally a withdrawal of the IMF funds from Cambodia in mid-1997. It is clear that donor-government relations and various forms of 'green conditionality' can influence the particular agendas of the Cambodian government. However, the freezing of aid has been criticised by other international observers due to the fact it may encourage the government to turn to alternative sources of income, perhaps through logging practices and the legitimisation of unsustainable investment.

Aid conditionality is still linked to logging reform in Cambodia, but as stability has returned to the country, the RGC has shown greater determination to comply with international requirements.

Reports by the British Environmental Watchdog, Global Witness, have done a great deal towards raising awareness within the international community of the logging abuses happening in Cambodia, and the organisation has played a leading role in promoting action. Its regular reports have exposed the extent of corruption surrounding the logging business in Cambodia, and provided up to the minute facts and figures.

2.3 LOG EXPORT BANS

An initial measure introduced by the government in the attempt to curb deforestation and illegal logging was to place a ban on log exports. In September 1992, the Supreme National Council (the interim government) in conjunction with UNTAC, imposed a moratorium on log exports which would, from the 1st January 1993 allow only processed wood to be exported from Cambodia. This stop-gap measure, it was hoped, would provide time to establish sustainable forest management practices and to make forest inventories. Unfortunately, the ban led to an intensification of logging before the moratorium became effective, and once in place it proved difficult to enforce.

Similar provisions have met with similar responses. In January 1995 the RGC imposed a complete ban on the export of logs and sawn timber. The ban was consistently breached because of the claim that stockpiles of 'old felled' logs remained in Cambodia and had to be removed to prevent wastage. Once a permit was granted the loggers would export the existing stockpile and simultaneously cut more trees.

On 26th December 1996 the RGC wrote to the governments of neighbouring countries asking for help in the enforcement of the log export ban which was re-imposed on December 31st 1996. This again has been circumvented on numerous occasions.

Log export bans have failed to be effective due to the pull-effect of a high regional demand and the push-effect of a very low state budget limiting greatly the incentives for the central and peripheral actors to implement forestry reform.

2.4 CONCESSIONS MANAGEMENT

Nearly all the remaining forests in Cambodia have been allocated by the RGC to international logging companies as private concessions. The Department of Forestry auctions concessions of forest land as 5-25 year leases and establishes maximum allowable harvest rates. It has been estimated that nearly 70% of Cambodia's total land area has officially been allocated for concessions: timber concessions (7 million ha, 39%), protected areas (3.3 million ha, 18%), and agriculture, military and fishing concessions (0.7-0.8 million ha each, 12% total). The purported logic of the state in awarding large concessions to foreign companies appears to have been to enable them to better police those areas of forests and prevent illegal logging. However, in reality, the concessions have proved ineffective in ensuring sustainable management of forest areas. Legal contracts favouring the concessionaire over the government, low timber royalties, and no method of ensuring good forest management typifies these deals, in addition to them being signed with little or no consultation with local peoples. In practice, concessions have been allocated on maps with little or no site

verification or identification of local communities, cultural sites, watersheds, or sensitive ecological areas. The concessionaires largely ignore the Cambodian Forestry Code of Practice, drawn up by FORTECH in 1998. Most concession companies have been known to use the system of 'collection permits' issued by the Council of Ministers and MAFF. Collection permits are ostensibly issued for recovering 'old felled logs', but in reality are widely used to legitimise illegal log production and trade, and to avoid paying royalties and taxes on timber. Military units have also been directly involved in logging operations, either as guards or in organising illegal deals and exports. In short, the concession system has been successful in bringing a forest-based industry to Cambodia, but has done little in terms of long-term sustainable management. The concession system not only reinforces the fact that the local people have no control over their resources, but it also takes away the value of the forest for the local users, thus diminishing their interest in protecting the forest.

2.4.1 Case Study – Concessions in Ratanakiri Province

Following the cancellation of the Macro-Panin concession in December 1997, the government began to divide up the concession area among various other companies including Pheapimex-Fuchan and HERO Taiwan. Concessions in Ratanakiri cover 40% of the surface of the Province. They were all decided without consultation of the provincial authorities, the local populations, the IO/NGOs, or without social and environmental impact assessments. The Director of the United Nations High Commission for Human Rights wrote to the Minister of Agriculture under whose responsibility the Forestry Department lies, expressing her concern over the granting of further concessions in Ratanakiri Province. In reply, the Minister of Agriculture wrote that it was necessary to redistribute the concession land in order to 'fight anarchic logging, to address the needs of infrastructure, and to improve the very difficult living conditions of the people living in the former forest concession of Macro Company.'

A 60,000 hectare concession, located to the north of the provincial town of Banlung, was awarded to HERO Taiwan company in 1998 with direct approval from the then Prime Ministers, Ung Huot and Hun Sen. The concession area overlaps land that is inhabited by almost 10,000 highland people living in thirty-five villages, but the concession was granted without their consultation. Logging commenced in May 1999. There have since been reports emerging expressing concern with the concession operations.

- *HERO was cooperating with Military Region One personnel in January 1999 and its sawmill continued to operate throughout 1998, although it did not receive an exploitation permit until February 1999*
- *On 11th May 1999 HERO, with military support 'persuaded' village chiefs to sign away their lands for logging*
- *In May 1999 HERO was cutting outside its concession area. The company has sub-contracted its logging activities to two sub-contractors and on an ad hoc basis to local people*
- *Reports by villagers have told of 'clear cutting' by HERO, with 3-5 trucks leaving each night, and of the cutting of trees within the culturally significant spirit forests, despite the fact that the Concession Management Plan states that areas of village importance must be excluded from cutting*
- *The concession area is to be cut rotationally over a 25 year period, but the coupe areas have been estimated at 1/25th of the total concession area rather than of the forest area, demonstrating that the concession is far from sustainable. Sub-contractors of HERO have admitted that the 25 year concession will be logged out in 3 years due to the company over-cutting and illegal military logging*
- *Operations have continued during the rainy season against the recommendations of the Cambodian Forestry Code of Practice*
- *Roads and snig tracks constructed in the HERO concession have been seriously below the standards outlined in the Cambodian Forestry Code of Practice*
- *Huge timber wastage appears to have occurred*
- *There have been reports of luxury class timber having been cut contrary to the concession agreement*
- *HERO has failed to adhere to the RGC's demand that each concession provide 20% of its processed production for local use*

In April 1998 Pheapimex-Fuchan was awarded a concession of 350,000 hectares, directly bordering Virachey

National Park. This company also has a reputation for illegally logging in other companies concessions, logging outside its own areas, and for the intimidation of officials. The concession was granted without the knowledge of the Governors of Ratanakiri and Stung Treng who had already endorsed an alternative proposal for the area to be preserved as an extension of Virachey National Park. The proposed buffer zone of the park overlaps the Pheapimex concession by 180,000 hectares, and is home to approximately 11,000 indigenous people who rely on the supply of natural resources from the buffer zone. This concession not only threatens the security of the National Park, but it may also cause the local communities to move into the heart of the park. The local communities or concerned NGOs have not been included in development of the management plan.

Forest concessions on indigenous land continue to seriously oppress indigenous people. People have their land allocated without their consent nor their approval. They are threatened and intimidated. They are removed from the decision-making process. Their livelihoods and religious beliefs are under attack. Forest concessions remain a fundamentally inappropriate form of forest management on indigenous lands.

2.5 FOREST POLICY REFORM RECOMMENDATIONS

- In 1995 the RGC requested the World Bank, UNDP, and the FAO to conduct a selective review of important issues in the forest sector and to initiate dialogue on sectoral development and policies. This resulted in the Forest Policy Assessment report. A draft was discussed with Government officials in February 1996 and presented at the International donors meeting in Tokyo that same year. The report criticised the basis of awarding concessions in Cambodia, highlighted the problem of illegal logging, and drew up benchmark figures for sustainable timber yield and potential revenues
- In July 1996 the Government formed a National Steering Committee to manage forest policy within the Department of Forestry, and with technical assistance from international consultants, commissioned four projects to steer the forest reform process:
 - Forest Policy Reform (Associated in Rural Development Inc., USA)
 - Forest Concession Management (FORTECH, Australia)
 - Log Monitoring and Enforcement (Development Alternatives Inc., USA)
 - Legal Counsel (White and Case, USA)
- Between November 1997 and February 1998 the projects were carried out. A report was produced on May 22nd 1998. The key recommendations of the forestry consultants were:
 - To carry out a national forest resource assessment at a macro-level within one or two years to allow for forest resource planning, management and monitoring (using remote sensing and GIS technology)
 - To create a new, simple, objective forestry law that would include penalties stiff enough to deter illegal logging
 - To encourage more co-ordination between ministries and between central and provincial RGC units with regards to land allocation decisions
 - To develop flexible approaches and definitions to community participation in forestry and options for community resource management. These need to be incorporated into the legal framework to allow transfer of land use rights to communities with the capacity and capability to use forests responsibly and sustainably as Community Forestry Concessions
 - To transform the existing concession system from harvesting rights to forest management rights on a sustainable basis and to make the concessionaire accountable for all operations within their concession
 - To focus on small holder reforestation until such time as it is feasible to invest in large-scale industrial forest plantation development
 - To cease the 'collection permit' system, cease approval of new log processing investment licences, and

to maintain the log export ban until the forestry and forest industries sectors are back under control

- To establish formal tax rates and a structure that could reduce the extent of tax evasion and reflects the different values of separate parcels of forest
- To establish law enforcement measures in addition to log tracking and revenue collection systems in forest concessions. The DAI consultants proposed the establishment of a Cambodian Forest Action Centre that would enforce the forestry law through a force of 700 armed rangers
- To reorganise the Department of Forestry, to build staff capacity, and to provide adequate funding

The Forest Policy Reform Project produced a substantial amount of valuable information and the recommendations provide an effective template for forest policy reform. The beginnings of a positive move towards forest reform is now evident as the RGC pushes ahead with some of the recommendations outlined by the Forest Policy Reform Project.

2.6 FORESTRY LAW

The World Bank supported Legal Review was responsible for an analysis of the current Cambodian forest law (dated June 25th 1988), and for reviewing proposed draft forest laws that have been drawn up in recent years. It was decided that none of the laws were sufficiently comprehensive to protect the Cambodian forests. The analysis pointed out that the current forest laws provide 'no objective standards for forest protection' nor 'integrated guidelines or standards for forest management'. The existing forest law was considered to be 'inaccessible, complex, inconsistent and unenforceable, more suited to a centrally planned economy, no reflecting current market oriented economy.'

In May 1998 the RGC decided to withdraw the proposed draft forest law from the National Assembly and to redraft new forest legislation. The objective is to establish a legal basis for administration, allocation and management of forest resources, which reflects the new RGC forest policy. The final result of the project will be the approval of the new Forestry Law by the Council of Ministers and, eventually, by both houses of the Parliament. In addition a Sub-decree on Forest Concession Planning, Management and Control, and a Sub-decree on Community Forestry have been drafted.

A problem with forest law enforcement in Cambodia in the past has largely been a result of the lack of transparency and accountability surrounding forest policy. This problem is beginning to be addressed by the RGC by allowing for formal consultation processes on all the draft legislation. The Environment Working Group of the NGO Forum for Cambodia was able to review the draft sub-decree on Forest Concession Planning, and to submit their comments. With the new Forestry Law it was also proposed that a consultation period would be allowed before the law was sent to the Council of Ministers.

The sub-decrees on Forest Concessions and Community Forestry are both important in that they also have the potential to improve transparency and community involvement in forest management.

Unfortunately, IMF conditions required that the sub-decrees went before the Council of Ministers by 15 October 1999, resulting in the formulation of the sub-decrees preceding the law to which they are subject. It was also felt that there was insufficient consultation time allotted to the consideration of the sub-decrees.

Other draft legislation that will concern forestry includes the Land Law and the Environmental Impact Assessment Sub-Decree. A version of the Land Law has been prepared by the Council of Ministers and the NGO Working Group on the Land Law has prepared extensive comments on the law.

The draft legislation outlined here has been written by different government departments and different International Organisations, all of which work to different agendas. As such there is little coherent policy linking them. However, some observers feel that the legislation shares some common ground, namely a lack of commitment to sustainable resource management, to the rights of forest-based communities to use and access these resources, and to the recognition of the importance of forests as ecosystems. If the legislation continues to fail to address these issues, it is unlikely that they will serve to protect Cambodia's forests as a varied resource, or that communities who have traditionally used the forests will abide by them.

2.7 CONCESSION REVIEW

The RGC has shown definite signs of a commitment towards better concession management. In 1999 logging royalties were raised from US\$20-25 per m³ to \$54 per m³ together with a 10% export tax. In addition, prior to the third World Bank convened Consultative Group Meeting in Tokyo on February 25 1999, the Ministry of Agriculture announced the withdrawal of 2 million hectares of forestry concession belonging to nine companies. Although Global Witness contends that this move was largely a publicity stunt as the majority of these areas were already logged out or were not operational, it demonstrated that the RGC is quite capable of taking a firm line in the termination of concession contracts. This move leaves a remaining 4.7 million hectares under concession.

The Asian Development Bank has recently funded a performance-based review of all timber concessions. The review was carried out over a period of two months by a consortium of companies led by Fraser Thomas. The official Concession Review is just one component of a US\$900,000 ADB Sustainable Forest Management Project, which includes the drafting of a forestry law and the preparation of community forestry guidelines. The ADB/Fraser Thomas Concession Review Team released an interim report in late 1999 and a final report was released on 4th April 2000. During the review process concerns were raised by outside observers about the evaluation criteria, the shortness of time given to site inspections, and the review of concessionaire documentation, much of which was in Khmer. The review process also involved staff from the Department of Forestry. This suggests that the evaluation was fundamentally flawed given that the concessionaires often pay the staff salaries of the Provincial Forestry Department staff, and that the Forestry Department in Phnom Penh has a reputation for shielding the majority of concessionaires from criticism of their activities. During the December 1999 inspection of the HERO concession in Ratanakiri Province, the inspectors were guided away from areas of illegal cutting by the sub-contractors, but were shown new swidden fields being cut within the concession area. Reports shown of the inspection on National TV suggested that village resistance was instigated by NGOs.

The Concession Review Final Report does acknowledge severe problems in the concession system, referring to it as 'a total system of failure.' It recommends the termination of several concessions where forest resources are depleted, and recommends that the RGC declares a moratorium on some or all logging operations until new management plans meeting international standards are prepared. The Review team believe that at least seven concessionaires will not be able to meet these proposed requirements because of the already depleted state of the forest in their concessions. A workshop is to be held in Phnom Penh on the 20-21st April to discuss the findings and recommendations of the review.

Despite the fact that the Review has effectively outlined in detail the unsustainable nature of the current concession system in Cambodia, and pin pointed the major culprits, the following concerns have been raised:

- The Final Report fails to recommend the cancellation of concessions on the basis of concessionaire performance and legal conduct, although it does assert the opinion that the RGC has good legal grounds with which to cancel concessions
- The review did not utilise information about current or past illegal logging in connection with the concessionaires. It could be argued that the review thus fails to provide the RGC with all the information it will need to reach any decisions or conclusions
- The review fails to adequately address or comment on the issue of the appropriateness of a concession system in Cambodia. It can be argued that a forest concession system does not deliver equitable, long-term sustainable economic growth based on sustainable forest management, and that alternatives to concession forestry should be sought
- The review gave inadequate consideration and weight to social and environmental concerns and issues. The rating of the concessions was done with only forty points out of a total of 200 related to environmental concerns, and only thirty points out of 200 related to social and community concerns. In particular, no allowances appear to have been made within the review's criteria for the consideration of minority people, such as those in Ratanakiri, when faced with forest concessions. Both HERO and Pheapimex were described by the review as 'Very poor performance. Unacceptable in all aspects', with HERO getting the lowest performance score of all concessions inspected.
- The process to review the Final Report involves a meeting on the 20-21st April. This allows just over two weeks for the consideration of the report, and it also includes the major holiday period of Khmer New Year which does not bode well for the participation and commitment the meeting will require

- The concession review team have recommended a moratorium on all concessions until the recommendations proposed by the review have been considered and implemented by the RGC. A worrying aspect of this proposal is that existing concessionaires may intensify their logging activities before the moratorium becomes effective.

2.8 THE LOGGING CRACKDOWN

On January 6th 1999 Prime Minister Hun Sen announced a sweeping crackdown on illegal logging consisting of the closing down of sawmills and the confiscation of timber and equipment. Again the crackdown illustrated how the RGC is able to extend its control countrywide and to crackdown on illegal activities. The MoE and MAFF established Forest Crime Monitoring Units in April 1999, and Global Witness has been appointed by the RGC as an independent monitor with the mandate to report forest violations directly to the Council of Ministers and donors. Generally the logging crackdown appears to have been effective. The quantity of logs felled and exported has dramatically declined since 1998 and there is widespread confirmation that illegal activities have been much reduced. However, some criticism has arisen:

- The majority of small and medium-scale sawmill operations were closed down, but the majority of large-scale concessionaires and military operations acting illegally remained largely untouched by the crackdown
- The prevention of small-scale sawmill activities was a blanket operation which resulted in timber prices rising beyond the means of most villagers
- By April 1999 it was reported that there were some leaks in the crackdown in the form of exports to Laos and Vietnam, sometimes carried out by Military Region 1 and legal concession companies

The logging crackdown caused the country's domestic timber industry to suffer and for local timber prices to rise approximately \$200-250 per m³, beyond the reach of most local users. In an effort to address this problem, the RGC has required the legal concessionaires to supply 20% of their production for local use. However, as the concessionaires have to pay the RGC US\$54 per m³, this cost, plus extraction and transport costs, will also place the price too high. Cambodia requires approximately 170,000m³ of timber per year for domestic consumption. A reform of the domestic timber industry could ensure timber at sustainable prices for local use, while at the same time generating valuable tax revenue for the Ministry of Finance. A possible solution to this problem would be for the RGC to authorise, for example, two sawmills per province to provide timber for local use at set costs to be returned to the Ministry of Finance.

The next few years will be crucial to Cambodia's forestry sector. Major steps have already been undertaken – the Forest Policy Reform Project is underway, every timber concession is being reviewed, the Forestry law is being re-written, and the RGC has shown a definite commitment to clamping down on forest violations. However, what these processes have largely overlooked is the involvement of local communities. By providing access and user rights to the local communities who have traditionally used the forests, the RGC would be moving towards the desired goal of greater equity in resource distribution, to a devolution in central power, and thus to the increased sustainability of the Cambodian forests.

SECTION THREE

TOWARDS COMMUNITY-BASED SOLUTIONS TO FOREST MANAGEMENT

3.1 INTRODUCTION

Despite the positive steps towards forest policy reform as outlined in the previous section, there has been little attempt by the RGC to address community approaches to forest management, approaches that could contribute towards the solving of the problems of deforestation and illegal logging. Measures such as the crackdown, which raised local timber prices, have in fact had adverse effects on local people. Because timber royalties go to the RGC, there are no direct benefits to the local communities who may try to negotiate 'compensation' independently. Forest concessions remain a fundamentally inappropriate form of forest management on indigenous lands. Imposed by central authorities they fail to acknowledge the rights of

indigenous peoples to access the forests they have traditionally used.

Many NGOs feel that to successfully address deforestation, the co-operation and participation of local communities is a vital element. Local communities, depending for their survival on forest resources, are in close enough proximity to actually police the resources effectively and often have the knowledge and incentives to undertake sustainable use. Security of tenure or land use is one of the most critical factors in obtaining the initial participation and enduring support of local people in forest protection activities. There has been a strong NGO move towards promoting initiatives for community resource management in Cambodia. More recently there has been a move towards promoting community involvement in concession management.

3.2 COMMUNITY INVOLVEMENT IN CONCESSION MANAGEMENT

The recommendations of the Forest Policy Reform stated that in terms of concession management local communities and authorities should be brought into the forest concession allocation process. FORTECH, in its review of forest concession management stated that local needs and traditional rights of communities must be recognised in the allocation, management planning and forest operations. Communities should have the right to participate in the decision as to whether to award a concession, and lands of traditional social, economic and cultural significance should be delineated and excluded from the concession. In Ratanakiri, however, attempts to promote community involvement in the HERO concession have proved less than conclusive.

3.2.1 Case Study – Community Involvement in Concession Management, Ratanakiri Province

The HERO Forest Concession overlaps indigenous customary land. The concession is inhabited by almost 10,000 people living in thirty-five villages. Most are members of the Kreung indigenous group who have lived in Ratanakiri for hundreds of years. The Kreung are deeply linked to the forest for spiritual and ancestral reasons, and because the forests contain the bulk of resources for their subsistence livelihood. The concession was approved in 1998 without consultation with the forest-dwelling communities. The villagers within the concession area only learned of it when road-building equipment appeared near a village in March 1999. When the villagers requested the right to establish a Community Forest they were told by a forestry official that it was too late.

The concession operations have damaged agricultural land and village paths by using them as logging roads. The blocking of waterways has also led to a reduction in water quality for some villages. Of great concern to the local communities has been the fact that HERO have been cutting trees within the culturally significant spirit forests.

*In July 1999 the Governor of Ratanakiri called a workshop concerning the HERO concession, involving district and provincial officials, forestry department officials, NGOs and villagers. **It was agreed that areas deemed culturally and ecologically important by the villagers should be excluded from the concession area. It was recommended that as a condition for further logging by the HERO Taiwan Company, a full participatory process and a detailed mapping of the reserved areas must be conducted. Local villagers would be trained to participate in concession monitoring***

- *A cultural resources study took place in August 1999 with a specific focus on researching and mapping spirit forests in six villages in the O'Chum district of the concession area*
- *The Minister of Agriculture, in a letter to Prime Minister Hun Sen on the 2nd September 1999 endorsed the positive co-operation between the NGOs, the local communities, the local authorities and the Forestry department in the HERO concession*

However, violations by the concession company continued:

- *The company continued to log in sacred forests clearly marked as exclusion areas*
- *Company foreman continued to offer covert payments to community members to get access to parts of the forest, creating divisions within the communities*
- *Individual villagers involved in monitoring were sometimes subject to intimidation, and members of a study team were advised not to enter one forest area by HERO workers, despite the fact they had official approval from the provincial governor*

- *Company workers have been reported to have set up base within villages while marking and logging, creating an atmosphere of fear and tension which impedes transparent monitoring*
- *The company continued to cut illegally in areas outside of the authorised coupe, and continued logging and roading in contravention of the Cambodian Forestry Code of Practice*

3.3 COMMUNITY FORESTRY

Community forestry is a major forest management alternative to industrial forest concessions, in which significant forest management authority is conveyed to local communities. The justification for the transfer of use rights and management responsibilities of forest areas from the state to communities includes the following points:

- The state is unable to effectively manage the large areas of land under its jurisdiction
- Local communities are usually the primary users of the resource and thus, if given long term security over the benefits of sustainable management, will have an incentive to wisely use the resources
- The state owns the land in the name of the country's citizens, so properly managed use by citizens, supervised by the state, is justified.
- By undertaking community forestry the conflict over forest land is reduced and sustainability can be increased. In turn this can lead to forest certification and higher returns from the forest resources

Under community forestry, the rights to use, manage and benefit from a forest resource are held by the community or user groups as an entity. Since the benefits to each individual member depend on the overall success of the project, there is an incentive to manage the resource carefully. Community forestry promotes local knowledge, utilises local incentives to undertake sustainable management, and encourages devolution of authority.

Commonly, community forestry has been encouraged on areas of degraded land with the aim of reforestation. National forest departments have fewer reservations for giving local communities the rights to manage resources where these resources are degraded. But community forestry may also be applied to areas of old growth forest with the aim of conservation and protection.

The experience of other countries has shown that community-based resource management systems are successful in protecting forests from uncontrolled logging and agricultural conversion by giving local communities ownership, access, management, use and benefit rights. Through such rights, local forest-dependent peoples can protect their livelihoods, manage the pace of their own development, and redress the current inequality of resource distribution. In particular, natural resource rights are vital for the survival of the indigenous highlanders who rely on the forests for a large proportion of their livelihoods, and who are marginalised from the dominant society in terms of geography, language, and culture. These forest dependent communities often have a good knowledge of the forest and strong incentives to manage it sustainably. Villagers could apply for long-term renewable concession rights to forest land. These can be usufruct rights, whereby the community or the individual gains the right to use and enjoy the benefits of the forest areas for a specific length of time as long as it is not damaged or altered. Alternatively, association title could be given, whereby members of a village register as an association with the government and apply as a group for title for communal forest land.

Community forestry has already been introduced in several small-scale initiatives in Cambodia, with the goal of ensuring the long-term security and stability of the livelihood of rural and forest dwellers, while protecting, conserving or rehabilitating the environment by increasing the area of forest cover. It is gaining recognition as an effective strategy for achieving both sustainable forest management and socio-economic development objectives. Most of the initiatives emphasise developing pilot projects and have been instrumental in promoting and demonstrating community forestry. Both the MoE and MAFF/DFW have recognised responsibilities for community forestry, and each has established a national-level community forestry unit. Although national policies for community forestry are not yet clear, support for community forestry by the two Ministries and some of the provincial authorities has been encouraging. However, more formal recognition by the RGC for community forestry has yet to be given, particularly in areas where community forest areas conflict with other forest uses, in particular with logging and forest concessions.

3.3.1 Case Study – Ya Poey Community Forest, O’Chum District, Ratanakiri

In July 1996 the NTFP Project, in cooperation with IDRC and the East West Centre of Hawaii began a study of customary use of land and forest in Poey Commune, O’Chum District. This was the beginning of a pilot community forestry project targeting old growth forest and indigenous highland communities. One forest was chosen for the pilot project. Comprising a total area of about 4,500 hectares, the forest, known as Ya Poey, is used collectively by six villages of Kreung ethnicity. The forest is divided into four sections, named in the Kreung language: Stieng, O’Taberr, Nyao, and Phnom Tapieng. Village elders outlined the traditional rules that forbade the cutting of forest for swidden, the burning of the forest, or the cutting of large trees.

In the spring of 1997 the six villages formed a Community Forestry Association and agreed on forest protection regulations, and the functions and responsibilities of the Association. Ya Poey Community Forest allows members to collect bamboo, rattan and vines for domestic consumption; to cut timber for domestic purposes with permission from the relevant authorities; to gather other NTFPs for commercial purposes within the rule of law and without destroying the forest; and to hunt small animals and fish using traditional fishing and hunting gear. The regulations prohibit burning, all kinds of timber exploitation for sale, clearing land for swiddens and home gardens, mineral exploitation, fishing and hunting using modern technology and/or for commercial purposes, and hunting large mammals or endangered species. Twelve regulations were agreed upon and presented to the Provincial Rural Development Committee (PRDC) for consideration. The villagers submitted a request to the PRDC to approve a ninety-nine year concession for forest protection for the Ya Poey Community Forest Association. This concession would automatically be renewable with a three-year trial period at the beginning. In return for forest management, members in Ya Poey Community Forest Association can collect forest products for domestic use as well as many NTFPs for commercial purposes.

In early July the Community Forest agreement for Ya Poey was endorsed by the heads of the Provincial and District departments of Forestry, Agriculture, Environment and Land Titles. According to the Governor, this process represented a de facto recognition at the provincial and local government level for Ya Poey Community Forest. However, the Governor also requested that the Community Forest Association submit an official request to the RGC to recognise their community forest. On the 4th July 1997 copies of the request were taken to the Ministries of Interior, Agriculture, the Inter-Ministerial Committee and the Forestry Department in Phnom Penh. The villagers are still awaiting approval.

3.4 JOINT FOREST MANAGEMENT

Joint Forest Management is another option that may allow for the better management of Cambodia’s forests by recognising the need for strategies of interaction between forest-reliant people and the Cambodian government. Joint Forest Management builds on the precedent set by community forestry in that it promotes community involvement in the protection and management of forest resources, but it takes this a step further by advocating systems whereby the resources are managed by communities in partnership with the government and the private sector, thus contributing more directly to the national economy.

Joint Forest Management schemes require the development of methods for increasing the productivity of existing natural resource systems, to satisfy both local and national demand. This requires current natural resource systems to be carefully and critically examined, identifying new opportunities for potential resource utilisation in a sustainable manner, and thus increasing productivity within a set area. Under such a scheme, rules and regulations for the utilisation of the resources would be drawn up by local communities in consultation with the government authorities, and these would be binding for all stakeholders.

Within the forests of Northeast Cambodia there are many opportunities for increased efficiency in resource utilisation under a Joint Forest Management system. For example, opportunities exist within old growth forests where timber or NTFP productivity could be enhanced; areas of forest fallow could be examined for the potential to produce trees of commercial value while allowing the soil to regain fertility; existing or future plantations can be considered for their potential to increase economic returns through product variety; and land previously cleared but returning to permanent forest may allow for the enhanced growth and value of commercial species through careful thinning. Such strategies may allow for increased productivity of forest areas while excluding areas used for environmental protection, for cultural or spiritual purposes, or for local community needs. The beginnings of a Joint Forest Management project are currently taking place with highland communities in Som Thom Commune in Ratanakiri Province.

3.4.1 Case Study - Som Thom Joint-Forest Management Project, Oyadao District, Ratanakiri

In Som Thom Commune, Oyadao, local communities together with the provincial authorities and UNDP have developed a land use plan for the commune. The plan outlines areas of agricultural land, agricultural concession land, spirit forests, village extension land, wildlife protection areas, paddy fields and multiple-use forest, and details rules and regulations for the management of these land-use areas as drawn up by the community in consultation with government departments. The district and the provincial authorities have given their support to this project.

The Som Thom project demonstrates how local communities can take control of their land in addition to being willing for timber harvesting to occur providing it operates under the joint-management of the government, the concession companies and the communities themselves. The Ya Poey forest community have also shown a willingness to allow careful timber harvesting within their community forest. Such schemes have the benefit of being socially acceptable in that communities are involved rather than alienated, and they offer increased sustainability as the local-ownership increases the incentive of the local communities to ensure that the forest is harvested well. Unfortunately, the lack of legal framework at present precludes local ownership of forest land.

As these case studies show, there is still a long way towards the establishment of processes allowing for community participation in forestry management in Cambodia. However, the pilot projects outlined above are the important beginnings of such a process. Community involvement in forest management is essential if Cambodia is committed to moving towards increased sustainability and equity within the forestry sector. Community involvement has the potential to reduce conflict over resources, to protect livelihoods and preserve human rights, to maintain cultural values, and to acknowledge the importance of forests for reasons beyond the economic value of timber.

SECTION FOUR

RECOMMENDATIONS

The Cambodian forestry sector in 1999 has seen almost unprecedented activity and progress. However, Cambodia needs policies to improve how and where land-use allocations are made, and it needs policies to ensure the livelihood of its rural population. Forests have to be transformed from contested resources to resources that are used profitably for the whole nation. There is a need for a multi-disciplinary approach, whereby the solution to deforestation is achieved through community solutions in addition to forest engineering.

State management of forests has failed to produce adequate results. The devolution of powers to use and manage the forests from central government to local government, and from local government to local communities is a critical step in ensuring the sustainable management of Cambodia's forest resources. The following recommendations concentrate specifically on measures to increase local-level community involvement in the management of Cambodia's forests.

4.1 RGC RESPONSIBILITIES

The RGC must continue to show political will to regulate and monitor the forestry situation with strong measures, allowing the balance of state interests, business interests and local community interests with a master plan for appropriate, sustainable and equitable development.

- The RGC must allow for transparency and consultation with all decisions regarding the forestry sector, and provide for participatory processes that actively engage a wide-range of stakeholders
- The RGC must ensure that it takes into account all social, environmental and economic costs when considering the benefits of any land or forest development
- The RGC must ensure compatibility of land use allocation with the local communities who use or need access to the same land or resources on that land
- The RGC should call an immediate halt to operations within concessions on indigenous lands. This is particularly urgent given the mounting evidence of widespread illegal activities within the concessions and widespread disaffection of indigenous people
- The RGC must recognise the rights and ability of local communities to take on management

responsibilities of land and forest and to work towards institutional and policy reform to cover and safeguard these community rights

- The RGC must recognise that provinces need to be involved in land-use planning as mutual land-use planning cannot be done at national level alone. The RGC must play a regulatory but also a facilitative role, and should concentrate on the capacity building of local authorities who will be better able to facilitate community resource issues
- The RGC must continue to work towards the prevention of illegal and unsustainable logging activities through, for example, the maintenance of the log export ban, the drafting and enactment of the new forestry law, and the termination of concessions operating illegally or in contravention to their management plans. A closing down the parallel shadow economy under which illegal logging has thrived is a pre-requisite to creating a functioning judiciary and law enforcement agencies
- The RGC should require all timber to be certified by an international auditor as originating in sound environmental and social practice. The Forest Stewardship Council (FSC), established in 1993, constitutes an internationally recognised and independent certification process.

4.2 CONCESSIONS

The improved management of timber concessions alone will not solve deforestation. Centrally-imposed concessions should be abandoned in favour of a process favouring local-level consultation and participation. Local communities need input and access to concession areas, and local alternatives to concessions should be considered. Progress should continue on community involvement in concession management. The following prerequisites should be met:

- The procedure for granting concessions must be transparent and preservative, with consultation of all affected parties, in particular the local communities and local authorities
- All concessionaires must be required to complete an environmental impact assessment (EIA) and a social impact assessment which would focus on the social impacts of the proposed logging
- Detailed studies of local community use and involvement with forest areas should be conducted before forest concessions are authorised by the government, in order to avoid serious impacts on local communities and ensuing conflict
- Lands of traditional social, economic and cultural significance should be delineated and excluded from the concession. These must be given to communities located within concessions through an equitable recognition of customary rights. Such areas must be carved out and excluded from concession contracts so that the ownership and use rights of forest communities are not compromised.
- Procedural and substantive protections for communities located within proposed concession areas must be established. Such communities should have the right to participate in the decision as to whether to award a concession. Key to such participatory right is the use of representative mechanisms chosen by villagers themselves rather than by outside forces
- In existing concessions, areas of cultural, economic and social importance for local communities must be mapped out with the participation of the local communities
- Annual examinations by the provincial forest department of the coupe area and the concessionaires' sawmills should be permitted. The Forest Department should be under no obligation to inform the concessionaire of the time of the examinations. The results from these examinations must be made public
- Long term monitoring of logging operations as well as log transport and export is needed by the national government in close co-operation with the provincial authorities and the local communities. Village monitoring groups should be encouraged and training provided
- Security and freedom from intimidation of village and NGO monitors needs to be addressed and ensured by the Forestry department

- A mobile ombuds-system to which local people may anonymously complain about logging abuses could be devised
- Communication between communities living within or near concession areas should be facilitated to allow for exchange of ideas and concerns

4.3 COMMUNITY FORESTRY AND JOINT FOREST MANAGEMENT

The right of communities to manage land and forest should not be seen as a privilege to be granted by the state, but rather as an essential step to enable local people to provide a service for the present and future economic health of the nation. Both the Ministry of Agriculture and the Ministry of Environment have taken an interest in community forestry initiatives by creating their own community forestry units. It has been demonstrated that community forestry projects allow customary rights to be incorporated and recognised without major modifications of existing legal frameworks. However, such efforts will remain localised unless mainstreamed into the overall forestry policy framework. In order to achieve this the following prerequisites should be met:

- Legal mechanisms should be developed for recognising traditional land-use practices and systems of customary tenure in order to protect the rights of indigenous peoples
- Current land use must be documented and mapped. This is important evidence of possession rights of the rural poor which can be used to prevent further eviction or encroachment. In the case of indigenous people, mapping land use is quick, simple and cost effective
- The RGC should recognise, endorse and protect the customary rights of indigenous highland and rural communities to collect and use forest products
- The Community Forestry sub-decree should include the authorisation that individuals or associations may access and use forest lands by entering into contractual agreements with the government
- The community forestry sub-decree should expressly include community forestry as practised by the highland peoples, as a legitimate form of community management. Community forest status must be given to areas of old growth forest. Projects such as Ya Poey and Som Thom must be urgently recognised, supported and protected
- Community forestry working groups should be created at the provincial level, incorporating departments such as agriculture, environment, forestry and planning, to screen and make preliminary recommendations on proposed provincial community forestry associations
- There is a need to maintain sufficient flexibility at the national and provincial levels to allow local institutions and knowledge to frame locally unique solutions. Rather than a single community forestry policy, it is recommended that Cambodia develop a 'menu' of social forestry options that allows planners and communities to pick and choose the best solutions

4.4 INTERNATIONAL COMMUNITY RESPONSIBILITIES

The International Community must promote community involvement and participation in the management of forestry resources in Cambodia as a top priority.

- The International Community should place increased emphasis on the importance of community involvement and participation in approaches to forest conservation, natural resource management and land planning
- Pledges of loans or grants made by the international community should be carefully conditioned on the basis of respect for human rights and sustainable management of natural resources, in agreements that are informed and transparent to the public. Compliance to such written conditions should be closely monitored and the Cambodian government must be held accountable for its policies

- The International Community needs to call for an immediate halt to operations within concessions on indigenous land until Cambodia has the institutional resources and political will to prevent human rights abuses and ecological abuses
- The International Community should assist the RGC to develop community forestry or joint-forest management systems, thus encouraging local communities to continue to value forest resources through their increased involvement in their management
- The International community should continue to support initiatives providing accurate information on forestry and land use issues from the local level, particularly concerning human rights, indigenous rights and forest management within Cambodia
- Major importers of illegally cut Cambodian wood must take responsibility to exert severe control over the origin of wood products that are imported, and refuse transactions of wood of illegal and non-sustainable origin. Non-certified timber should not be imported from Cambodia.
- International donors should co-ordinate their strategies to ensure that they do not pressure the RGC into counter-productive actions

APPENDICES

APPENDIX ONE

AN ANALYSIS OF THE LAND SITUATION IN RATANAKIRI PROVINCE

Land markets consistently work on behalf of the rich at the expense of the poor. The experience worldwide in developing countries is that free land markets (often in combination with rural debt) lead to a situation where poor or subsistence farmers are forced, or tempted, to sell their land at minimal prices to speculators or developers.

This situation is already evident in Ratanakiri Province near the market centres. Individuals are now selling plots of land, traditionally considered communal assets by villages, without consultation with the community or the elders. The result is that the remaining land is no longer able to support the village population for food production.

Case Study: Oil Palm Concession, Oyadao District

One of the main government rationales for promoting industrial agriculture concessions is that it will provide employment for local people so that they can improve their living standard and reduce their swidden cultivation practices. In order to examine this assumption, in 1996 the NTFP Project was commissioned by the then Governor of Ratanakiri to make a case study of the 20,000 hectare oil palm concession in Oyadao District. The study found that the company planned to employ 400 people in their plantation and factory. However, 4,500 people would be displaced, mainly of the Jarai ethnic group, from their productive land. The monthly salary of US\$30-50 per month would not compensate a family (at market values) for the loss of their crops. If one salary provided for an average sized family of five, 2,500 people (over half of the population) would still be displaced. These people would be forced to clear new areas of forest in order to survive. In fact, the company has employed few local people, preferring instead to hire wage labourers from the lowland provinces.

Case Study: Land Swindle in Bokeo District

In Bokeo district three local villages (one Jarai and two Tampuan) were tricked into selling 1,200 hectares of prime land to a powerful military general. The General paid local district officials to issue 5-hectare land titles in the names of local villagers, a total of 247 titles in all. The villagers were told their signatures were for a government development project from which they would all benefit, however they later realised that they had signed land titles, all of which were now held by the General. When the villagers demanded their land back the General once again hired local officials to acquire 247 signatures on an agreement saying that the villagers had agreed to sell their titles to the general for a small bag of salt. Several villagers reported how they had been forced to falsify dozens of thumbprints. They were not told of the content of the agreement they were signing, but were threatened that if they did not sign they would lose all their land.

With the help of a legal aid organisation, the villagers lodged a complaint with the provincial court in May 1999. In January 2000, as the conflict had still not been resolved, the Ratanakiri Governor agreed to refer the case to the National Land Conflict Resolution Committee under the Ministry of Interior. The case is still pending.

This case demonstrates how easy it can be for those with power to claim land occupied by local indigenous inhabitants. It is typical of dozens of other cases of land grabbing involving areas from between 5 to 500 hectares each. Because local people have no legal documents proving their customary rights, it is difficult for them to defend their claims. If displaced, they are faced with no option except to clear forest in other areas in order to maintain a viable food production system. It is feared by many observers in Ratanakiri Province that a combination of intimidation and bribery will be increasingly used to force the villagers to give up their land. For many reasons, this is a watershed case. If the outcome of the case proves favourable to the villagers and they are successful in keeping their land it will send a strong message to those involved in the current wave of land grabbing in Ratanakiri Province.

Towards Communal Tenure of Land in Ratanakiri Province

Research commissioned by the Council of Ministers in May 1999 on the type of land tenure favoured by indigenous communities showed a strong preference for a communal type of tenure. The main reasons given for this were that communal tenure would protect the food security potential of the village for present and future generations, as any land sales would necessarily need to be approved by at least a two-thirds majority of the adult village members. Proceeds from any sale would be used for communal purposes. Villagers agreed that such a system would help to protect the common good of the community from the temptation or greed of individuals.

Communal tenure can thus be seen to be one mechanism acceptable to indigenous communities that would buffer them against the excesses of the land markets.

Case Study: Land Use Planning Pilot Project in Krola Village, Poey Commune, Ratanakiri Province

In view of the difficulties being faced by other villagers due to loss of land, leaders from Krola village in Poey Commune decided to request assistance from the NTFP Project in late 1997. After considering a number of options for land tenure, including individual titles and a collective of individual titles, the villagers chose the option of mapping user-areas with participation from the local authorities in preference to legal title options. Their rationale was that recognition from the local authorities would provide them with greater security than legal title. The land use planning process would enable them to continue to use some areas communally, for example for swidden farming, and to allocate other areas for individual use, such as for paddy or fruit tree orchards. The Central Land Titles Department in Phnom Penh, in conjunction with the GTZ Land Management Project, provided technical expertise in producing a participatory land use map of the village user areas. Micro-zones were identified and mapped. These included:

- Old growth forest for the collection of non-timber forest products
- Spirit forest
- Bamboo forest (for the collection of building materials)
- Watershed protection forest
- Burial forest
- Buffer forest (around the village)
- Village residential area
- Paddy
- Swidden and fallows
- Perennial fruit orchard
- Investment zones for cash crop production

The total area covered by the land use map is approximately 1,200 hectares. Of this, about 35% is agricultural land, approximating five hectares of land per family.

For each of the micro-zones, a village Land Use Working Group developed internal regulations on use and management, with technical assistance provided as required by the NTFP Project and a counterpart from the central Land Titles Department. The process of formulating the regulations included holding regular meetings involving all village members at which the regulations were reviewed.

All communities with user areas adjacent to Krola village sent representatives to join the process at all crucial steps. Krola village representatives attended meetings in all of the neighbouring villages in order to ensure the understanding of the process and to resolve any outstanding disagreements about the extent of user areas between the neighbouring communities. Once the negotiations were completed, elders and leaders from the neighbouring villages placed their thumbprints on the land-use map to signify their support.

As the support and recognition of the authorities is a crucial factor in ensuring security over land and resources, relevant authorities and line departments were also involved in the process at all steps. These included:

At Provincial Level:

- Forestry Office, Land Titles Department, Environment Department, the Provincial Secretary General
- District and Commune authorities

At Central Level:

- A Counterpart from the Land Titles Department
- A Counterpart from the Forestry Department

The process of mapping and developing user regulations took approximately four months during which time a Land and Natural Resources Committee was elected. The land management regulations include provisions for the re-election of the Committee and principles of its operation.

Examples of the Regulations

- Sale of land (even small parcels) must be endorsed by consensus of at least 80% of the voting members of the village
- The community allocates access and rights of use to land to individuals or families who are members of the village. Productive activities are primarily carried out by individual families
- Swidden land may be converted to permanent land uses such as perennial fruit orchard or cash crops. Any family who develops a parcel of land is recognised as having exclusive rights to harvest the produce, and may pass these rights on in inheritance. A ceiling of five hectares per nuclear family is placed on conversion of swidden land to settled users. This helps to protect widows and other families with limited labour resources from being marginalised by more aggressive community members. The five-hectare provision encourages families to engage in perennial cash crop production, according to the provincial development policy. Villagers can expand their area of perennial crops year by year, according to their capability. As these crops come into production, one may expect a corresponding decrease in dependence on swidden cultivation
- As the village population increases (and the number of nuclear families), the situation may arise whereby all swidden land has been allocated to individuals. At this stage, parcels may begin to be divided to children by inheritance. This situation would be little different from having private land title, with the exception that sale of the land would not be permitted
- Old growth forest areas and spirit forests are protected from further encroachment
- Significant areas have been set aside for joint investment in cash crop production. The community welcomes any investors who are interested in developing this land for cash crops. The period of cooperation and provisions for sharing responsibilities and benefits between the investment company

and the local community would be defined. Such an approach allows for the Government priorities of encouraging investment to be realised, while at the same time protecting the community interests. It effectively recognises that Government, local communities and investors are all legitimate stakeholders in the land. This approach introduces a new tier of decision-making in development and investment on customary land: that of consultation, participation and negotiation with local communities. It can help to ensure a more transparent process in decision-making about development projects

The Advantages of Community Tenure (usufruct rights) through Land-use Planning

- Local highland people can easily adapt to this approach
- Rapid mapping is possible involving the whole community at a time, as compared to surveying for individual titles. This ensures that a level of protection over rights to land can be delivered quickly for local people
- The Land-use Planning Process describes actual de-facto tenure (current use and occupation) which are recognised as possession rights under the 1992 land law. Article 70 accepts 'fallowing land for the purpose of restoring soil fertility' as being a legitimate use of land. Thus active fields and fallow swiddens can be described as part of the community possession
- Participation of all stakeholders is an effective method to prevent conflict. Neighbouring villagers, local authorities and the community are all involved in the process. The reduction of civil conflicts is a major priority of the Ministry of Interior. Participatory Land-use Planning will greatly reduce the time that local authorities have to spend on resolving conflicts
- The productive potential (and thereby food security) of the village is protected for present and future generations
- The gradual conversion of swidden land to more productive uses such as fruit trees or perennial crops is encouraged through this process. This is consistent with Government priorities. Conversion to sedentary agriculture is able to take place at a pace which the community can handle. This may take up to fifteen years
- The existing community labour force for agriculture development is utilised. Rather than being marginalized or disadvantaged by the development, as happened with the oil palm concession, local communities can participate and benefit
- Private investment is allowed through the entering into joint agreements with the local community
- Important forests are conserved and the watersheds are protected

Obstacles to Community Tenure

- The Land Titles Department and some local authorities are resistant to communal forms of land tenure as it has the potential to effectively lock-up large areas of land from the speculators market and therefore from the titling and land transfer process
- As yet there is no clear policy framework. Progress on the policy for highland people's development has been static for almost three years. A chapter on indigenous community land rights has recently been drafted into the land law, but not yet approved
- The type of tenure provided under a community Land-use Plan is, as yet, unclear

Because there is no policy framework, each Land-use Planning application must go through an expensive and time-consuming process of consultation and workshops at every level. This process involves consultation with the relevant authority as the first stage, followed by the presentation of an official application based on the results of the first level of consultation.

Recommended Types of Agriculture Investment for Community Land

- Investments that are high in biodiversity should be encouraged, based on the existing agriculture systems and incorporating native varieties. In this way the ecological and environmental advantages of

the traditional systems can be maintained

- Investments of perennial tree crops should be a major component. Perennial tree crops help to stabilise the system and replace some of the ecological functions of the secondary forest
- Family food production should be a first priority. The marketing of surplus products would be a second priority
- Investments should be labour intensive rather than capital and inputs intensive. Labour is one of the main limiting factors for the highland family in implementing agriculture change, therefore appropriate ways of saving labour will need to be found

APPENDIX TWO

HUMAN RIGHTS AND CAMBODIAN FORESTS

Article 31 of the Cambodian Constitution recognises and respects all human rights stipulated in covenants and conventions related to human rights. Several human rights provisions enumerated in the International Covenant of Civil and Political Rights (ICCPR), ratified by Cambodia in 1992, and the International Labour Organisation (ILO) Convention No. 169 are relevant to current forestry practices, and to the situation of the highlanders of the Northeast. These treaties engender the following binding international obligations on the Royal Government of Cambodia:

1. **The right to culture** – Article 27 of the ICCPR stipulates that, ‘ethnic ... minorities ... shall not be denied the right, in community with other members of their group, to enjoy their own culture [or] to profess and practice their own religion.’ Indigenous cultures in Northeast Cambodia are intimately interwoven with the natural world. Animist religions place great emphasis upon peoples’ obligations to and relationships with the natural world and the consequences for failure to meet these obligations. Culture and personal identity is thus inextricably bound to a sense of place and oneness with their immediate natural environment. Where land and forest is the focus of religious and cultural signification, the right to cultural difference and autonomy hence resets upon access to these resources.
2. **The right to life** – every individual has a right to life. Article 6 of the ICCPR states that everyone has ‘the inherent right to life. This right shall be protected by law.’ Consequently, governments have a duty to preserve, or at the very least, not harm, the resources upon which individuals depend for their survival. Land, forest and fishery access rights are of primary significance to most rural Cambodians as a source of food security and livelihoods. A variety of subsistence strategies have helped to protect rural Cambodians against catastrophe in any particular area. Forest resources are an essential part of this subsistence ‘safety-net’. Deforestation undermines a staple of rural Cambodian livelihood strategies and reduces the ability of the rural poor to avoid landlessness and poverty.
3. **The right of equality** – the current use of forests vitiates the right to equality in two ways. First, the exploitation of forest resources is currently heavily biased towards logging, which means that the value of the forest for local communities using NTFPs is systematically devalued. Timber exploitation often fatally compromises the ability of forest residents to gather NTFPs, thus preventing them from pursuing their livelihoods. Thus, the current exclusive focus on timber has an actual negative impact on forest-dependent communities in that the costs of forest exploitation are unevenly distributed among the population. Second, virtually all legal revenues from timber exploitation flow directly to Phnom Penh. Little if any is reinvested into the communities that have suffered the most from deforestation and environmental damage. Thus, the distribution of forestry revenues is deeply flawed and damaging to health and life because of its inequality. In conclusion, both the distribution of costs and benefits from current forest exploitation are systematically skewed against forest-dependent communities in favour of military and political elites in Phnom Penh. Consequently, the current system of timber exploitation has an important impact through the exacerbation of income inequalities throughout Cambodia.
4. **The right to self-determination** – Article 2 of ICCPR guarantees that ‘all peoples may, for their own ends freely dispose of their natural wealth and resources.’ While this right has traditionally been applied to the State, its application in the case of indigenous groups has been suggested by ILO Convention 169, which promotes the control of resources by those who immediately depend upon them. This provision is particularly pertinent for the highlanders of the Northeast, and may mean that at least some of these forest communities will have a direct claim on the ownership of forest resources. In addition,

Article 7 of the ILO Convention 169 says that indigenous people have the right to decide their own priorities for the process of development as it affects their lives, beliefs, institutions, spiritual well-being, and the lands they occupy or otherwise use.

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