

Unofficial Publication

The official publication of the Summary Report is pending as it is waiting for the approval of the National Land Management Authority. The study had been conducted during July 2007- 2008 and its latest version was presented to the Centre for Research and Information on Land and Natural Resources in September 2009, which was relatively late for the study's findings.

On the strong presumption that, by the time the publication is approved, the findings may be essentially outdated and fail to reflect the current situation, the Foundation for Ecological Recovery, as co-researcher, would like to make the latest version of the report unofficially available via websites for interested people.

However, as soon as copies of the summary report are available, the official publication will be launched again.

Summary Report

Research evaluation of economic, social, and ecological implications of the programme for commercial tree plantations: case study of rubber in the south of Laos PDR



Collaboration between

Centre for Research and Information on Land and Natural Resources, National Land Management Authority, Office of Prime Minister, Lao PDR, Faculty of Social Sciences, Chiang Mai University, Thailand, Foundation for Ecological Recovery, Bangkok Thailand.

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Introduction

This research project is a collaboration between the Centre for Research and Information on Land and Natural Resources of the National Land Management Authority, Office of Prime Minister, Laos, the Foundation for Ecological Recovery, and the Faculty of Social Sciences, Chiang Mai University (list of researchers in annex) with the aim of evaluating the economic, social and ecological impacts of large-scale land concessions to plant rubber and making recommendations for the future management of land in Lao PDR. Two provinces were selected in the south of Laos, Champassak and Salavane, to conduct research over the course of one year from July 2007 to July 2008.

Project Objectives

1. To contribute and develop research capacity and information resources on large scale plantations in Lao PDR.
2. To study and analyse the socio-economic and ecological impacts of large-scale plantations in Lao PDR at local, provincial and national level.
3. To initiate and encourage cooperation through collaborative research between different partners, namely the government of Lao PDR (Centre for Information and Research of Land and Natural Resources, National Land Management Authority), Non-Government Organisations (Foundation for Ecological Recovery, Thailand and other NGOs in Lao PDR) and academics (Chiang Mai University, Thailand and other researchers within Lao PDR).
4. To provide the opportunity for exchange forums among the actors impacted or interested in the large scale plantation issues, including government officials at all levels, non-government organizations, local people, academics and plantation companies' representatives.
5. To provide feedback and recommendations for the development of land use policy in Lao PDR.

The research report is divided into three parts. Part I presents an evaluation of the history and development of the rubber industry within the economic and social history of the Mekong region. This section examines the expansion of investment into rubber planting in Laos. Part II turns to the history of land concessions in Laos, with an assessment and review of laws and policies related to forestry and land, and an analysis of the process of authorization of land concessions in Laos. Part III presents an assessment of the economic, social and environmental impacts which have been brought upon the people living in the six villages within the case study areas: Oudomsouk, Lak 19, Nong Nam Khao Yai villages in Bachiengchaloensouk¹ District, Champassak province, and Vangkhanane, Nong Ke, and Nong Lao Theung in Lao Ngame District, in Salavane province. During interviews at household level, the research team collected information covering five years from 2003-2007 in order to compare the difference in livelihoods before and after the arrival of the rubber estates, of which the first began to take over land from the end of 2004.

Part IV presents an overall analysis which includes the main findings from the study and presents short, middle and long term recommendations to alleviate the suffering of the people who have lost their land. These propose the establishment of a mechanism for monitoring and investigation of the rubber companies' operations, as well as forms of assistance and ways to resolve the problems of the people affected, and call for a review of the processes for granting land concessions and related policies for land management.

Part I Laos and the rubber industry

The expansion of the rubber industry in Lao PDR is directly related to the emergence and expansion of capitalism in the Mekong Sub-region. Frontier capitalism, which had become an important pre-condition in the development of the rubber industry since the end of the 1990s, developed through various forms of relations among transnational capitalists, farmers, and local government officials on the borders between China and Vietnam, China and Laos, Thailand and Laos, through to Vietnam and Laos.

Lao PDR has become a strategic area for rubber production between major capital from three countries, China, Vietnam and Thailand. This is a direct result of the increased global demand for natural rubber since

¹ Referred to locally as Bachieng District, which is the form used throughout this report.

2005. Particularly in China, which is currently the biggest importer of rubber in the world, the demand for rubber has increased steadily throughout the last decade. China, Vietnam and Thailand have expanded their rubber plantations into Laos, which is seen to have abundant fertile soils, and cheap labour. These capital groups have different ways of operating which creates different impacts for the development of the rubber industry in Laos, involve different changes in land use, and different impacts for the livelihoods of rural people who have come to be involved in these projects.

Rubber plantations in Lao PDR have been implemented involving different types and levels of investment:

1. Local capital: involves investment by Laotian investors on a relatively small scale. This is operated on both a land concession and contract farming basis.
2. Smallholder capital: refers to investment by farmers in their own fields, whether or not on a contract farming basis.
3. Cross-border capital: refers to investment by middle men and traders on the borders, particularly with Lao and China. These middle men vary in character, from small-scale investors who provide funds and seedlings and buy up latex at an agreed price to traders who scout around the borders to buy up produce.
4. Transnational corporations: refers to 100% foreign investment which may be registered as a new legal entity or a branch of a foreign enterprise. These are mostly from China, Vietnam and Thai and operate via land concessions and contract farming.
5. Transnational joint venture capital: refers to the joint investment between private capital and private sector in Laos.

These five sectors use resources differently. The latter two can access the largest areas of land, they concentrate land capital and earn the highest income. Up to 75% of the investment in rubber in Laos has been made by foreign companies. A survey by the Ministry for Commerce in 2007 (www.moc.gov.la), found that 40 companies have come to grow rubber in Laos in a total area of 182,900 ha. This does not include areas where rubber is planted by local capital and smallholder farmers, as clear figures for small scale plantations are not available.

These different capital groups mentioned above carry out investments in rubber under four different models as follows:

1. Rubber plantations under large estates: these use large areas of land and much labour. Mostly these are operated by large capital groups. The system of agricultural estates is managed on a similar basis to an industrial factory. The owner of the estate is the controller and has a monopoly on the management of capital, technology and labour. Production is characterised by mass-production, monocropping, the control of technical standards and the recruitment of large numbers of labour under strict discipline and controls. Unlike most factories, however, the work is not regular but seasonal and temporary. Employment within the rubber estates is highly insecure.
2. Contract farming system: this arises from an agreement between farmers and a company or trader to plant, manage and buy up rubber at an agreed price and quantity. In this system, farmers maintain rights to use the land and manage the rubber themselves, as they invest their own land and labour while the company or traders invest in the supply of seedlings, technology and markets.
3. Labour and income sharing under an agricultural cooperative: where an agricultural group at the village level allocates land to farmer members who make an agreement with the group to plant, tend, and harvest the rubber.
4. Smallholder rubber farms: where all investment comes from the smallholders themselves. Or alternatively, the household invests their land and labour, and a third party assists in the investment of other capital and seeking out markets. The latter case tends to be common among ethnic groups in the highland areas, located in the northern border regions close to China, who have extended families who have already gained experience in growing rubber, and they can help in providing technology, funds and knowledge about planting and harvesting rubber, as well as access to markets.

Large-scale capital in the Lao rubber sector, whether domestic or external, tends to be invested in large-scale plantations, under an agricultural estate model. For this companies require large-scale land concessions from the government of around 30-50 years.

Laos' boom in rubber, since the turn of the 21st century, differs from the patterns of expansion in other countries of South East Asia in that there is a tendency towards expansion through large-scale rubber plantations, led by foreign rather than domestic capital. Although land use planning has not yet been

organised in Laos, large-scale land concessions for rubber have been issued throughout the country. The different forms of farmer participation in the rubber industry influences the opportunities for economic development for different households. Mostly, rubber plantations have expanded among the communities of the upland and highland ethnic minorities (*lao theung* and *lao soung*), partly as a result of the policy to promote the reduction of shifting cultivation, partly due to the climatic and geographical conditions in these areas which are appropriate to the production of rubber. However, participation differs between the minority groups in the north and in the south. While farmers in the north have been able to integrate rubber into their fields as an agricultural alternative and accumulate larger amounts of capital as a result, farmers in the south have been transformed into waged labourers in the rubber estates. These differences are a direct result of differences between the large-scale concessions and small-scale rubber plantations.

In the large-scale land concessions, which exist in the north as well as the south, capital, including land, finance, knowledge, and technology for managing the rubber plantation, is concentrated largely in the company, while peasants become workers and receive a wage for their labour. Investment under a contract farming system and the smallholder plantations involves greater distribution of capital. Smallholder rubber farmers, own their own small plantation plots, and distribute capital in hiring labour, and trading produce. Income from the sale of rubber products goes directly into the hands of the farmers which allows the farmers to accumulate capital and build greater income from the rubber plantations.

Average income estimates of the farmers who own rubber plantations in 2006 revealed that they produce 1,360 kg of rubber per ha, which created an income of around 7.2 million kip per year (\$880) (Ketphanh et al 2006). A family growing 3 ha of rubber could have an income of around 21.6 million kip (\$2,640), averaging 1.8 million kip per month. There are no available estimates to assess the potential monthly income of a rubber worker once the harvesting begins in the large-scale agricultural estates in the south. The income of plantation workers, of around 400,000-700,000 kip per month in the first years of planting, are discussed below.

Comparing the two, however, the basis for economic security of the farmers entering the rubber industry differs. Among farmers who become labourers working in the rubber estates, their loss of farmland and other sources of food, leaves them with only one means of livelihood, the wages they earn from working in the estate. This source of income is uncertain because work in the plantations is irregular. Meanwhile, the insecurity of farmers who start their own rubber farms derives from a lack of knowledge related to this new crop, which means that they are unable to manage their farms efficiently enough, and are not able to seek out their own markets. This gives them very little bargaining power with the traders, but they do have some alternatives in choosing a trader who gives a satisfactory price. Farmers who participate in the form of contract farming, have less bargaining power, as this tends to depend on the conditions which are fixed by the company that procures the finance and technology for them. While their bargaining power is low, farmers still maintain their land, they gain a higher and more stable income from rubber than the rubber estate workers.

Compared with other countries involved in the rubber industry, Laos came late to the industry, and is the least ready for development. In those countries who have planted rubber for a long time, eg Thailand, China and Vietnam, they have developed considerable resources of science and technology. The fact that the government does not have a policy, strategic measures, or a law for serious support (including finance, technology and science) to the farmers, means that presently Laos has to rely on funds and technology from foreigners.

Many rubber farmers in Laos do not receive support from the government, and lack essential knowledge or information on rubber, eg production, marketing and product processing or selling more latex. They have low production efficiency, often selling only latex, which means Lao farmers alternatives in generating income from rubber is limited.

The lack of development of the rubber processing industry means that Laos' markets for selling rubber all lie outside the country. Their insufficient capital for production, and the inaccessibility of the market, means that the rubber producers in Laos have low bargaining power, compared with farmers in the other countries. There is no mass cooperation of producers and producer groups aimed at improving their bargaining position. The approach for development of the rubber industry in Lao PDR therefore presents major challenges which must be researched and analysed. Rubber requires a considerable investment even at the smallholder level. The drive to plant economic crops under monoculture may not be the best approach for the eradication of poverty in Lao PDR, when diversified agricultural production appears better placed to ensure food security.

Part II Land concessions in Lao PDR

History and development

The beginnings of the land concessions in Lao PDR are directly related to the change in economic development policy at the end of the 1980s to the beginning of the 1990s, with the first large-scale land concession to plant commercial trees granted in 1994. This authorized the concession of land for commercial trees in Champassak to the Asia Tech company from Thailand (7 December 1994) over an area of 16,000 ha, for a period of 55 years with a total capital investment of 12.8 million US dollars. Since then, the planting of commercial trees and other industrial cash crops in Laos has expanded.

The policy of change of the economic policy of the Lao government was entitled "reorienting the natural economy to a commercial economy" which set the direction for economic development through liberal market mechanisms. This included opening the country up to foreign investors, issuing a law on foreign investment, the amendment of all decrees and laws related to forestry land, with the aim of using forests and land resources for economic development. Investors, foreign and domestic alike, were given the right to request a large-scale concession of land to plant trees or industrial crops for trade.

Concessions were first authorized in law in the Land Decree of 1992, which permitted the granting of lease rights or land concessions to the Lao people, aliens, and foreign individuals. They are subsequently governed in the following decrees and laws on land and forests: the Prime Minister's Decree on the Management and Use of Land and Forests 1993, the Decree on Land and Forest Classification for planting trees and conservation of the forest 1994, the Forestry Law 1996, the Land Law 1997, the amended Land Law 2003, and the Decree on the implementation of the Land Law 2005.

These legal instruments have revised the regulations giving powers to a succession of different state bodies in authorizing concessions at the central and local level. However, they all share the emphasis that leases or concessions should only be granted over land which is lain waste, or devoid of trees. On the contrary, as has been confirmed in this research, concession rights have been granted over farmland, orchards, and other plots which the state has officially allocated to the people under the Land and Forest Allocation policy. The concession area in the cases studied here has also covered areas for grazing animals and forests used by local people.

Land concession boom for commercial plantations

Since 2000, the rate of expansion of investment by foreign investors in Lao PDR has intensified, through large-scale land concessions for tree plantations such as eucalyptus, rubber, cassava and sugar cane. Most of the investment by foreigners has been concentrated in the central and southern regions of Lao PDR in Bolikhamxay, Khammouane, Savannakhet, Champassak, Salavane provinces.

Presently, investment in tree plantations in Laos comes both from countries within the Mekong sub-region and further afield. For example, the Oji company from Japan, has taken over a 50,000 ha concession previously granted to the BGA company, in Bolikhamxay and Khammouane provinces, the Berla Lao company (Aditya Berla Grasim), from India, has a concession to plant 30,000 ha in Savannakhet province, and the Viet-Lao, DakLak, and Dau Tieng companies have an agreement to invest in and plant rubber over an area of more than 30,000 ha, in Champassak province and Salavane, in the south of Laos.

According to the Committee for Planning and Investment², the total area of land concessions which the Lao government has authorized to foreign companies throughout the country, both for monocrop plantations and cash crops, amounts to approximately 167,000 ha, the target to plant eucalyptus 80,000 ha and grow rubber 46,600 ha. Most of the lands conceded lie in the central and southern part of the country.

The process for granting land concessions

The granting of the land concessions is one measure by which the government aims to draw in investment, particularly foreign investment. The process of authorization of land concessions has always been related directly to the laws and policies to promote investment, and the government units with the primary role, has been the Committee for Planning and Investment (CPI), originally the Committee for Management of Investment and Foreign Cooperation. The authorization for land concessions are intended to be

² These figures appear to be inconsistent with the figures quoted earlier from the Ministry of Commerce. It has not been possible to clarify this inconsistency.

implemented in one step, through a one-stop shop process. There are no surveys of land prior to the authorization of the land concession. Concessions may be authorized for a period of between 30-50 years and 75 years in a Special Economic Area. Presently, proposals for a state land concession for foreign investment projects, must carry a minimum investment of 20 million US dollars (Law on the Promotion of Investment 2004).

The approval of many of the land concessions to foreign companies was given before the completion of the economic feasibility study. Furthermore, land concessions have been authorised before a detailed survey of existing land use and physical suitability of the area of land proposed. There were no site specific economic, social or environmental impacts studies before authorizing the land concessions. In the villages studied, the loss of land was abrupt and unannounced. As Mr Kham Ouane Boupha, Minister within the Prime Minister's Office, and Head of the National Land Management Authority stated in the Meeting on Land Use for Commercial Tree Plantations on 14-15 February 2007

“The issuing of land concessions and leases for tree plantations over large areas and for excessive periods has led to social and environmental problems and required both the resettlement of people and compulsory acquisition of the land which the people farm on. The people have lost their source of daily livelihood and lost their long term rights to use the land”

The process of granting of a land concession has been unsystematic involving several government bodies. The leasing or concession of land is governed by several laws and decrees and each piece of legislation determines a different maximum area threshold for different levels of government to authorize. Authority over land leases and land concessions has passed from the Ministry of Agriculture and Forestry, to the Ministry of Finance to the National Land Management Authority in the space of seven to ten years.

Although on the one hand, the government views its land policy as responding to the need to promote domestic and foreign investments in transforming land assets into capital. On the other hand, it recognises that past implementation of land concessions have created serious social and environmental problems. The overall emphasis on encouraging economic investments has led to overlooking social and environmental impacts. Various investment projects did not have any evaluation studies on the economic, social and environmental aspects and did not prepare a detailed land survey before project development contracts were signed. The contracts themselves only considered the financial investment aspects of the projects. Meanwhile, state bodies with specific duties under the law, for example, the Ministry for Agriculture and Forestry, have participated only as a witness in the signature of the project contract.

As a result of the various social and environmental problems which have arisen from land concessions in several projects, the government resolved in 2007 to suspend the granting of land concessions temporarily to study, monitor and evaluate the root causes of the problems that have arisen in the past.

Part III Rubber estates and transformed livelihoods

The third part of the report, examines the case studies on the expansion of rubber estates in the southern part of Laos with an evaluation of the social, economic and environmental impacts for the people who live in the area and are working with the rubber estates.

Land loss and compensation

All areas that were granted in concession to the rubber companies, were originally agricultural and forest land allocated to the people. The study found that over 90% of the case study households held temporary land use certificates, which had been issued by the state since the Land and Forest Allocation programme in the 1990s, and over 80% of the agricultural land area which was transferred to the rubber companies was in production and subject to a land certificate. Households in the target area with a land title (*bai ta din*) were also asked to give up their land to the companies. A considerable number of families lost all their farm land to the rubber estates, mostly in the villages of Lak 19, Vangkhanane, Nong Nam Khao Yai and Oudomsouk.

In Nong Nam Khao Yai, villagers were not informed of the project in advance. They learned of the project, when the company brought their tractors into clear their fields. No compensation was paid for the land or the harvest to the villagers, who lost teak plots, coffee orchards, rice fields and broom grass fields. In Vangkhanane, villagers did not know the total area of land which was given up to the company, while the

District officials have only partial records. The lack of basic information prior to the arrival of the company, meant that it was impossible fairly to calculate a sum of compensation. In some villages, land was given up to the concessions more than once, or to more than one company. For example in Vangkhanane, villagers were asked to give an additional area of land to the Dak Lak company, after the initial area was ceded. In Lak 19, one in five villagers lost land to the Dak Lak company in the first round, then later the rest of the village was called on to give up their remaining land to the Dau Tieng company.

Table 1: Area of the land conceded to rubber companies from 6 case study villages (ha)

Village	Year	Company	Total area conceded (ha)	Area after the concession (ha)	Total land given to the company
Oudomsouk	2005	Viet Lao	1,319.55	673.55	49%
Lak 19	2006	DakLak	48.00	27.00	90%
	2007	Dau Tieng	234.00		
N. Nam Khao Yai	2004	DakLak	555.85	155.85	72%
N. Ke	2006	DakLak	518.20	348.20	33%
Vangkhanane	2004	DakLak	521.85	110.65	76%
	2006	DakLak			
N. Lao Theung	2007	DakLak	140.00	117.50	16%

Many villagers who lost their land received compensation from the companies, however not all households were paid. In the Decree on Compensation and Resettlement of People as a result of Development Projects in 2005, it is stipulated that the people who have derived an impact from a development project, whether they have a certificate or otherwise, must be compensated or assisted, as a guarantee that the quality of their life will not be diminished as a result of the project. However, as information relating to compensation paid to each household has been recorded and kept by the company, the District officials only have sketchy reports of what has been paid. The study team were only able to access information regarding two villages, Nong Ke from District officials, and Lak 19, obtained from the Dau Tieng company.

The payment of compensation in the six case study villages was unsystematic and uncertain. One company paid compensation only for the loss of yield in that year, another company calculated a sum based on the value of the land and yields together, with a sum of compensation per hectare. The average sum per household was similar in both villages, around 1,500,000 kip per household (approximately \$176). As for the other four villages, most villagers did not receive compensation. Among those who did receive compensation, compensation was paid at an average rate of 500,000 – 1,000,000 kip per hectare only (\$59-\$117 respectively). Some received just over 200,000 kip (\$23) per hectare. These rates of compensation are extremely low even in comparison with the value of a single year's crop harvest per hectare. In the case of villagers who lost all their land, the compensation paid was not enough to cover a large household's food expenses for more than one month.

Livelihoods and land rights before rubber

Before the arrival of the rubber estates, the livelihoods of the people was based on agriculture and gathering forest produce. The agricultural system was mainly based on swidden rice cultivation, paddy rice farming (where possible: paddy land was not available in the case study villages in Bachieng), orchard farming and livestock raising. Most people grew rice to consume within the household, and sold their crop only when there was a surplus. In addition, most farmers in these fertile lands had established orchards to produce cash crops such as coffee, pineapples, ground nuts, cardamom, castor beans, durian and teak, for cash income of the household. The most common type of livestock kept were cattle, buffalo, goats, pigs, which were generally put for sale when it was necessary to access a sum of cash.

Before the arrival of the rubber concession, 80% of the households in case study areas grew rice enough to eat all year round. Households who were not able to produce sufficient rice for the entire year tended to go short of rice during the months of March to August. During these months however, the fruits from the cash crops tended to become available and the money raised from these could be spent to meet the food gap. The loss of dryland rice fields, particularly in those villages with few paddy lands available meant that villagers became more vulnerable to not having enough rice to eat throughout the year. Those that additionally lost their orchard land, had only one solution for compensating their loss of livelihood, which was

to seek work as a labourer in the rubber estates. In practice, however, it was found that employment opportunities were irregular in every village and work in the estates was not available for all of those villagers who lost their land. In addition, the wages were low and were paid late, while the price of rice increased steadily.

Transformation of the local people's way of life of after the rubber estates

Coffee, rice and insecurity

In three of the case studies (Lak 19, Oudomsouk and Nong Ke), villagers derived their main income from coffee before the arrival of the estates. The price of coffee increased in the period studied, giving the villagers a noticeably increased income. For example in 2005, villagers from Lak 19 had an income from coffee of up to 5,147,000 kip (\$606) per household, with yields in all three coffee growing villages at around 2.5-3 kg per tree or 1-1.5 tonnes per hectare. All three villages lost coffee orchards to the rubber companies. Lak 19 village, which gave up all its coffee plantations to the rubber companies, lost the chance to receive income from their crop in the year when prices were at record highs, at up to 18,000-25,000 kip per kg in 2007-2008

Other cash crops, planted in the case study villages included cardamon, durian, and other types of fruit trees. Growing a variety of plants by households is an agricultural strategy to reduce the risk of market volatility. A variety of choice helps distribute the income of the households more evenly around the year. The loss of these various sources of income has been an important factor in creating economic insecurity amongst landless villagers.

Despite the prevalence and success of growing cash crops in the study areas, villagers still did not abandon rice-growing. Before the establishment of the rubber estates, villagers in the case study areas used to produce rice as their main crop. Of households who were interviewed 90% used to produce rice, while two in five of case study households had sold rice in the past with yields of rice falling from 64 tonnes overall in 2003 to 23 tonnes in 2007. The average income of households who produced rice for sale was 1,800,000 kip (\$212) per year, even if this is not a large sum, it represented a supplementary income for households.

In all six villages, total rice yields diminished. Of the households surveyed, 80% used to be able to produce enough rice for their consumption throughout the year in 2003. From 2003-2006, that is in the years up to the establishment of the plantations, the total yields of harvested rice were reduced by one third, from 367 tonnes before the land concession to 240 tonnes. This reflects the initial loss of land from some of the earliest plantations affecting the case study sites. But since the majority of the land was conceded in 2006-2007, rice yields reduced to a quarter in 2007. The amount of rice that villagers had to buy therefore increased, but unfortunately for them this corresponded to the year of starkly increased prices for cereals, with rice prices rising by 140%, compared with the prevailing prices before the land concession. Estimated household expenses for buying rice averaged at 638,000 kip (\$75) per year in 2003 and increased to 1,523,000 kip (\$179) in 2007. Amongst households without land in Lak 19, it was found that the average expenses on rice increased to 4,647,000 kip (\$547) per year. In Oudomsouk expenses in buying rice amongst landless households averaged at a value of 5.9 million kip (\$694) per year.

The risk of rice insufficiency is irregular throughout the year. In the period before the rubber concession, rice was in short supply within the poorer households from March onwards, and most families had consumed their annual harvest by July. The times of rice shortages among households surveyed tended to be over the period September-October before the next rice harvest season. The planting of both dryland rice and paddy rice which are harvested two to three months apart, used to help in reducing rice insecurity. Since the rubber concession took over the land, the area of rice was reduced and rice insecurity increased sharply up to the end of 2007, when some relief came for those families who had kept their paddy land, who were able to reap a harvest in December.

The average expenses of households in the years following the land concession, showed the increase in expenses in buying rice and food, which increased overall livelihood expenses. Previously, expenditure on food was virtually unnecessary, and tended to be spent on seasonings, fermented fish (*pla ra*) and meat, but now for most villagers, food expenditure has to cover rice and vegetables, at the very least.

Undervalued food and resources from forests and streams

Loss of agricultural and public spaces have brought about changes in the way of life of the villagers in the case study areas. Before the land concession arrived, most public and private lands had been important sources of natural resources which were used by the villagers. These wild resources which tend to be called

collectively (“non-timber”) “forest produce” in English, are in reality not limited to the forest, but are also derived other ecosystem resources, such as streams and marshes etc.

Before the rubber concession arrived, villagers from different villages collected wild produce. For example mushrooms, bamboo, rattan shoots, vegetable leaves, and small animals, insects, fish, shrimps, shellfish for sale and for consumption. Areas which were rich sources of wild produce for people in all six villages studied before the establishment of the rubber estates were the rice fallows and rice fields, the streams and their banks, the deciduous dipterocarp forests (*pa khome*), the evergreen rainforests forest (*pa dong*) and the use forests (*pa chai soy*). Produce from these areas, which were harvested for sale were useful in supplementing the household economy. Important semi-wild crops included broom grass, which villagers used to reap from the swidden fallows and once a year to make an income. One household in Oudomsouk was able to make 5,000,000 kip (\$588) per year from selling dried grasses. Other households could make an income from 1,000,000 – 2,000,000 kip per year income from selling wild produce. This source of income was lost when the rubber company took over the rice fallows and various forest areas within and around the villages.

However it was not only economic income, but also subsistence goods and foods were lost from these areas such as vegetables and herbs and fruits from forest. Many different women from Lak 19 commented on the condition of their way of life from before the destruction of their land and forest, compared with when they were no longer able to collect forest produce. *“After working in the coffee fields, we would go together to look for food to eat and to sell” “we used to make our houses from the materials that we cut and shaped for ourselves. We could build our own houses, there was no need to buy”. “Our way of life was comfortable and calm, we never imagined we would have nothing to eat” “Before we used to go up the hillside to find food to eat, we would come down with a basket-full, currently its owned entirely by the Vietnamese company, we can go up there, but there is nothing to collect”.*

Environment in the rubber estates

Tree plantations or agricultural estates have a commercial purpose, to capitalize on the highest production capacity potential of a single crop. Large scale monocrop plantations have been compared more closely to a desert than a forest, because of the lack of additional plantlife or fauna in the plantations, and mostly because there are no food or resources which villagers can use therein. In the case of the rubber estates in Laos, 555 rubber trees are grown in a one hectare plot. Each tree is grown from carefully improved genetic stock to produce the highest amount of rubber.

Forests are comprised of a variety of living species with interrelated life cycles, and are eventually self sustaining. Agricultural estates, on the other hand, begin and end on a defined schedule and are under the control of the estate managers, similar to an industrial estate. The entire area of a rubber estate is cleared of all plants or trees that used to grow on that land. Rubber seedlings are grown in a nursery, and are planted in a field that has been clearcut. The trees are encouraged to grow with fertilizers, and sprayed with pesticides, and herbicides. After around 15-20 years, the trees are cut down, and the soil exposed again to plant anew.

It was not possible to collect primary data concerning the condition of the forests prior to their destruction for the rubber estates, however it was possible to interview households concerning the foods collected from the forest areas around the village. These were clearcut to grow rubber, with consequent problems of erosion of the top soil. All three companies referred to the importance of avoiding the clearcutting of forests around the rivers and streams and not growing rubber in steep slopes. However, these claims have not been monitored or investigated. In the rubber plantation of the Dau Tieng company, it was found that a steeply sloping area was cleared, and serious problems of erosion were seen in the slope above one of the rivers where the villagers used to fish. Chemicals pesticides and herbicides have been flowing from the rubber plantation, since the establishment of the rubber estates etc. Villagers have found that fish in the streams are beginning to disappear. Villagers have noticed diseased fish in pools and streams in some areas, prompting them no longer to dare drink the water or eat the fish there.

Hiring labour

Important claims of the benefit of the rubber estates projects is that they generate employment for the local people. In the first year, the rubber estates required a large workforce to prepare the land, dig holes in which to plant, and control the growth of weeds. The DakLak company stated that this type of work, required at least 60-70 people per ha per day, but in the 2nd-6th year of planting, the demand for labour gradually reduces. In the 7th or 8th year in which the rubber will be tapped, the need for labour will increase again,

however it is unlikely to reach as high as the requirements in the 1st year³. Employment in the rubber estates has been advertised as a way to improve livelihoods for local people, but in reality the dearth of labour demand in the four to five years waiting for the rubber trees to mature, has meant that the community has been exposed to the risk of severe poverty and hardship.

The estates have brought in Vietnamese labourers to work in the estates, mostly to work on the technical aspects of rubber production, bringing skills in nursery planting and supervising the workers. The number of Vietnamese workers exceeds the foreign workforce limit (10% of all employees) set in 2004 law to promote foreign investment 2004. In this sense, the company must increase the number of Lao labourers, and could usefully organise training for Lao workers to replace foreign workers to comply with the law.

The hiring of labourers in the rubber estates in the case study areas can be classified into three groups which do not fit neatly within a general understanding of “full time” and “part time” labour; that is “regular workers”, “daily labourers” and “piece rate (*mob mao*) labourers”.

Regular labourers Regular workers in all three rubber plantation projects work 6 days a week, 8 hours a day. They are paid wages by the month. Regular workers include guards, tractor drivers, spraying pesticides, spreading fertiliser and pesticides. The age range of regular labourers on average is around 18-40 years old. Those given priority were those who had suffered the most from loss of land to the companies. However, when the demand for labour dropped after the initial two years, the companies did not hire any new labourers. The Viet-Lao company reportedly announced to the villagers that they can only take on around 50-60% of those who were made landless by the company.

Full time labourers are a minority of the labourforce. Less than 5% of the approximately 1,200 labourers hired by the Dak Lak company during peak employment were permanent labourers. Contrary to the research teams’ and villagers’ expectation, full time labourers did not receive a regular monthly salary. Labourers working with the Viet-Lao and Dak Lak companies both said that they did not know in advance how much money they would receive each month. The steady reduction of wages since year 1 has caused serious problems for a great number of working households. The wages villagers received from the Viet-Lao and Dak Lak companies have reduced each year. In the first year, the wages were between 600,000 – 800,000 kip (\$70-\$94) and reached over 1,000,000 kip (\$117) in some months for the strongest of workers, but subsequently, monthly salaries have fallen to 200,000-500,000 kip (\$23-\$59). A wage of 200,000 kip per month is only enough to buy a single 50 kg sack of rice. Hired labourers who have lost their land are undergoing severe poverty and hardship.

Daily wage labourers data from the survey in 2007 indicate that on average daily labourers were working less than a quarter of the working year. Labourers receive a wage of around 20,000 kip (\$2.35) per person per day.

Mob mao Piece rate labourers

The *mob mao* system, is based on the hiring a household or group to work on a specific task, for example weeding, on a per hectare basis, without a formal time limit for completing the task. If a household unit can call on many labourers, their work may perhaps be finished earlier, but once the wages are shared out per person, the individual sums are very low.

The *mob mao* scheme in the case of the Dak Lak company is unusual. The company has a policy to reassign parcels of land in the rubber estate to contracted households, chosen particularly from those families which have lost land and been seriously affected by the plantation. They are required to look after the land as labourers of the company and are paid a *mob mao* labourer’s wage. They may grow crops in amongst the rubber particularly in the first three years of the tree growth. Households who have joined this scheme are to be permitted to harvest the rubber trees in their parcel once the tapping begins and sell the latex to the company on a sharecrop basis. However, the share of profits between the villagers and the company has not yet been clearly agreed nor have terms been written into a contract of any kind.

Households took part in the Dak Lak scheme in two of the villages in our case study, that is Nong Nam Khao Yai and Vangkhanane. In the former village, the paid work in these plantations for the *mob mao* workers amounted to only 33 working days per year per household interviewed in 2007. The average total income of

³ The Forest Research Centre of the National Agriculture and Forestry Research Institute has estimated that the labour force needed for a smallholder plot in North Laos is 400 labour days per hectare per year, reducing to 150-200 person days per ha per year in the years when tapping begins.

such workers was 690,000 kip (\$81) per household per year and this has since declined. In Vangkhanane, *mob mao* workers were given work on average for only 15 days per year per household interviewed. Total income for such workers in this village were on average 410,000 kip (\$48) per household per year. Villagers saw the low income and insufficient work as the reason for the problems of increased poverty. The lack of farm land has become a major problem in the view of villagers because the rubber project could not respond to the villagers needs, even if there was to be a greater number of people employed than at present.

While in Vietnam there is a minimum wage, there is no such regulation in Laos, which means that companies can set the level of wages per month according to their own assessment. In Vietnam, the law states that all wages paid by a company must come to at least 40% of the profits. Data from the feasibility study of the Dau Tieng company show that the amount of wages budgeted for the project amounted to only 1% of the profits. Even though the regular full-time worker have more security than other labourers, each of the companies have yet to sign contracts with these or any other labourers.

Strategies in adaptation

People in the six villages had to make a sudden and fundamental change in their lives as a result of their loss of farmland to the rubber estates, from peasants to labourers. The majority were not able to adapt successfully, because apart from the unfamiliar way of life, families were faced with greater poverty and hardship than before from as a result of rice shortages and insufficient income to make a living. A minority were able to adjust well, people in these latter groups tended to be families with many adults of working age. This meant that, if they were employed, they could gain a working income that was commensurate with their expenses. Others were able to adjust because they had been able to keep some agricultural fields on which they could grow food or cash crops.

Amongst the families who still had a small amount of land left, these tended to become labourers with the rubber estate alongside their dryland rice production. Amongst those families who still had a substantial amount of land left, they were able to farm rice and keep their orchards as before and maintain or increase their standard of life. When their work on the farm was done, they were able to supplement their income by choosing to work on an occasional basis with the rubber estate.

Those people who did not have any farmland, had to adjust by becoming looking constantly for hired work, either with the rubber companies or elsewhere in the local area if available. Some were able to grow rice to eat or other crops to sell in between the rows of rubber trees in the plantation. Some people adapted to another means of livelihood such as the people of Lak 19 who turned to metalwork as their main source of income.

The extent of adaptation by the people depended on the conditions of land and labour within each household. The fact of having a quantity of land left on which to produce, helped people to better adapt their way of life than those families who lost all their land. The fact that the people in the case study villages in Bachieng District had very little paddy land as compared with the villages in Lao Ngame⁴, meant that the loss of all their dryland rice fields had a much greater impact on their livelihoods.

Some people who were made landless tried to find new plots of land on which to grow rice. The most common coping strategy was to plant rice between the rows of rubber trees. This opportunity is no longer available as the rubber tree canopy has now closed in most of the plantations in the case study sites. Others rented dryland rice fields from their relatives in the neighbouring villages, such as in Vangkhanane, and some were able to find land to clear new paddy fields. But in the study villages of Bachieng, the people were not able to find new areas of land to clear, because every village had been affected by the land concessions. These people had only one choice to seek work with the rubber estate.

Part IV Analysis and Recommendations

As a means to encourage private sector investment with the promise of large areas of land for commercial tree plantations, particularly rubber, land concessions have been granted in all regions of Laos. Presently the

⁴ It is not considered advisable to plant trees in land that may be waterlogged, so in general paddy fields were exempt from the land concession area. Of the families interviewed in Bachieng and Lao Ngame, only 4% and 29% respectively had access to paddy land both before and after the concession.

cultivation of rubber under the large-scale land concession system covers an area of over 77% of the total rubber cultivation in the country. Most of this area is in the central and southern regions of Laos. The government has a plan to increase the rubber cultivation area as part of its policy to increase the forest area to 500,000 ha by 2010.

Since 2000, however, the expansion of the rubber estates have instead created a variety of problems. These include land conflicts between the concession companies and local farmers as a result of encroachment of community forests and agricultural land which the Lao people had received under the Land and Forest Allocation Policy. A variety of sources of food from natural spaces have been lost to the community in and near the plantation sites. The low rates of compensation have been inadequate to compensate for the loss of livelihoods and productive lands to the concession.

Reports of such difficulties led the Lao government to announce a temporary moratorium on the consideration of leases and concessions during the National Land Meeting on 7-8 May 2007. In the meantime, studies were to be undertaken to evaluate the causes of past problems and policies and laws should be adjusted as appropriate.

This report presents the findings from the joint research project "Ecological, and socio-economic implications of the large-scale commercial tree plantations in the South of Laos" (July 2007 to April 2008), a collaboration between the Centre for Research and Information on Land and Natural Resources, National Land Management Authority, under the Office of the Prime Minister of Laos, the Foundation for Ecological Recovery, Bangkok, Thailand and the Faculty of Social Sciences, Chiang Mai University, Thailand.

The policy to promote commercial rubber cultivation is consistent with the policy of the state to develop land use to responds to need for expansion of the national and local economy. The objective is to generate employment in the rural sector to relieve the problems of poverty for the people. However sound these principles, they have not been put into practice as intended.

The research project undertook case studies of six villages directly affected by major land concessions in the South: Oudomsouk, Nong Nam Khao Yai, and Baan Lak 19 in Bachiengchaloensouk District, Champassak, and Vangkhanane, Nong Lao Theung, and Nong Ke from Lao Ngame District, Salavane. An analysis was made to compare between the economic benefits of granting large-scale land concessions for commerce with various impacts upon the communities involved. The research team made a detailed study of the process of change within the communities since the approach of the land concession, from the identification of land, the payment of compensation, to the transition from farmers to labourers in the estates.

The research had three main assumptions.

1. Large-scale land concessions and leases to private companies for the cultivation of commercial tree crops will generate the greatest economic and social benefits to the nation and to local areas when they are granted through a step by step process that is cautious, transparent, clear and accountable, that is based on accurate and comprehensive information from the field and that ensures the participation of all parties including the central government, local government authorities, private sector companies, and local people.
2. In order for the promotion of the rubber agro-industry in Laos to bring the maximum benefits for the nation and the people, local producers must participate in the development of the industry and derive full benefits from commercial agriculture.
3. Supporting the change from traditional production to becoming laborers in the rubber estates will create benefits for the people if their livelihoods and economies are improved without causing a deleterious effect on the ecology and community resource base.

In testing these assumptions, this research paper has presented an analysis of three important factors: the nature of the expansion of the rubber industry in Laos, the process of granting land concessions in Laos and for the case study projects, and the changes which have been brought about for the communities targeted by the rubber estates. The main findings can be summarized as follows.

1. The expansion of the rubber industry in Lao PDR has taken different forms, but the major mechanism has also brought about the most significant land conflicts

The expansion of rubber in Laos counting from the 1990s has taken four major forms:

- Large-scale agricultural plantations by foreign capital through land concessions
- Large- and medium-scale plantations through contract farming mechanisms
- Medium- and small-scale plantations by the village agricultural associations
- Small-scale plantations by smallholder agricultural households.

However, rubber cultivated in large-scale plantations through investment of foreign capital, which covers up to 77 percent of the land under rubber throughout the country, appears to have caused the greatest impacts. Most important among these are land conflicts. The process of granting large-scale land concessions has caused widespread and abrupt loss of land amongst local people. In the case study areas, most of the people become landless farmers, having lost almost all their land to the rubber companies. A variety of issues lie behind the problems manifest by the rubber plantations. These are summarised as follows.

1. The loss of land rights⁵. In the case of the rubber plantations established by contract farming and by village associations, land use rights remain with the existing landholders. In the case of the rubber plantations established through land concessions, the power to make decisions concerning the investment and the production lies with the concession company. The loss of the community's rights to use land in the areas targeted by the rubber concession has meant the people are no longer able to farm for themselves. This contrasts with the experience of the people in the contract farming areas (also known as the 2+3 system) and those who have planted rubber in small and medium sized farms in the North of Laos, who retain "ownership" over the land and have been able to make a smoother transition from subsistence agriculture towards commercial farming. Agricultural land rights are not only incentives for agricultural investment but also provide essential livelihood security. Their loss has become a major cause of conflict between the people and the rubber plantation companies in certain areas.
2. The size of the land concession area. Almost all concessions propose to take over large areas of land, generally over 10,000 ha of contiguous land. In reality, a single vast plot of abandoned land without any existing exploitation is extremely difficult to find in Lao PDR. Exceptions may exist in former war-torn areas, where unexploded ordnance are still lying uncollected, for example in areas of Ta Oy and Samoey Districts of Salavane on the border with Vietnam, and where there have been fewer settlements. However companies tend not to be interested in such areas, given that they are remote and far from the market trading routes, as well as carry dangerous risks for workers and must involve expensive mine-clearance. Most of the large-scale concession companies have chosen instead to request land which is already being used for agriculture by local people.

2. The process of granting state land concessions is convoluted and inconcise. There are few coherent standards and no appropriate investigation and control systems to oversee company operations

The granting of land concessions to investors is one of the primary strategies of Lao PDR to stimulate foreign investment. However, this process has in the past met with six major problems:

2.1 Most land concessions are agreed and signed without a prior land survey. A survey is generally completed after signature, while the economic feasibility study or "economic critique" (*Botwipak setakit*) is being undertaken, meaning that the key issue for the concessions - the amount of land which can in fact be granted under concession - is not yet known at the time the major decisions are being made. The Committee for Planning and Investment, the concession company, the Ministry of Agriculture and Forestry and others authorized to sign the concession agreement have not had access to the facts concerning the land that can be granted. This has been a serious limitation. It has meant that local state officials are obliged to look for land to make up the total area specified in the concession contract. When inevitably there is insufficient waste or unused land to provide the company, land that is already used and farmed is taken to meet the quota. This is what happened in the villages under the land concession in Bachieng District, Champassak province, where many villagers lost their productive lands and other resources. In the three cases studied of the companies Viet-Lao Joint Stock Rubber Co, DakLak Rubber Company and Dau Tieng Viet-Lao Joint Stock Rubber Co, it was found that agreement and signature of the land concessions had been granted before the economic feasibility studies had been completed and before the investment was considered.

2.2 Land concessions have been authorized without consideration of the suitability of the area to the crop. A study has been carried out identifying areas that are appropriate and those inappropriate for rubber cultivation throughout the country. However this information has not been put to use in the process of considering land concessions for rubber. As a result many areas, particularly in the South, which have capacity to grow a range of different crops have become extensive rubber estates. Champassak which is a

⁵ In this case the land rights in question are usufruct rights as allocated under the Land and Forest Allocation Programme. Of those households interviewed, approximately 80% of their agricultural land area (land given up to the land concession companies) had been issued with Temporary Land Use Certificates (TLUC) under the Programme.

major coffee producing area is now seeing much of its land, including many smallholder coffee plantations being converted into rubber plantation under the land concession. This conversion may turn out to be costly to the country.

2.3 A highly convoluted system of powers exists to authorise land concessions which arises from a variety of inexactly overlapping laws, including the Forestry Law, the Land Law, the Ministerial Regulations etc. In practice, the land concessions studied were based on agreements signed by provincial level officials and their counterparts in the neighbouring country. The confusing provisions of the law and the lack of standard provisions for consistent granting of land concessions has allowed some land concessions to be granted in overlapping areas. Even while there is a moratorium on land concessions and the NLMA has been assigned central authority for land management, it is still unclear what kind of mechanisms will need to be put in place to clarify the system of investigating and controlling the process for granting land concessions. In the case of the Viet-Lao, Dak Lak and Dau Tieng companies, which operated in Champassak province and Salavane provinces, the research team were not able to obtain clear evidence to determine which state body has approved the concession.

2.4 There are no provisions for social and environmental impact assessments and detailed study of the economic value of the project. Currently there are no clear provisions requiring the large-scale concession projects in Lao PDR to undertake either an Environmental Impact Assessment or a Social Impact Assessment. This has become an important issue because there are no safeguards to prevent large scale projects from creating problems for the ecology and environment, nor if such impacts arise, any regulations clarifying who must take responsibility.

In the case study areas, it was found that the clearing of land for the land concessions in six villages affected important local water bodies, by permanently cutting off local access to water sources or through reduction in water quality. Streams are reported to be drying out and some contamination was reported in streams where the villagers used to drink from.

What is perhaps most surprising is that there has not yet been any detailed economic appraisal of the costs and benefits from the land concessions studied. Concession fees were not linked to the suitability of the land or the nature of the project and there was no study of the distribution of income in the local area.

2.5 Lack of participation by affected people The granting of land concessions for rubber has in the past been a matter decided by national and provincial level officials and the concession company. In most areas, local people have been given no part in the decision making. They had no say in whether to take part in the rubber projects, which areas of land were selected or sought, how much compensation should be paid, nor whether they could work in the rubber plantations. This study found that there were no provisions for participation of affected people within the policies or legislative framework. The discretion thus lies with the local level officials. In those villages where the province or district allowed time and priority to building a participatory process, such as those in Salavane, the seriousness of the impacts from the loss of productive land were somewhat reduced. Compensation rates in these areas were higher. However in those areas where the local officials neglected to consult with local people in the process of procuring land for the concession company, impacts were found to be more widespread and more serious.

2.6 Lack of monitoring, investigation and evaluation mechanisms. Even though large scale land concessions have now been granted in every part of Laos, there are still no clear provisions concerning the mechanisms, units or processes that should carry out the role of monitoring and investigation. There is no mechanism for enforcing the conditions of the contract relating to the areas of the concession, statements concerning employment, fair wages, nor any penalty provisions for breach of contract.

3. Large-scale land concessions to grow rubber have brought more negative impacts to the community than positive economic gains.

There are no standards and regulations for transparency and control in the process for granting large-scale land concessions for rubber. No set of information or field data is collected in advance, and there is generally no participation by the local people. This has led inevitably to serious impacts for the livelihoods of the local people in the concession areas. Employment in the rubber plantations may be the only livelihood option around for the following reasons.

3.1 Loss of land and land use rights to productive land. The study found that 90% of the households in the case study areas had temporary land rights certificates issued under the Land and Forest Allocation

Programme of the 1990s. Over 80% of the production area which was given to the rubber companies was land covered by such certificates. No consideration was made of how the land was used by the local people before their land rights were cancelled. Having received their land rights certificates, and developed their land, they would have been entitled to permanent land use rights according to the 8 steps of the land and forest allocation programme. This study also found that the few households which had already been issued with land titles, were also obliged to hand over their land to the companies. The loss of land use rights has destroyed the livelihood security of the local people and meant that several hundred families, no longer having the means to feed themselves, have no option but to work as labourers.

3.2 Food shortages and loss of cash crop income. The conversion of productive village land - rice fields and various other farmlands and orchards, producing coffee, cardamom, pineapples and timber, etc into rubber plantations has brought about serious food shortages and loss of income from the sale of economic crops. These had been the main source of income for all six villages studied. The study found that the number of households that used to produce sufficient rice all year round reduced from 45 per cent in 2003 to only 9 percent in 2007. Rice yields were down to a quarter of their previous production. The income from selling rice and various market crops dropped significantly. Loss of primary income and rice shortages meant that the costs of living rose sharply. For some households, annual expenditure to buy rice rose to 5,900,000 kip per year, a significant sum of money in the local economy.

3.2 Degradation of the natural resource base. In those villages where the process of procuring the land for the rubber companies was accelerated, such as in Vangkhanane and Oudomsouk, certain forest areas which used to be an important source of natural forest products (NTFPs) and food were completely destroyed. The rice fallows which had previously been a source of both food and income were mostly destroyed. Foods which were derived from natural spaces such as streams and wetlands are now harder to find, their losses partly as a result of the use of chemicals used in the rubber estates. The loss of these three main pillars of the community economy: rice fields, orchards and forest lands is the equivalent of undermining every livelihood path for the local people. This was a major factor in the community's transformation and engagement as agricultural labourers.

4. Inability to recover the community economy following the loss of land to the companies. Weak mechanisms to manage compensation and ensure fair conditions of employment

The payment of compensation is the main way in which the problems and suffering from the loss of productive land and natural resources might be alleviated. In all six villages, it was found that the payment of compensation did not follow any consistent standard or reasoning. Some companies paid compensation only for the crops that were lost, other companies calculated the area of land and the crops together. Some companies paid compensation for less land than was actually confiscated. In other cases, the level of the compensation depended to the ability to villagers to negotiate. There are no legal provisions to govern this, even though in some cases the government officials at the district level suggested the rates of compensation for the company to consider. In general, the state officials did not help to set up principles so that the people could not be taken advantage of by the company. Generally, compensation paid was around 1-2 million kip (approximately US\$100-200) per ha which was many times less than the value of the cash income which the land provided. The low rates of compensation made it difficult for villagers who lost their land to recover from the loss of livelihood resources or to invest in any new occupation.

Employment in all three companies throughout the past 3-4 years has been irregular and insecure. There was plentiful employment only in the first year when the estates were being planted and established. In subsequent years, employment fell to less than half the original level and no longer spanned the entire year. This meant that many villagers became unemployed and suffered considerable poverty. Even among those who had regular full time employment, wages were not regular. Their payments decreased from the first year considerably.

Not all workers employed are from the local villages. Vietnamese workers are also employed by the companies in various capacities. Presently, the number of foreign workers exceeds the limits set out in the law on promotion of investment 2004, namely that the employment of foreigners should not exceed 10 percent of the workforce.

There is no state body or labour law provisions in place to help to manage employment and wages. Employment matters are entirely up to the consideration of the company. There is no mechanism to allow villagers to call for fair wages nor to assist them in ensuring justice.

5. The community's capacity to adjust and recover from the impacts of the concession depends on the amount of land and labour families have left

Working under unfair conditions and irregular employment, villagers who have lost their land to the companies have tried to find alternatives for their subsistence. This study has found that those households who still had some paddy fields remaining, for example in Nong Ke, Vangkhanane and Nong Lao Theung were still able to continue farming or able to buy land from neighbouring villages. When they were not engaged in farming they were free to take up work in the rubber estates. While the villagers who lost almost all their land, of which many were in Oudomsouk, Lak 19 and Nong Nam Khao Yai, suffered the most serious impacts. They had to find work in the rubber estates or try to find work elsewhere. In the first year of the land concession, villagers were still able to grow rice to feed themselves in the rows between the rubber in the plantations. However, this was not generally possible afterwards partly because the rubber trees grow quickly and soon the earth was covered beneath shade.

Currently those families who can survive are those who still have land left or else those who have sufficient labour to find income to cover their increased expenses. The group of families who have experienced the most severe problems are the landless and families with few working age adults. To this day, neither the state nor the concession companies have taken concrete steps to alleviate the poverty of these families.

Since the research study period corresponded to the phase of land clearance and rubber tree planting, it was not possible to evaluate the economic benefits that might be derived from the land concession project as a whole. The rubber trees should be able to be harvested in year 7 counting from the date of planting which differs amongst the three companies. In the first 6 years period, the company is exempt from paying land concession fees. In addition, the research team has not been able to access all relevant documents. Only one economic feasibility study concerning one company was made available, and information concerning employment was not provided by the companies. Due to these limitations, the majority of the information presented here is derived from interviews with the affected people. While it may not be possible to undertake a full economic assessment, the research team view that an additional study should be made once the rubber can be harvested.

Recommendations

The research team proposes that future support for the development of commercial agriculture in Lao PDR should change direction. Emphasis should be placed on the generation of direct benefits for agricultural communities rather than the allocation of large areas of land to the private sector. This study has indicated the many problems which have arisen in the case of the major land concessions studied. The projects have not created the kind of economic changes that might benefit local people. As a pathway for resolving the problems arising from the loss of land to the concession companies and as a means of adjusting the direction of land management in Lao PDR, the research team propose the following recommendations:

Short term measures

1. Provide immediate relief for those suffering from the loss of land
 - 1.1 A rice fund could be established in each community that has already lost a significant area of land to the companies and have consequently experienced hunger and extreme poverty.
 - 1.2 The compensation payments must be reviewed, so that the people already affected can be compensated in as fair a manner as possible.
 - 1.3 Land must be found for all those who have lost their land, with a minimum of 1 hectare per family for subsistence production
 - 1.4 Wage rates for the labourers in the rubber estates must be revised and monitored to ensure that they are sufficient by which to live. Written contracts must be completed for each labourer.

Medium term measures

1. Set up an official committee to monitor and investigate the implementation of all land concessions. This committee should have the following powers and responsibilities:
 - 1.1 to monitor the companies operations in relation to land and land use, making sure land areas are as agreed.
 - 1.2 to ensure that local land management authorities coordinate with the labour authorities to control, regulate the labour employment fairly, so that the villagers can gain regular work, fair wages and welfare at work
 - 1.3 to coordinate with other institutions to find alternative occupations, provide assistance and provide some relief for the families who have suffered from the loss of their land and whose wages are too low to live on.

2. There needs to be a land survey and land zoning plan in each province. All areas of land that are genuinely used by the communities and individuals who have been issued with certificates under the Land and Forest Allocation policy should be kept free from land concessions.
3. The mechanisms for the authorization of land concessions should be reformed to reduce the problems of a very complex process.

Measures for the long term

1. Large-scale land concessions should no longer be granted to foreign investors for commercial cropping over the long term
2. Land management policy should emphasise building the capacity of people to develop their land use to increase its economic value, whereby rights to use the land still belong to the people.
3. There should be a plan for land management which considers the balance between the benefits to the national economy, the local economy, a fair distribution of income, ecological benefits and biodiversity.
4. If there are to be more land concessions, they should be small in scale, in land that is not subject to community use. Evaluations should be carried out of the potential impacts on the environment and society before a project is authorized.

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