

## **2-8 Human resource development**

### **2-8-1 Current state**

#### **(1) History of education**

Before the country was colonized by France, education was conducted in Buddhist temples, as was the case in neighboring Thailand and Cambodia. However, only a very limited portion of the population had access to this education. On top of this, temple education was restricted to boys, excluding girls and ethnic minorities outside Buddhism.

Later during colonial rule, the country was paid relatively little attention by its imperial master because of its sparse population and its landlocked geography, with modern education introduced later than in neighboring countries. In the beginning, France had the country controlled by Vietnamese, adopting an obscurantist policy towards the Lao people and taking a negative attitude toward the development of highly-educated Laos. Even so, members of the royal family and some of the other elite went to France to study, and as education at the few lower secondary schools and vocational schools was also conducted in French using French textbooks, France had a strong influence over urban education. This situation remained essentially the same even after independence in 1954.

After the socialist revolution in 1975, the education system was completely reformed. Primary education was made compulsory, and Lao was stipulated as the language to be used in the classroom from primary education through to specialized education. The government also worked on literacy education. These policy efforts produced some results, but the poor conditions at the outset have prevented the dissemination of primary education right through to the present, and literacy rates remain low. Part of the problem was also that specialist education which had been taught in French was suddenly being taught in Russian, and many Laos of the time received scholarships to study in the Soviet Union, Eastern Europe, Viet Nam and China.

#### **(2) Courses of study and enrollment rates**

The Lao's current education syllabus is a 5-3-3 year system (Figure I-3). In upper secondary education and vocational education higher than upper-secondary level, however, course lengths vary according to the subject and the school. Non-formal education for adults as a supplement to the formal education syllabus shaves the primary school syllabus down to three years.

Enrollment rates for the various courses of study are shown in Table I-24. Enrollment opportunities have expanded rapidly in recent years since the World Conference on Education for All (EFA) in 1990. Under the EFA plan, the target established for the Lao PDR is a net enrollment rate of 80% of children aged between 6 and 10 by 2000. The 1996 Socio-Economic Development Plan reports a 25% increase between 1990 and 1995 in enrollment opportunities at primary level, with the net enrollment rate reaching 73%. The increase at lower secondary level was 24% and 38% at upper secondary level. This indicates a steady rise in enrollment rates, but these are still low compared to other Southeast Asian countries (Table I-25).

There is also a serious dropout problem. In the Lao PDR, 56% of those children who enter the first year of primary education drop out without completing the five-year syllabus. One factor in this is incomplete schooling, with more than 50% of primary schools only holding classes

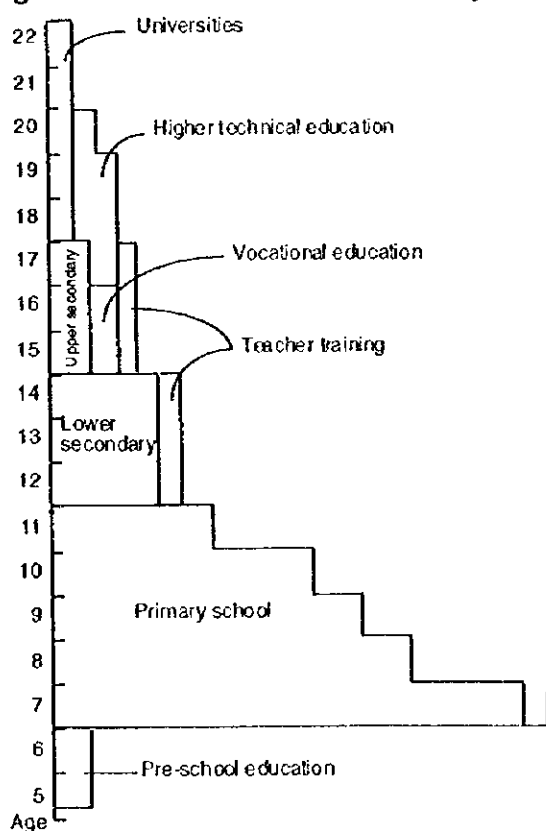
for the first two or three years of the syllabus, forcing children to travel to schools further away in order to go on to higher grades. This situation has led to high dropout rates for girls in rural villages and mountain areas, for whom it is comparatively more difficult to attend distant schools. Other factors include the high failure rate in strict examinations typical of a former French colony, less incentive to learn because of this, the language problem experienced by children from ethnic minorities who cannot speak Lao, and the labor services children provide to households. To bring down failure rates, the the National Assembly on Education is pushing automatic promotion to the next year between the first and third years of primary school, but no fundamental solution has been put forward in regard to the language problems of ethnic minorities in the education system and to providing incentive for households to send their children to school rather than putting them to work at home.

**Table I-24 Basic Education indices**

	Total population	Men	Women	Survey year
Adult illiteracy rates	43%	31%	56%	1995
Primary school net enrollment rates	64%	71%	57%	1992
Lower secondary education net enrollment rates	15%	18%	13%	1992
Number of students at upper secondary level per 100,000 persons	112	167	60	1992
Average years of enrollment	6.7	7.9	5.5	1992
Primary school examination failure rates	28%	29%	26%	1992

Source: World Education Report 1995

**Figure I-7 The Lao's Educational System**



Source: International Encyclopedia of National Systems of Education, Second Edt.

**Table I-25 Comparison of Basic Education Indices with Major Southeast Asian Nations**

	Lao PDR	Thailand	Viet Nam	Indonesia
Adult illiteracy rates	43.4%	6.2%	6.3%	16.2%
Primary school net enrollment rates	64%	93%	95%	97%
Lower secondary gross enrollment rates	24%	39%	32%	43%
Number of students at upper secondary level per 100,000 persons	112	2,029	149	1,049
Primary school examination failure rates	28%	8%	No data	9%
Number of primary school students per teacher	29	17	36	23
Number of lower secondary students per teacher	12	18	24	14

Source: World Education Report 1995

Note: Adult illiteracy rates are 1995 figures; the Vietnamese primary school net enrollment rate and the Thai primary school examination failure rate are 1980 figures; all others are 1992 figures.

### (3) Education policies and education finances

The marked improvement in enrollment rates is the result of the high priority the government has placed on basic education, forming the National Assembly on Education in response to the 1990 EFA and setting national targets of 80% for both primary school net enrollment and adult literacy rates, as well as higher school completion rates at primary education and higher net enrollment rates at lower secondary level. As can be seen in Table I-27, aid from foreign countries and international institutions has also laid increasing emphasis on basic education but virtually ignored lower secondary education, putting more funds instead into upper secondary education.

**Table I-26 Allocation of 1995 education budget**

Pre-school education	3%
Primary education	43%
Lower secondary education	28%
Vocational education	3%
Upper secondary education	4%
Non-formal education	2%
Teacher training	9%
Management sector	8%
Total	100%

Source: UNICEF, "Situation Analysis of Children and Their Families in the Lao PDR"

**Table I-27 1989-2000 Allocation of Foreign Aid for Education**

Primary/basic education	34%
Lower secondary education	0%
Upper secondary education	44%
Vocational education	7%
Non-formal education	2%
Teacher training	8%
English education	5%
Total	100%

Source: World Bank, "the Lao PDR Education Sector Review on Financing and Management of Education, Summary of Key Issues"

The 1996 Socio-Economic Development Plan includes compulsory primary school education, the construction of schools with dormitory facilities for remote areas, and the promotion of education for women and the socially vulnerable. It therefore seems likely that the government intends to continue prioritizing basic education for the meanwhile. Priority allocation of the budget and foreign aid to basic education is a logical strategy given the current state of education in the Lao PDR, with primary education far from fully disseminated. However, because the Lao PDR is short on human resources at all levels, comprehensive education development is needed, including lower and upper secondary levels. Where the budget allocation for education was low compared to other Southeast Asian countries, it has begun to rise in recent years.

#### **(4) Primary and lower secondary education: curricula and teaching materials**

The primary and lower secondary curricula follow guidelines created in 1990. The primary school year is 33 weeks, with a half-day holiday every Saturday. Of the 22 or 23 hours a week of primary school classes, around 10 are on the Lao language, around 5 on arithmetic, and the rest used for science, social studies, crafts, physical education, drawing and music, etc. On top of this, there are also extracurricular activities such as meetings, flag-raising and club activities. Lower and upper secondary school years are 33 weeks, with around 30 hours of classes a week. Fewer hours are spent on the Lao language, and foreign languages (3 hours) are added to the curriculum. The above-mentioned general subjects become more specialized with the teaching of geography, history, civics, physics, chemistry and biology. Sports (including military training), civic education, farming, and the basics of vocational education are also incorporated in the curriculum. There is criticism that centralized curriculum development is not matching the needs of local communities.

Teaching materials are developed by the Research Institute of Educational Science under the Ministry of Education, and with the support of the World Bank, teaching materials for the first two years of primary school were developed and distributed nationwide last year. The schedule is now to progressively develop teaching materials through to lower secondary level, while experiments are also underway on the development of special teaching materials for teaching Lao language to ethnic minorities. Textbooks are printed by the Ministry of Education's Printing Department, but demand is outstripping the capacity of the Printing Department.

ment's printing presses. Because of such supply issues and the inefficiency of the distribution system, disseminating textbooks to all students is likely to take some time yet.

**(5) Primary and lower secondary education: teachers and teacher training**

The rapid rise in enrollment rates is boosting teacher demand and work is currently underway with assistance from the Asian Development Bank to integrate the currently non-uniform teacher training system. One in three primary school teachers has not gone through formal teacher training, and with no institutionalized re-training, there are wide disparities in teacher quality. Most unqualified teachers are working in schools in remote areas, making it difficult to provide any special educational care for ethnic minorities or to constrain drop-out rates. No system has been set up to provide incentive for qualified city teachers to work in remote schools. Teachers have relatively high social status in the Lao PDR, but low wages and frequent payment delays are discouraging many graduates from teacher training schools from taking up teaching posts. Teaching tends to be one-way from the teacher to the student, with the emphasis on copying down what the teacher has written on the board and memorizing it, which does not enhance students' ability to think.

**(6) Primary and lower secondary education: school construction**

The construction of primary schools in the Lao PDR has been the responsibility of villages and local communities, with the government dispatching teachers to the completed facilities. At present, however, more than 4,000 villages do not have primary schools. Building primary schools should be a priority task in the Lao PDR education administration, particularly given the high population growth rate and the current promotion of elementary education dissemination policies. Around half of the grassroots grants provided at the discretion of the Japanese Embassy are directed into school construction through NGO channels.

While there is a shortage of schools, the Lao's small population also means that with the exception of urban areas, student numbers tend to be low even for existing schools. In urban areas, there are many cases where the lack of schools is being compensated for by converting part of Buddhist temples into schools.

**(7) Higher education and vocational education**

Higher education in the Lao PDR has traditionally been conducted by special schools under each provincial government, with no university. To respond to the major demand for high-level human resources accompanied by economic growth and the introduction of a market economy, the government is currently working on the integration of these special schools into the newly constructed National University of Laos, with assistance from the Asian Development Bank. This project includes the establishment of academic departments not found in the special schools, such as economic and business administration departments. The academic level of lecturers, however, is low, with issues to be addressed in terms of both curriculum development and the quality of lecturers.

Higher education and vocational education in the Lao PDR have both been strongly influenced by socialist countries such as the Soviet Union, Viet Nam and Eastern Europe. Because curricula and teaching materials have also been directly imported from these countries, there are many cases where these are not suited to actual conditions in the Lao PDR. As the Lao PDR moves toward a market economy, the gap between educational content and staff composi-

tion and the needs of the labor market is becoming a problem. Most overseas education was formerly focused on the socialist countries, but with the government's economic open-door policy, an increasing number of students are going to countries such as Thailand, the United States and Australia. Responding to the introduction of the New Economic Mechanism, accession to ASEAN and the rapid growth of foreign aid, both the government and foreign aid institutions are also beginning to put their weight behind training for civil servants for internationalization and marketization of the economy. These efforts, however, have yet to be institutionalized.

In higher education and vocational education, places have been allocated to a certain number of academically gifted students from ethnic minorities and local communities, and a review of the efficiency of this system is currently being conducted. Further, as the Lao PDR leans further toward a market economy, a system is also being introduced whereby students who can pay special entrance fees are given enrollment priority. This introduction of efficiency and market economy principles into higher and vocational education is doubtless necessary in responding to changes in the Lao PDR economy, but at the same time it is also detracting from equal education opportunities and increasing students' sense of unfairness.

#### **(8) Literacy education and non-formal education**

The government has been conducting a literacy campaign since the founding of the Lao People's Democratic Republic, spearheaded by the Department of Non-Formal Education. Despite this, the Lao's illiteracy rates are extremely high. Education is conducted in venues such as primary schools, village meeting halls and temples, with primary school teachers and monks doing the teaching. Parents also sometimes teach their own children (or children receiving a school education teach their illiterate parents), and lower and upper secondary school students sometimes teach as volunteers. Compared to formal education, finances are extremely limited (Table I-26), and in many cases, although someone has been taught to read and write, these skills are not maintained because of the lack of opportunity to use them. The challenge will be how to secure financial resources and how to link literacy education with higher daily living standards and productivity. Special attention also needs to be paid to literacy education for ethnic minorities who do not understand Lao.

The improvement of primary school enrollment is an important long-term task in terms of the country's human resource development. At the same time, over the short term, non-formal education such as literacy education and training in simple skills will be essential in raising the quality of the current labor force in line with economic development needs. Promotion of literacy education for the adult women who make up around 70% of the illiterate population would also be an effective means of addressing high birth rates and infant mortality rates. Widening the scope of non-formal education is an urgent task in contemporary the Lao PDR.

### **2-8-2 Issues**

#### **(1) Expansion of basic education**

Human resource development in the Lao PDR has problems at both ends of the system--the expansion of basic education and the development of high-level human resources.

The primary issue is disseminating and improving basic education. Illiteracy rates are high; it is difficult for women and ethnic minorities to attend school; there are few education

opportunities in remote areas; even where students enroll in school, there is a high likelihood that they will later drop out; and neither the supply of textbooks nor the quality of teachers is adequate. The recent spurt in bilateral and multilateral education assistance in the area of basic education to redress an education situation typical of an extremely poor country is because cooperation in the Lao PDR in this area makes a lot of sense in the context of the stress international aid is currently placing on basic education.

Spurred by the 1990 World Conference on Education for All, the Lao PDR government has begun to take a very positive stance on basic education, significantly boosting the budget allocation for this area, and education development has moved ahead smoothly in recent years. The success of basic education in future years will be determined, however, by the government's response to the three types of disparity explained below: gender disparities, regional disparities and ethnic disparities. Foreign aid institutions must also ensure that redressing these disparities is adequately built in to their activities.

### **1) Gender disparities**

As can be seen from Table I-24, school enrollment and literacy rates for women are lower than for men. While the ratio of female students at primary school level is 44%, this drops to 22% at university level, falling progressively the higher the level of education. Women comprise just under 70% of the country's illiterate population. The illiteracy rate for men is 31% and for women 56%. The lack of progress in education for girls from ethnic minorities is particularly serious, with more than half of girls not attending primary school at all, while the majority of those who can attend can only complete the first two years.

Reasons behind this include parents' lack of appreciation of the importance of education for girls, the difficulty of girls traveling the increasing distance to school the higher the grade, and the lack of sanitary facilities in many schools. At the same time, because women make up 47% of the total labor force (1995), a high level even compared to other developing countries, education for women would not only have the social effects of restraining the Lao's high rate of population increase and improving household hygiene and nutrition, but also have a major impact on economic development through the improvement of the quality of female labor.

### **2) Regional disparities in education**

Table I-28 shows total enrollment rates by province. There is a major difference between enrollment rates for under-developed regions such as Se Kong, Phong Saly and Louang Namtha and comparatively advanced regions such as Vientiane City, Vientiane Province and Champassak, pointing to clear regional disparities. These large education disparities are the result of the Lao's low population density impeding the efficient establishment of schools, with particularly low enrollment rates in the mountain areas, as well as the existence from the outset of major income disparities between regions. The concentration of foreign aid in education in the central provinces is also a problem.

The most important factor in redressing regional disparities in education will be improved school access. School buildings, including dormitories, and the qualitative development of multi-grade teaching are urgent tasks. An education system is also needed which can respond to local education needs through a certain degree of decentralization.

**Table I-28 Total Enrollment Rates by Province**

Province	Primary schools	Lower secondary schools	Upper secondary schools
Vientiane Mun.	136%	67%	39%
Phong Saly	58%	8%	1%
Louang Namtha	55%	4%	1%
Oudomxay	97%	6%	2%
Bokco	98%	17%	4%
Luang Prabang	99%	18%	5%
Houaphan	83%	17%	3%
Xayaboury	99%	23%	5%
Xieng Khouang	71%	20%	5%
Vientiane	114%	47%	17%
Borikhamsay	111%	26%	6%
Khammouane	102%	26%	8%
Savannakhet	114%	34%	11%
Saravane	117%	21%	4%
Se Kong	11%	3%	1%
Champassak	117%	43%	13%
Attapeu	85%	12%	5%

Source: Asian Development Bank, "the Lao PDR: Education in Asia and Pacific Series 1993"

### 3) Ethnic disparities in education

In terms of ethnic groups, the lowland Lao peoples who comprise 67% of the population also comprise 90% of students enrolled in lower secondary school and 96% of university enrollments, while enrollment opportunities for the highland and mountain Lao peoples are extremely limited. The probable reasons for this are as follows: the ethnic minorities have a learning disadvantage in the Lao language, while there are also wide differences according to the ethnic group in terms of cultural perceptions of school education as a whole and of education for girls, geographical access to schools and economic barriers to attending school. Primary school enrollment rates have been rising steadily, but the challenge will be whether enrollment can be facilitated in remote areas, particularly for girls from ethnic minorities. To achieve this, the administration will have to grasp the education needs of each ethnic group and their cultural perceptions, building a system which can reflect this in educational content.

### (2) Development of high-level human resources

The second task will be the development of high-level human resources to shoulder politics and the economy in a country which is undergoing rapid development, transformation and internationalization. While the Lao PDR has seen a spurt in aid from foreign countries and international institutions in recent years, many aid personnel have pointed out the administration's low human resource capacities. The Lao PDR has experienced little of the damage caused by overinvestment in higher education which has been the case in certain African and South Asian countries. Along with basic education development, however, the government will also have to work actively on higher education and training for civil servants. This will mean giving priority to the following measures.



### **1) A more efficient supply of higher and vocational education opportunities**

In addition to improving internal efficiency employing economies of scale, as seen with the National University of Laos, increasing the efficiency of the provision of higher and vocational education opportunities must also encompass improved external management efficiency to allow higher and vocational educational institutions to respond effectively to human resource needs in the labor market. This will require the creation of a system in which the workplaces which will employ graduates participate organically in the management of higher/vocational education institutions and in decision-making on educational content. However, in a society like the Lao PDR with its small market scale for education services, as well as the above-mentioned compound disparities, simply leaving more efficient management to the privatization of education could well lower the quality of education and increase disparity. The government should control the quality of education and use means such as scholarships to secure the equitable provision of education opportunities, while at the same time gradually developing incentives such as the liberalization of profit making activities in order to match education institutions to social needs.

Higher and vocational education institutions have also provided virtually no training opportunities for people already in the labor force. Changes in the Lao's economic environment are clearly expanding workers' learning needs. Educational institutions responding to these needs will be a key factor in forging organic links between education and socio-economic development.

### **2) Responding to a market economy**

The Lao's introduction of a market economy has not necessarily echoed the experience in other socialist transition economies. Socialist systems only took partial hold in the country's comparatively primitive economic structure, which is in the process of being upgraded as a result of the recent economic reforms and opening-out. Higher education in the Lao PDR is still not responding accurately to these changes in the economic environment. Development of economics and business administration curricula that promote human resources up to international standards is an urgent task. The Lao PDR therefore needs to work simultaneously on the development of new lecturers and researchers in the economics and business administration areas and on the retraining of current lecturers.

Appropriate training opportunities also have to be provided not only to those at a higher education school age but also to those directly involved in the market economy introduction process, such as economy-related civil servants and financial institution employees.

### **3) Responding to internationalization**

In opening its economy, the Lao PDR has achieved ASEAN accession and has also seen a rapid jump in recent years in foreign aid and involvement in international negotiations. This trend is likely to become more and more marked in the years ahead. However, the Lao PDR still has only a limited number of people able to respond to such developments. Training and study abroad for civil servants, ordinary foreign language education, and particularly English education, would contribute not only to the modernization of administrative systems but also to increased efficiency in absorbing aid. Providing even brief chances for Lao citizens to experience foreign countries would have an impact over and beyond immediate economic efficiency in

the sense that it would give them the opportunity to reconsider the Lao PDR in the context of the international community and in history.

## 2-9 Social Sector (population, employment and poverty counter measures, gender, health and medical care)

### 2-9-1 Current state

#### (1) Population

The Lao PDR has a limited population of 4,574,848 and a low population density of 19.3 persons per square kilometer<sup>(74)</sup>. According to government statistics, the annual rate of population increase fell from 2.7% in 1985 to 2.4% in 1995<sup>(75)</sup>. The infant mortality rate rose over the same period, but child, maternal and gross mortality rates improved. The drop in the natural rate of population increase is the result of the birth rate falling faster than the mortality rate (Table I-30). At the same time, with an estimated 2.8% in 1996<sup>(76)</sup>, the Lao PDR currently has the highest population growth rate in Southeast Asia. If the population continues to grow at this rate, the Lao PDR will have a total population of 5.2 million by 2000, a figure which will double over the following 30 years<sup>(77)</sup>. With around 45% of the population children 15 years or under (1994), Lao's population composition is typical of a developing country<sup>(78)</sup>.

Around 11.5% of the population is concentrated in the capital of Vientiane, while in terms of provinces, population concentration is highest in Xaingabouri, Savannakhet and Champasak, plain areas along the Mekong River where there are routes across to Thailand. Population is light and density low in the mountain provinces of Phong Saly, Louang Namtha and Houaphan in the north, as well as Borikhamsay Province in central Lao PDR and the provinces of Se Kong and Attapeu in the south. Even in these provinces, however, the population is increasing slowly but steadily, and also becoming more dense, whereas in the northern provinces of Louang Namtha and Oudomxay, population figures have been falling since 1990. A slight population rise is therefore being maintained even in remote mountain areas, but areas next to provinces where transport corridors have been developed are seeing their populations flow out to these provinces. Care will have to be taken to avoid the further dwindling of these populations (Table I-29).

#### (2) Employment and poverty issues

The Lao PDR has one of the lowest GDP per capita levels in Asia at US\$350 (1995). Moreover, 46% of the population are unable to earn the monthly income of 8,558 Kip (as of 1995) needed for a daily intake of 2100 calories per person<sup>(79)</sup>.

The ratio of the poor to total population differs between rural and urban areas (53% against 24%), and among the central, northern and southern regions (40, 46 and 60% respectively), with the poor concentrated in the south and in rural areas.

According to statistics by industry on workers aged 10 or over, around 85% are engaged in agriculture and fishery<sup>(80)</sup>. Moreover, given that the lowest level of the population pyramid

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<sup>(74)</sup> 1995 Population Census.

<sup>(75)</sup> Ibid.

<sup>(76)</sup> Population Reference Bureau

<sup>(77)</sup> UNICEF Consultant, second draft, (1996), *Situation Analysis of Children and Their Families in Lao PDR*.

<sup>(78)</sup> UNICEF, *ibid.*

<sup>(79)</sup> Document of the World Bank, *Lao PDR Social Development Assessment and Strategy, August 15, 1995*, pp.ii-iii

<sup>(80)</sup> 1995 Population Census

will reach working age over the next 10 to 20 years, alleviating the problem of poverty is a matter of urgent necessity, as is creating employment in rural areas. Boosting employment will depend on creating jobs in sectors other than agriculture and fishery, whether this is in urban or rural areas. However, in rural areas, not only in the case of skilled work but also in unskilled jobs, road construction, for example, and other construction and civil engineering projects frequently cannot find the necessary local labor. This is partly because of the difficulty those involved in farming and fishing have in adjusting to jobs in other sectors. There is a strong need to promote human resources development and vocational training in rural areas.

There are no figures on the outward flow of labor, but there are apparently many foreign workers coming in to the country to work even as unskilled labor on public civil engineering and construction projects. This is because of the shortage of labor in rural areas. Here too, the difficulty those involved in farming and fishing have in changing jobs is a factor obstructing the expansion of local employment.

Assisted by the UNDP, considerations apparently began in 1997 on the development of social welfare policies and a social security system.

### **(3) Gender issues**

Within the one country there are still a number of differences in women's social roles and status, the result of factors such as geography, ethnic group, the degree of industrial and social infrastructure development and border proximity <sup>(81)</sup>.

#### **1) Women's social and economic activities**

The Lao women are generally heavily involved in economic activities. In fact, women play a more important role than men in agriculture, service work and office work. Women also have a major role in the handicraft industry and related commercial sectors.

Looking at women's economic activities by province, women are the dominant force in developing economic activities in areas such as Xayaboury Province, where market economy has taken hold and trade with Thailand is developing across the border. In provinces such as Oudomxay and Se Kong, however, which are comparatively heavily forested and in which the situation in terms of roads and means of transport has obstructed the development of trade, problems such as the heavy agricultural labor carried out by women have been pointed out.

#### **2) Education**

Gender differences exist in terms of literacy rates, enrollment in primary education and continuation on to higher education. Seen by age group, literacy rates are strikingly low for women aged 50 and above. By province, literacy rates for women 15 years and over are less than 30% in the northern provinces of Phong Saly, Louang Namtha, Oudomxay and Bokeo, and in the southern province of Se Kong. There are also major differences among ethnic groups. In terms of literacy rates (both men and women) for persons 15 years and over in the four largest ethnic groups, where the Lao PDR has a 75.2% literacy rate, the literacy rate among the Phu Thai is 63.0%, among the Khmu 40.9% and among the Hmong 26.5%, a particularly low level. The gender disparity between ethnic groups is large overall, but is particularly striking among

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<sup>(81)</sup> UNDP, *LAO PDR: Province Profiles Series, 1996-1997, No.1-3 Socio-economic Profile & Income Generation Activities Profile*

the Hmong, where men have a literacy rate of 45.7% against 8.1% for women (Tables I-31, I-32).

### **3) Vocational training**

Various types of vocational training are still conducted at village level. There are exchanges between villages, training trips abroad and also short study tours of around 10 days. The aim of this vocational training is not just to acquire technical skills but also to gather market information, and women's vocational training has a particularly large effect <sup>(82)</sup>.

### **4) Maternal health**

Maternal mortality rates are high nationwide, and special attention is being paid to improvement in remote and upland areas. Health centers and health posts are currently being established at village level, with medical round services being designed and implemented whereby groups of doctors, technicians and nurses visit villages on a fixed schedule to provide medical examinations and treatment, or at least a nurse is permanently stationed locally. Home births are common in rural areas, but because of the lack of trained midwives, emergency care for abnormal births and for pre- and post-natal problems is not possible, nor are prior check-ups. This is where increasing the number of health centers and health posts and expanding medical round services will be vital.

### **5) Current state of voluntary participation**

The Lao Women's Union, an LPRP organization, has branches at village level even in remote areas, and these are working proactively with the Youth Organization on related activities. The LWU has also established cooperation mechanisms with NGOs in many sectors at central, provincial, local and village levels (Figure I-8). Current priority objectives are to eradicate discrimination against women from ethnic minorities; to develop agriculture, particularly in isolated areas; and to raise women's education levels. A number of very effective small-scale women's projects have also been established at village level toward agricultural and rural development <sup>(83)</sup>.

## **(3) Health and medical care**

Health and medical care in the Lao PDR is beset by a number of difficult problems. Below we have divided these into five areas.

### **1) State of medical care administration and services at provincial and district level**

Public networks for medical care administration and medical facilities have been institutionalized at central government, provincial, district and community level, but these are not yet fully functional. Three research institutes (the National Institute for Hygiene and Epidemiology, the Institute of Malaria and Parasitic Diseases, and the Mother and Child Health Institute, supervised by Department of Curative and Preventive Services) and one medical uni-

<sup>(82)</sup> According to an interview survey at the LWU.

<sup>(83)</sup> *Report on the Contribution of LAO Women in Rural Development, Cf BT Education Services*, Prepared by Ms. Somchanh Lao Women's Union, and *Country Report on Women In the Lao PDR*, National Preparation Committee for the 4th World Conference on Women, Beijing 1995.

versity have also been established. However, the services and management systems of these need to be modernized and improved in terms of quality.

In terms of policies on medical organizations, services and management systems, the government plans to introduce machinery and equipment to improve hospital medical standards at the various levels, as well as to strengthen medical services not just in urban areas but also at district, area and village level in rural and mountain areas, as well as for ethnic minorities in remote areas. This will require the incorporation of both traditional as well as modern medicine into medical care, as well as guidance for private sector clinics.

Urban hospitals need to develop emergency medical care systems (linking ICU facilities, ambulances and information systems) to handle the recent increase in traffic accidents. Large hospitals in Vientiane have ICU facilities and ambulances, but in reality, their medical equipment, services and staff are not yet up to standard.

To improve health and medical care at village level in terms of disease-prevention measures and the supply of medicines, experiments are being made in forming teams of doctors, nurses and test technicians from provincial and district hospitals to send out on regular village rounds, reaching out to those who live in isolated areas where medical services are scarce. Systems for establishing dispensaries and health posts at village level are also being developed.

## **2) Supply of medical products**

The supply and distribution of medicines is inadequate. Cities have pharmacies where general and traditional medicines can be bought. The operators of these stores, however, do not know enough about preserving product quality or expiry dates. Many households also harvest, dry and preserve natural medicines. It is difficult to get injections and special medicines which are infrequently used. Most medicines are imported, with the majority from France, Thailand and China. There is a price problem in that French medicines are more expensive even where the same ingredients are used.

There are currently three domestic pharmaceutical factories, one which manufactures general medicines (government-affiliated), a transfusion plant (which receives aid from the Netherlands), and a pharmaceutical technology development center (supported by Japanese aid; handles anti-malarials as well as general medicines, transfusions, injections, etc.).

## **3) Shortage of human resources**

The Lao PDR does not have enough medical staff, including doctors, assistant doctors and specialist nurses, and levels need to be improved. There is a strong need for training for specialist doctors in areas such as surgery, obstetrics and gynecology, and dentistry. Priority has also been placed on training nurses and improving their skills. Particular attention needs to be paid to remote areas, developing medical facilities and medical equipment as well as enhancing medical and health care training projects within development plan frameworks at provincial and district level.

## **4) Family planning**

Given Lao's limited population and low population density, as well as the loss of human resources and the labor shortage resulting from the earlier civil war, population growth tends

to be supported. In 1988, the government launched population policies centered on birth spacing. These are directed at promoting pregnancy and childbirth spaced at appropriate intervals, recognizing the negative effect which frequent pregnancies and births can have on mothers and children.

Adding in Lao's population structure, with a dependent population index of 92.8, the burden on the working age population is extremely heavy compared to neighboring countries, one factor pushing down the savings which furnish the investment needed for development. This could also boost population density against field area, increasing the burden on the environment. Heightening awareness of family planning will therefore be extremely important to the future of the Lao PDR.

## 5) Primary Health Care (PHC)

PHC comprises comprehensive health and medical care and welfare activities linking individuals, families, communities and the country together in a participatory approach. It seeks to develop public hygiene services and medical services with self-care as the foundation, focusing on each region's main health issues. In the following sections, we will look at the current situation in the Laos PDR.

### a) Appropriate nutrition and water supply

The average calorie intake in the Lao PDR is 2,630 kcal a day, which is not particularly low compared to other Southeast Asian countries (Malaysia 2,884, Thailand 2,443, Philippines 2,450, Myanmar 2,598 and Cambodia 2,021)<sup>(84)</sup>. However, the nutritional status of children is obviously not good. Survey results indicate that 48% of children under five have moderate to severe growth disorders, while 10% suffer moderate to severe atrophy, worse than the Southeast Asian average. Child nutrition needs to be improved more in rural than in urban areas, as does the nutrition of children from ethnic minorities. The lack of micronutrients is also a problem, with Vitamin A, iodine and iron deficiencies. These are caused by a cereal-based diet and rock salt intake, as well as malaria and the contraction of parasites.

A safe supply of drinking water and the establishment of sanitary latrines are important in preventing infectious and parasitic diseases, but dissemination rates are still low, particularly in rural villages (Table I-35). A safe drinking water supply not only helps prevent infectious diseases but also has a major impact in improving living conditions. For example, by decreasing women and children's water-fetching labor, more time is created for handicrafts and other jobs, while children also have time to attend school.

### b) Maternal and child health care

Infant and maternity mortality rates are high in the Lao PDR. According to an international comparison table for 1997, the Lao's infant mortality rate is 92 deaths per 1,000 live births. In Malaysia, the same rate is 11, in Thailand 26, in Viet Nam 34, in the Philippines 40 and in Myanmar 79, with only the Cambodian infant mortality rate higher than the Lao PDR at 110 (1997).

Looking at mortality rates by area of residence, these become progressively higher across urban areas, quasi-urban areas and rural areas (52, 78 and 136 respectively, with a

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<sup>84)</sup> ASIA WEEK, 1997.2

total of 125; 1994). There are also disparities according to geographical conditions, with a lowland rate of 115 and a highland and mountain area rate of 147. Infant mortality rates improve the more years of schooling the mother has had, standing at 154 for no years of schooling, 107 for one to six years, and 71 for seven years or more (Table I-34).

In many cases of infant mortality, the child dies within a month of birth, with an especially high mortality rate during the first week. Factors behind this include home deliveries by persons without appropriate training; low birth weight; nutritional disorders (protein, micronutrient, calorie deficiencies, etc.) in newly-born infants; no inoculations; and hygiene issues such as the lack of safe drinking water. The main causes of death for infants are malaria, pneumonia, cholera, diarrhea and meningitis.

Twenty eight percent of maternal mortalities occur during pregnancy and 72% during or after childbirth. Causes include both obstetric factors (blood loss, septicemia, etc.) and non-obstetric factors (malaria, cholera, acute pneumonia, hepatitis, trauma, gestosis-induced cardiac disease, etc.). These are the result of home deliveries, the absence of a trained birth attendant at the time of birth, nutritional problems during pregnancy or nursing (anemia, lack of micronutrients, etc.), frequent pregnancies and births, lack of medical care before and after childbirth, and numerous miscarriages.

c) Inoculations and other measures against infectious disease

Many of the Lao's main killers are infectious diseases. It is difficult to grasp the situation accurately because of the limited information available on disease, but the top ten causes of death are all infectious diseases (Table I-36). Diseases which can be prevented by inoculation include polio, measles, whooping cough, diphtheria and neonatal tetanus.

Malaria occurs nationwide, with an estimated 1.4 million persons infected annually, and 14,000 deaths. There are regional disparities, however, according to geography. These geographic areas can be generally divided into (i) hill and low mountain areas where rates of infection are high; (ii) the southern plain area, where rates are low to medium; and (iii) alluvial plain (mostly the Vientiane Plain), plateau and mountain areas, where infection rates are low. By province, infection rates are high in Louang Namtha, Bokeo, Houaphan and Savannakhet, with measures against malaria the priority health care issue. Malaria is particularly dangerous for infants and pregnant and nursing mothers.

The drinking water supply and latrine sanitation are closely linked to diseases such as diarrhea, and activities to improve living conditions based on knowledge about malnutrition issues (including tuberculosis and pneumonia), medical and health care education, diet improvement and prevention of infectious disease will be important, as will movements to encourage self-care.

There are currently no reported cases of infection or death from other infectious diseases such as AIDS, or sexual diseases such as syphilis or gonorrhea. However, there is information suggesting that the number of people infected is rising in provinces close to the border where there is increasing cross-border traffic (e.g., Xayaboury, which borders



with Thailand)<sup>(85)</sup>. AIDS must be designated as an infectious disease which must be reported, with the first step an overall increase in the accuracy of information<sup>(86)</sup>.

#### **(4) Other Issues**

Aftereffects of the war years up until 1975 are households headed by women, refugees and unexploded ordnance. 1991-92 statistics point to an extremely large number of widows in the 40 to 70 age group, with around 25% of widows heading their households. This is closely related to the poverty issue.

There is not an overwhelming number of refugees, but there are problems in certain regions. Projects to assist refugees have been listed in Table I-37.

While there is little international awareness of the presence of unexploded ordnance, this is in fact concentrated in the northern and southern mountain areas, as well as lying in a belt along the Viet Nam border, and is causing a grave impediment to development. In 1996, UXO LAO (the Lao National Unexploded Ordnance Program) was launched based on a trust fund set up by the UNDP, UNICEF and eight donor countries, and a survey of the socio-economic impact of unexploded ordnance was undertaken on the basis of a contract with Handicap International<sup>(87)</sup>. There are still villages in remote areas which lie within areas of ordnance concentration.

While this goes into the area of preventive medicine, there is a risk that AIDS will spread in a limited number of regions<sup>(88)</sup>. NGO activities contribute a great deal in this area.

#### **2-9-2 Development issues**

An integrated approach needs to be taken to population issues, regional disparities, disparities among ethnic groups, gender issues and other factors constraining the Lao's socio-economic development. The following can be said of social infrastructure and human resources development.

##### **(1) Social infrastructure**

Social infrastructure in remote areas is not only at a low level unit-wise; while villages, districts, provinces, regions and the nation form a network, linkage among these elements is difficult, a factor which stands in the way of resolving the various problems. It is important not simply to improve single facilities but rather to strengthen local networks or linkages: in other words, a community development approach. Work has finally begun on developing laws on health and medical care and social welfare, but it will be important to push forward with the creation of laws toward system establishment and management and operation of the above.

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<sup>(85)</sup> Province Profiles Series, No.2

<sup>(86)</sup> The above information was taken from interviews with staff at the Ministry of Public Health, Ministry of Labor and Welfare, the LWU and JICA's staff in the Medical and Health Care sector. The Lao PDR Embassy of Japan's *Raosu gaikyo* (March 1997) and other documents were also used as material.

<sup>(87)</sup> Handicap International, *Living with UXO, Final Report*, 1997

<sup>(88)</sup> *Ibid.*, UNDP, (1996), *Lao PDR: Province Profile No.2, Socio-economic Profile of Savaboury Province*

## **(2) Human resources development**

The lack of human resources is common to all social sectors. To create and maintain a multi-layered network which extends out from the central government to villages, it will be vital to develop the human resources to support this. At the same time, new network institutions and systems could be created to make up for the shortfall in human resources. For example, a number of communities could be combined to establish a cluster region for which the minimum level of medical staff would be provided, while at the same time a higher-level team of medical experts would make regular rounds of the area. This would raise regional medical service levels.

Table 1-29 Population by Province

Province	Area (Km <sup>2</sup> )	Population (1,000 persons)												Density (Km <sup>2</sup> )			Population index 1985=100		
		1985			1990			1995			Rate	1985	1990	1995	1985	1990	1995		
		Total	Rate	Total	Rate	Total	Rate	Male	Female										
Whole country by provinces	236,800	3,618	100.0	4,140	100.0	4,605.3	100.0	2,276.9	2,328.4	100.0	15	17	19	114	114	127			
Vientiane Mun.	3,920	381	10.5	464	11.2	531.8	11.5	267.9	263.9	11.5	97	118	136	122	122	140			
Northern region	Phongsaly	16,270	124	3.4	141	3.4	153.4	76.2	77.2	3.3	8	9	9	114	114	124			
	Luangnamtha	9,325	98	2.7	119	2.9	115.2	56.1	59.1	2.5	11	13	12	121	121	118			
	Oudomxay	15,370	189	5.2	288	6.8	211.3	104.9	106.4	4.6	12	18	14	150	150	112			
	Bokeo	6,196	56	1.5	64	1.5	114.9	56.8	58.1	2.5	9	10	19	114	114	205			
	Luangprabang	16,875	298	8.2	337	8.1	267.2	181.9	185.3	6.0	18	20	22	113	113	123			
	Huaphanh	16,500	212	5.9	220	5.3	247.3	122.8	124.5	5.4	13	13	15	174	174	117			
	Xayaboury	16,389	226	6.3	185	4.5	293.3	146.6	146.7	6.4	14	11	18	72	72	130			
Central region	Xiangkhuaug	15,880	163	4.5	181	4.4	201.2	99.7	101.5	4.4	10	11	13	111	111	123			
	Vientiane	15,927	267	7.4	305	7.4	286.8	145.4	141.4	6.2	17	19	18	114	114	127			
	Borikhamxay	14,863	123	3.4	143	3.5	164.9	82.4	82.5	3.6	8	10	11	116	116	134			
Southern region	Khammuane	16,315	215	5.9	245	5.9	275.4	133.8	141.6	6.0	13	15	17	114	114	128			
	Savannakhet	21,774	549	15.2	639	15.4	674.9	330.6	344.3	14.6	25	29	31	116	116	123			
	Saravane	10,691	189	5.2	225	5.4	258.3	125.0	133.3	5.6	18	21	24	119	119	137			
	Sekong	7,665	51	1.4	57	1.4	64.2	31.6	32.6	1.4	7	7	8	112	112	126			
	Champasack	15,415	407	11.3	453	11.0	503.3	245.5	237.8	10.9	26	29	33	111	111	124			
Attapeu	10,320	70	1.9	79	1.9	87.7	42.5	45.2	1.9	7	8	8	113	113	125				
Special region (Xay-somboon)	7,105	-	-	-	-	54.2	27.2	27.0	1.2	-	-	-	8	-	-	-			

Source: National Statistical Center

**Table I-30 Fertility and Mortality (1985-1992)\*\***

Category	1985	1992	% change
- Birth rate per annum	46%	41.6%	-1.1%
- Mortality rate per annum	17%	15%	-1%
- Population growth rate annum	2.9%	2.6%	-3%
- Infant mortality rate annum (1 year old)	118/1,000	125/1,000	
- Child mortality rate annum (1-5 years old)	170/1,000	128/1,000	-26%
- Maternal mortality rate*	30/10,000	13.2/10,000	-16.80
- Life expectancy	48	50	+2 years

Note: The maternal mortality rate given here does not necessarily match with the figure in the UNDP 1996 report of 650 mortalities per 100,000 persons (1993).

Source: National Statistical Center, the Lao PDR: National Preparation Committee for the 4th World Conference on Women (Beijing, 1995)

**Table I-31 Literacy Rates by Gender and Province (age 15 and over)**

Province	Men	Women	Total
Vientiane Mun.	92.2	78.9	85.5
Phongsaly	44.8	25.0	34.6
Luangnamtha	46.6	19.6	32.5
Oudomxay	59.8	24.3	41.6
Bokeo	56.8	27.3	41.6
Luangprabang	68.3	38.5	52.9
Huaphanh	71.0	40.8	55.5
Xayaboury	75.2	54.8	64.9
Xiengkhuang	73.7	47.1	60.0
Vientiane Prov.	83.6	60.7	72.2
Borikhamxay	77.6	52.6	64.9
Khammuane	70.7	43.1	56.0
Savannakhet	70.2	43.6	56.2
Saravane	65.7	35.2	49.4
Sekong	55.9	24.0	39.4
Champasack	84.7	59.4	71.3
Attapeu	69.2	37.2	52.1
Xaysomboon S.R.	69.5	30.9	50.0
<b>TOTAL</b>	<b>73.5</b>	<b>47.9</b>	<b>60.2</b>
Urban	92.4	78.1	85.2
Rural	69.0	41.2	54.5

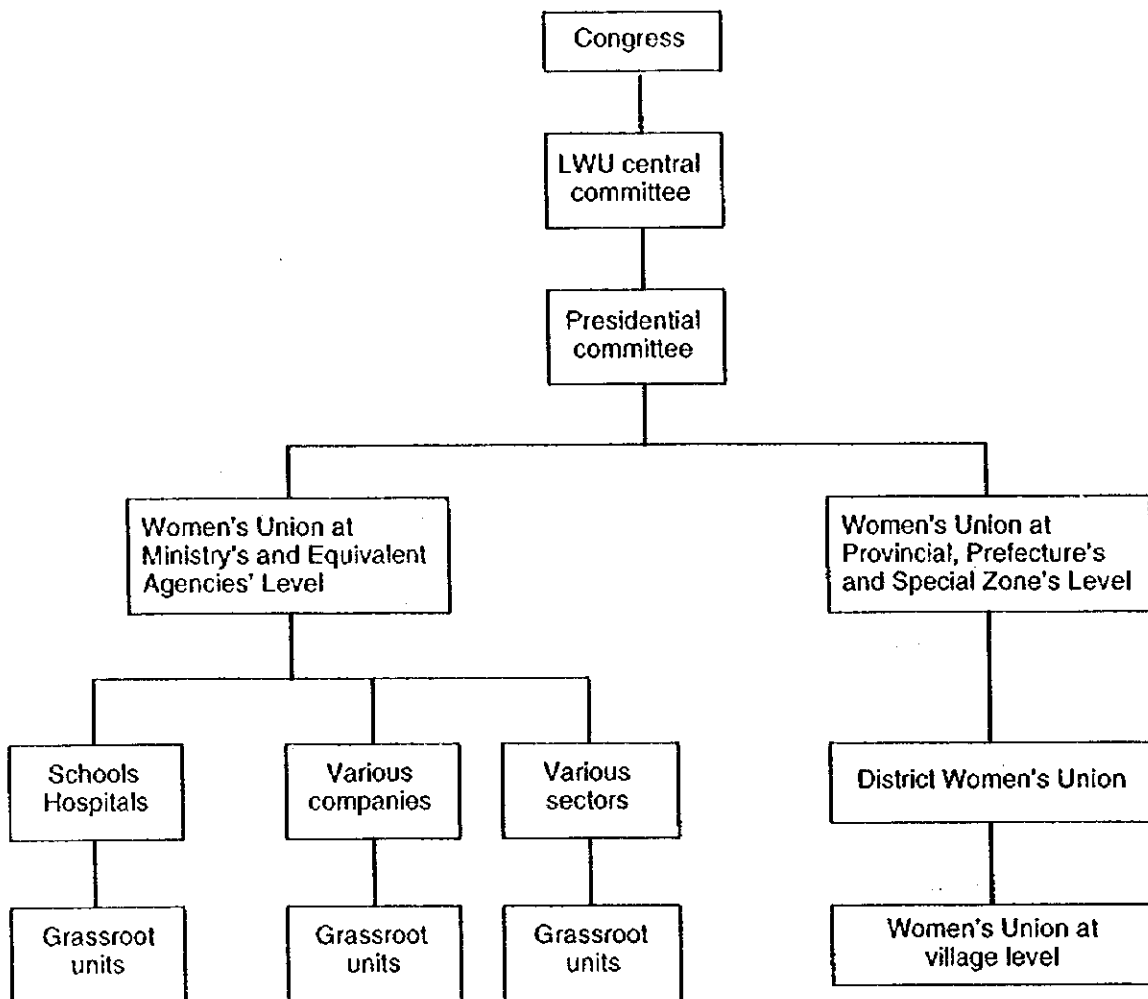
Source: Population Census 1995

**Table I-32 Literacy Rates by Gender and by Ethnic Group**

Group	Item	Actual figures		Rate		
		Literate	Population	Total	Men	Women
	Total Aged 15+					
Lao		1,024,932	1,362,749	75.2	86	65.1
Phutal		143,160	227,084	63	77.2	50.1
Khmu		107,898	263,722	40.9	60.8	22.7
Hmong		36,443	137,774	26.5	45.7	8.1

Source: Population Census 1995

**Figure I-8 Organization Chart of Lao Women's Union**



Source: The Lao Women's Union, 1997

**Table I-33 Rural Development Projects Under Implementation by the LWU**

1. The health for women project.
2. The informal education project.
3. The handicraft enhancement and preservation project.
4. The vocational training project.
5. The food security project.
6. Saving women's labour project.
7. The study tour project.
8. The vehicle providing project.

\* Taken from the "Report on the Contribution of Lao Women in Rural Develop-

**Table I-34 Lao PDR Infant Mortality Rates**

Area of residence	City	Quasi-city	Rural village	Total
	Mortality rates			
Child mortality rate (per 1,000 live births)	52	78	136	125
Under 5 years old infant mortality rate (per 1,000 live births)	76	102	200	182
Geographical conditions	Lowlands	Highlands and mountain areas		Total
	Mortality rates			
Child mortality rate (per 1,000 live births)	115	147		125
Under 5 years old infant mortality rate (per 1,000 live births)	161	230		182
Years of education received by mother	No years	1-6 years	7 years or more	Total
	Mortality rates			
Child mortality rate (per 1,000 live births)	154	107	71	125
Under 5 years old infant mortality rate (per 1,000 live births)	228	155	85	182

Source: NSC, Women and Children in the Lao PDR: Results from the Lao Social Indicator Survey, 1994

**Table I-35 Dissemination Rates for Safe Drinking Water and Hygienic Toilet Facilities (1995)**

	Rural areas	Urban areas	Total
Safe drinking water	49%	60%	51%
Sanitary latrines	20%	97%	32%

Source: UNICEF, 1996



## **2-10 Environmental conservation and environmental resource management**

### **2-10-1 Current state**

Environmental protection and environment resource management encompass an extremely wide range of areas. Geographically, they include issues such as water quality control, sewerage treatment, inland water drainage, waste management, and traffic management and air pollution control in Vientiane and other urban areas, as well as slash-and-burn agriculture, forest management and improvement of the living environment in rural and mountain villages far from such urban areas. Areas with strong environmental involvement include not only forestry, agriculture and industry, but also public sanitation and education.

Real progress on environmental issues will hinge on raising environmental awareness not only in the narrow sense of pollution issues, but across a number of areas, developing a comprehensive and systematic set of countermeasures.

The Lao's central organization in the environmental area is the Organization for Science, Technology and Environment (STENO). STENO is a new organization established in April 1993, and is made up of seven departments and one research institute. STENO's main responsibilities are to coordinate and to provide advice to other ministries and agencies in the area of science and technology, while in terms of the environment, STENO handles plan formulation and survey and research work. In July 1994, STENO produced the Environmental Action Plan, the Lao's first systematic plan in the environmental area. This plan embraced the span of environmental issues, including both natural science and socio-economic aspects, and listed the Lao's environmental issues as follows: forests and forest resources; protection of biological diversity; soil resource management; water resource management; environmental issues caused through industrial and mineral resource development; and traffic and transport-related environmental issues.

The plan also touches on institutional systems, regulations, environmental information systems, environmental impact assessments, and human resources development in resolving environmental issues and achieving better environmental management.

We see the following as the main areas in terms of environmental protection and environment resource management in the Lao PDR at present:

- (i) Forest protection and conservation
- (ii) Stabilization and progressive reduction of slash-and-burn agriculture toward natural forest regeneration
- (iii) Watershed management and environmental resources management
- (iv) Environmentally sustainable land utilization
- (v) Urban environmental management (including traffic control)
- (vi) Approaches to the environment in secondary and higher education
- (vii) Environmental impact assessments of large-scale development
- (viii) Measures to counter industrial air and water pollution
- (ix) Development of environment-related legislation



The most serious environmental issues the Lao PDR currently faces are the deterioration of forest resources through slash-and-burn agriculture which culls resources over a short cycle, and the various issues this raises in regard to the living environment and the promotion of agriculture and industry. Of course, traditional slash-and-burn agriculture conducted over a 15 to 20 year cycle actually supported sustainable resource utilization in that resources were used within the range of the natural growth capacity. However, with the turmoil surrounding the 1975 revolution, recent rapid population growth, government guidance, and village migration closer to rivers and roads for reasons of sanitation and education, slash-and-burn agriculture has now shifted to a short cycle of three to six years. Slash-and-burn agriculture over such a short cycle forces resource culling significantly above natural growth volume, creating problems such as forest deterioration and the proliferation of obstructive vegetation, the drying-up of water resources, and the reduction of non-wood forest resources. This inevitably impacts on the lives of the farmers themselves.

Sida and various other donors are already working on the stabilization and reduction of slash-and-burn agriculture, and are beginning to see a certain degree of success. However, progress in this area will hinge on reforming and improving the overall living conditions of farmers who are forced to depend on this form of cultivation, which is where a comprehensive and strategic approach will be vital.

At the same time, living environment issues in the capital of Vientiane have become more and more marked in recent years, with issues such as waste disposal, traffic management and water pollution already at a stage where they can no longer be ignored. Urban environment issues are something the Lao PDR will have to deal with in the process of national development. Moreover, resolving urban environmental issues which are already critical requires an enormous amount of money, time and manpower. The Lao PDR must therefore lay down rigorous basic guidelines on environmental management now, systematically developing the necessary measures in the various areas according to these guidelines, before it moves fully on to the anticipated path of accelerated development.

## **(1) Forest management**

Despite the vital role which the Lao's forests, which cover roughly half of its national territory, have played in people's lives and in national development, no mechanisms were set up for systematic forest management until fairly recently. Donors have continued to experiment with forest management, but this management has tended to be conducted on a regional rather than an integrated national basis.

### **1) National Forestry Law**

The 1990s saw a number of Decrees of Prime Minister and Ministry of Agriculture and Forestry issued on forest management, culminating in the National Forestry Law, which was promulgated in April 1996 and put into force in November the same year. This at last marked a start to national development of a systemic framework for forest protection.

The National Forestry Law divides forests into the following five categories (Articles 16-21):

- \* Protected Forest (mainly water catchment forests; firewood collection is not allowed; Protection Forest; Pa Pongkanh)

- \* Forest Reserve (mainly forests in which the natural environment is protected; three stages; Conservation Forest; Pa Sa Ngouan)
- \* Production Forest (mainly for firewood collection and harvesting of wood for housing construction; Pa Phalith, Pa Namsai)
- \* Rehabilitated Forest (mainly forests which are covered by young trees; Pa Feumfu)
- \* Degraded Forest (mainly for afforestation; Pa Sutson)

In many cases, however, villages categorize forests in other ways, such as "spirit forests" (Pa Pi), with many discrepancies between the terms used by villagers and the terms stipulated under the National Forestry Law.

Other main points stipulated under the National Forestry Law are as follows:

- Recognition of traditional forest utilization (Article 30)
- Promotion of afforestation and forest cultivation (Articles 33-38)
- Forest conservation and protection (Articles 41-45)
- Rights and obligations of forest users (Articles 48-58)
- Rights and obligations of village committees (Article 63)

National Forestry Law-based regulations and means and measures for forest protection have yet to be developed, with the Forestry Department currently working on regulation details (see 2-4-1 Forestry, Current state, 6) Development of forest and forestry laws).

## 2) State of the forests in the Lao PDR

The Lao PDR was originally a richly-forested country, but FAO and SIDA surveys report the loss of as much as 23% of forests over the last 50 years. By province, Luang Prabang has the lowest rate of forest coverage.

**Table I-38 Forest Loss in the Lao PDR**

	1940	1963	1973	1989
Forest area (1000 ha)	17,000	15,000	13,000	11,200
Forest coverage (%)	70	64	54	47

Source: The Lao PDR government materials (includes estimated values)

**Table I-39 Forest Coverage and Forest Loss Rates by Region**

	Forest coverage rate (%)		Area lost (1000 ha)	Extent of loss (%)
	1982	1989		
Northern region	38.3	36.3	202.6	2.1
Central region	54.3	51.7	187.7	2.6
Southern region	59.5	58.3	78.6	1.2
Total	49.1	47.2	468.9	2.0

Source: The Lao PDR government materials (includes estimated values)

There are a number of factors behind this rapid forest loss:

- Illegal logging
- Large-scale forest fires (spontaneous fires, fires spreading out from burn-offs)
- Population pressure in certain areas increasing the intensity of slash-and-burn agriculture
- Wartime turmoil around 1975 (mass spraying of defoliants, concentrated bombing, war-related migration and concentration of slash-and-burn farmers)
- Excessive commercial logging (commercial logging is now impossible without a government concession)

No quantitative examination has been made of the degree to which each of these factors has contributed to the degradation and loss of the Lao's forest resources. However, in regions where the topsoil was never particularly fertile and where the soil has become sterile, regeneration can take an extremely long time once a forest has been severely damaged. For example, Nya Kha, Nya Lao and other weeds covering areas in the Nam Ngum Dam watershed and in the east of Savannakhet Province in the south are obstructive vegetation impeding forest regeneration. In the case of the Nam Ngum Dam watershed, this is primarily the result of intense slash-and-burn agriculture and large-scale mountain fires, while in the latter, the wartime turmoil around 1975 is thought to have had a major impact.

### **3) Forest protection at national level**

In terms of forest protection at national level, protected areas are in the process of being established with the support of IUCN, Sida, WCS and other international donors. The main objective of these is the protection of biological diversity, and around 20 areas nationwide have already been designated as National Biodiversity Conservation Areas (NBCAs). These areas have been surveyed to a certain extent in regard to the living organisms for which they provide a habitat.

### **4) Forest protection at provincial level**

There is currently no work being undertaken at provincial level to establish areas for protection or conservation. The government seems to intend establishing protected areas at provincial level as the next step on from the establishment of such areas from a wide-ranging national perspective, but currently it lacks the personnel, resources, budget and institutions to implement this.

In some cases, as seen in parts of the Nam Ngum dam watershed, the electricity sector side is designating water catchment forests in order to maintain hydropower capacity. However, these moves have gone no further than announcing that water catchment areas will be established, with no concrete measures taken.

### **5) Forest protection at district and village level**

Traditional villages have custom-based agreements, albeit unwritten, on the use and protection of nearby forests, and also engage in forest management such as partial prohibition of logging.

Experiments have been underway for the last several years at district and village level to establish protected forests and water catchment forests as a means of strengthening traditional forest protection mechanisms and developing new forest utilization and protection regimes in villages established through relatively recent migration. These experiments are related to moves described later toward land allocation and the creation of land utilization plans. The basic approach to categorization of protected forests, etc., is usually to designate "protected forests" predominantly with a view to protecting wildlife, and to designate "water catchment forests" to maintain water catchment capacity in the area providing the water resources for village drinking water and irrigation water, basing these criteria on Decree 169/PM (abolished in November 1996 when the National Forestry Law came into effect) and Decree 186/PM.

In terms of the establishment process, the district agriculture dissemination office first provides guidance and advice, with the village committee making the final designation and recording this in writing. As part of the process, forest volunteers are chosen by each village for forest management and forest-related supervision and guidance and, with district or provincial support, or support from foreign donors, efforts are made to provide one week of training. In some villages, forest volunteers are given the right to make the first judgment on logging in community-held forests for timber for housing construction.

**(2) Stabilization and progressive reduction of slash-and-burn agriculture and enhancement of natural regeneration**

The slash-and-burn stabilization issue in the Lao PDR involves a very broad range of issues, including environmental protection, forest protection and regeneration, industrial policy, regional policy, ethnic minority issues, education, public sanitation and gender. For the Lao government, it is therefore a major headache, and one which needs to be quickly resolved. At the same time, discussion on the slash-and-burn issue is often either deliberately or unconsciously fragmented, which is making it all the more difficult to resolve.

Table I-40 shows the number of families engaged in slash-and-burn agriculture as reported by the government.

**Table I-40 Slash and Burn Agriculture**

	Number of families (1000s)	Slash-and-burn area (ha)
Northern region	163	174,448
Central region	79	76,808
Southern region	33	27,371
Total	275	278,627

Source: Lao government materials (including estimated values)

Slash-and-burn is essentially an extremely sustainable form of production when conducted within the limits of forest regeneration capacity and growth volume, and has a long history in many countries, including Japan. The period of fallowing in the Lao PDR was originally apparently 15 to 20 years, with the mountain-dwelling Lao Soung (the Hmong people) in particular farming the same spot for some years before moving on to the next.

However, with the exception of a few areas, such traditional slash-and-burn has virtually disappeared, with the new cycle in fact around a short three, six or nine years. Slash-and-burn agriculture over such a short cycle results in resources being culled at a pace well beyond natural growth capacity, creating such serious problems as a loss of soil fertility, forest degradation, erosion and reduced water catchment capacity.

Factors behind this change in slash-and-burn agriculture in the Lao PDR are as follows:

- Around 1975 and during the ensuing wartime turmoil, there was concentrated migration by ethnic groups into certain areas, where they initiated extremely intense short-cycle slash-and-burn farming, the after-effects of which still remain.
- Mountain and midland the Lao peoples have shifted down close to rivers and roads for reasons such as their children's education and medical care, as well as pressure from the government, significantly increasing the density of slash-and-burn agriculture in these areas.
- Although this is not clear from government statistics, the number of households dependent on slash-and-burn farming has increased because the country has been unable to achieve sufficient growth in productivity to absorb population growth (currently rising at more than 3% a year).
- This has resulted in a vicious circle whereby the shortened slash-and-burn cycle and reduced soil productivity are provoking further migration and increased slash-and-burn agriculture around areas with good terms of trade.
- Having promised foreign donors an early and major reduction in the area of land used for slash-and-burn, the government has gone through local government to greatly reduce the areas where villagers may engage in slash-and-burn agriculture, also limiting cycles to a few years.

When considering the slash-and-burn issue, sensitivity to the following points in particular is needed.

- The degree of forest protection varies widely according to the region. In regions where forests are being maintained in a relatively good state, it will be important to re-evaluate the traditional ways in which villagers have related to forests in their daily lives, but the same cannot be said for areas in which most secondary forest has already been destroyed.
- In villages with a high ratio of sedentary farming, traditional forest management mechanisms are still in place, but the same mechanisms are not necessarily functioning well in villages established since 1975.

Many documents refer to Hmong slash-and-burn agriculture as the major cause of forest destruction, although it is very difficult to find any reports that aim such accusations at the Hmong on the basis of a careful comparison of the slash-and-burn agriculture methods of the Hmong and other peoples. In fact, examination of the slash-and-burn techniques actually in use reveals that the Hmong have designed a variety of measures to maintain the soil fertility of slash-and-burn land. These include the mixing of crops with bean crops, planned crop rotation around every three years, keeping chickens on the slash-and-burn land and using their droppings as fertilizer, planned spreading of straw over the fields, and the building of stone walls to

prevent soil from escaping. The midland Lao peoples (particularly the Khamu), on the other hand, basically only plant one crop a year, so they do not use techniques such as crop rotation. They also begin their burn-outs from the bottom of the slope, which frequently causes major mountain fires and burns forest far in excess of the area needed for farming. Judging from the facts of the situation, at the very least it can be said that the slash-and-burn agriculture of the highland Lao people, and particularly the Hmong people, is not the villain it is made out to be in terms of forest destruction.

In any case, where aid is given toward resolving the slash-and-burn issue, it will be vital to start from an accurate grasp of the realities of the situation.

Short-cycle slash-and-burn farming not only lowers soil fertility but where numerous burn-outs are conducted in the same plot, obstructive vegetation such as the Nya Lao and Nya Kha weeds frequently proliferates on the burnt land. While the stabilization and progressive reduction of slash-and-burn agriculture is one of the government's main policies, development of comprehensive alternate measures will be vital in actually effecting a conversion from this style of agriculture.

The following two programs are particularly important in terms of moves related to the stabilization and reduction of slash-and-burn farming.

**1) Strategic Plan for the Management, Protection and Utilization of Forests and Forest Areas (1993-2000)**

Announced in 1993, this plan aims to significantly reduce the number of slash-and-burn farmers' households by the year 2000. However, it contains no concrete alternative production measures, only setting target figures. Such numerical targets may simply push the livelihoods of slash-and-burn farmers into crisis. In fact, there are already cases where farmers prohibited from engaging in roadside slash-and-burn agriculture are taking boats upstream to farm much more distant areas.

**2) Sida's comprehensive slash-and-burn stabilization projects**

Support from Sida focuses on agriculture and forestry, energy development and transport, but also reaches out to many other areas, including administrative reform, health care and sanitation and social development. Sida set up the Lao-Swedish Forestry Cooperation Program (LSFP) in 1978, which in the 1990s has also been prioritizing forest management. The aims of the LSFP are as follows:

- Promotion of the multi-purpose, rational, effective and sustainable utilization of forest land and forest resources over the long term
- Contribution to the sound economic development of rural villages
- Designation of areas which should be protected for biological, ecological or environmental reasons
- Improvement of institutions and development of human resources in the forestry sector.

This program also addresses Selected Forest Areas, the objective of which is participatory forest management which includes rural development.

The basic concept is one of joint forest management based on villagers' resource utilization rights and forest management responsibilities. It incorporates participatory planning methods, working on creating greater linkage between agriculture and forestry, including fruit tree growing, animal husbandry, small-scale irrigation and joint forest management, as well as setting up revolving funds and providing support in kind and subsidies. A center has been set up in Luang Prabang, and project staff are working together with personnel from district institutions in more than 100 villages in Phong Saly, Xayaboury, Savannakhet, Saravan, Champassak (two locations) and Se Kong. These activities are based on a thorough grasp of conditions in Lao rural villages, and are important in considering the shape of future aid.

### **(3) Watershed management**

The government has become more aware in recent years of the importance of comprehensive watershed management. There is strong concern in particular over the Nam Ngum dam, the Lao's main source of income, where soil is eroding into the reservoir and the amount of power generated is falling. The watershed has therefore been divided into upstream and downstream areas, and a watershed management program is now being established in the upstream area with assistance from GTZ following a detailed analysis of the Nam Ngum dam watershed with IDRC cooperation.

In the downstream area, watershed management and forest conservation and restoration plans have begun, through a combination of JICA development survey, project-type technical cooperation, and grant aid.

These are the first real watershed management projects in the Lao PDR. Participatory watershed management systems are also being introduced for maintenance and management purposes in regard to the implementation of irrigation projects in small watershed units.

#### **1) IDRC creation of a watershed management database (around Xieng Khouang)**

A database was created by the IDRC for watershed management to promote Nam Ngum Dam watershed management, with more specific objectives as follows:

- Gauging socio-economic conditions, surveying the reciprocal links between Nam Ngum Dam watershed resources
- Considering the possibilities for improved resource management in regard to community property
- Developing the capacity and boosting the specialization of the Lao researchers involved in resource management at community and watershed level
- In particular, clarifying the extent of competition and friction over resource utilization within and between communities in regard to external development such as forest-related activities and hydropower generation.

Field surveys were undertaken in 176 villages in the Nam Ngum dam watershed between May 1992 and October 1993. The Lao PDR counterpart in the surveys was the Nature Protection and Watershed Management Office within the Forestry Department of the Ministry of Agriculture and Forestry, and the major feature of these surveys was implemen-

tation cooperation from the Dong Dok Forestry College, the Muang Mai Forestry School and the Vientiane Teacher Training College (Dong Dok). The data collected are being turned into figures and systematically analyzed.

## **2) Nam Ngum Watershed Management and Conservation Project (NAWACOP)**

NAWACOP is a project which began based on the above survey, mainly looking at the Xieng Khouang area within the Nam Ngum Dam watershed. The Nature Protection and Watershed Management Office and the GTZ are working together on this, starting by analyzing living conditions using the participatory rural appraisal (PRA) method, pinpointing problems and considering solutions.

Watershed management projects are also beginning to emerge in Oudomxay and Vientiane in the context of the introduction of irrigation systems set up on a watershed basis. These take a participatory approach and focus on the provision of labor by irrigation beneficiaries within the watershed and the formation of management organizations.

## **(4) Environmentally sustainable land utilization**

Land utilization is an important issue in ensuring protection of the environment. The problem with land ownership and land utilization in the Lao PDR is that, politically, the country is a socialist state, while on the other hand, mechanisms related to the traditional and customary use of land remain even today, with the intertwining of these creating an extremely opaque situation. However, systemization is underway, if slowly, with the formulation of the Land Law and the introduction of land allocation systems.

### **1) The Land Law**

The Land Law went into effect in April 1997, with main stipulations as follows. (Because a definitive English version of the Land Law has not yet been released, the following has been translated based on the original the Lao version with the cooperation of Ms. Komoto, a JICA expert stationed in Vientiane.)

- All land is national property and shall be managed by the state (Article 2).
- Land utilization shall be divided into eight categories: agriculture, forests, construction, industry, communications, culture, national defence and peace-keeping and water areas (Article 11)
- Determination of Scope of Agricultural Land Use Rights (Article 17)
  - Individuals and families may use farmland over the long term according to the utilization category, purpose of use and area.
  - Where there is enough labor and conditions permit, one unit of labor (one person) may hold utilization rights on farmland of various types.
  - Land of an area greater than stipulated shall be leased from the government.
- Determination of Scope of Forest Land Use Rights (Article 21)
  - Individuals and families may use areas of stripped land and sparse forestland over the long term to the extent that the area does not exceed three hectares per labor unit.



- Individuals' forest utilization rights must first be agreed by the district and the village. A Land Utilization Committee shall then issue a land title valid for three years, and after three years, if the land has been used appropriately and there is no dissent, the land title holder shall have the right to apply for a long-term land registration certificate.
- Land titles
  - Land titles shall be issued by the district to those proving their right to temporary land use in regard to farm and forest land.
  - Transfer, investment, mortgage and leasing are not possible.
- Issuance of Land Title (Article 49)
  - There shall be only one land registration certificate from the land register, with a copy given to the holder of the land use rights in question.
  - Rights established through land registration shall be recognized on a long-term basis.

The Land Law makes some stipulations on land use, including farm and forest land, but the principal objective behind this is not necessarily forest use and categorization. In many areas, in fact, forest matters are left to the National Forestry Law and the various regulations which are currently being developed for attachment to this. In formulating this first Land Law, however, the government has effectively guaranteed permanent land use rights which can be bequeathed, bought and sold, and which are barely distinguishable from land ownership.

However, in terms of slash-and-burn agriculture, neither the Land Law nor the National Forestry Law make any stipulations on the form of land use in line with land use rights. This means that slash-and-burn land is regarded as only a temporary form of forest usage, with the land therefore unable to be bought, sold or bequeathed. It is obviously unlikely that the government will immediately implement draconian regulations on slash-and-burn agriculture, but there will be increasing pressure to convert from this form of production.

## **2) Land-forest allocation**

Moves in regard to forest and land allocation occurred at an early stage in the process of National Forestry Law formulation. This was not an urban but rather a rural and mountain village issue. Luang Prabang Province in the north was the first area where the government gave limited approval to the allocation of forests and land, but land-forest allocation is now taking place nationwide on the basis of Decree No. 0822/MAF (promulgated August 1996).

The main objectives of this are as follows.

- Conservation of existing forests and forest expansion
- Progressive implementation of regulations on forest resource utilization
- Clarification of village land-users and long-term land management in line with this
- Increasing self-reliance in a multi-ethnic society and expanding investment in production activities

- Land management and the creation of a land tax system
- Stabilization and progressive reduction of slash-and-burn agriculture (by the year 2000).

Allocation involves eight steps: preparation; consultation with villages; data gathering; discussion within villages; surveying; decision-making; dissemination; and monitoring and assessment. However, there have been virtually no cases where allocation has gone beyond the seventh step (dissemination).

## **(5) Environment management in urban areas**

Urban development in Vientiane has been proceeding at a fierce pace in recent years. The number of cars in particular is skyrocketing, with traffic jams beginning to occur in the mornings and evenings.

As there is no reference made to urban environmental problems in Vientiane and other cities in the Environmental Action Plan mentioned earlier, the quantitative situation is unclear, but the following can be pinpointed as environmental issues which are becoming increasingly marked:

### **(i) Automobiles**

While some progress has been made in establishing traffic signals, etc., there is no comprehensive traffic control system which can handle the recent boom in automobile numbers, resulting in traffic jams in the morning and evening and frequent traffic accidents. There is also concern over air pollution caused by cars.

### **(ii) Water quality management**

STENO undertakes water quality surveys to a certain extent, but there is no clear numerical picture of the situation. With the lack of proper sewage disposal and the inland water drainage, etc., however, urban rivers and waterways are already considerably polluted.

### **(iii) Waste disposal and resource recycling**

Waste disposal is currently one of the most important issues facing Vientiane and other major cities. There is some urban garbage collection system, but no distinction is made between general waste and commercial and industrial waste discarded by stores, etc., and medical garbage is frequently mixed in. Moreover, the final stage in waste disposal is currently no more than piling it in an open dump. In FY1995, JICA implemented basic planning toward the improvement of waste disposal.

## **(6) Environment approaches in school education**

Schools currently have no textbooks on environmental education. However, with UNICEF support, education is being provided in some areas on environmental health and sanitation, with a primary school environmental education textbook called "The World Around Us" currently being prepared.

The Lao PDR does understand the importance of environmental education in schools and the need for public awareness amongst ordinary citizens, but there are almost no materials for this purpose written in the Lao language.

#### **(7) Environmental impact assessments for large-scale development**

The development and sale of electricity through large-scale dam construction are extremely important as sources of foreign exchange for the Lao PDR with its few exportable raw materials or products. There are currently around 60 concepts and plans for dam construction in the Lao PDR, with around 20 already being implemented.

Large-scale dam development has various environmental impacts in terms of both natural and social aspects. The government is also aware of this issue, highlighting the following points in the Environment Action Plan mentioned earlier:

- \* Direct impact on population issues
- \* Direct impact on natural resources
- \* Direct impact on economy and culture
- \* Direct impact on dam reservoirs
- \* Indirect impacts

#### **(8) Measures to combat air and water pollution in the manufacturing industry**

The Lao PDR currently has few factories or plants with severe environmental impacts. At the same time, because regulations on, for example, waste water and exhaust gas emissions have yet to be enacted, the country has no means of regulating the environmental burden imposed by factories.

STENO has already set up a working group to formulate regulations on waste water content levels, but these have yet to be approved by the government. No regulations have been formed on exhaust gas emissions.

#### **(9) Development of environment-related legislation**

While there is yet no basic environment law, the backbone of environment administration, an Environment Law task force led by STENO has submitted draft legislation to the government.

At this point, the content of the Environment Law is still not clear, but it is scheduled to be approved by the National Assembly and promulgated in FY1998.

### **2-10-2 Issues**

#### **(1) Forest protection**

Forest protection is one of the most critical environmental tasks facing the Lao PDR, and will be an indispensable element in the Lao's further economic development. If it is difficult for the Lao PDR at present to create products based on advanced science and technology or to build a sophisticated, high-level service industry, protecting and regenerating its forests and

developing industries using forest resources (electricity and agriculture, eco-tourism, etc.) is one way in which the Lao PDR could clearly differentiate itself from its neighbors.

Formulation of the National Forestry Law has led to the gradual development of systemic frameworks for forest protection, but the Lao PDR has yet to resolve major issues in terms of systems, organization and technology. The following points are particularly important.

- \* Systemization of procedures for systems and regulations toward concretization of the National Forestry Law
- \* Strengthening the organization of human resources development in Agriculture and Forestry Offices at provincial (PAFO) and district (DAFO) level as the bodies engaged first-hand in forest protection
- \* Increasing awareness among local residents and creating mechanisms and opportunities for their involvement in forest protection
- \* Research on forest management which will allow simultaneous protection and sustainable use of forest resources.

## **(2) Stabilization and progressive reduction of slash-and-burn agriculture toward natural forest regeneration**

While the government has been putting considerable effort into the slash-and-burn agriculture issue in recent years, the various elements involved in resolving this issue necessitate a more comprehensive approach. The following points are particularly important.

- \* Re-evaluation and review of traditional slash-and-burn technology
- \* Improvement of slash-and-burn farming technology (burn-outs, planting, weeding, management, etc.)
- \* Field surveys on slash-and-burn farming
- \* Implementation of comprehensive slash-and-burn stabilization measures
- \* Development of technology and accumulation of information relating to the restoration of wide-ranging wasteland
- \* Combination of agriculture, fruit-growing, animal husbandry and joint forest management
- \* Coordination with forest regeneration and afforestation activities.

## **(3) Watershed management and water catchment**

Because of the broad range covered by watershed management, systems need to be created in line with specific targets. Where the introduction of small-scale irrigation systems is planned, the central issue would be organizing local residents to maintain and manage irrigation facilities, while in watersheds where erosion is a concern, the main focus would be planting vegetation and creating land use plans which take land slope into consideration. The following issues are particularly important.

- \* Collection of natural and social data on watersheds, creation and utilization of databases

- \* Establishment of coordination mechanisms on watershed land utilization (coordination between applications, upstream and downstream, ethnic groups, etc.)
- \* Increasing awareness in order to involve local residents in watershed management, adoption of planning processes with a participatory approach
- \* Establishment of forest protection and water catchment forests for each watershed.

#### **(4) Environmentally sustainable land utilization**

Promotion of planned land utilization is particularly important not only from an environmental protection perspective but also the perspective of promoting agriculture and the forestry industry. The establishment of the Land Law has launched work on systemic frameworks, but the current land-forest allocation system emphasizes forest allocation in mountain village areas, while urban land utilization is not covered at all. Moreover, because too much manpower is needed for implementation, in most cases land utilization ends up being accepted as it stands, making it very difficult to employ the same implementation methods nationwide. Rather than a standard nationwide land allocation system, more flexible means which focus on the main issues in specific regions should be considered. However, in terms of medium- to long-term policy, land utilization rights will still have to be clarified.

The following issues are of particular importance:

- \* Re-evaluation of customary rules on land use and the village-level development of land use rules
- \* Creation of guidelines on best practices for land utilization from an environmental perspective
- \* Comprehensive coordination of agricultural land use and forest areas
- \* PAFO and DAFO staff training in land-forest allocation
- \* Improvement of surveying technology
- \* Creation of a database on allocated forest land
- \* Creation of land utilization plans with small watersheds as the unit.

#### **(5) Improvement of village living environments**

Given the harsh living conditions in villages, village development is important in terms of raising the level of the country as a whole. At the same time, because of the country's limited budget and human resources, it will be vital to form and implement highly effective policy programs. The following issues will be particularly important:

- \* Personnel involved in disseminating living standard improvements and community organizers working to raise local residents' awareness
- \* Development of statistical data on the current state of living environments
- \* Support for the creation of a comprehensive village development program which includes technological improvement, promotion of industry, social development, education, hygiene and public awareness

- \* Effective support for the promotion of current rural development projects.

#### **(6) Urban environmental management (including traffic control)**

Issues such as car traffic; waste management, sewerage treatment and inland water discharge, etc.; and air and water pollution are becoming marked, but virtually no measures have yet been taken to combat them.

The following issues will be particularly important:

- \* Implementation of systematic field surveys on the quality of the environment
- \* Development of institutional aspects such as regulations and standards
- \* Development of human resources involved in environment management
- \* Development of equipment and technology transfer for environment monitoring
- \* Creation of environment management organizations (central and provincial levels).

#### **(7) Environmental education/learning in schools and advocating education**

Environment education and environment learning are important in both school and adult education. However, there is currently an extreme shortage of instructors, teaching materials and information. The following points are particularly important.

- \* Systematic development of teaching materials and resources on environment issues (translation into the Lao language)
- \* Development of textbooks on Lao natural, social, historical and cultural environment
- \* Guidance and training for teachers in regard to environment education
- \* Establishment of environment education-related subjects in the university teacher-training process
- \* Support for the development of teaching materials by related organizations.

#### **(8) Environmental impact assessments on large-scale development**

The Lao PDR is likely to experience various types of development over the coming years, and particularly in the case of large-scale dam construction and the establishment of factories, it will be vital to undertake appropriate environmental impact assessments and build the necessary measures into development plans from the outset. Currently, however, the Lao PDR has to depend on developers and donors. The following points will be particularly important.

- \* Government creation of systems for environmental impact assessment
- \* Surveys and research on technical guidelines for environmental impact assessment
- \* Development of systems to include environmental considerations in the various development plans
- \* Human resources development in regard to environmental impact assessment
- \* Development of monitoring systems

**(9) Measures against manufacturing industry air and water pollution**

As roads and other means of transport are developed, industries wanting to use the Lao's mineral resources are likely to move into the country and set up local bases. At this point in time it is not even possible to measure exhaust gas emissions, and a regime has to be established which, starting from technological aspects, can analyze and interpret the quality of the environment. The following tasks will be particularly important:

- \* Development of systems for environment-related measures
- \* Research toward the creation of environment-related standards
- \* Monitoring-related equipment development, technology transfer and human resources development
- \* Development of monitoring systems.

**(10) Development of environment-related legislation**

It seems that an Environment Law will finally be promulgated, but practical efforts on environmental management have barely begun. Together with development of technological systems, it will also be vital to develop the appropriate legislation. The following issues will be particularly important:

- \* Execution of the Environment Law
- \* Formulation of systemic environment-related regulations and standards
- \* Creation of organizations and human resources development at provincial and district level.

### **3. The Asian Network and the Lao PDR Development**

#### **3-1 Benefits from network participation**

##### **3-1-1 Capital inflow effect**

As with other developing countries, the Lao PDR faces the double problem of a savings-investment gap and a foreign exchange gap. Having struggled with chronic trade and current account deficits since the country was founded, the Lao PDR has found the inflow of foreign capital useful in offsetting these gaps. Not only can this capital be put to use in developing hardware and software aspects of infrastructure such as roads, bridges, airports, railroads, power stations, waterworks, education and law, it can also be operated as corporate and state long-term investment capital. Able to support various aspects of corporate economic activities and also to directly back government economic investment activities, foreign capital stands to play an important role in industrialization. Below we have divided the inflow of foreign capital into aid from governments and international institutions and capital inflow from the private sector in order to examine the capital inflow effect that accession to ASEAN will have on the Lao PDR.

##### **(1) Foreign aid inflow effect**

It is not difficult to imagine that Western countries find it easier to provide aid to the Lao PDR as a member of ASEAN than as a country supported by the Eastern bloc. In fact, aid from the Eastern bloc, particularly from the former Soviet Union, virtually dried up in 1990, leading to a rapid increase instead in the amount of aid from Western countries. Accession to ASEAN has strengthened the Lao's links with the West and ensured continued economic support from these countries, but at the same time, Western countries are also showing signs of aid fatigue, removing the possibility of any further swift aid expansion. What is important for the Lao PDR is not simply an increase in the amount of aid but rather the quality of aid projects--in other words, improving its ability to absorb aid, something which has been a problem in the past, and fostering the ability to effectively plan and implement projects. Even grant aid creates recurrent costs, straining government finances. In the case of loan assistance (both bilateral and multilateral), the government must bear in mind the need for future repayment, taking care to avoid an accumulated debt problem.

Multilateral aid involves both the relationship between international institutions and the Lao PDR as a single country and the relationship between such institutions and the Lao PDR as a member of the Mekong sub-region. In terms of the latter relationship, particular attention should be paid to the cross-border, broad-reaching aid from international institutions directed at Indochina and the greater Mekong sub-region. This economic cooperation aid is likely to expand still further in that it will benefit not only the Indochina countries but also Thailand, Malaysia, Singapore and Myanmar.

The Mekong River begins in China's Yunnan Province, with Myanmar, Thailand, the Lao PDR, Cambodia and Viet Nam lying along its banks. Given its chronic budget deficit, there are limits to how far the Lao PDR will be able to develop its own infrastructure. Moreover, even where international institutions provide multilateral aid, the disbursement scale for any single country is unlikely to be large. International institutions will be much more pro-active, on the



other hand, about support for the development of infrastructure (roads, bridges and telecommunications) which makes use of the international nature of the Mekong and contributes to the development of the entire greater Mekong sphere. If the three Indochina countries join ASEAN, forming a single large market centering around the Mekong, they will be able to ride the momentum of development of the greater Mekong region--the greater Mekong region effect. What is important here is that even where international roads and bridges linking Thailand and Viet Nam are built, the Lao PDR must avoid becoming no more than a corridor. We propose that Thailand, Viet Nam and the Lao PDR jointly finance the establishment of international transport, insurance and warehouse companies. As this would be difficult for the Lao PDR to achieve alone, the Lao PDR should move ahead in cooperation with its neighbors. While achieving peace across the entire region is a necessary condition for implementing such international projects, the very act of implementation should contribute to greater regional peace and stability, as well as mutual development.

## **(2) Foreign private capital inflow effect**

While there will be no sudden spurt, the inflow of public funds seems to be a given; the inflow of private sector capital, however, is unlikely to increase as much as hoped. Private capital flows in through private commercial loans and direct investment. The former is the counterpart of the debt issue, but because the latter is in the form of private sector-led projects, it does not create an accumulated debt problem. Technology transfer is also expected. Because the Lao PDR is marked as having high country risk, lenders tend to hold back, and loan interest rates are naturally high, a situation which inevitably limits the size of private commercial loans when the government procures foreign capital. The Lao's accession to ASEAN is unlikely to lead to any sudden expansion of such loans. With exports providing only a limited amount of foreign exchange, the Lao PDR should be careful about borrowing, because private commercial loans will inevitably lead to debt accumulation.

Turning to direct investment, accession to ASEAN is unlikely to bring any sudden change in the Lao PDR, and building an attractive investment environment will take some time yet. Unlike aid donors, companies move into a country purely on a business base, which naturally means that the company must also shoulder the risk of failure. Therefore, the flow of private sector capital into the Lao PDR will not suddenly increase with its accession to ASEAN. Moreover, because formation of the ASEAN Free Trade Area (AFTA) will dissolve the borders of the ASEAN countries to the point of borderlessness, instead of moving directly into the Lao PDR, companies are likely to settle for exporting from other ASEAN countries rather than the direct investment to the Lao PDR. As is discussed in detail in "3-2 Constraints arising from competition within the network," companies generally see no need to go to the trouble of moving into a country with domestic demand as limited as that of the Lao PDR. However, as seen in the cases of other ASEAN countries, as infrastructure is essential for economic development, it will gradually develop through aid from Japan and other countries. While the road might be steep, Lao investment environment will definitely improve over the long term. The older ASEAN members, on the other hand, are faced with the major problem of how to keep down production costs as wages continue to rise. At the same time, they also have to promote the shift to products with higher added value. Given this environment, being at an earlier stage of development could work to the Lao's advantage in terms of receiving investment. In other words, while the Lao PDR may be at the tail of the flying geese pattern of economic development, this could result in manufacturing bases for some products which no longer pay in the older ASEAN

countries being shifted to the Lao PDR. One more example of how late development could be in the Lao's favor in terms of investment is the general system of preferences (GSP) which developed countries extend to the LLDCs. Because the EU has set import tariffs on Lao garment products at zero, Thai companies have suddenly increased their investment in the Lao garment industry. Because such development disadvantage conversely draws foreign investment, the Lao PDR has a very good chance of attracting foreign investment and increasing its exports by negotiating with developed countries for an increase in the number of GSP products.

Accession to ASEAN by socialist the Lao PDR will have a positive psychological effect on foreign investors. Investors' greatest dislike is nationalization of assets. Even though the Investment Promotion Law guarantees that foreign companies' assets will not be nationalized<sup>(89)</sup>, foreign companies still feel uneasy about investing in a socialist country. Joining ASEAN will significantly alleviate this psychological unease, and if the government works on concrete improvement of the investment environment in line with this, the inflow of foreign capital should increase.

### 3-1-2 Improvement of government administration capacity through policy consultation

The Lao PDR government is currently weak in terms of administrative and industrial policy planning capacity. Through its accession to ASEAN, the Lao's interaction with the ASEAN countries will inevitably increase, which should allow the Lao PDR to develop cooperative ties in these areas and to receive technology transfers. ASEAN has the potential to metamorphose into a more powerful grouping by using intraregional policy consultation, known as AFTA-Plus, whereby member countries can draft and implement joint policies beyond differences in their policies and laws in the various areas. In fact, tariff cuts, the removal of non-tariff barriers and the abolition of quantitative regulations alone will not be enough to ensure effective AFTA formation, which will need coordination on the above software aspects as well. By participating in this kind of consultation, the Lao PDR will not only be able to learn about the policy drafting and formulation process from the developed countries of ASEAN, but also have the chance to build cooperative relations. Specific areas of policy consultation and, potentially, technology transfer, could include trade-related investment measures (TRIMs), trade-related aspects of intellectual property rights (TRIPs), foreign capital regulations, product standards, safety, quarantine, monetary issues, transport and telecommunications, labor, non-bank services, R&D and environmental policies.

### 3-1-3 Network dialogue effect

A channel will be opened to the outside world through ASEAN's third-party dialogue mechanism. The ASEAN Regional Forum (ARF)<sup>(90)</sup> is one effect of using ASEAN's foreign dialogue function.

<sup>(89)</sup> Motoyoshi Suzuki (1995), Foreign Investment Management Committee, the Lao PDR Prime Minister's Office, *Kaisei: Raosu gaihoku toshi shorei kanriho* (Japanese translation), Japan-Laos Association.

<sup>(90)</sup> In response to the 1992 ASEAN Summit Declaration, the ASEAN Regional Forum was established in July 1993 with the objectives of promoting preventative diplomacy and building confidence in the Asia-Pacific region. ARF comprises the ASEAN member countries, the seven dialogue partners from the Post-Ministerial Conferences (Australia, Canada, the EU, New Zealand, the Republic of Korea, the United States and Japan), the three observers (Cambodia, Lao PDR and Papua New Guinea) and the two consulting countries (China, Russian Federation).

By joining ASEAN, the Lao PDR will enjoy opportunities within the ASEAN structure for dialogue not only with Europe and the United States, but also with the Pacific countries, China and the Russian Federation.

### 3-1-4 Japan-ASEAN link effect

The Japanese Government has continued to build friendly relations with the ASEAN countries. These relations have been strengthened through frank and wide-ranging exchanges of views covering world economic issues, Japan-ASEAN economic and political relations and culture, using such vehicles as (i) the Japan-ASEAN Summit; (ii) talks between the Japanese and ASEAN foreign ministers; (iii) talks between the Japanese and ASEAN economic ministers; (iv) talks between the Japanese and ASEAN ministers for science and technology; and (v) the Japan-ASEAN Forum<sup>(91)</sup>. As is shown in Table I-41, Japan has implemented various ASEAN-directed cooperation projects, ranging from industrial projects to projects for science and technology promotion and human resources development. By joining ASEAN, the Lao PDR will be able to receive Japanese cooperation as an ASEAN member. (See Appendix 1.)

**Table I-41 Japan-ASEAN Relations**

<p><b>[1] Meetings</b></p> <ul style="list-style-type: none"> <li>(a) Japan-ASEAN Summits</li> <li>(b) Japan-ASEAN Foreign Ministers' consultations</li> <li>(c) Japan-ASEAN Economic Ministers' consultations</li> <li>(d) Japan-ASEAN Science and Technology Ministers' consultations</li> </ul>		
<p><b>[2] Main Japan-ASEAN Cooperation Projects</b></p> <table border="1"> <tr> <td> <p><b>(A) Economic cooperation</b></p> <ul style="list-style-type: none"> <li>(a) ASEAN Industrial Project</li> <li>(b) ASEAN Promotion Center on Trade, Investment and Tourism (APC)</li> <li>(c) ASEAN Human Resource Development Project</li> <li>(d) Plant Renovation Project</li> <li>(e) Japan-ASEAN Science &amp; Technology Cooperation</li> <li>(f) Japan-ASEAN Friendship Programme for the 21st Century (JAFP)</li> <li>(g) Japan-ASEAN Cooperation Promotion Programme (JACPP)</li> <li>(h) ASEAN-Pacific Human Resource Development Cooperation</li> <li>(i) ASEAN-Japan Development Fund (AJDF)</li> <li>(j) Inter-ASEAN Technical Exchange Programme (IATEP)</li> </ul> </td> </tr> <tr> <td> <p><b>(B) Cultural Cooperation</b></p> <ul style="list-style-type: none"> <li>(a) ASEAN Cultural Fund (ACF)</li> <li>(b) Youth Invitation Programme</li> <li>(c) ASEAN Research Cooperation</li> <li>(d) Japan Foundation Asia Center</li> <li>(e) Japan Scholarship Fund for ASEAN Youth (JSFAY)</li> <li>(f) Japan-ASEAN Exchange Project (JAEP)</li> <li>(g) Cultural Grant Aid</li> </ul> </td> </tr> </table>	<p><b>(A) Economic cooperation</b></p> <ul style="list-style-type: none"> <li>(a) ASEAN Industrial Project</li> <li>(b) ASEAN Promotion Center on Trade, Investment and Tourism (APC)</li> <li>(c) ASEAN Human Resource Development Project</li> <li>(d) Plant Renovation Project</li> <li>(e) Japan-ASEAN Science &amp; Technology Cooperation</li> <li>(f) Japan-ASEAN Friendship Programme for the 21st Century (JAFP)</li> <li>(g) Japan-ASEAN Cooperation Promotion Programme (JACPP)</li> <li>(h) ASEAN-Pacific Human Resource Development Cooperation</li> <li>(i) ASEAN-Japan Development Fund (AJDF)</li> <li>(j) Inter-ASEAN Technical Exchange Programme (IATEP)</li> </ul>	<p><b>(B) Cultural Cooperation</b></p> <ul style="list-style-type: none"> <li>(a) ASEAN Cultural Fund (ACF)</li> <li>(b) Youth Invitation Programme</li> <li>(c) ASEAN Research Cooperation</li> <li>(d) Japan Foundation Asia Center</li> <li>(e) Japan Scholarship Fund for ASEAN Youth (JSFAY)</li> <li>(f) Japan-ASEAN Exchange Project (JAEP)</li> <li>(g) Cultural Grant Aid</li> </ul>
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<p><b>(B) Cultural Cooperation</b></p> <ul style="list-style-type: none"> <li>(a) ASEAN Cultural Fund (ACF)</li> <li>(b) Youth Invitation Programme</li> <li>(c) ASEAN Research Cooperation</li> <li>(d) Japan Foundation Asia Center</li> <li>(e) Japan Scholarship Fund for ASEAN Youth (JSFAY)</li> <li>(f) Japan-ASEAN Exchange Project (JAEP)</li> <li>(g) Cultural Grant Aid</li> </ul>		

Source: Based on Ministry of Foreign Affairs, Asian Affairs Bureau, Second Southeast Asia Division, Outline of the Association of Southeast Asian Nations (ASEAN), December 1996.

<sup>(91)</sup> Motoyoshi Suzuki, *Raosu: ASEAN kamei to shijokuzaiika no kodai -kiso-shakai no jidai-kubun*, research commissioned by the Institute for Economic and Industrial Studies and the Institute for Social Affairs in Asia, *Tonon ajia tairikubu ni okeru shinko-shijokuzaiiken no hatten no kanosei ni kan suru chosakenkyu*, March 1997, pp. 49-77.

### 3-1-5 Political stability effect

The Bangkok Declaration of 1967 declares that "the countries of South-East Asia share a primary responsibility for strengthening the economic and social stability of the region and ensuring their peaceful and progressive national development." Through Lao's accession to ASEAN, any domestic political instability or conflicts with neighboring countries can now be settled or ameliorated through active cooperation from the ASEAN countries. At the same time, if ASEAN membership stimulates the Lao's economic development, the strong desire of its citizens for democracy could eventually make it difficult for the Lao Revolutionary People's Party to maintain one-party rule.

## 3-2 Constraints arising from competition within the network

### 3-2-1 Countdown until integration into the global market

The Lao's schedule under the Common Effective Preferential Tariff (CEPT) scheme is shown in Figure I-9. In establishing AFTA, ASEAN's plan is to (i) lower tariffs under the CEPT scheme, (ii) abolish non-tariff barriers, and (iii) abolish quantitative restrictions. The ASEAN Secretariat has classified products into the following four categories, with each ASEAN member to implement plans in line with its respective domestic circumstances (Table I-42).

- (1) Inclusion list (list of CEPT products)
- (2) General exception list
- (3) Temporary exclusion list
- (4) Sensitive list (products with heavy impact)

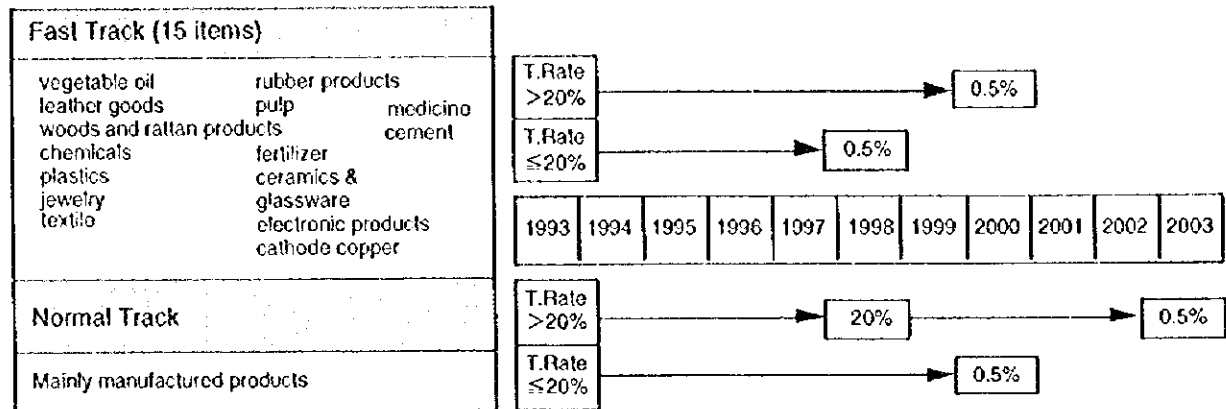
**Table I-42 General Tariff Reduction Schedule of CEPT Scheme**

Category	Items	Current average tariff rate (%)	Implementation period	Representative items
(1) CEPT items (inclusion list)	533	0-5.0	1998-	Marine products, steel, aluminum, turbines, spun thread, machinery
(2) General Exception List	102	2.9		Amphetamines, malt beer, wine, cigarettes, autos, etc.
(3) Temporary Exclusions List	2,820	79.4	2008-	Finished industrial products, processed agroproducts
(4) Sensitive List	96	2.7	2015-	Livestock, meat, freshwater fish, vegetables, fruit, rice, timber, etc.
Total	3,551	100.0		

Source: Author

**Figure I-9 General Tariff Reduction Schedule of CEPT Scheme**

● Inclusion List (CEPT products) 44,642 items as of January 1996



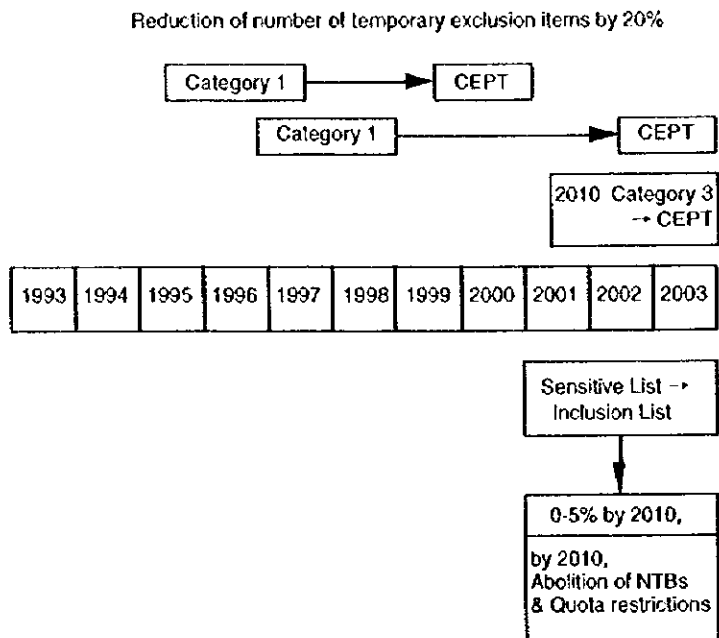
● General Exceptions List, Temporary Exclusion List, Sensitive List

● **General Exceptions** 666 items  
CEPT Agreement-Article 9  
Nothing in this Agreement shall prevent any Member State from taking action and adopting measures, which it considers necessary for the protection of human, animal or plant life and health, and the protection of articles of artistic, historic and archaeological value.

● **Temporary Exclusion List** 2,888 items  
[Category 1] Manufactured & processed agricultural products 2,496 items  
[Category 2] Unprocessed agricultural products 377 items  
[Category 3] Unprocessed agricultural products covered by State-Trading Enterprises 15 items

Exclusion list means  
(a) Agricultural raw materials/unprocessed products covered under Chapters 1-24 of the Harmonized System (HS), and agricultural raw materials/unprocessed products in other related HS Headings; and  
(b) Products which have undergone simple processing with minimal change in form from the original products.

● **Sensitive List**  
Unprocessed agricultural products 287 items



### **(1) CEPT items**

The Lao PDR has 533 items on its inclusion list, among them aluminum, turbines, pipes, spun thread, looms, bearings and various types of machinery, on which 0-5% tariffs have been imposed since January 1998. As most products on the CEPT inclusion list have traditionally been taxed at low rates, putting them on the CEPT list has effectively had virtually no impact.

### **(2) General exceptions**

Under Article 9 of the CEPT Agreement, whereby people, animals and plants, as well as artistic, historical and archeological values, need to be protected, or where certain products could threaten national security or damage public order and standards of decency, these can be permanently exempted from tariff reductions as general exceptions. The Lao PDR has 102 items of its general exception list, including amphetamines (imports prohibited), malt beer (40%), wine (30%), cigarettes (40%), autos (40%), trucks (30%), auto parts (10%), airplanes (10%), helicopters (10%) and weapons (30%). Designating autos as general exceptions is unique to the Lao PDR.

### **(3) Temporary exclusions**

When a country has not yet finished preparations for including an item in the CEPT inclusion list, this may be put on the temporary exclusion list for exemption for the time being from tariff reduction. The Lao PDR has designated 2,820 temporarily excluded items, including finished industrial products and processed agroproducts (tariffs range from 5 to 40%). The plan is to shift 564 of these (20% of temporarily excluded items) every year to the CEPT inclusion list between 2001 and 2005, reducing tariffs on all these products to between 0 and 5% by 2008. The result will not only be a certain loss of tariff income, but also major import expansion. This raises many causes for concern: for example, foreign reserve levels could fall, resulting in a foreign currency crisis; the Kip could fall against the dollar, inducing an exchange crisis; and domestic import substitution industries could be negatively affected, which would in turn detract from the further development of such industries. At the same time, the drop in import prices will greatly boost consumer utility.

### **(4) Sensitive items**

Sensitive items include agriculture and forest products livestock (10% tariff), meat (30%), freshwater fish (20%), vegetables (40%), fruit (30-40%), rice (5%) and timber (20%). Despite the strong need to protect domestic producers, even tariffs on these products will be reduced to 0-5% from 2015.

## **3-2-2 Impact of tariff reductions: less income, more imports**

The following is a consideration of the impact of tariff reductions.

Firstly, the Lao's tariff income in FY1995 was around 19.1% of total income. Tariffs also comprised 23.1% of tax income (Table I-43). The issue will be how far tariff income, which accounts for around 20% of total income, falls. Secondly, because all 533 items on the CEPT list implemented from January 1998 were already being taxed at no more than 5%, designating them as CEPT items has had virtually no direct impact. Thirdly, because the 2,820 items on the temporary exclusion list comprise a significant 79.4% of all items, when tariffs on these are

reduced to 0-5% as of 2008, tariff income will inevitably plunge while imports expand. This will reduce foreign reserves and push down the Kip against the dollar. As the Lao PDR depends on imports of a wide variety of products from daily items (toilet paper, soap, shampoo, etc.) to machinery and fuel, lower import prices will increase consumer utility, but also obstruct the growth of import substitution industries.

Fourthly, looking at the Lao's foreign trade, 70% of its imports are from ASEAN, which means that imports from non-ASEAN countries such as Japan are less than 30% (Table I-44). The Lao PDR can place its usual tariffs on imports from these non-ASEAN countries. However, because the drop in intraregional tariffs to 0-5% will effect a trade shift whereby some imports previously sourced from non-ASEAN countries are instead sourced from within the region, there is likely to be an overall loss in tariff income.

Fifthly, tariff reductions may well convert illegal trade (smuggling) to legal trade. the Lao PDR is a landlocked nation with five immediate neighbors, resulting in vigorous border trade. The Lao PDR customs authorities estimate that the amount of illegal trade is at least triple the level of legal trade, but there are no official statistics. Here we would like to look at the trade conversion effect, assuming that illegal and legal trade are at the same level. Illegal trade takes place where, for example, the parties involved wish to avoid high tariffs, where a product is prohibited under legal trading, and where import procedures are too complex and time-consuming. According to the authors' estimates, the Lao's average tariff rate is 12.1%<sup>(92)</sup>, and legal exports (F) and imports (B) are conducted on the basis of this average tariff rate (Figure I-10), as is the case in illegal trade. When AFTA reduces this rate to 0-5%, depending how far the gap shrinks between net benefits derived from smuggling and the net benefits of legal trade through customs (smuggling revenue minus legal trade costs), traders will start to move certain products through legal instead of illegal channels. Figure I-11 shows the expansion of legal trade (trade expansion effect A) and of illegal trade (trade conversion effect C) through tariff reductions. Tariff income will increase 0-5% for A and C.

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<sup>92)</sup> Motoyoshi Suzuki (1997) *Long-Term Gains in Joining ASEAN -Case of the Lao PDR-*, Faculty of Economics, Thammasat University, Thammasat Economic Journal, Vol.15, No.1, Bangkok Thailand, March.

**Table I-43 The Lao PDR Revenue and Tariff Income Share (billion Kip)**

	FY1994	FY1995	1995 Share of import duties	
Revenue	165.7	212.4	100.0%	
1.1. Tax	134.9	176.0		100.0%
(1) Profit tax	17.3	20.7		
(2) Income tax	10.7	13.5		
(3) Agricultural/Land tax	1.8	2.1		
(4) Business licenses	0.2	0.1		
(5) Turnover tax	27.6	33.9		
(6) Tax on foreign trade	38.7	46.7	22.0%	26.5%
6.1 Import duties	33.8	40.6	19.1%	23.1%
6.2 Export duties	4.9	6.0	2.8%	3.4%
(7) Excise taxes	5.5	15.5		
(8) Timber royalties	26.7	34.6		
(9) Other taxes	6.5	8.8		
1.2. Non-tax revenue	30.8	36.4		
(1) Depreciation/dividends SOES	3.0	5.2		
(2) Others	27.8	31.2		
Leasing	5.0	3.8		
Concession	0.4	0.4		
Overflight	7.9	9.8		
Interest/Amortization	10.6	10.8		
Other	3.9	6.7		

Source: Author based on Bank of the Lao PDR, Annual Report, 1996

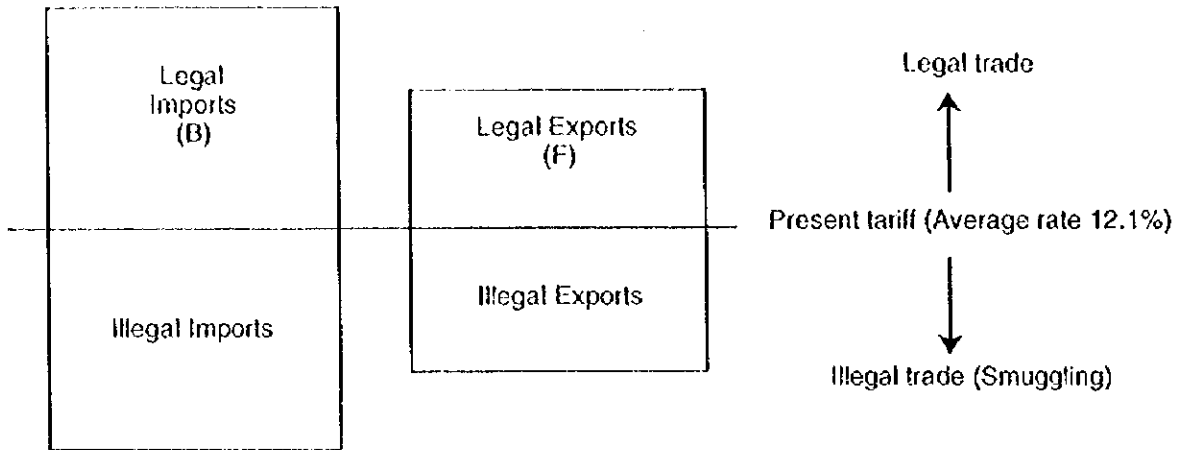
**Table I-44 The Lao PDR Foreign Trade**

	Lao export to						Lao import from					
	US\$ Mil.			share (%)			US\$ Mil.			share (%)		
	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995
ASEAN	95.0	161.0	188.0	51.6	36.8	54.0	221.0	376.0	464.0	62.8	58.7	70.3
Thailand	57.0	63.0	63.0	31.0	14.4	18.1	193.0	321.0	390.0	54.8	50.1	59.1
Singapore		3.0	10.0	0.0	0.7	2.9	11.0	31.0	45.0	3.1	4.8	6.8
Vietnam	38.0	94.0	115.0	20.7	21.5	33.0	16.0	23.0	28.0	4.5	3.6	4.2
Extra-ASEAN	89.0	276.0	160.0	48.4	63.2	46.0	131.0	265.0	196.0	37.2	41.3	29.7
Japan	11.0	28.0	27.0	6.0	6.4	7.8	41.0	37.0	32.0	11.6	5.8	4.8
France	17.0	18.0	26.0	9.2	4.1	7.5	4.0	21.0	26.0	1.1	3.3	3.9
Germany	12.0	19.0	17.0	6.5	4.3	4.9	4.0	8.0	5.0	1.1	1.2	0.8
United States	8.0	9.0	10.0	4.3	2.1	2.9	5.0	6.0	2.0	1.4	0.9	0.3
Australia				0.0	0.0	0.0	12.0	31.0	23.0	3.4	4.8	3.5
China	3.0	4.0	6.0	1.6	0.9	1.7	41.0	40.0	53.0	11.6	6.2	8.0
Russia	3.0			1.6	0.0	0.0	2.0	1.0		0.6	0.2	0.0
World	184.0	437.0	348.0	100.0	100.0	100.0	352.0	641.0	660.0	100.0	100.0	100.0

Source: Author based on the IMF Direction of Trade Statistics Yearbook, 1996

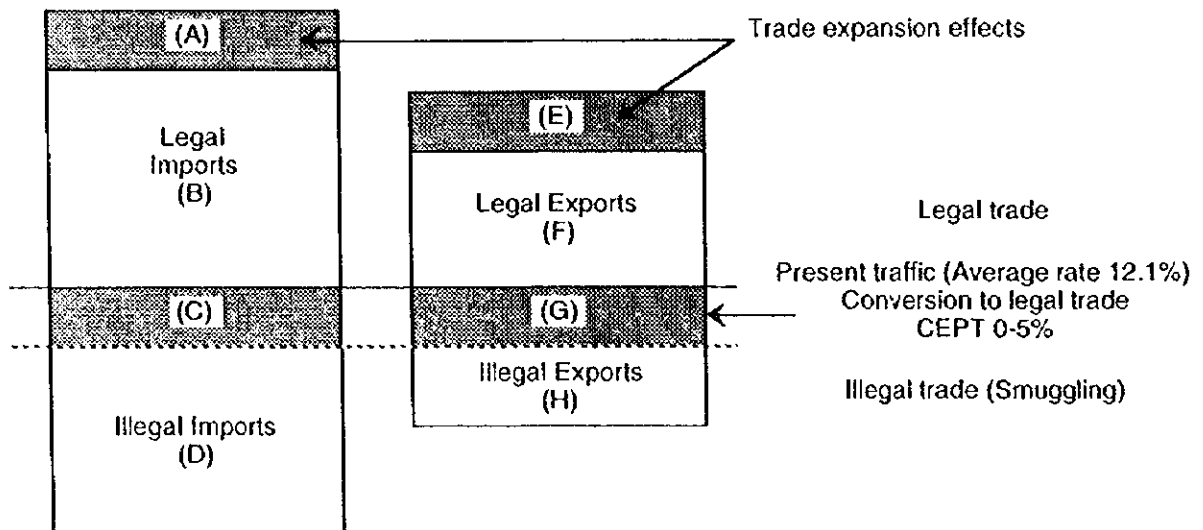


**Figure I-10 Conceptual Comparison of Legal and Illegal Trade**



Source: Author

**Figure I-11 Conversion from Illegal to Legal Trade**



Source: Author

### 3-2-3 Offset effect of increased turnover and excise taxes on tariff revenue

The government is seeking to compensate for the loss of tariff income through tariff reductions by introducing and expanding turnover and excise taxes <sup>(93)</sup>. However, although using turnover taxes and excise taxes to offset the tariff revenue lost through tariff rate reductions may be legitimate as an effort to stop revenue loss, it will not provide any real solution. The aim of establishing AFTA is to lower tariffs to stimulate the market, but where domestic taxes are simply introduced in place of tariff reductions, commodity prices will rise, undoing the market stimulation effect. This would bring into question the original purpose of AFTA and tariff reductions. Secondly, from a longer-term point of view, the loss of tariff income will have to be covered by developing and strengthening the country's industrial foundations and through revenue from profit tax and income tax, etc., arising from new employment. (See Appendix 2,3 at the end of the report)

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<sup>(93)</sup> In June 1989, a government ordinance on the tax system (No. 47) was promulgated, followed by establishment of Taxation Bureau in 1990. At the 7th National Assembly on 14 October 1995, a Tax Law was adopted which contained stipulations on the turnover and profit taxes.

## Appendix: Mekong River Basin Development Forum

There are five fora for developing the Mekong river basin: the ADB Mekong Subregional; the Forum for Comprehensive Development of Indochina; the Working Group on Industrial Cooperation in Cambodia, The Lao PDR and Myanmar (CLM-WG); the Committee for Coordination of Investigation of the Lower Mekong Basin; and ASEAN-Mekong Basin Development Cooperation (AMDC)<sup>(94)</sup>.

The ADB Mekong Subregional is sponsored by the Asian Development Bank (ADB) and chaired by Thailand. Its membership comprises China (Yunnan Province), Cambodia, Viet Nam, Japan, Australia, the UNDP and ESCAP, and both ministerial meetings and senior officials' meetings are held. The first meetings took place in October 1992, launching studies and surveys on regional development projects in the six countries in the Mekong river basin. More specifically, this forum is considering regional development projects in six areas: transport, energy, environment, trade, tourism and telecommunications.

The Forum for Comprehensive Development of Indochina was launched in January 1993 in response to a proposal by then-Prime Minister Kiichi Miyazawa during an ASEAN trip. It embraces 25 countries (the nine ASEAN countries, China, France, Germany, the United Kingdom, Russia and the United States (as an observer), etc.), as well as eight international institutions, among them the ADB, the World Bank and the European Commission. The first meeting was held in January 1995 in Bangkok, Thailand, but no meetings have been held since.

The Working Group on Industrial Cooperation in Cambodia, the Lao PDR and Myanmar (CLM Working Group) was established in September 1994 by the ASEAN Economic Ministers' Meeting and Japan's Ministry of International Trade and Industry. Member countries are the nine ASEAN countries, Cambodia and Japan, while it is attended by ministers, vice-ministers, director-generals and private sector representatives. The objective is not simply the economic development of Cambodia, the Lao PDR and Myanmar, but also stronger economic ties between these countries and ASEAN, seeking to promote the maintenance and expansion of economic development across Southeast Asia as a whole. Specific areas covered are: (i) to promote the introduction of a market economy through development of laws and accounting systems, as well as support for the privatization of state enterprises; (ii) the development of certain cities as special market economy zones (selection of model cities); (iii) infrastructure development (promotion of BOT and BOO projects); (iv) support in formulating trade policies; (v) stronger linkages among sector-specific markets (developing industry-specific market linkages to promote industrial development and the expansion of investment opportunities in the Asian region, this embracing the ASEAN countries, the Indochina countries and Myanmar); (vi) mineral resource development cooperation (satellite surveys of mineral deposits); and (vii) human resources development (support for the establishment of Cambodia's Human Resource Development Center and third-country training in Singapore and Thailand). The CLM Working Group and the ADB Mekong Subregional are the most comprehensive and active of the various Mekong river basin development fora.

The Committee for Coordination of Investigation of the Lower Mekong Basin was set up by the UNDP and includes Thailand, Viet Nam, the Lao PDR and Cambodia as members, while Japan, Australia, the Netherlands and 13 other countries are involved as cooperating parties.

<sup>(94)</sup> Noboru Hatakeyama, *Dai-rokkai bietonamu-myanmar kenkyukai shiryō*, Foundation for Advanced Information and Research, October 1996

The Committee's predecessor was launched in 1957, but remained inactive from the 1970s until the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin was signed and inaugurated in April 1995. This is an international development organization for cooperation in the sustainable development, utilization and management of water and related resources in the Mekong river basin. However, one problem is the fact that China is not a member, despite being one of the river basin countries.

The AMDC, coordinated by Malaysia, is a ministerial meeting comprising the nine ASEAN countries and China (Yunnan Province). It was advocated by Malaysia at the ASEAN Summit in December 1995 and launched accordingly. The first meeting was held in June 1996 in Kuala Lumpur.