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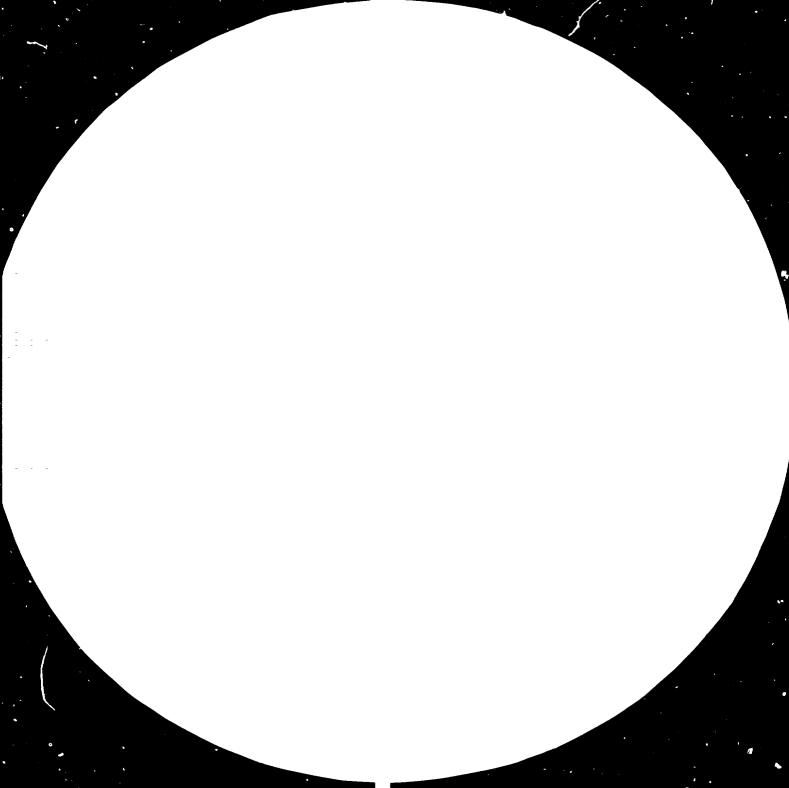
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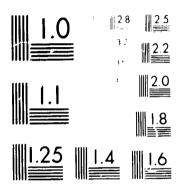
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COUNTRY INDUSTRIAL DEVELOPMENT PROFILE

OF

THE LAD PEOPLE'S DEMOCRATIC REPUBLIC#/

Prepared by the

International Centre for Industrial Studies

900071

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PREFACE

The International Centre for Industrial Studies, Regional and Country

Studies Section, has undertaken the preparation of a series of Country

Industrial Development Profiles. These profiles are desk studies, providing statistical and economic analyses of the industry sector, its growth, present status and future prospects. It is hoped that the profiles will provide analyses of use to programming technical assistance, industrial redeployment and investment co-operation activities.

This profile on the Lao People's Democratic Republic has been prepared by J. Cruyl, Associate Expert, ESCAP/UNIDO Division of Industry, Housing and Technology, Bangkok. The profile is based on documents, reports and studies available at ESCAP and UNIDO Headquarters. No fie survey has been undertaken and some of the data on industry are not up to date.

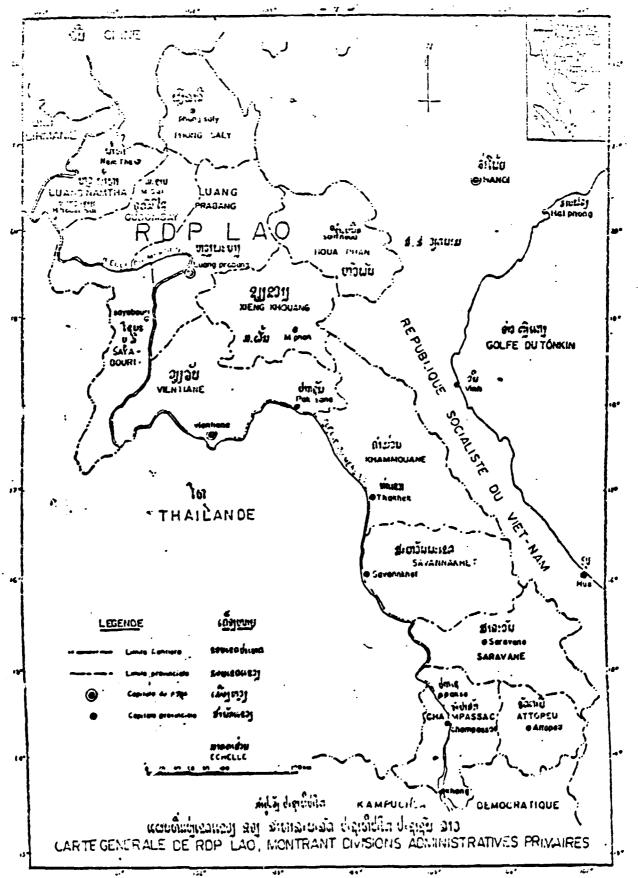
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SUMMARY AND CONCLUSIONS

The Lao People's Democratic Republic is a small landlocked country in the Indo-Chinese Peninsula and one of the poorest nations in the world.

Its population was estimated at some 3.4 million in 1977. The country is overwhelmingly rural, the main economic activity is agriculture (60 per cent of the GNP) and the major preoccupation is the cultivation of rice. Over 80 per cent of the work force is active in the agricultural sector against fewer than 10,000 persons in mining and manufacturing together.

The structural distortions and dislocation caused by the long conflict have seriously affected the short term development possibilities of the country, compounded by consecutive natural misfortunes which aggravated the already precarious position in which Laos was left in the mid 1970's. Top and overall priority is hence given to the production of rice to attain self-sufficiency.

The tiny modern manufacturing sector (3.6 per cent of the GNP) is confined to the processing of domestic raw materials (rice milling, saw milling) and the production of basic consumer goods (furniture, production of cigarettes, matches, soft drinks and small workshops).

The latter category of industries relies heavily on imported materials, is relatively capital intensive and has a very low value added component.

Due to shortages of raw materials, spare parts and trained staff at all levels, average capacity utilization was estimated at about 30 per cent and in some industries as low as 10-15 per cent.

Other important constraints in the short term are the limited institutional infrastructure for the industrial sector and initial adaptation problems to the socialist management system. Industrial production targets were set for 1978, but no recent figures were available to evaluate the measure of success. The only comparison possible is the trend of recovery against the industrial peak of 1973.

The country's development plan stresses the supportive role of the industrial sector and manufacturing industries to agricultural development and the primary sector as a whole. The long-term development prospects of the Laotian industrial sector are from this point of view bright, for the country has abundant agricultural, forestry and mineral resources backed up by its hydro-electric potential.

In the meantime, Laos has been the recipient of many aid programmes since the change in regime, necessitated in major part by consecutive natural misfortunes. Industrial development aid has also been forthcoming and directed towards the development of the country's own resoures (agriculture, forestry, hydro-electric potential). Much more foreign aid will be needed to prepare the industrial infrastructure and allow the country to exploit its development potentials.

The lack of basic planning capacity in the meanwhile seriously hampers the Lactian Government in programming the country's further development.

UNIDO assistance would enable the Lactian authorities to apply essential tools of development management and allow further planning of the country's immediate industrial needs and medium to long-term prospects on a sound base.

I. GENERAL ECONOMIC BACKGROUND

Geography

The Lao People's Democratic Republic is a small landlocked country in the Indo-Chinese Peninsula. It is bounded on the north by the People's Republic of China, on the northeast and east by Viet Nam, on the south by Democratic Kampuchea and on the west by Thailand and Burma.

The country covers an area of 236,800 square kilometres and extends more than 600 miles from northwest to southeast. Eight per cent of the land area is cultivated, 60 per cent is forested.

Dominating the landscape of Laos are its inhospitable jungle-covered mountains. The only lowlands in the country lie alongside the eastern bank of the Mekong.

Population - labour force

In 1977 the population was estimated at 3,427,470. The economically active work force totalled roughly 1,674,000 in m 1 1977. 1,261,000 are active in the agricultural sector. Mining and manufacturing together employ fewer than 10,000 persons (0.6 per cent of the work force).

Table !. Estimated Population—
(thousands of persons at mid-year)

1967	1968	1969	1970	1971	1972	1973	1974	1977 <u></u> 5/
			2,962					

Source: The Europa Yearbook 1979.

2/ Estimates are based on the results of an administrative count made in May 1958, adjusted upwards by 30 per cent.

b/ Estimate.

Table 2. Labour force
(thousands of persons at mid-year)

	1960				1970			1977-
	Males	Females	Total	Males	Females	Total		Total
Agriculture, etc.	544	540	1,084	618	560	1,178 <u>a</u> /		1,261
Industry	36	15	51	52	25	78)	1.42
Services	111	59	170	151	87	238)	413
TOTAL	691	613	1,305	821	674	1,495 <u>a</u> /		1,674

Source: ILO, Labour Force Estimates and Projections, 1950-2000.

a/ Source: FAO, Production Yearbook

GNP evolution

If economic planning is to be effective there is a high - priority need to improve information on the basic structure and needs of the economy, and the changes therein over time.

Impressive achievements have been made in setting up a new decentralized administrative and institutional structure in this young republic emerging from decades of conflict and facing an acute shortage of food, trained manpower, as well as difficult problems of consolidating the socialist revolution and preserving political independence.

At present however the lack of basic data is one of the main constraints to effective planning. The macro-economic figures given below are compiled from the Far Eastern Economic Revies, a study by the "International Development Center of Japan", and the 1979 World Bank Report. The authors warn that "given the high level of aggregation of the estimates and the large number of as yet unverifiable assumptions on which (the figures) had to be based, their usefulness is still limited".

Table 3. GNP evolution (market prices)

RAEY	GNP \$US million	GNP KIP million
1972 <mark>a</mark> /	(estimate) 220	-
1974-75 a /	(estimate) 115 ^d /	K 116,500 ^d /
1976 ^b /	(estimate) 237	KL 71,000
1977	(estimate) 290 <u>c/</u> 257 <u>a/</u>	KL 78,000°

- a/ Far Eastern Economic Review.
- b/ IDCJ-study for ADB.
- c/ World Bank Report.
- d/ Figures apply only to former regime Vientiane zone.

With the same cautious approach the per capita incomes can be given:

Table 4. GNP per capita evolution (market prices)

YEAR	GNP/Capita \$US	GNP/Capita KIP
1971 <u>a</u> /	(estimate) 73	-
1974-75 ^a /	(estimate) 47 ^d /	35,000 <u>d</u> /
1976 <mark>b</mark> /	(estimate) 77 (66) e /	23,133
1977 ^C /	(estimate) 90	24,600

- a/ Far Eastern Economic Review.
- b/ IDCJ-study for ADB.
- c/ World Bank Report.
- d/ Figures apply only to former regime Vientiane zone.
- e/ The IDCJ-study gives a "shadow exchange rate" of 350 new KIP per \$US 1. Freference was given to the average exchange rate the World Bank used of new KIP 300 = \$US 1.

For full comprehension of the figures in \$US value a summary of the exchange rate history of the Laotian currency against the \$US is given in Table 5 below.

Table 5. Exchange rate evolution KIP-\$US

Period	Exchange rate KIP (K)	KIP deliberation (KL)
Cotober 1972 -	AVG 4 7 040	ANG 4 77 40
October 1973	\$US 1 = K 840	\$US 1 = KL 42
September 1974	\$US 1 = K $1360^{a/}$	
March 1975 -	\$US 1 = 750	
June 1976	\$US 1 = K $1560-2000^{a}$	\$US 1 = KL 37.5
July 1976 -		
July 1976 5/ May 1978 5/		\$US 1 = KL 200
May 1978 -		
December 1979		\$US 1 = KL 400
December 1979 -	•	\$US : = NKL 4C/

a/ Black market rate.

b/ In June 1976, the KIP (K) was replaced by KIP de liberation (KL) at a conversion rate of K 20 = KL 1.

c/ On 11.12.79 the Laotian Government has introduced a "New KIP" (NKL) - equal to 100 KIP in the old currency (KL) (Bangkok Post 11.12.79).

If the GNP and GNP/Capita figures have any indicative value (absence of figures in constant values) one could conclude that the Laotian gross national product has increased by 2.5 per cent per annum since 1972 (or five per cent per annum if the World Bank GNP figure is taken). The per capita income would be increased then by an annual three per cent over the same period.

The composition of the gross national product as computed by the ADB and World Bank Teams is summarized below. More detailed figures for 1977 are given in Annex 1.

Table 6. Composition of GNP

	1976 Billion L	1	1977 Billion KL	1
Agriculture	43.1	60.7	47.1	59.9
Industry	11.8	16.6	11.3	14.4
Services	16.1	22.7	20.2	25.7
TOTAL	71.0	100.0	78.6	100.0

Source: IDCJ-study and 1979 World Bank Report.

The industry sector accounts for 14.4 per cent of GNP composed of 3.6 per cent for manufacturing; 9.3 per cent for construction; 1.3 per cent for utilities and 0.2 per cent for mining (Annex 1). The World Bank Report observes however that within manufacturing, about three-fourths of the value added is in activities which hardly qualify as manufacturing in the usual sense: rice milling, the rural production of charcoal and Lao-Lao (the local whiskey), handleraft and cottage industry.

Income distribution

Information on the income distribution is not available. What could be deduced through various assumptions is an idea of the average per capita national income (not considering private consumption) in Laos, comparing it with Northeast Thailand.

The World Bank mission concluded, after making appropriate changes due to (minor) structural differences in both regions' economies, that "the average per capita national income in Laos is lower than the poverty line. Thus the incidence of poverty in Laos is extremely high, even if the incomes are evenly distributed".

Character and structure of the economy

In the past Laos has had a "dual economy" in which the majority of the people have been engaged in agriculture at subsistence level, while urban activities have been dominated mainly by foreigners and a few local middle-men, as well as by some high-ranking government officials. The lack of a well-established transportation network left the urban centers heavily dependent on imports. Those who controlled urban commerce and industry tended to be

more concerned with short-term profits, neglecting to replace equipment and machinery and seldom training the local staff in technical and managerial skills.

The structural distortions and dislocations caused by the long conflict (artificial urbanization, abandonment of productive agricultural lands and unbalanced industrialization) still dominate the Lao economy.

Agricultural sector

Approximately four-fifths of the population derives its income from agriculture. The sector accounts for 60 per cent of the national product and for a comparable percentage of export earnings. It also provides the basis for Laos' agro-industries such as rice mills as well as saw mills and wood processing factories.

Rice - Most cultivators produce glutinous rice on about ince-quarters of the cultivated land, of which nearly two-thirds consist of lowland paddy fields and the other third of up land soils under slash-and-burn techniques of cultivation. Less than 10 per cent of the paddy area is irrigated and double cropping is practiced on less than 2 per cent of the area planted. Paddy production is therefore dependent upon unreliable wet season rainfall.

A drought and a high incidence of pest disease severely affected the 1976 rice crop. 120,000 tons of rice were imported in the rice deficit provinces. Drought struck again in 1977. This resulted in a shortfall of about 113,000 tons of rice. In 1978 heavy rains hit the country causing floods in the mountainous zones and inundating large areas in the fertile Mekong valley. These latest floods had damaged an estimated 125,000 tons of rice.

These natural disasters aggravated the already precarious situation where low yields, together with the abandonment of part of the land during the war, had made Laos to become more and more dependent on food imports to feed its population.

To deal with the problem of food deficits as well as that of unemployment in the cities, the Laotian Government has mounted an extremely ambitious resettlement programme, thus combining underutilized land and labour. By the end of 1977 nearly 400,000 persons were resettled and another 150,000 were to follow in 1978/79.

The basic potential for agricultural development in Laos is generally good, once yields have been improved through increased supplies of inputs and rehabilitation or new construction of small irrigation and flood control works. In 1977 and 1978 the Government launched mass campaigns and activities to attain this.

Other crops (Appendix 3) - Other crops grown in Laos are feed crops (maize and soya) as well as industrial crops (coffee, tea, cotton, tobacco, pyrethrum, silk and fruit trees). Maize production is of the order of 30,000-40,000 tons a year. The Government realizes the urgency of increasing feed crop production, but inadequate price incentives has been an important constraint.

Many coffee and the few existing rubber plantations have been either damaged or abandoned during the war years. Most plantations have recently been rehabilitated. Yields are however low. In 1977, coffee production was about 3,100 tons of which roughly 1,500 tons were exported, earning \$US 3.7 million.

<u>Livestock</u> - Animal protein is the second most important need after rice. The country's livestock subsector has the potential for rapid expansion, but its development is seriously constrained by a shortage of breeding stock and animal feed (Appendix 4).

<u>Fishing</u> - The Lao farmer relies heavily on fish for protein. Fish pond farming is being encouraged: 1;450 ponds were dug in the first four months of 1977. In the first half of the same year the output of the Vientiane salt fish factory was 80,000 kg.

Forestry - Forests are one of Laos' main sources of wealth. Timber and wood-products are Laos' most promising foreign exchange earner in the short and medium term. Due to lack of equipment, transport facilities, the shortage of technicians and illegal felling, timber production has dropped considerably in the last two years. In 1976/77 only 50,000 cubic metres of timber was produced and exports earned \$US 1.4 million compared with a production of 160,000 cubic metres and exports worth about \$US 7 million in 1974. Total timber exports in 1978 amounted to 20,000 cubic metres, bringing \$US 6 million. Much of it, however, was old stock from the period when trade with Thailand was at a standstill. Revitalization of this industry is expected to be accorded high priority in the next five-year plan.

Industrial sector

Manufacturing - In the modern manufacturing sector in Laos, most activities are confined to the processing of domestic raw materials (rice-milling, saw milling) and the production of basic consumer goods (furniture, production of cigarettes, matches, soft drinks, and small workshops). This second category of industries, established during the war, relies heavily on

imported raw materials, is relatively capital-intensive and has a very low value aided component. Average capacity utilization in 1977 was estimated at about 30 per cent, and in some industries as low as 10-15 per cent, due primarily to shortages of raw materials, spare parts and trained staff at all levels as well as disruptions stemming from changes in ownership and management.

Mining - Laos processes a variety of minerals, the most important being tim, with tin reserves estimated at 65,000 tons. In addition, and of great consequence to the future of the country, there are sizeable high grade iron ore deposits, reasonably sized deposits of potash and lesser quantities of gold, lead, zinc and coal. Oil has been discovered in the Vientiane Valley and commercially viable quantities are thought to exist. Exploitation plans are, however, not in hand.

Service sector

Transport - Transport presents a major difficulty. Laos has around 10,000 km of roads and no railway. The state of the roads in 1976 was generally bad, and subsequently, considerable improvement and building work has been completed (Appendix 5). However, many roads other than the main routes are still not surfaced with tarmac, and even key stretches have to be upgraded to all weather standards. There is a good network of air fields and regular flights connect most cities. Supplementing road and air traffic, there are around 4,500 km of navigable waterways on the Mekong and its tributaries. Utilization should recently have increased given the better relations with Thailand.

Electricity - Laos has potentially abundant hydroelectric power. With the completion of the first stage of the Nam Gnum Dam Project in the early 1970's, Laos became a net exporter of electricity to Thailand (Appendix 6). In November 1978 the second stage of the dam was inaugurated and completed on schedule so that the annual production of electricity should be of the order of 600 mm kwh. This should raise the earnings from electricity to \$US 7.8 million from the current level of \$US 2 million.

Foreign trade and balance of payments

Laos has run a heavy trace deficit since 1970 (\$US 11 million merchandise exports against \$US 75 million imports in 1978) (Appendix 7). Financing the deficit has not been difficult so far with aid funds playing a major role. In 1975 Laos drew 3.25 million S.D.R's from the IMF. This was followed by a further drawing of 3.25 million S.D.R's in 1976, and another \$US 11 million in 1978.

The country is keen to exploit exports of timber, coffee and fruits. Processed timber and logs were sold to Singapore and Japan. Tin exports have, however, not returned to their former level. The government faced difficulties in exporting tin ores to Malaysia for smelting because of legal action by the former French owner of the mines after its nationalization in 1977 (Appendix 8).

Under the previous Government the two major components of imports were:

- (a) Industrial products, such as petroleum products, wachinery, metal products, and vehicles, accounting for more than half of the total imports; and
- (b) Rice, other food and beverages constituting around 25 to 30 per cent of the total.

Currently, more than half of total imports consist of daily essentials (rice, sugar, soap, milk, etc.), and the remainder comprises mainly industrial products (petroleum products, transport material and industrial equipment) (Appendix 9).

The new Government has initiated a major policy change over the direction of foreign trade in an attempt to broaden its relations with centrally planned economies. Laos signed trade agreements with China, Vietnam, the Soviet Union, Mongolia and other centrally planned economies.

II. STRUCTURE OF THE MANUFACTURING AND PROCESSING SECTOR

Branches of industries

Modern manufacturing sector

The modern industrial sector in Laos includes, inter alia:

- three small mechanical textile (weaving) mills (one in Sam Neva, two in Vientiane) using imported yarn;
- four semi-mechanical textile mills (one each in the provinces of Namtha, Outom Say, Phong Sally and Khamouane);
- some 80 saw mills in the former Vientiane zone and another 20-30 in the other zone;
- three modern furniture, parquet and plywood factories;
- two-three agricultural tool factories;
- several small coffee processing plants;
- 110-115 small and medium size rice mills;
- a modern brewery;
- a detergent factory;
- cigarette and match factories;

- a number of small establishments manufacturing plastic products, oxygen, corrugated iron, ice, soap, etc.;
- a small foundry set up with UN assistance;
- a pottery factory;
- a cattle fodder mill near Vientiane set up with French-West German aid;
- about 130 collective salt making shops in the Vientiane area.

Traditional subsector

Traditional crafts and small-scale industries have existed in Laos for centuries: spinning and weaving of both cotton and silk, smelting and manufacture of iron, copper and other metal articles, lacquering, bamboo and rattan working, wood carving and pottery, etc.

Regional distribution, urban-rural location

The predominance of Vientiane is highlighted by the fact that over 50 per cent of the total recorded number of establishments are located there, accounting for 70-75 per cent of total production.

Next to the rehabilitation of the existing plants a more regional balanced distribution of the industrial sector is being considered.

Intersectoral linkages; consumer-capital goods

The intersectoral linkage between agriculture and industry is clear in such industries as rice milling, saw milling, wood processing and cigarette manufacturing, which utilize locally produced raw materials. On the other

hand the traditional industries have the potential of becoming a dynamic intermediary between agriculture and industry.

The modern industrial subsector is heavily inclined to consumer goods utilizing imported raw materials.

With the exception of "Lao industries" there was until recently a remarkable lack of production of capital goods. Great emphasis has been placed since then on the production of agricultural tools, and part of a Swedish loan is to be allocated to increase such output. In the Sepone District of Savannakhet 454 iron tool making units have been formed.

Industrial employment and productivity; capacity utilization

Mining and manufacturing together employ less than 10,000 persons. The size of the establishments in Vientiane is relatively small. The <u>IDCJ-study</u> gives an estimated average of 23 employees in the industrial plants and consumer goods establishments. Saw mills employ an average of 72 persons.

Average capacity utilization in 1977 was estimated at about 30 per cent. Productivity suffers greatly due to shortages of raw materials, spare parts and trained staff at all levels. Table 7 below gives a more detailed picture of the industrial production, employment and capacity utilization in Laos.

Table 7. Industrial production, employment and capacity utilization

	Employment			Installed	Production		Capacity
	Actual 1977	Target 1978	Unit	capacity	Actual 1977	Target 1978	utilization 1977 %
Electricity	924	1,171	mil. kwh	n.a.	265	340	n.a.
Tin	520	676	tons	1,360	612	900	45
Agricultural tools	70	100	'000 pieces	, 41.9	76.4	570	17
Logging	n.a.	n.a.	'000 cu m	700	70	211	10
Sawmills	n.a.	n.a.	'000 cu m	300	30	73	10
Plywood	230	230	'000 pieces	630	63	100	10
Veneer	n.a.	n.a.	tons	8,200	1.148	3,000	14
Parquet	88	88	1000 sq m	450	63	100	14
Bricks	61	331	'000 units	3.710	1,150	5,000	31
Tin roof sheets	75	75	'000 pieces	3,708	445	1,000	12
Textiles	521	642	'000 m	1,400	574	1,600	41
Cigarettes	311	311	mil. packets	45	12.9	21.7	29
Soft drinks	102	102	hl	45.000	12,540	20,000	28
Salt	45	345	1000 t	10	7	15	70
Matches	38	38	'000 boxes	4,800	2,400	3,800	50
Furniture	595	595	mil. kips	380	213	250	56
Beer	122	122	hl	31,688	5,070	6,000	16
Coffee	n.a.	n.a.	t	n.a.	49.6	120	n.a.
Ice	n.a.	n.a.	t	n.a.	5,460	7,000	n.a.
	n.a.		'000 sheets	n.a.	445	1,000	n.a.
Corrugated iron Oxygen	n.a.	n.a. n.a.	bottles	n.a.	2,222	3,100	n.a.
• •			tons		· ·	120	n.a.
Seasoning	n.a.	n.a.		n.a.	n.a. 162		
Retreading Buckets	n.a. n.a.	n.a.	tyres units	n.a. n.a.	31,142	3,720 168,830	n.a. n.a.
		n.a.			- ,		
Plastic bags	n.a.	n.a.	tons	n.a.	38	120	n.a.
Electric cables	n.a.	n.a.	spools meters	n.a.	5,130	13,200	n.a.
Plastic rope	n.a.	n.a.		n.a.	n.a.	540,000	n.a.
Candles	n.a.	n.a.	boxes of 10	n.a.	P.a.	5,803	n.a.
Mosquito spirals	n.a.	n.a.	1,000 boxes	n.a.	100	560	n.a.
Plastic sandals	n.a.	n.a.	pairs	n.a.	n.a.	•	n.a.
Car batteries	n.a.	n.a.	units	n.a.	30	2,640	n.a.
Sponges	n.a.	n.a.	units	n.a.	n.a.	78,000	n.a.
Noodles	n.a.	n.a.	tons	n.a.	122	429	n.a.
Soap	n.a.	n.a.	1,000 blocks	n.a.	572	3,000	n.a.
Coal	n.a.	n.a.	tons	n.a.	114	1,000	n.a.
Nails	n.a.	n.a.	tons	n.a.	33	497	n.a.
Ceramics	n.a.	n.a.	pieces	n.a.	409	12,000	n.a.
Ceramics	n.a.	n.a.	pieces	n.a.	409	12,000	n.a.
Lao Lao	n.a.	n.a.	1,000 liters	438	592	n.a.	n.a.

Source: Ministry of Industry and Commerce, and 1978 Annual Plan.

Investment and sources of finance

Investments are mostly being financed directly by the state budget. But state ownership is not universal: factories whose management was willing to follow government production guidelines have been allowed to continue. In these mixed ventures the state and the private sectors share profits and investment costs in accordance with the size of their share holding. On the whole however, private ownership is being progressively eliminated.

Immediate foreign assistance is urgently needed and to be most effective, in accordance with the Laos progressive policy of socialist transformation, it should finance raw materials and spare parts imports.

The Laotian Government has expressed interest in attracting new foreign investment. At present, the government's approach is to negotiate an investment agreement on a case by case tasis. The success of this policy will depend on establishing a record which gives confidence to the investing public.

III. COMPARISON OF PLANNED INDUSTRIAL TARGETS WITH RECENT PERFORMANCE OF THE MANUFACTURING SECTOR

General

The Government has given first priority to achieving self sufficiency in food. The natural disasters in the last three years have certainly not facilitated this task.

Manufacturing sector

For the industrial sector, the government has encouraged the reopening of those factories, closed at the end of the previous regime's rule, furnishing industrial daily necessities to the people.

In this light no specific targets were put forward in the first couple of years after 1975. The only comparison possible is the trend of recovery against the industrial production peak of 1973. In 1977 it was announced that 80 per cent of the factories in the newly liberated areas had resumed production, with over 400 medium and scall factories and a large number of handicraft shops operating.

Only partial statistics gave an indication of the gradually recovering level of industrial production. For example in November 1976 following monthly production figures were released. sawn timber, 15,500 m³; wood products, 380 m³; wood board, 21,300 m²; wooden water pipe, 370 bags; scales, 160,000; veneer, 1,020 sheets; manufactured ice, 864 tons; soft drinks, 26,772 cases; alcohol, 10,490 liters; fish sauce, 113,700 bottles;

noodles, 3,200 kilograms; cigarettes, 260,000 packs; matches, 32,000 boxes; candles, 5,000 kilograms; plastics, 1,040 rolls; soap, 300,000 bars; galvanized iron, 126,000 sheets; nails, 35,000 kilograms; mosquito coils, 10,600 boxes; charcoal, 20 tons; milled rice, 1,482 tons; roasted coffee beans, 20 tons; cotton weaving, 7,600 m; compressed oxygen, 1,716 m³; and farm tools, 45 tons. This still corresponded with only 20 per cent to maximum 30 per cent of the peak level reached in 1973.

The first comprehensive listing of industrial production was compiled by the World Bank team, and is given in table 7 above. It also specifies production targets for 1978 in accordance with the interim three year plan 1978-80. No recent figures were available to evaluate the measure of success in attaining the production targets.

IV. THE INSTITUTIONAL INFRASTRUCTURE FOR INDUSTRY

Administrative structure

The highest governing body in Laos is the Supreme Paople's Assembly (SPA).

The Council of Ministers is the highest administrative body of the Government. The Council comprises a Prime Minister, four Deputy Prime Ministers, the heads of 12 Ministries and of the National Planning Committee, the Nationalities Committee, the National Bank as well as four members of the Prime Minister's office who hold ministerial ranks.

There are 12 provinces (Khueng) whose administrative committees are directly responsible to the Prime Minister's Office. Each Khueng is divided into districts (Muong) which are in turn divided into subdistricts (Tasseng). Each of these units have elected People's Assemblies. However, the day-to-day administration is the responsibility of an administrative committee at each level chosen from among the members of the People's Assembly.

Although the system is still in a transition stage, what has emerged so far is a decentralized administrative structure which permits local authorities a considerable degree of initiative within the broad guidelines set by the central government.

Planning process

Primary responsibility for planning rests with the National Planning Committee (NPC), an independent agency whose chairman carries the rank of Minister.

To complete the planning apparatus, planning and statistics departments are being established within each technical ministry. However at present the only ministries with an effective planning capability are agriculture, public works and interior.

The NPC currently performs two major functions each year. First, it assembles the production targets of the various ministries and Khuengs, together with the required inputs, for presentation to the Council of Ministers. Second, the NPC reviews the projects submitted by the Ministries and Khuengs, eliminates those that are self-evidently unsound, unjustified or inconsistent with the overall guidelines laid down by the Council of Ministers. The remainder are put together as the first draft of the annual investment plan.

An effort is made in the technical ministries to relate the annual production targets to their proposed investment plans. But there appears to be only cursory plan co-ordination in the NPC.

The intention is to develop:

- (a) Five-year planning to provide the framework for long-term development strategy and national objectives; and
- (b) Annual planning which would identify the specific short-term tasks and investments required to achieve the long-term objectives.

In the meantime, the interim three-year development plan 1978-80, provides a temporary framework. It specifies production and other physical targets and identifies some of the projects but does not give the details of the investment programme project by project.

The first five-year plan will cover 1981-1985, but details were not available at the time when this survey was written. Although planning procedures are being progressively introduced, the process is hampered by a lack of basic data and qualified cadres with a solid grounding in theoretical principles and experienced in practical management of a centrally planned economy.

Financial institutions

Monetary and credit policies play a limited role in Laos because first, the banking system is not yet well developed, and second, a considerable portion of the economic activity in the rural areas is outside the monetized sector.

The present banking system comprises the National Bank of Laos (NBL) and its subsidiaries, which were established by statute in December 1975. Today, there is at least one branch per province. The long-term objective is to facilitate the distribution of credit and to mobilize savings by establishing branches in each district.

Credit policy is used as an instrument for encouraging the formation of co-operatives; less than 10 per cent of total credit outstanding is to private enterprises or individuals. Current interest rates, are 3-6 per cent in agriculture and 6-12 per cent in industry and commerce.

In the case of industry, almost all credit is for short-term working capital. Very little development credit is currently being made available, as investments are mostly being financed directly from the budget. The opposite is the case in agriculture: 90 per cent of agricultural credit is medium term for land clearing, the purchase of buffalos, seeds, tools, etc.

An earlier report from the ADB mentioned that in order to promote light industry and handicrafts, the Government issued an official announcement on 29 September 1976 stating that it shall properly determine investors' rights, help secure raw materials, equipment and fuel, and take responsibility for distributing the final products. In another announcement, the Government has expressed its intention to extend financing through the banking system for the promotion of industries and transport, at the low interest rate of 3 per cent per annum and a term of one-three years. These latter interest rates, however, do not correspond with the ones given by the World Bank report and leaves some uncertainty regarding the availability of financing for the manufacturing sector.

State enterprise

Under the present administrative arrangements, control of state enterprises is achieved by (a) the approval of annual budgets and production plans specifying, on the one hand expenditure and revenue and on the other hand quantities of input and output, and (b) regular reports to the supervising authority (weekly, monthly, quarterly and annually). For enterprises at the national level the annual budget and production plan must be approved by both the responsible Ministry and the Ministry of Finance, after consultation with the Planning Commission.

The physical inputs required by an industrial enterprise must be purchased from approved suppliers (normally Société Lao d'Import et Export or the Department of Internal Trade) at fixed (official) prices and all its output must be sold to the Department of Interior, Trade or, in the Provinces, to its agent, the Khueng Shop, at fixed prices.

In the case of those enterprises requiring imported inputs, the enterprise must apply for an import permit from the Department of External Trade for each consignment and complete a complicated procurement process.

In fixing the price of the product, the Government aims to allow the enterprise concerned a "profit" margin of 10 per cent to 25 per cent depending on the product. This margin is the difference between the sale price and all the operating costs including the turnover tax and contributions made to the depreciation fund.

Private sector

Private enterprises are required by the Government to operate in much the same way as state enterprises, submitting each year a budget and production plan to the Ministry of Commerce and Industry for approval. This plan must indicate inputs needed (including imported raw materials, intermediate goods, machinery and spare parts) and specify the output.

On the basis of the budget of the enterprise as adjusted by the Ministry, the latter calculates the official purchase price of the output, which includes a small profit margin. The actual margin may be increased in practice by a lowering of costs through the more efficient operation of the enterprise than assumed in the calculations of the Ministry.

Foreign investment

In order to encourage industrial production the Government has expressed its willingness to co-operate with domestic and foreign investors. At present the Government's approach is to negotiate an investment agreement on a case by case basis.

Initially, new foreign investments are likely to be mainly in the field of forestry where Laos has a valuable product that may be processed at relatively low cost.

For the manufacturing sector private foreign investors might be useful to rehabilitate some of the enterprises that have been abandoned by their owners.

The key to success is to devise arrangements that adequately reassure the investor, and provide an internationally competitive return on investment without fixing prices at levels which are unfair to Laos.

V. MAIN FEATURES OF INDUSTRIAL DEVELOPMENT OBJECTIVES

AND STRATEGIES

Principles

The prime principle in the Government's development aim is to guide the country step by step towards socialism, while relying as far as possible on the country's own resources.

As mentioned above, the preparation of the first five-year development plan 1981-85, has not yet been completed. The discussion of the main outlines of a long-term development strategy for Laos as given by the World Bank report, based upon its lengthly discussions with the Lao officials, will to a certain extent compensate for the lack of more up to date information. The following paragraphs review the objectives and strategy of the interim three-year development plan, 1978-80.

Objectives

One of the three fundamental political objectives of the Lao Government relates directly to the economy and is:

"To promote and co-ordinate socialist transformation with socialist construction; gradually advance socialist production relations in the national economy; incessantly develop and increase production forces; build new technical and material bases; resume food production, restore and develop

the economy and culture; stabilize the economic and financial situation, and normalize people's living conditions; and create conditions for vigorously developing the national economy from 1981 onward. $\frac{1}{2}$

Based on the fundamental objectives, the Interim Plan identifies ten main tasks. The main priority is to transform and develop agriculture and forestry. The role of other sectors is to support agricultural development.

The most important tasks which relate directly to economic management are to:

- (a) "Restore forestry and agricultural production; lead the country to follow the path of socialist collectivization; rehabilitate the economy; swiftly develop the state marketing network; strengthen the industrial and communications sectors; and advance the state economy to a collective socialist economy;
- (b) Strive to develop basic construction work, concentrate on developing agricultural and forestry production and on meeting the need for food supplies in the country...; develop industries to serve agriculture and forestry; promote exports in co-ordination with imports; and build basic conditions for and develop a new structure of the national economy;

^{1/} Source: Report to the joint session of the Supreme People's Assembly and the Council of Ministers by H.E. Kaysone Phomvihan, Prime Minister, 2 March 1978.

- (c) Develop transport networks along strategic routes and deep into rural areas; improve and broaden an allweather road through Viet Nam to the sea;
- (d) Increase trade; formulate regulations for organizing and managing the distribution of goods; fully promote the state trade role in broadening the circulation of goods; and create conditions to ensure the stability of the currency and prices; and
- (e) Increase the number and quality of cadres, particularly in key organizations and sectors; strive to provide economic management training for cadres; and formulate economic management procedures in a planned manner;"

The main tasks stress clearly that the industrial sector, and <u>ipso facto</u> the manufacturing sector, will be developed to serve agriculture and forestry. While ambitious long-term plans for the development of industry corresponding to the country's potential will be undertaken in due course with the main emphasis being set on agriculture, the immediate concern centers on agrobased industries utilizing locally-available raw materials (e.g. wood, coffee and other cash crops).

Strategies

A clear cut long-term development strategy was suggested in the World Bank report which kept in mind the serious handicaps existing in Laos due to extreme shortages of savings, foreign exchange and skilled manpower. Various government actions indicate a thinking on the same line as the report's proposals which are summarized below.

Development programmes should primarily emphasize the achievement of overall agricultural self-sufficiency and expansion of agricultural exports. The Government's resettlement programme is eminently sensible and should go a long way in rendering productive anew the idle population of the cities and in restoring the productivity of the abandoned lands at low investments costs. Emphasis should also be placed on intensifying agricultural production and raising yields. Since current yields are very low, with little investment it should be possible to improve productivity and expand agricultural production quickly. Similarly, expansion of export earnings should in the first place concentrate on those products, namely, timber, coffee and other crops, where with small investments it is possible to improve quality (thereby increasing their unit export price) and expand production. Finally, in the industrial sector, the priority is the rehabilitation of existing capacity of certain essential industries.

VI. ANALYSIS OF THE MAIN CONSTRAINTS ON THE DEVELOPMENT

OF INDUSTRY

General

The structural distortions and dislocations caused by the long conflict viz., artificial urbanization, abandonment of productive agricultural lands and unbalanced industrialization still dominate the Lao economy.

Compounding the structural problems is an acute shortage of qualified cadres caused in part by the exodus of large numbers of trained personnel.

Laos is to move from a service oriented economy based on aid receipts, towards a country whose structure will reflect the country's internal resource potential.

Moreover a greater part of the industrial sector

- (a) Relies heavily on imported raw materials;
- (b) Is relatively capital-intensive given the country's level of development; and
- (c) Has a low value added component.

Skilled manpower - entrepreneurs

The local industry was partly crippled by the flight of traders, owners, skilled technicians, and capital from the country and was further hampered by poor management under the present planning/management system. The managers

of most enterprises have little control over production decisions or the flow of funds in their enterprises, but are typically responsible for meeting the physical targets in the annual plan.

The government has acknowledged that "we are building the new regime with our hands empty and a certain lack of experience" (Sieng-Pasason paper). Lack of expertise, lack of cadres, management mistakes and the priority given to political considerations, sometimes at the expense of technical realisations and capabilities, took their toll.

Many technically competent personnel not agreeing or adapting with the socialist transformation of the country continued to flee Laos throughout the years since the 1975 change in regime.

But the government stepped up its effort to train cadres in socialist countries. An estimated 5,000 students were reported to be studying in different east European countries and the government intended to send about 1,000 more in 1979. In primary and secondary education, however government efforts were greatly restricted by a shortage of teachers, teaching aids and books.

Raw materials

The lack of binding contracts governing the transactions between enterprises has frequently caused bottlenecks in the production process.

This situation has contributed to the decline in the capacity utilization of main industries.

Whereas the problem mentioned in the above paragraph applies to the industries utilizing mainly local raw materials, the same certainly also applies to the industrial sector mainly depending on imported raw materials. This last category is further hampered by the lack of foreign exchange constraining the state import agency to supply them with agreed quantities.

Foreign exchange - finance

The chronic shortage of foreign exchange of Laos in perspective with its other priorities, agriculture for instance, places the industrial sector in a difficult position.

Not only can the supply of (imported) raw materials be disrupted, but essential machinery and spare parts required for optimal capacity utilization, cannot be purchased.

Given this severe foreign exchange constraint and the need to restructure production away from low value added products, preference needs to be given to industries which earn or save foreign exchange.

Institutional infrastructure

In view of its other priorities the present limited institutional infrastructure for industry in Laos is quite comprehensible. Future actions will have to be foreseen to create a suitable institutional back-up system for the country's (re-) emerging industrial sector if the economy is to achieve a balanced development. Much will depend on the modalities of the socialist framework and its applications to the industrial sector.

Management system

Both state enterprises and private companies are subject to a rather rigid operational system as explained in the above paragraphs. As yet the system does not have to cope with the more complex management problems confronting the more industrialized socialist countries.

Nevertheless, it appears that problems related to the change in management and organization of enterprises has affected the performance of many industries. The World Bank report has made some suggestions to overcome the emerging problems and include, among others:

- (1) provide an adequate accounting mechanism;
- (2) devise mechanisms to encourage higher productivity;
- (3) allow the enterprises to function in a more autonomous way;
- (4) make transactions between state enterprises binding on the parties with enforceable penalties; and
- (5) give more flexibility to the pricing system, which would reflect economic costs and scarcities of the goods and services in question in a better way.

VII. REVIEW OF THE PROSPECTS AND POTENTIAL FOR INDUSTRIAL DEVELOPMENT

General

In economic terms, Laos is thought to be potentially the richest of the Indo-Chinese countries, based on its abundant agricultural, forestry and mineral reserves and its hydro-electric potential.

Whereas the country's immediate industrial priority is to rehabilitate the existing capacity of certain essential industries, the long-term development of the Laotian industrial sector lies in its supporting role in developing the country's own resources.

The following paragraphs analyse the country's industrial perspectives, immediate needs and preconditions for further development in its major industrial branches.

Agricultural based industries

The existing rice milling capacity is very inadequate to meet even very modest objectives and will be even more so as paddy production grows in the future. Many rice mills are idle, some due to the lack of spare parts and others because their equipment had been sabotaged. Although some of the missing parts could be manufactured by local machine tool shops, the latter are themselves frequently idle due to shortages of raw materials. A rice mill rehabilitation and expansion project needs to be prepared urgently.

There is also an urgent need to improve the quality of exported coffee through proper processing and grading. Most of the existing plants are obsolete and pulping is done on the plantations using inappropriate small manual or diesel rice mills. In addition, coffee is not inspected for grade and quality at the official buying stations and there is no incentive for growers to improve the quality of coffee. With small investments in new coffee processing and sorting plants, Laos could obtain a higher unit price for its coffee and thereby increase export earnings quickly. Additional processing equipment will be required as coffee production and exports expand in the future.

In the early 1970's, cotton was grown on about 6,000 ha with an estimated seed-cotton production of 3,000 tons. However, area and consequently production has steadily declined (3,200 ha and 2,400 tons in 1977) due to poor marketing arrangements and lack of proper organizations for seed and insecticide distribution. Since Laos has no ginning mills, seed cotton is exported to Thailand, while at the same time textiles and cotton yarn for the cottage industry are imported. The Government has plans to expand the area under cotton to 5,500 ha by 1980. Expansion of cotton production may be justified not only by itself but also because it may provide a foundation for establishing ginning mills, and subsequently spinning mills and garment factories as well as oil extraction plants to supply domestic needs and save foreign exchange.

Forestry-based industries

Laos has vast timber resources. Development of wood-based industries to process these vast resources for export may, therefore, play a major role in the country's long-term development strategy. A wide range of potential

activities has already been studied. These include: (a) modern saw mills;
(b) plywood and parquet factories; (c) furniture factories; (d) pulp and
paper; and other products based on chemical transformation of wood. Some of
these industries will probably be too capital-intensive to be considered in
the short run.

Other industrial sectors

In addition to wood processing, industries which should be investigated are: (a) integrated agro-industries which are based on domestic raw materials (e.g., animal feed mills based on maize and other feed crops, etc.);
(b) industries in support of agricultural development (e.g., foundry and agricultural tools manufacturing); and (c) basic consumer goods industries.

Finally, Laos may also want to consider developing export industries based on imported raw materials. For example, a number of Southeast Asian countries have been successful in exporting garments.

VIII. REGIONAL, SUBREGIONAL AND BILATERAL CO-OPERATION AGREEMENTS

Protocols, aid agreements, and intentions of economic and technical assistance were signed with various countries since 1975. The following paragraphs give a review of some of the agreements made.

Laos has signed several protocols with the USSR. These cover aid in construction equipment, spares and machines; the transportation of building materials for a satellite tracking station; a memorandum on work due to start in 1980 on the expansion of Vientiane's electricity network; a protocol on vocational training; a trade agreement and protocols on assistance to build a radio station and roads/bridges, etc.

Laos has signed a number of agreements with other centrally planned economies. An economic, scientific and technical co-operation agreement with Czechoslovakia, a trade agreement and protocol on co-operation in forestry with Vietnam and a document on chicken raising with Hungary. Under the latter, Laos is being assisted by Hungary to build a chicken farm with a weekly output of 35,000 birds. Also a protocol on the construction of a bridge on highway 9 (Hungary) and the signing of minutes of geological co-operation (Vietnam). Under this last agreement maps are to be drawn of the Kieng Koung and Samneua regions and exploration is to be carried out for iron deposits (Ieng Khouang), limestone (Dong Hen) and natural resources for brick and cement works (Kieng Khouang, Khammoune and Savanakhet provinces).

East Germany signed agreements on health co-operation for 1979/80, on economic aid in 1979/80, and on the exchange of goods in 1979. The second session of the Laos/East German commission for economic, scientific and technical co-operation took place in May 1979 and a protocol was signed.

Furthermore a protocol on the exploitation of gypsum in Savanna Khet province was signed with Vietnam, a protocol on goods exchange and payments with Bulgaria, documents on assistance in the development of communications, public works and transport with Japan, minutes of an agreement on economic, scientific and technical co-operation and a co-operation agreement in radio with Czechoslovakia, minutes of co-operation on building a workshop with East Germany, and an agreement on scientific and technical co-operation with North Korea.

IX. REVIEW OF BILATERAL AND NON-UNDP ASSISTANCE

Laos has been the recipient of many an aid programme since the change in regime, much of it resulting from the natural disasters which occurred since 1975.

The following tables provide some information on commodity aid and bilateral aid received by Laos in 1976.

Table 8. Commodity aid received by Laos from Socialist Countries in 1976

Countries (or Agencies)	Date	Value (\$US)	Particulars
Vietnam	25 Jan	(unspecified)	White rice 500 tons
Kampuchea	25 Jan	(unspecified)	White rice 3,000 tons
•			Salt 300 tons
USSR	30 Jan	\$US 1,400,000	Food and consumption goods including petroleum 8,000 tons
China	3 Feb	(unspecified)	White rice 10,000 tons
			Gasoline 10,000 tons
			Cement 3,000 tons
			Trucks 150
			Bicycles 8,000
			Sewing machines 674
			Asphalt 250 barrels
			and clothing materials
			and medicines
Germany (Democratic			
Republic)	4 Jan	\$ US 750,000	10 tons of merchandise
Hungary	19 Jan	\$US 320,000	(unspecified)
Bulgaria	12 Feb	\$ US 500,000	Cloth 500 m
			Women's coat 10,000 m
			Men's coat 10,000 m
			Trousers 12,000
Albania	Feb	(unspecified)	Clothing, cotton
			Foods products and medicine (Quantity unspecified)
Romania	25 Feb	\$ US 340,000	12 tons of merchandise
Korea (Democratic		•	
People's Republic)	-	\$US 120,000	(unspecified)
Germany (D.R.)	9 Mar	Kip 500,000	Toys and cash grants
Yugoslavia	26 Apr		Medicines ·
	11 July	\$US 200,000	3,795 tons of food products
Cuba	Mid July	(unspecified)	1,000 cows and livestock materials
Czechoslovakia	15 Sept	(unspecified)	6 tons of medicines, milk and soaps
Yugoslavia	17 Sept	(unspecified)	2,638 tons of flour, soybeans, canned fish
USSR	16 Oct	(unspecified)	1,000 bicycles, clothing
	·	-	25,000 m 22 tons of medicines
			and cigarettes

Source: Khao San Pathet Lao, various issues.

Table 9. Laos: Bilateral aid

Countries	Amount	Particulars
Vietnam	Dong 17 million (\$US 6.4 million)	For 1976/77 programmes
USSR	Rbl. 32 million (\$US 42.7 million)	Interest free and repayable in 50 years for construction of a new city including a hospital in Phone Savanh, near Xieng Khouang
People's Republic of China	Yuan 45 million (\$US 23.7 million)	Interest free and repayable in 50 years, including commodity aid of Yuan 15 million and project aid of Yuan 30 million for construction of road connecting north Laos and Luang Prabang, bridges and a brick factory
F.R. Germany	DM 13 million (\$US 514 million)	2nd phase Nam Ngum Project
Japan	Yen 2,010 million (\$US 6.7 million)	Same as above
F.R. Germany	DM 9 million (\$US 3.7 million)	Interest at 1.0% p.a. Repayable in 30 years including 10 years grace United loan or agriculture

Source: Khao San Pathet Lao, various issues.

Throughout the years 1977-1979 aid was obtained from both centrally planned and market economy countries as well as international organizations of which the most important were:

Country Agency	Date	Value	Particulars
USSR	1977	\$US 2,700,000	Development loan, building of a hospital and aid in non-ferrous metals mining
UN	1977	\$US 2,800,000	Help for war refugees
IDA	1978	\$US 1,200,000	Imports of fertilizers and insecticides, research programme for high-yield seeds and irrigation works
USA	1978	\$US 5,000,000	Food aid
ADB	1979	\$US 8,000,000	Forestry development project including the rehabilitation of the Lao ply mill, the establishment of a new saw mill, the construction of forest roads, the rehabilitation of equipment, etc.

The work on the second phase of the Nam Ngum hydroelectric project, financed by the Asian Development Bank (\$US 35 million) has been completed and a joint French and West German aided cattle fodder mill went into operation but production suffered from difficulties in obtaining raw materials.

Table 10 provides information on planned assistance expected to be provided by organizations of the United Nations system other than UNDP for 1980 and beyond. Noteworthy is the planned strengthening of the rice milling industry by the United Nations Capital Development Fund in 1981. The IBRD/IDA

is assisting in agricultural and agro-industrial rehabilitation and development through loans totalling \$27.2 million during the 1980-85 period. Further, the Asian Development Bank is expected to provide significant loans, inter alia, for development of the forestry industry, agricultural development, infrastructural improvements and utilization of wood residues.

Table 10. Assistance provided by organizations of the United Nations System other than UNDP—

				Planned	
Source	Project or activity		е	xpenditures	Period
			.	(\$US)	covered
WHO	Health Services Development			302,800	1980-81
HIIO	Country Health Programming			254,400	1980-81
	Family Health			314,700	1980-81
	Disease Prevention and Control			18,000	1980-81
	Promotion of Environmental Healt	th		14,900	1980-81
	Health Manpower Development	011		605,800	1980-81
		Total	WHO	1,510,600	
WFP	Community Development in the				
	Vientiane Plain			1,335,330	1980-81
		Total	WFP	1,335,330	
UNICEF2/	Primary Education			1,929,600	1980-81
01110LL -	Primary Health Care			1,355,000	1980-81
	Preschool Child Care			134,000	1980-81
	Logistics			235,000	1980-81
	Nutrition			131,000	1980-81
	Programming			200,000	1980-81
	Emergency Programme			100,000	1980-81
		Total	UNICEF	4.084.600	
UNHCR	Assistance to repatriates $\frac{3}{2}$			50,000	1980
ONIION	Hospital construction			175,000	1980
	School construction			25,000	1980
	Irrigation			250,000	1980
	Resettlement of repatriates 3/			1,500,000	1980
		Total	UNHCR	1,900,000	
UNFPA	Demographic and Statistical				
	Data Collection			63,000	1980-81
		Total	UNFPA	63,000	
UNFDAC					
		Total	UNFDAC	350,000	

^{1/} It is anticipated that the ultimate total will be higher as additional contributions become available during the period 1980-1986.

^{2/} The amounts shown will partly be financed by specific donor countries whose commitments have not been confirmed as of yet.

^{3/} Pending approval donor.

Table 10. (continued)

Source	Project or activity		Planned expenditures (\$US)	Period covered
UNCDF	Strengthening of the rice maindustry Irrigation Dam Houei Vang Establishment Irrigation Br	ie	825,000 1,900,000 1,5,0,000 2,884,000	1981 1980-1982 1980-1982
IBRD/IDA	(a) Approved Loans:			
	Agricultural Rehabilitation Development I Agricultural Rehabilitation Development II		5,400,000	1980-1982 1980-1982
	(b) Planned Loan:		10, 400,000	1,700-1,702
	Agro Industries Rehabilitat	ion	11,400,000	1980-1985
-		Total IBRD/I	DA 27,200,00	
ADB	(a) Approved Loans:			
	Forest Industry Development Casier Sud		8,000,000 7,000,000	1980-1985 1980-1985
	(b) Planned Loans:			
	Agricultural Support Facilia Vientiane Plain Road Vientiane Plain Rural Elect Tha Ngon Rehabilitation Mini-Hydropower Plant Agricultural Support Facilia Utilization Wood Residues Vientiane Plain Rural Elect Nam Tien Irrigation	crification	5,850,000 6,000,000 4,000,000 3,000,000 4,000,000 3,000,000 6,000,000 4,000,000	
	(c) Technical Assistance (Grants	890,000	
		Total ADB	57.740.000	
IFAD	Approved Loans:			•
	Development Casier Sud	Total IFAD	5.800.000	1980-1985
		GRAND TOTAL	102,868,000	
		Whereof grant		

^{1/} Pending approval

Source: Draft UNDP Third Country Programme for the Lao People's Democratic Republic, Jan. 1980 - Dec. 1985, Nov. 1979.

X. THE THIRD UNDP COUNTRY PROGRAMME

AND CO-OPERATION WITH UNIDO

In the past UNIDO has provided technical assistance to Laos in a number of important areas. Altogether from 1972 to March 1980 UNIDO has completed implementation of 35 projects representing a total expenditure of \$US 975,000. The completed projects include four large projects exceeding \$US 100,000 each namely assistance in production of agricultural tools; pilot woodworking plants; industrial development productivity and food processing industries. Two mediumsized projects with a value of between \$US 50,000 and \$US 100,000 each were implemented in the fields of woodworking industries and management and production assistance to the woodworking industry. Three projects with an expenditure value of between \$US 20,000 and \$US 50,000 were implemented in the fields of prefeasibility study for the additional utilization of forest resources; industrial development and productivity and feasibility study for the establishment of small-scale brick making plant. The remaining projects, which were of smaller size below \$US 20,000, included assistance in the following fields (listed in ascending order of project value): development of low-cost modular prefabricated wooden bridges; feasibility study for the production of nitrogenous fertilizers; industrial development planning; clearing of flooded and submerged forest at Num Ngum Hydro-electric power plant site and water improvement; assistance to woodworking industry; assistance in the construction of pottery kilns; prefeasibility study for the establishment of a small foundry; assistance to sugar industry; industrial adviser; assistance to oil industry; local production of oral rehydration salts; assistance to iron foundries; development of sericulture; industrial management techniques; light industries; industrial estates organization; assistance to electric plating workshop; assistance in the production of prefabricated wooden bridges; study tour to woodworking fair; food processing;

prefeasibility study for establishing a pilot foundry; production of building materials and components; assistance in saw-doctoring; pharmaceutical industries and assistance in the identification and preparation of industrial projects.

The list of approved and operational UNIDO project to Lao People's

Democratic Republic as of February 1980 includes four projects: one large-scale

project on integrated woodworking (total allotment of \$13 1,093,881) and three

smaller projects on production of prefabricated wooden bridges; testing and

quality control of tobacco products; and local village type salt production

(Table 11).

Table 11. Approved and operational UNIDO projects as of 15 February 1980

Project No.	Title	Total Expenditures
DP/LAO/74/010	Integrated woodworking (total allotment: \$US 1,093,8812)	#US 962,056 ² /
SI/LAO/79/801	Fact-finding mission in connection with the establishment of a laboratory for testing and quality control of cigarettes and other tobacco products (total allotment: \$US 6,405-/)	_ <u>a</u> /
SI/LAO/79/802	Fact-finding mission to improve existing local village type salt production units in Laos (total allotment: \$US 4,950-/)	_ <u>a</u> /
VC/LAO/76/027	Production of prefabricated wooden bridges (total allotment: \$US 20,000 2)	\$US 15,319 <u>a/</u>

a/ Based on computer printout UNIDO-UMAPO2 dated 15 February 1980.

('Status of allotments for projects as at 31 December 1979')

The third UNDP Country Programme covers the period 1980-1985. It thus includes the entire span of the forthcoming Five-Year Plan (1981-85) and the last year of the Three-Year Interim Plan (1978-80). The total UNDP programming resources are set at \$US 23.247 mill. for the six years. The draft country programme has earmarked a total of \$US 1,716,000 for industry for implementation

in 1980, 1981 and 1982 and nil for 1983, 1984 and 1985. The proportion of the UNDP programme earmarked for industry thus represents 7.4 percent. The UNDP draft country programme includes the following projects related to the industrial sector. $\frac{1}{2}$

"Ongoing projects

Funiture factory (LAO/74/010) - Under this project large-scale technical assistance was provided over a number of years in woodworking, drying, finishing, saw-doctoring, production management, etc. Equipment and supplies were provided for the construction and commissioning of a furniture factory which is expected to be completed by April 1980. The services of a project co-ordinator and a civil engineer will be provided under this project until completion of the factory. Further inputs in training will be considered under a category II project as and when resources become available.

The Executing Agency is UNIDO. The government co-operating agency is the Forestry Department, Ministry of Agriculture, Forestry and Irrigation. The total UNDP inputs are \$US 1,060,689, of which about \$US 40,000 are to be used from January 1980 onwards.

Development of forest utilization and industry (LAO/78/012) - This project promotes the development of forestry resources by increasing the production of plywood and veneer for export as well as furniture grade sawnwood. The immediate objectives are the rehabilitation of the Lao Plymill and the existing saw-mill at the Lao Plymill, installation of a blockboard plant, briquetting press and kilns, establishment of a pilot road construction and logging unit, expansion of nursery facilities and training of technicians in these fields.

^{1/} Source: Draft UNDP Third Country Programme for the Lao People's Democratic Republic January 1980 - December 1985, November 1979.

The Executing Agency is the Asian Development Bank, which also finances the foreign exchange cost of equipment and supplies. The government co-operating agency is the Forestry Department, Ministry of Agriculture, Forestry and Irrigation. The project started in September 1979 and is presently planned to continue until 1981. The total UNDP inputs are \$US 487,000, of which \$US 402,000 are to be used from January 1980 onwards.

Establishment of a modern rice mill (LAO/78/026) - This project will assist in the establishment of a modern rice mill which will serve as a model for other rice mills in the country and hopefully attract potential donors to finance additional rice mills in the Lao PDR. Other immediate objectives are to train national personnel in the operation of the rice mill, the preparation of a programme for the utilization of by-products from rice processing, and the improvement of two rice and paddy storage buildings. Under an extension now under consideration, technical assistance and training will be provided by UNDP in support of the 3rd IDA project which inter alia proposes to rehabilitate existing mills and expand capacity in the provinces of Vientiane, Savannakhet and Champassak.

The Executing Agency is FAO. The government co-operating agency is the Ministry of Industry and Commerce. The present project started in 1978 and is expected to continue until 1980. The total UNDP inputs are \$US 451,652, of which \$US 33,400 remains to be spent from January 1980 onwards. The expanded project will require an additional UNDP input of \$US 615,000 over a three year period (1980-1982).

Educational material production (LAO/79/003) - The objectives of this project are to establish a centralized production unit for the design and production of simple teaching materials and to train personnel in management and production of teaching materials, thereby contributing to the improvement of basic education at the pre- and primary school levels. Equipment and raw materials are supplied by UNICEF.

The Executing Agency is UNESCO and the government co-operating agency is the Ministry of Education, Sports and Cults. The project was signed in October 1979 and is presently planned to continue until September 1983. The total UNDP inputs are \$US 178,000 over a three year period.

New proposals

Coffee processing (LAO/78/025) - This project will assist in design, construction and installation of equipment at a coffee mill Champassak which will be funded from the 3rd IDA project.

The Executing Agency is proposed to be FAO and the government co-operating agency will be the Ministry of Industry and Commerce. The proposed UNDP contribution is estimated at \$US 233,000 over a three year period.

Agricultural tools manufacturing (LAO/79/018) - This project will provide support to the "555 Factory" and the "Lao Industries" to enable them to produce and supply agricultural tools. Cost of equipment, imported raw materials and construction will be provided from an ADB loan. Consultant services will assist in formulating production plans, preparing specifications and tender documents, installation and production of tools, and training of factory workers.

The Executing Agency will be ADB and the government co-operating agency will be the Ministry of Industry and Commerce. The proposed UNDP contribution is estimated at \$US 180,000 for consultancies and training over a three year period (1980-1981).

Rice mills and paddy storage (LAO/79/030) - To meet the immediate need for rice mills, paddy storage and transport in Xieng Khouang Province, an ADB loan provides for two mills and five mobile units, six paddy stores and four trucks. Assistance from UNDP is requested to provide the services of

consultants for selecting the location of the mills and storage facilities, finalizing the design of the buildings and drawing up tender documents and, at a later stage, assisting in the installation and commissioning of the new rice mills.

The proposed Executing Agency is ADB and the government co-operating agency will be the Ministry of Industry and Commerce. The proposed UNDP contribution is estimated at \$US 35,000 for five-month consultancies in 1980 and 1981.

In addition to the above projects, category II projects have been identified in salt production, quality control of cigarette manufacturing and drying of tobacco, to be implemented as and when resources become available."

Suggestions have also been made for UNIDO assistance in the development of the ceramics industry.

The Laotian Government's immense task to develop the country is seriously hampered by the lack of essential tools which makes a planned development and evolution possible. Future UNIDO assistance may be considered at three levels: industrial planning at the national level to be co-ordinated with overall development planning; assistance in the planning, organization and management at the state enterprises level with a view to raising the presently low-level of capacity utilization of key industries; and at the sectoral level assistance could be provided in promoting industry-agriculture linkages both forward and backward.

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Annex 1. Estimate of 1977 GNP by industrial origin

	Actua	1	,
	Total	Per Capita	Structure
	(billion KL)	(*000 KL)	(% of Total)
Paddy	14.5	4.5	18.4
Other crops	18.2	5.7	23.2
Animal husbandry	12.4	4.9	15.6
Fisheries	1.3	0.4	1.7
Forestry	0.7	0. <i>z</i>	0.9
Subtotal agriculture	47.1	14.7	<u>59.9</u>
Mining	0.2	0.1	0.2
Manufacturing	2.8	0.9	3.6
Construction	7.3	2.3	9.3
Utilities	1.0	0.3	1.3
Subtotal industry	11.3	3.6	14.4
Trade, Transport, Communication	6.2	2.0	7.9
General government	7.8	2.4	9.9
Other services	6.2	1.9	7.9
Subtotal services	20.2	6.3	<u>25.7</u>
Total	78.6	24.6	100.0

Source: Socialist transformation in the Lao People's Democratic Republic - an Economic Report. Document of the World Bank - February 1979.

Annex 2. Agricultural land use ('000 ha)

•		1977	11	978	
	A	ctual	Planned		
	Area	Percentage	Area	Percentage	
Agricultural Area	1,652.5	100.0	1,713.9	100.0	
Cultivated area	852.5	51.6	913.9	53.3	
Seasonal crops	838.2		868.2		
(Irrigated)	(66.0)		(78.0)		
Permanent Crops	14.5		45.7		
Pastures	800.0	48.4	800.0	46.7	
Cropped Area	861.5	100.0	923.2	100.0	
Padd y a	658.0	76.3	664.0	71.9	
Upland	(240.0)		(230.5)		
Lowland	(410.0)		(424.2)		
Dry season	(8.0)		(9.3)		
Maize	24.6	2.9	32.1	3.5	
Starchy crops	6.6	0.8	8.2	0.9	
Vegetables and fruit trees	67.7	7.8	70.1	7.6	
Industrial crops	11.5	1.3	42.4	4.6	
Other	93.1	10.8 ;	106.4	11.5	

a/ Normal year basis

Source: 1978 Annual Plan and Ministry of Agriculture. World Bank Report 1979.

Annex 3. Area planted, yield and production of major crops

	Area planted ('000 ha)				Yield (ton s/ha)			Production ('000 metric tons)		
Crops	1976 1977		Target 1978	1976	1976 1977		1976	1977	Target 1978	
Paddy	678,000 <u>a</u> /	625,500 <u>b</u> /	664,000	1.15 <u>a</u> /	0.85 <u>b</u> /	1.36	785,000 <u>a</u> /	530,000 <u>b</u> /	907,500	
Maize	22,948	24,608	32,116	1.38	1.40	1.43	31,588	34,921	45,886	
Potatoes, Manioc, Sweet potatoes and yams)) 5,334)	6,600	8,222	12.17	12.80	12.80	64,911	84,525	105,360	
Cotton	2,747	3,210	3,780	0.72	0.76	0.78	1,988	2,425	2,979	
Coffee	6,185	6,605	7,604	0.67	0.47	0.50	4,122	3, 104	3,821	
Tobacco	10,352	11,867	12,000	0.59	0.62	0.62	6,210	7,324	7,440	
Vegetables	3,460	3,880	4,430	7.81	7.94	8.06	27,040	30,816	35,739	

a/ 1977 normal year basis

b/ Actual

Source: Ministry of Agriculture, and 1978 Annual Plan. World Bank Report 1979.

Annex 4: Livestock population

	1976	1977
Pigs	526,000	643,700
Cattle	308,100	324,600
Buffaloes	592,500	610,800
Chickens	3,028,000	3,381,100
Ducks	37,900	42,700

Source: National Planning Committee - World Bank Report 1979.

Annex 5: Transport data

Length of roads in kilometres

	Paved	Unpa	ved
		Gravel	Earth
National	850	2,800	-
Provincial	400	2,200	2,600
Other	88	293	1,038
Total	1,338	5,293	3,638

Source: World Bank Report 1979.

Annex 6: Electric energy generation, consumption and trade, 1975-79

Year	Installed Total	Hydro	Ger. ation	Losses	Imports from Thailand	Total distribution (GWh)	Local consumption	Exports to Thailand	Value of exports // (\$ mn)
1975	44	33	250	18.4	8.6	223	65	158	.8
1976	44	33	242	19.9	7.1	215	58	157	1.3
1977	44	33	265	24.0	6.0	235	58	177	1.7
1978 <u>b</u> /	124	113	340	5.0	6.0	330	72	258	2.7
1979 <mark>c</mark> /	124	113	760	14.0	6.0	740	90	650	6.8

a/ in 1976 export price was raised from 5 mil/KWh to 10.5 mil/KWh.

Source: Electricité du Laos. - World Bank Report 1979.

b/ Estimates.

c/ Forecast.

Annex 7: BALANCE OF PAYMENTS, 1972-1979 a/
(in SUS millions)

	·	Average 1972-74	1975	1976	1977	1978	Forecas: 1979
ī.	Merchandise trade (net)	-51.0	-50.0	-41.5 5.5	<u>-55.0</u>	-64.0	-65.0
	Exports (.J.).	6.0	3.0			11.0	75.3
	Imports c.i.f.	57.0	53.0	48.0	54.0	75.0	30.0
	Commercial imports b/	(24.0) c/	(15.3) <u>c</u> /	(16.5)	(19.0)	(20.0)	(30.0)
	Project aid	(10.0)	(5.0)	(15.0)	(20.0)	(25.0)	(20.0)
	Commodity aid	(5.0)	(22.0)	(14.7)	(25.0)	(30.0)	(30.0)
	FEOF eld d/	(18.0)	(11.0)	(1.8)	-	-	-
ı.	Services (net)	-15.0 24.0	0.6-	-15.5	-20.0	-20.3 9.5	-22.5
	Receipts	24.0	3.0	7.5	3.5	0.5	7.5
	Foreign exchange sales to						
	the banking system	(13.0)	-	-	-	-	-
	Foreign exchange sales by						
	diplomatic missions						
	and tourists	(3.5)	(3.8)	(1.5)	(1.0)	(1.0)	
	Other	(7.5) <u>e</u> /	(4.2)	(2.9)	(2.5)	(5.5)	<u>r</u> / (6.0)
	Expenditures	39.0	16.0	20.0	23.5	26.5	
	GOL expenditures aboard	(2.7)	(2.7)	(1.9)	(1.9)	(2.0)	(2.0)
	Service of external debt g/	(1.3)	(0.8)	(1.6)	(1.6)	(1.7)	(2.0)
	Purchase of foreign services						
	(technical assistance)	(35.0)	(12.5)	(16.5)	(20.0)	(22.8)	(26.0)
I.	Current account deficit (I + II)	-66.0	-58.0	-57.0	<u>-75.0</u>	-84.0	-87.5
v.	Capital and Transfers	83.0 18.0	48.0 10.0	52.0	70.0 h	/ <u>82.0</u> h	/ 82.0
	FEOF assistance (net) i/ Project aid (including	18.0	10.0	1.5	-	-	-
	technical assistance) Commodity aid, cash) 65.0	18.0	30.5	40.0	50.0	50.0
	grants and credits		20.0	20.0	30.0	32.0	32.0
٧.	Overall Balance (III + IV) j/	15.0 k/	-7.0	-1.0	-4.8	1.3	- 7.0
τ.	Monetary Movements (net)	-2.6	7.0	1.0	4.8	-1.3	
	Change in reserves (-increase)	(-2.6)	$(\overline{3.1})$	(-2.8)	(4.5)	(-12.3)	
	IMF transactions	_	(3.9)	(3.8)	(-)	(11.0)	

a/ Laos does not compile balance of payments accounts, table constructed on the basis of staff estimates and data provided by Lao authorities; trade figures limited to recorded transactions only; 1972-75 for the former Vientiane zone only; 1976-79 for the whole country.

Source: Data provided by the Lao authorities and mission estimates. World Bank Report 1979.

b/ For 1975-79, includes purchases requiring foreign exchange payments and financed out of foreign exchange earnings, cash grants or credits and reserves. Excludes private imports, commodity and and imports of machinery and equipment related to foreign financed development projects.

c/ Includes activities financed and managed directly by foreign aid programmes.

d/ Imports financed out of FEOF resources.

e/ Includes that portion of FEOF resources which were converted into local currency (i.e., desterilized) by the donors and used to purchase Laotian services. About a third of total FEOF resources were desterilized in this manner.

f/ Includes \$2.3 million in payments by international carriers for overflight rights in Amber One air corridor.

g/ Includes interest and amortization.

h/ Figure is inconsistent with the budget (Annex X). Budget figure is adjusted downward by $\overline{25}$ % to allow for the overvaluation of the technical assistance component of project aid from nonconvertible currency areas. See also para. 4 in Annex X.

 $^{{\}it i/}$ Total FEOF resources net of desterilized portion included under service receipts; see footnote (e) above.

j/ Includes errors and omissions.

 $[\]underline{k}$ / Used to finance primarily capital exports and unrecorded imports.

Annex 8: Exports of main commodities

(in \$US '000)

						
	1974	1975	1976	1977	Actual 78 1st Quarter	1978 <u>a</u> /
Timber	7,383	605	702	1,263	448	3,000
Coffee	175	760	3, 147	3,751	-	3,800
Tin	1,784	1,661	1,345	1,226	260	900
Wood products	347	677	571	594	159	600
Electricity			1,300	1,712	559	2,000
Other	48	59	49	344	160	700
Total	9,737	3,762	7,114	8,890	1,586	11,000

a/ Mission estimates.

Source: External Trade Bank of Laos. World Bank Report 1979.

Annex 9: Commercial imports by main product

(in \$US '000)

	1976	1977	<u>Jan-Apr</u> 1978	1978 <u>a</u> /
Rice				
Milled	5,561	1,401	171	2,000
Paddy	1,709	6,087	•	200
Other food items and beverages	1,377	271	-	500
Animal feed concentrates	329	279	us.	500
Petroleum products (fuel)	3,782	5,865	2,113	8,000
Textiles	312	•	-	800
Machinery and tools	416	159	108	1,000
Other b/	3,006	3,997	1,608 a/	7,000
Total	16,492	18,059	4,000	20,000

a/ Mission estimates.

Source: External Trade Bank of Laos. World Bank Report 1979.

 $[\]underline{b}/$ Includes chemical and paper products, vehicles, cement and other raw materials.

