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 A Survey to Determine the Scope and Direction of Future American Voluntary Agency Assistance to the People of LAOS

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1. Which are the immediate needs within the areas of Community Development, Agriculture, Housing, Health and Nutrition?
2. Among these needs, which have been given priority by the Minister of Plan of Laos?
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# A REPORT ON LAOS

**A SURVEY TO DETERMINE  
THE SCOPE AND DIRECTION  
OF FUTURE AMERICAN  
VOLUNTARY AGENCY ASSISTANCE  
TO THE PEOPLE OF LAOS.**

**CATHOLIC RELIEF SERVICES-USA, INC.**

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REPORT ON LAOS

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This survey commissioned by, and made in cooperation with,  
the Agency for International Development, Washington, D. C.

NOVEMBER, 1974

November 30, 1974

The Most Reverend Edward E. Swanstrom  
Catholic Relief Services - USCC  
1011 First Avenue, New York City 10022

Dear Bishop Swanstrom,

The CRS Laos Survey Team has completed the written part of the assignment which has been given to us. I have the privilege of submitting that report to you herewith.

The report is the result of excellent preliminary briefing in CRS New York, extensive visitation throughout the Royal Kingdom of Laos from November 5 - 26, 1974, enriched by full cooperative support by Mr. James Delaney of CRS Laos and from the Director and staff of USAID Laos.

Members of the Provisional Government of National Union and of the Neo Lao Hak Sat were generous with their time and their briefings.

We were privileged to share verbally some of the recommendations we were considering making with the United States Ambassador to Laos, the Honorable Charles S. Whitehouse, PGNU Commissioner of the Plan, Dr. Pane Rassavong, and His Excellency, the Papal Nuncio.

The members of the Survey Team join me in sincere thanks to you and your staff for the privilege of having been entrusted with this survey. We have gained much and we hope that some of this is reflected in our report. We have stressed that CRS invited us to make this survey; the report is submitted herewith to you. We are available for explication and debriefing at your convenience.

Very sincerely,



James MacCracken  
Survey Team Coordinator

Enclosure.

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## APPRECIATION

The members of the CRS Survey Team wish to express their deep appreciation to Bishop Edward Swanstrom and his staff for the privilege of being invited to serve Catholic Relief Services and the people of Laos.

Particular appreciation is expressed for the officials of the Provisional Government of National Union of the Kingdom of Laos who made time and assistance available to us while we were engaged in learning, listening and visiting throughout the zone that was open to us. We regret that we were unable to visit the Neo Lao Hak Sat zone but we are grateful to Mr. Sanan Southichak and his colleagues for sharing the views of the Neo Lao Hak Sat during our conversation in Vientiane.

Our survey trip was made possible by US Ambassador Whitehouse, USAID Laos Director Charles Mann and their staff. We received every assistance from the Area Coordinators of USAID on an efficient schedule arranged by Messrs. Leonard Maynard and William Luken of the USAID OPRA staff, for which we are appreciative.

We express our thanks to the Ministry of Economy and the Plan for introductions to the Chao Khouangs whom we visited, and for the presence of Dr. Virachit Keomanichan, Assistant Director of Administration of the Commission of Plan, who accompanied us on our province visits.

## INTRODUCTION

Current United States legislation pertaining to foreign aid has drawn attention and priority of AID to the role that could be played by voluntary agencies. Concurrently, many of the AID funds available are being decreased; the role of the voluntary agency is thus being seen in new perspective. One explicit AID program which is reviewing the relationships and roles between AID and the voluntary agencies is that related to Laos.

Inquiries addressed to local representatives of the American voluntary agencies related to Laos work have been made by USAID Laos. One such was to CRS Laos. Upon consultation with CRS New York Headquarters, it was mutually suggested that a special CRS Survey Team be formed to come to Laos for a period of approximately one month to evaluate the role which CRS (or perhaps other voluntary agencies as well) might play in the future.

Following consultation with AID Washington and the US Ambassador to Laos, CRS invited such a team to be formed and to go forthwith to Laos. The purpose was to determine within Laos the following factors with regard to an envisioned program and/or projects of CRS for the rehabilitation and re-settlement of displaced persons within that country.

1. Which are the immediate needs within the areas of Community Development, Agriculture, Housing, Health and Nutrition?
2. Among these needs, which have been given priority by the Minister of Plan of Laos?
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8. Should needs be focused on community or family? Are there special needs for children?

9. Would the realistic facts in Laos limit the contribution by a voluntary agency to the immediate needs rather than long term development?

During Team briefing in CRS/New York, several general points of guidance were shared:

1. That the Team relate to the Provisional Government of National Union of Laos.

2. That to the extent possible, all recommendations be directed towards both sides of the current political separation, and that Laos be looked at as a single national country.

3. That particular scrutiny be given to the entire area of logistics.

4. That any agricultural input will have to be almost totally dependent upon the competence and capacity of the local government or tribal structure.

5. That the Survey Team, due to the limitation of time and purpose, not concern itself with individual socio-economic projects.

6. That the Team not be limited in its findings as to the scope of a program for Laos; rather CRS and/or other voluntary agencies would design their program according to the factors of the study.

## GEOGRAPHY

The Royal Kingdom of Laos is at present a country at peace in an area of southeast Asia which has a long history of war and colonization. Surrounded by North and South Vietnam, Cambodia, Thailand, Burma and China it is a potential oasis in a constant political dynamic. Landlocked, like Switzerland, with certain natural resources and a peace loving population, it has great potential as a source of food in an increasingly hungry world.

The Mekong River, flowing out of China, forms the border between Burma and Laos and a large part of the border between Thailand and Laos.

The total area of Laos is 229,840 (91,000 miles) of which 89%, especially in the north and east is mountainous, 3.5% is covered by hills between 200 and 500 m. in height and the remaining 7.5% consists of plains, especially along the Mekong River valley. At present 60% of the country is estimated as forest land and only 8% as arable land.

A population estimated in 1973 as 3.1 mill. inhabits the country, with 2/3 of it concentrated in the valleys and plains of the Mekong Basin under the control of the Vientiane government. Although the population density is estimated at 13 km, it must be remembered that the potential for redistribution of population is limited by the topography of the mountain areas. At present the population-growth is estimated as 2.4% per annum, although accurate statistics are not available at present.

The climate of Laos is determined by the monsoon, with heavy rains from May to October, a cool season from October to January and finally a hot humid season from February to April. The annual average precipitation in Vientiane is 171.5 cm, with temperatures averaging maximum 32°C, minimum 21°C.

It is estimated that there are 1,580 km of navigable streams in the country and 3,760 km of roads, subject to more accurate information from the northern parts of the country. There are seven airports with scheduled, commercial service connecting provincial capitals with each other and the outside world. In addition there are innumerable airstrips of widely varying quality built by the military during the war for strategic purposes and to service refugee communities, some of which could be maintained in future as needed.

The basic natural resources are timber from the forests, hydroelectric power from mountain streams, known deposits of tin and iron ore and a

potential surplus agricultural production of rice and coffee for export. However the agricultural potential suffers from severe restraints, as described below by UNDP:

"One of the principal effects of the war which has ravaged the country for more than two decades is the dislocation of the rural economy. The military operations and the massive displacement of the population have destroyed the old patterns of commerce. As these have never been replaced in a satisfactory manner, and especially not in a stable fashion, there is a great uncertainty about the possibility of marketing surplus production.

"As a result, agricultural production is above all geared to subsistence farming (70%). The remainder escapes the Lao economy by and large because it is exported directly, and consequently illegally to Thailand, where there is no lack of marketing and commerce. The lack of incentive to produce has contributed to the maintenance of agriculture in an archaic state. The lack of resources in the physical nature, such as the quality of the soils and the topography as well as the existing natural resources have limited considerably the government effort to promote agricultural production".

The present result of this sad state of affairs is a gross domestic product variously estimated at \$72 - \$100 per capita, depending on whether it is calculated on a monetary or on output basis.

## GENERAL OBSERVATIONS

The coalescence of the CRS Survey Team took place in Bangkok, Thailand, as Miss Haglund, Mrs. Mollerup, Dr. Smith and Mr. MacCracken embarked together on Royal Cambodian Flight 141 to Phnom Penh. There Father Masterson joined the team. We visited briefly CRS Cambodia refugee and emergency program activities. This was to provide us all with a brief but useful common understanding of a CRS program before entering Laos.

The Survey Team flew into Vientiane together on Royal Air Lao Flight 423, arriving in a brief heavy downpour, marking the end of the rainy season. We were met by CRS Laos director Mr. James Delaney and USAID Laos Liaison Officer Mr. William Luken. All of the Team's subsequent itinerary was handled by one or the other: Mr. Delaney and his staff for Provisional Government of National Union, Neo Lao Hak Sat, and private agency contacts including Caritas Laos and the order houses. Mr. Luken arranged the USAID Laos related briefings, meetings with the U. S. Ambassador and travel to and support by the USAID Area Coordinators. Housing and motor transport and some air flights were provided by USAID Laos and the private sector of hotels, meals, etc. were from CRS Laos. Team requests for specific interviews or changes of schedule were acted promptly upon whenever and wherever possible. Our sole disappointment was our inability to visit anywhere in the zone of the Neo Lao Hak Sat despite repeated requests to the Ministry of Economy and the Plan, Ministry of the Interior and to Neo Lao Hak Sat leader Saran Southichak.

The Royal Kingdom of Laos, Land of the One Million Elephants, is much a feudal society. The ancient tribal and royal societies have been buffeted by invasion, war and a limited peace. Each has brought a series of successive regimes and political concepts, one atop the other. The gentle, friendly Lao now have a country which continues in vast areas of the Vientiane side zone under princes, the King, the army military area commanders, the Chinese merchant mercantile structure, and the varying impacts of the national ministries.

The political structure at province level is under the province governor (Chao Khouang), but the governor has little budget control and even fewer funds for the responsibilities which he carries. The Ministry of Economy and the Plan anticipates that the province governors will have increasing authority and planning initiation, but there is a long way to go. Most of the national budget (primarily supported from external sources) remains under national ministry level and is disbursed to the provinces through ministry officials to subordinates on the staffs of the province governors.

War and the multiple systems of overlapping feudal systems have rendered tax collection haphazard at best. Limited tax income forces govern-

mental salaries to remain at impossibly low level. Inability to secure income through road block taxation, or other extra-legal forms, forces the agricultural population (80% of the Vientiane zone population) to bear intolerable burdens. Adequate rice to meet real need is grown; there is little incentive for a farmer to grow more. His needs are simple and there is no evidence of starvation anywhere in Laos.

Laos is in the midst of a gigantic series of changes: problems of war and refugees everywhere now change to problems of a coalition government in a new peace. National ministries alternate in the two top positions an official from the Vientiane side and from the Neo Lao Hak Sat side. In Vientiane and Luang Prabang, soldiers from each side mingle with the population in the Morning Market and share joint city police patrols. Apart from these two cities, there is little mixing.

Under the Provisional Government of National Union there are still two distinct zones, each with its own currency. The zonal boundaries are still being marked, and the national elections are presently estimated to take place only in late 1975 or in 1976; no one seems aggravated by the leisurely timing. A prisoner exchange has been negotiated and accomplished; current conversations are in progress for the return of the refugees to the other side.

Both zones are food importers and both have made it clear that an immediate urgent priority is to attain food self-sufficiency. It is reported that less than 10% of Laos is under agricultural cultivation and that there are vast additional agricultural possibilities. Both zones wish external foreign assistance towards this end.

Both zones also wish assistance in the repair and construction of roads, bridges and feeder roads. Transport and the economics (including roadblock taxes by whoever has the strength) are only part of the marketing problems faced in the Vientiane zone side. Just along the western border runs the mighty Mekong River, with a comparatively wealthy developed Thailand a canoe trip away. Lao coffee, many pigs and almost all of the lumber from Lao forests go across the river without either government control or taxation. As the forests are cut down, the logs are roughly lumbered into board and carefully stamped as Lao lumber; little is done to repair the forest ravage by way of reforestation.

From the air the Thai forests look rich; the Thai tax levy on lumbering is stiff and rigidly enforced. The Thai lumber dealers find that purchase of Lao lumber and payment of import tax comes to less than cutting down a Thai tree. Lao sawmill owners are among the richest people of modern Laos.

The market basket of village and town is the Morning Market. Fresh food is carted in from six in the morning and by ten a. m. or noon at the latest, the food stalls are closing. Stalls with clothing, drygoods, notions and appliances cluster in or around the Morning Markets and keep open until evening. In some of the larger cities there are Evening Markets, which transfer to another geographic part of the urban sprawl the remains of the foods from Morning Market. The stall owners and proprietors are mostly Chinese, though there are many Vietnamese. It is rare to find a Lao stall-tender.

The Lao diet is broad; the base is rice. A vast variety of green vegetables, fruit in season and protein are added as either found in the country or available to the individual pocketbook. A Morning Market may boast the normal beef and pork, chicken and other fowl, a vast variety of fish, clams, freshwater shellfish and even boxes of fifty pounds of semi-frozen smelts from Bangkok.

Members of the Survey Team have found vast varieties in the Morning Market of protein from mule deer to red squirrels, toads of every size down to clusters of insects. A popular availability for those with adequate funds is Ovalmaltine or the equivalent in a dozen brand names of vitamin enriched milk powders. But, while starvation is rare, malnutrition is substantial in both urban and rural areas.

Malaria is the major medical problem, with varying strains in various areas of the country. One cannot estimate the toll in lives, energy and community through massive malarial debilitation.

Public health, or even the awareness of basic dimensions, is unrecognized. Water is polluted everywhere except from dug wells in some areas. In one city there are two commercial ice plants; one has pure water from a dug well, while the other freezes untreated and polluted Mekong River water for the customers.

The monetary unit of Laos is the Kip, which has three levels of recognized exchange: 600 Kip to \$1 for priority imports which include chemical fertilizers, seeds, insecticides for agricultural use, milk and sugar. The second rate is 840 Kip to the \$1 for rice, live animals (pigs, cattle and buffalo), petroleum products, pharmaceuticals and medicine products, office furniture and supplies, and school supplies. A second and third priority for the 840 Kip rate includes cotton, cement and machines. The third rate, a free floating rate, is now at about 1150 Kip per \$1.

The cities of Laos are smaller than their fellow cities of Asia; less than twenty per cent of Laos live in cities. Of the working population on the Vientiane side zone of 1.6 million, 80% are estimated to be in subsistence

farming. The flow of refugees has been stemmed into the rural areas, from which some refugees are even now moving home to land in the other zone.

As the new (since April 4, 1974) Provisional Government of National Union assumes its responsibilities, the problems are massive. While the Team is unaware of the extent of external assistance being provided to the Neo Lao Hak Sat zone, it is evident that only massive international assistance in the Vientiane side zone is keeping the economy afloat.

The Foreign Exchange Operations Fund (FEOF) was established in 1964 to try to provide a base for economic stabilization. The United States, United Kingdom, Australia, France and Japan are major contributors, but the funds, according to the Ministry of Economy and the Plan, are inadequate to meet the increasing budget deficit. The United States contribution in current year amounts to \$17,000,000. In 1975 an FEOF rate of \$38.8 million is required, of which the Laotian government portion is \$6 million.

The United States, in current year, has brought \$50,000,000 into Laos, of which \$17 million is for the FEOF. As US foreign aid is decreasing, the primary purpose of the Ministry of Economy and the Plan's six year plan is to solicit additional external foreign assistance. The Plan covers six years for an asking in excess of \$200,000,000. Cabinet rank ministers have and are now visiting world capitals to seek these funds. While final reports have yet to come in, preliminary responses have not been heartwarming to the government.

The USAID Laos program has been concentrating upon refugee and emergency assistance for the recent past. The refugees are those who primarily sought sanctuary in the fighting in 1972. Many have been located on land and are now self-sufficient. Some, such as those in the hills in the North or on the less fertile Vientiane Plain, still require USAID assistance. If agreement is reached that they may return safely and confidently to their former villages, this problem can be brought briefly to a close in less than the seven years or so estimated by USAID Laos last year.

The USAID Laos program has made major contributions through its financial assistance directly to the Provisional Government for National Union, the support of the FEOF and the very utile support to Travail Publique (Lao Department of Roads and Public Works). Hundreds of schools and nearly two hundred medical clinics have been built, along with thousands of dug wells, dams, fish ponds, bridges, airport maintenances, etc. Hundreds of thousands of refugees have been helped in clothing, housing, feeding and re-equipping. Thousands of USAID employees have been trained.

During the war, an entire USAID transport and communications network was established and maintained. Hospitals and contracts with Operation Brotherhood (a Philippines agency) provided direct province level medical care. The hospitals are in process of turnover to the PGNU Ministry of Health from Operation Brotherhood. There are other varied contract and secured relationships in support of Laos and the PGNU.

The USAID support to date has been only in the Vientiane side zone; there is a willingness to hear and receive requests for assistance to the Neo Lao Hak Sat zone, but none has been received to date. There is no problem in USAID Laos thinking about a voluntary agency preparing or working on a program on the other side. There is no available data in Vientiane as to what the other zone might need explicitly other than the verbal comments of the leaders of the Neo Lao Hak Sat, such as the Survey Team received in a three hour conversation with Mr. Sonan Southachak, who is the principal representative for the other zone located in Vientiane (and who is a member of the National Political Council of Coalition of the PGNU).

United States concerns have been varied and complex. With the war over, there are still varied support efforts. It is the sense of the Team that commitments have been made to General Vang Pao, commander of the Meo forces, whose headquarters is in Long Chienq. Then there are special American funds that support an agricultural redirection effort for the opium growers in the Laos segment of the Golden Triangle. Those redirection efforts which members of the Team saw are valiant but have a long way to go. After all, it is easier for an uplands farmer to come to market once a year with a load of 70 kilograms of opium than to have to carry on his back seven tons of the finest fruit or vegetables. There are few if any roads to the higher reaches where poppies thrive. Even now, around the redirection efforts, one can see in the higher meadows the lime green of the young poppy shoots.

The problem of the refugee tribal groups in the hills of the North is great. The traditional practice of the tribal farmers is to slash and burn the forest and vegetation to clear fields for rice. After one or two seasons the field, unfertilized at all, grows weak. So a new field is slashed and burnt, with a potential cycle of five to eight years before one can return to a weakened field. The vegetation must grow up adequate to good burn-off, which is what takes five to seven years after the last harvest.

There is such a concentration of refugee and military force tribal people in some areas, particularly around Long Chienq, that most of the forested hillsides have been layed barren. The sole solution in the long run seems to be the broader dispersal of the people. Land is not the urgent short-fall in Laos that it is in so much of the rest of the world. The estimated demographic density of Laos is 11 persons per square kilometer. There are some two million Lao and tribal peoples in the Vientiane side zone, which composes

only 15% of all of Laos. In the remaining 85% of Laos, under the Neo Lao Hak Sat zone, are only about one million people. In fact, President Souphanvong of the National Political Council of Coalition, called for 3/5ths of all external assistance to be keyed towards the other zone in a speech on November 5, 1974.

According to the United Nations, Laos is among the twenty-five least developed countries in the world. Having no access to a sea port, Laos from the Vientiane side zone is dependent upon Thailand. Presumably the Neo Lao Hak Sat zone is totally dependent upon North Vietnam access to port. Potential reserves of tin concentrate could help the economy. Other mineral resources are presumed to exist in abundance, although the Survey Team could not find any indication of a mineral survey. Thus we have dealt with a comparatively subsistence farming society, where the immediate needs relate to the production, marketing and consumption of food. The Team is convinced that under the most elemental processes of development that Laos could become an important food exporter. Indeed members of the Team think, in the face of apparent world hunger and the seeking of food purchase markets, that the Laotians themselves may soon be faced with the phenomenon of external food purchasers literally buying the rice out of the Morning Markets at higher prices for shipment abroad. At that point the malnutrition that affects the subsistence farm family will be magnified by real hunger. There are no apparent internal controls, other than supply and demand, over the Laotian market practices.

The Laotian subsistence farming level is too poor for the purchase and use of fertilizers. Varied efforts have been made with improved seed and various techniques. But the Survey Team was repetitively impacted by the change in strategy or the loss of memory of those who were endeavoring to help the farmer. In the final analysis, it appears that the Lao farmer, subsisting as he does on rice, reverts to lowland or upland rice growing. The other efforts at fish ponds, vegetable or fruit growing, or even tries at tea (which grows there wild) or coffee seem to fade before they catch on and the return, as ever, is to rice.

When the Survey Team inquired about cooperatives or about marketing unions, in an effort to improve primary merchandising and to reduce the multiple road taxes, it was indicated that these had failed to take hold because of the fear that the official who held the funds would abscond with the treasury. It was safer for the woman of the household to keep the money secure.

There appears in much of Laos to be adequate land. The general rule of thumb is that a worker who settles upon the land and works it for three years then holds title to it. Land title in Laos is a matter of infinite complexity, which hardly phases a Lao. He knows where his land is, and so do his neighbors. That appears adequate to him. He hardly understands the foreigner who comes in with a will to get clear land title for him.

Sometimes there will appear to be untenanted land and, if something nice evolved on that land, a man or a village chief will show up and claim it from some historical perspective. Other land may belong to a prince, who evicts the tenant. But there is other land, and not so many people. So there is a passivity and an acceptance of land title vagary that pertains.

One can see when a Lao has decided to settle permanently on land through the change in house improvement; from woven frond walls to solid wood or the equivalent. The village that prospers shows the addition of new rice storage huts; another sign that the village is remaining.

A final observation about the Lao: they have infinite relatives in their extended family. If the PGNU succeeds, much will have resulted from the extended family relationship between the sides and the zones.

Laos is a small nation, with Vietnam and Cambodia to her East and South still battling. On her West is economically mighty Thailand. In her initial eight months of provisional government, Laos has produced an initial five year plan to address her economic woes. The Plan was drawn in short order in Vientiane by the staff of the Ministry of Economy and the Plan. Many have derided it, but it constitutes an initial major effort to address the task ahead. (Appendix B) The province governors, many of whom have not even read the Plan, have been assured that the next five year plan will be written initially at province level. When this process will start is too early to know. The Vientiane zone province governors were only informed of this planning and priority strategy at their annual meeting in November 1974.

The zone under the control of the Neo Lao Hak Sat is also preparing reconstruction and development planning. The PGNU awaits receipt of the plans from the other zone.

In the interim, the economic statistics of Laos are devastating. The prospects before this, one of the most underdeveloped in the world, small country are staggering. The elite small groups of the varied feudal reigning systems will do well; the eighty per cent of subsistence farmers will have difficulty to sustain themselves unless they are helped. This is not a short term proposition, but the longer one of basic development. Even if all foreigners were to go home and leave Laos in peace, the traders and merchants from the rich and hungry areas of the rest of the world would soon seek out the food grown here and take it.

The future pages of history and geography books may record this period of Lao history as an interim. We cannot know the future; voluntary agencies for twenty-five years have learned to deal with the pertaining situation. If the situation changes tomorrow morning, change our planning accordingly. But generations of refugees, who have been helped by voluntary agencies, have

awaited their "tomorrow morning" for over two decades now. Thus the voluntary agencies deal with the realities of today, ever ready for change.

The work that voluntary agencies undertake now on the Vientiane side zone may well influence and determine the future of acceptance for work in the Neo Lao Hak Sat zone. There is a patent human need, an unanimous invitation to come and work, and the realistic possibility that the three million people of a one day unified Laos can be substantially assisted to rise above the bare subsistence survival level. For this, many voluntary, governmental and United Nations agencies efforts will be required. But most of all, with the encouragement of the assistance now so desperately needed, the Laos themselves may come to the point where they can truly fend for themselves in a unified country without external input.

## USAID Laos

The United States Aid Mission to Laos has carried a large responsibility for the past decade and more. Emergency and refugee assistance during wartime is complex enough, but in Laos there were needs for the building of communication and transport logistics almost entirely separate from those normally available in a country. Direct and indirect assistance in a wide variety of practical and fiscal fields was necessary. Much has been accomplished under extraordinary circumstance.

The United States foreign policy is to provide support and recognition of the Provisional Government of National Union. This takes many forms, including budget support of the PGNU and \$17 million in support of FEOF, the currency stabilization fund.

USAID Laos assistance in other areas of roads, refugee aid, development projects, building of schools, dams, etc. is reducing. In accordance with expressed Congressional intent that the voluntary agencies be used, USAID Laos has commenced a series of inquiries with the voluntary agencies now operating within Laos as to whether they have the wish or the capability to expand their activities in lieu of USAID Laos direct operation. The inquiries are unlimited in terms of aspects or components of USAID Laos historical program, which would be available for turnover consideration to the voluntary agencies if they expressed interest. Indeed, the CRS Survey Team inquiry stemmed from an USAID Laos inquiry to CRS Laos.

The CRS Survey Team has received all assistance and support possible from USAID Laos and we are appreciative indeed.

Currently USAID Laos is in the process of change, reduction and conversion from emergency and ad hoc measures - valid in wartime - to providing decreased supportive assistance to the PGNU. There are continuing assistance programs to refugees, completion of schools which have been started, and maintenance of medical and agricultural assistance. Attention is paid to the increased peacetime sensitivities of the Vientiane side zone as well as those of the Neo Lao Hak Sat.

USAID Laos, the Ministry of the Interior PGNU and the voluntary agencies of course are all prepared to assist the return of the refugees when such return has been determined. The conversations on this topic are in progress, and the Ministry of Interior and Social Welfare has commenced asking refugees whether they wish to remain where they are, resettle to other parts of the Vientiane side zone or return to their former homes in the other zone. If the refugees, for the most part, do determine to return home, this movement should be able to be accomplished rather promptly.

Conversations with Lao representatives of both zones indicate that there is a potential willingness to accept voluntary agency help. Each agency and program will be looked at on its own merit. It may be presumed that the style and sensitivity of voluntary agency work on the Vientiane side zone will be studied by the Neo Lao Hak Sat. Their estimate will thereby become a part of the decision as to which agency may one day be given permission for work in the other zone.

Upon CRS Survey Team inquiry, we were told that neither side had objection to the source of funds. It was thought by each side that private agency or government funds from Europe would be desirable, but each side also made it clear that American funds would be as welcome; indeed USAID funds were acceptable without question.

The Survey Team proposes that initial negotiation for a new working agreement within Laos be commenced with the Commissioner of Plans, Ministry of Economy and the Plan. When basic understandings and priorities are sketched out, then conversation with AID Washington and USAID Laos would naturally ensue.

## PUBLIC HEALTH

The team members had opportunities to visit a variety of health facilities in the areas visited. Despite an enormous effort and financial input on the part of USAID, U. N. agencies, the French government and the RLG/PGNU, the lasting results achieved so far appear to be minimal. In FY 1973 USAID spent \$3,122,000 in the health sector for a population of 2 million people, in 1975 UNDP is budgeting an expenditure of \$2,450,000 by UNICEF and WHO, in addition to which should be added PGNU expenditure through the Ministry of Public Health for the maintenance and operation of existing facilities.

In the past hospitals and dispensaries have been built with external aid, foreign medical teams have been employed to man health facilities and train counterparts, medical supplies have been made available in enormous quantities and scholarships have been provided for training programs both within the country and abroad.

Of the facilities visited, one hospital, run by an expatriate team, was acceptable; the remaining 5 were not up to the standard one would expect given the amount of external support available. Of the dispensaries visited, both USAID and RLG, only two appeared to be providing the kind of service for which the personnel had been trained and supplies provided.

The overwhelming impression in all medical facilities was the incidence of malaria (60-80% of hospital patients). The next largest group suffered from gastro-enteritis. Almost every hospital patient was receiving I. V. fluids, where there were any available, due to the chronic dehydration caused by malaria and gastro-enteritis.

It would appear that health education encompassing malaria eradication through local domiciliary spraying and prophylactic chemotherapy among selected population groups, hygiene, sanitation and clean drinking water would go a long way toward improving the general level of health of the village population.

Mother Child Health Centres would, if effectively integrated into communities, considerably reduce child mortality and morbidity, and would provide an opportunity for nutrition education among local women.

The existing dispensary network could become more effective in the local communities if the staff were put through refresher courses, integrated under one management, guaranteed a minimum supply of essential medicine on a regular basis, and encouraged to undertake public health education programs. The dispensaries, as they exist now, could be used as local re-hydration centres for malaria and gastro-enteritis patients who do not require hospitalization for other reasons.

However the essential element in the successful implementation of any health program is obviously the understanding, interest and concern of health workers and community alike which can best be achieved through sustained educational programs integrated into all activities schools, agricultural extension, MCH facilities and whatever other opportunities can be created.

## THE VOLUNTARY AGENCY ROLE

Assuming that suitable arrangements are made with the PGNU for a program of development in all geographical areas in Laos, and assuming that CRS together with a group of church related and humanitarian agencies is prepared to provide and/or channel funds for use through the program, there are a variety of operational problems which must be faced realistically and solved practically if a program is to have any chance of reaching the people it is trying to serve.

North American and European agencies have in the past worked together for various reasons in a variety of formal and informal structures created to meet current needs as they arose.

Some of these structures have continued, others were dissolved as the specific situation for which they had been created changed. Often the best aspects of one pattern are remembered and included in the next, sometimes they are forgotten.

The situation in Laos presents a challenge which cannot realistically be met by any of the existing patterns of cooperation. It is not an emergency, it is not even a major refugee resettlement problem any longer. It is a problem of helping the people of Laos to utilize the considerable potential of the country in terms of natural resources, in the face of a discouraging economic tradition and an unresolved political structure, to attain at least self-sufficiency in food production and an acceptable minimum of money for the acquisition of essential imports.

Assistance toward the attainment of these goals in Laos is a legitimate objective for voluntary agencies to pursue, whether they be North American, European or international agencies. However, in view of the fact that Laos is not a large country, that it has a small population, and that the operational obstacles are considerable, it would seem only reasonable for all voluntary agencies to coordinate their efforts, to standardize their arrangements with the PGNU and to share certain facilities in order to cut cost and increase efficiency.

Given the willingness to participate in some agreed form of development program in Laos, the agencies concerned would have to form an ad hoc structure outside Laos through which resources could be channelled. This parliamentary structure should be serviced by a separate secretariat, formed for the express purpose of acting as the head office of the Laos field program. All matters of policy would be coordinated between the field and the parliamentary structure through this channel, which would also serve the field program in coordinating personnel recruitment and administration, logistics, supplies and communications as well as coordinating all reporting to the parliamentary

structure and the donors. Short term emergency programs have in the past been very successfully coordinated without the creation of additional secretariats. But, given the goals in Laos and the conditions under which they must be achieved, it appears essential to have a full time staff geared to the dimensions of the program.

Within Laos there are several voluntary agency programs, representatives of U.N., specialized agencies and a range of bilateral governmental development projects and programs. Some of these present potential opportunities for cooperation in terms of funding, personnel or facilities for specific projects. However, none of them represents a base on which to build a new program, and none of them have entirely the same goals as a voluntary organization consortium would have.

Thus, although funding might be sought from governmental and U.N. agencies, food supplies provided by WFP, and technical expertise borrowed from any of the agencies and organizations in country, a voluntary agency consortium would need its own field headquarters manned by sufficient experienced administrative staff to ensure that everything possible in the way of support is provided to the projects agreed upon.

The head of the office must have ample time, together with Lao and expatriate colleagues, to formulate, plan, discuss at all levels and evaluate any projects undertaken. By its very nature this task will be infinitely time consuming. No project that is not completely understood at all levels, and that does not represent a genuinely felt need from the village level via the district and provincial officials right up to the technical exigencies of the Ministry of the Plan and the political priorities of the PGNU, has any hope of meeting the needs of the people and the goals of the volag consortium.

Once the administrative staff in country have found mutually agreeable projects, the office must be expanded to include the personnel and facilities required to support a field operation professionally. This includes personnel management, which is always more demanding under unusual circumstances than in normal development programs (where it can be demanding enough); communications support, and logistics. It seems realistic to assume that satisfactory (acceptable) support can be organized utilizing existing and planned Lao infrastructure with a minimum of external facilities.

On the Vientiane side the PTT will within two years have a microwave telephone service between provincial capitals; at present the telegraph service is adequate between major towns. Field operations in isolated areas would have to be served by radio telephone, hopefully linked to the national PTT in order to allay mistrust of private communications networks.

The national airline provides international connections and serves several provincial capitals on a scheduled basis. It would provide a backbone of personnel transport and could be used to airfreight urgently needed medical supplies, spare parts and equipment. In addition, the airline has charter aircraft of various sizes available which could be used for moving large quantities of urgently needed supplies to central distribution points. Communications aircraft would be extremely useful for supervisory activities and personnel support (not least medical evacuation) and should be based on charter arrangements with locally based private companies if possible. Otherwise the volag consortium should request permission of the PGNU to organize its own communications flights on long-term charter contract basis with the option of making surplus capacity available to other agencies having similar goals.

The road net on the Vientiane side is suitable for the movement of bulk supplies from the point of import (Thai border) to most areas and should, with the completion of the political arrangements currently underway, provide access to central points in all provinces. In years to come, it is anticipated that roads will be built eastward to ports in North and South Vietnam, thus shortening the distance to shipping facilities and diversifying dependence on foreign transport companies.

The Mekong River will also become a viable route for the transport of bulk supplies between the Thai border and several provincial capitals in the Mekong Basin at certain times of the year.

It seems unlikely that it would be useful to maintain fleets of trucks and barges for long distance movement of bulk supplies. This should be done on a commercial basis, in order to encourage the expansion of the local transport network, which is essential also to the marketing of local products. Even on a local basis, trucking should be arranged commercially, possibly with the formation of transport cooperative associations, to encourage local infrastructure. Vehicles for personnel transport and heavy equipment would have to be managed by the program or projects. It is absolutely essential that all vehicles and equipment be well suited to the working conditions and equally essential that service facilities and spare parts be available commercially, unless, of course, the project involves the training of motor mechanics and spare parts storekeepers. However, this is an expensive and time-consuming job which should not be entered into casually.

There are from time to time auctions of used vehicles and equipment; this should only be considered as a source of supply if the items for sale are exactly what is needed. Otherwise the problems caused by breakdown and lack of replacement parts will ultimately become a major impediment to the progress of projects and an unbudgeted expense of appalling dimensions.

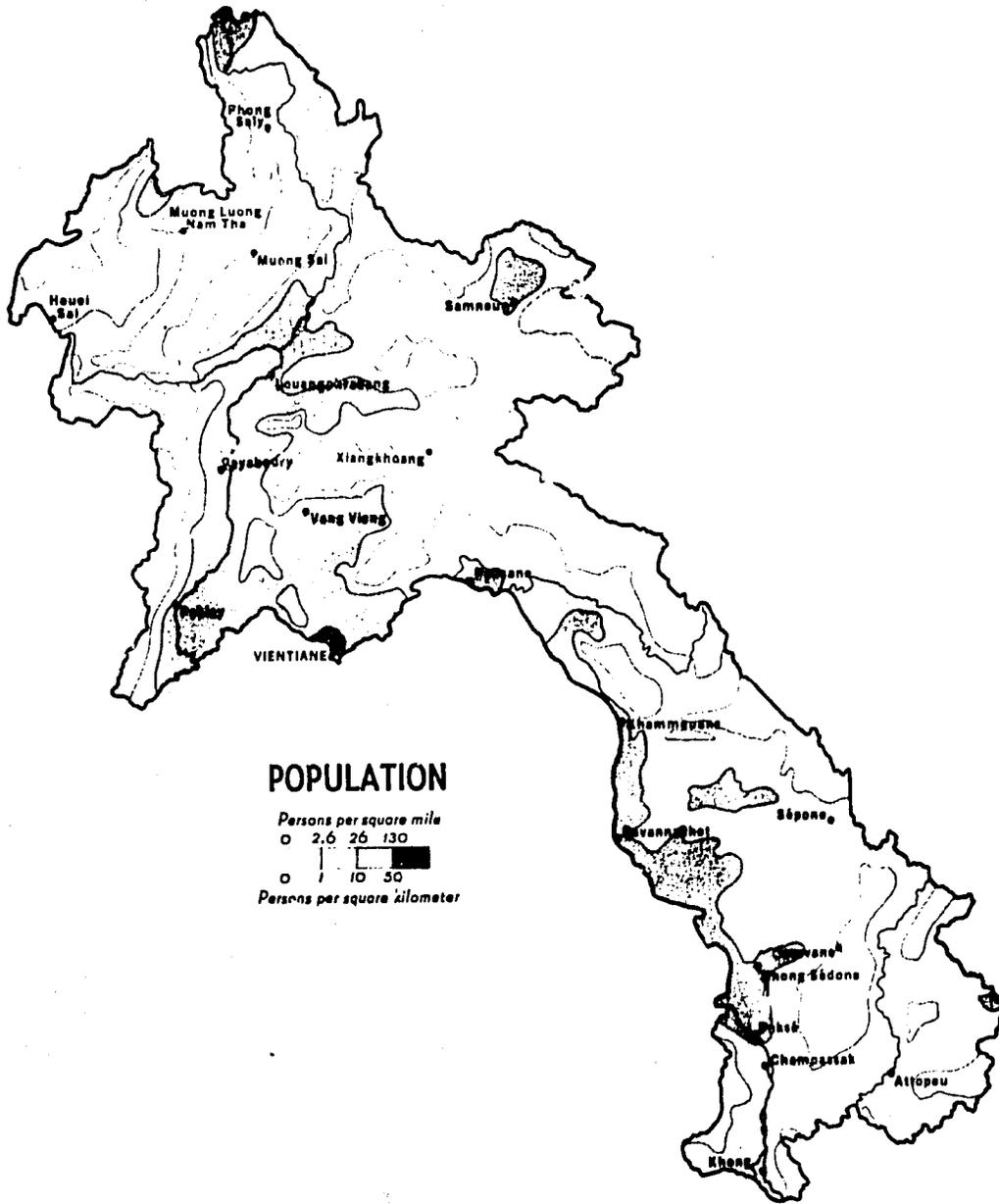
Supplies and equipment will almost universally have to be imported from abroad. There are several good supply centers in the area (from Japan via Hong Kong to Singapore and Bangkok). Only in exceptional circumstances should purchase directly from Europe or North America be considered. However, American onshore purchasing opportunities should be closely studied wherever they can provide comparable, suitable, serviceable, equipment within a reasonable time frame. In addition, the UNICEF warehouse in Copenhagen should be considered, as a source of supply especially when standardized institutional equipment is required, in order to fit in with other national and international institutions where personnel may have been trained, especially in medical work.

The overseas and field headquarters logistic and supply staffs must be carefully attuned to the precise needs of the project technicians, and very serious consideration must be given to providing only what is required (as close to original specifications as possible). Electrical equipment which is not built to local power supply standards is useless in projects, as is machinery for which suitable fuel is not locally available on a regular basis. Hand pumps (with handles that break soon after installation) are not relevant, no matter how cheap or even free they are. It is bad policy for any organization to raise expectations among staff technicians and the recipients of the services by making promises which are not fulfilled and by providing supplies and equipment which do not meet specifications.

Project technical staff in the field must be provided with adequate administrative support within the project. Irrigation engineers, animal husbandry specialists, doctors and nutritionists should not be tied down with local personnel, accounting, communications and logistic duties other than those pertaining to their specific field of expertise. They should only be expected to provide information on requirements and results to the appropriate administrative desk(s) within the project. Qualified specialists who meet the requirements of the projects undertaken will be far too valuable and rare to have their time wasted on administrative duties which could be performed better by well qualified administrators.

During the past 20 years a large number of expatriates have worked in Laos for governmental, international and voluntary organizations. Many of them have learned the language fluently and several have stayed in the country for up to ten years or more. Among these people, some of whom are still in country, there is a fund of knowledge, experience and dedication to the Lao people which could be invaluable to any new venture in the country. Repetition of mistakes and duplication of effort could to a large degree be avoided by the employment of a few of these people in both planning and implementation of projects.

In addition to the experienced human resources available there is an enormous fund of technical information compiled over the years by specialists working for refugee, rehabilitation and development agencies in Laos. There is apparently no accessible record of these technical documents at present. It should be a high priority concern of any volag consortium that an annotated bibliography of all relevant documents be made available to technical staff for planning purposes.



LAOS

## AGRICULTURAL OBSERVATIONS

The main crop produced is paddy rice grown during the rainy season with limited production of dry season rice due to the lack of dependable distribution systems from the water sources. A large acreage of rice is produced by the slash and burn method which involves cutting trees and vegetation in the hilly forest areas, burning it, then seeding the area without tillage. The fertility runs out, weeds come in after two to three years and the field is abandoned and the farmer moves on to repeat another slash and burn operation. A very large area of the country has been denuded and is opened up for extensive soil erosion. This no doubt results in flooding downstream in the rainy season since the water is not held back in the forest areas.

## CULTURAL PRACTICES

### Slash & Burn Rice

Very little if any fertilizer or pesticides are used in the production of this crop. No machinery is used to produce the crop. The rice is stripped from the plant and the straw is left in the field. Ashes from the burning apparently supplies some of the nutrients for growth. Yields are about 800 kilos per hectare on the slash and burn areas. The second year the soil gets hard and the soil becomes open for annual weed growth which requires some hand weeding. The next year the soil gets harder and weeds become more competitive, then it is abandoned.

### Paddy Rice

Machinery used is a plow pulled by a water buffalo or oxen and a row marker. Farmers plow after flooding when the soil is soft. No other machinery is used except a few hand sprayers and a two-wheeled cart pulled by oxen or buffalo used for hauling the rice out of the fields. The majority of the paddy rice is cut by hand using a sickle blade, bundled, dried and threshed by hand by beating the rice bundle on a plank. Very little fertilizer is used. Pest control is usually limited to controlling the visible insects in the seed beds. Very little if any fungicides are used commercially. The economics and affect on yield of using insecticides and fungicides on the rice crop are unknown. No herbicides were in commercial usage and no herbicide specialists are present in Laos. Flooding is the main cultural practice used for general weed control.

Insect and disease symptoms and damage were observed throughout the country. The reduction in yield caused by insects, diseases and low fertility could easily account for a 50% reduction in yields. This is an estimate since no accurate data is available.

## Rice Research

The new rice research station is a beginning of a search for answers which may increase rice yields. The emphasis is on new variety introduction which is useful. Insect surveys have begun and attempts are being made to evaluate the insect situation as related to damage and yield affect.

## Rice Disease Research

This is still in its infancy and should be supported.

## Insect and Disease Control Plans

No known effort is being made to establish a practical aerial insect and disease control program on rice. Inquiries about the use of aerial application of insecticides and fungicides were generally questioned as very impractical. Because of the absence of knowledge in this usage it would be desirable to investigate the possibilities. Airplane spraying with the Grumman Agcat can do the work of at least 2,000 farmers using hand spray equipment and do it on time and with more even coverage, cheaper, and safer. With the cooperation of the rice research, farm aerial spraying should be investigated. The same airplanes could be used for fertilizing. In the off rice season the same planes could be employed for mosquito control to reduce the incidence of malaria. The Agcat plane will spray 60 to 80 acres per hour or roughly 400 hectares per day applying 10 gallons per hectare which is sufficient for insect and disease control. Spraying rice fields by air is a brave step forward but this kind of new technology is available and can easily be imported if it is needed and if it is economical and if Laos officials desire to increase their rice yields. The farmers are asking for pesticides and are ready for an effective program at the least cost with the greatest return. Most all of the flat land rice would be satisfactory for airplane application which is 3/4 of the Laos rice production area. Arrangements should be made to evaluate and eventually introduce aerial application of rice pesticides. This is a high priority need in Laos.

Seeding range crops and fertilizing range areas could also be done by air but needs further study in Laos. Done at the right season it may be possible to establish range grasses without the costly tillage operations using aerial application methods.

## Livestock

Most cattle seen in Laos are small and generally thin. Water buffalo appear to be very healthy and are constantly foraging in the rice straw and underbrush.

An improved forage program is needed to supply higher quality feed to the beef animals. Green chop and low cost surface silage storages covered with black polyethylene could be used for the dry season feeding period. Desirable forage grasses are growing on the experimental farm near Savannakhet and could be promoted by trained extension agents.

Hog production was observed in Na Phok, Luang Prabang, and a few other areas. Local feed supplies included some corn and soy beans but most of the feed had to be purchased. As yet there is not a good feed base for swine production and the pig competes with humans for the feed that is produced. Most corn fields were hand planted, weedy, and showed nitrogen, phosphorus, and potassium deficiencies and in general were low yielding. No attempt has been made to utilize herbicides on field corn or sweet corn. Corn growing at Hat Dok Keo pilot project was the best corn growing in Laos. Sweet corn and field corn growing in the refugee villages were under watered and showed most of the common nutrient deficiencies.

Soy beans were being thrashed by hand in many of the refugee villages and had a good pod set. No commercial plantings of soybeans were observed. Most of them were small patches.

Vegetable growing is primarily limited to home gardens with the exception of a few Japanese demonstration plantings of head cabbage near Savannakhet and Vientiane and a planting in Bud Lane's area with a local farmer's cooperation. Most irrigation is by flood or the sprinkling can.

At Luang Prabang, Christian Lezy has established a commercial farm producing garlic, onions, peanuts, long green beans, strawberries, some rice, various fruits, coffee, swine, and chickens. He has spent at least \$70,000 in establishing terraces and an irrigation system. Although he is not a farmer he had some of the best commercial plantings in Laos. Drip irrigation samples were demonstrated to him and he is going to order enough for a commercial trial on this farm. Fruit production in Laos is thoroughly described by Charles A. Duncan who did an extensive survey in Laos in 1974 pointing up the potentials and areas which need urgent support for further development.

#### AGRICULTURAL POTENTIAL

The best acreage of soil in Laos for vegetable and fruit crop development was shown to me by Kenthong Vixay Vone in Pakse. He is one of the best informed field workers I met in Laos. This area was chosen as a potentially excellent growing area before I read Charles Duncan's report which confirms my observations. The area contains the most vigorous vegetation in the country with a deep alkaline soil mostly flat to a slight slope with excellent fresh water streams. It contains about 2,500 acres and should be the preferred area to establish a commercial vegetable growing industry. It could include a com-

bination of processing and fresh vegetables. Commercial crops for canning could include snap beans, asparagus, tomatoes, and sweet corn. Field crops could include soy beans, sorghum. Fresh vegetables could include lettuce of all types, cabbage all types, onions (green and bulb), garlic, shallots, squash, pumpkin, peppers, eggplants, cucumbers, carrots, sweet potatoes, and radishes. This soil could be properly maintained with green manure sorghum crops plowed under after 6 weeks of growth.

Sprinkler irrigation could be introduced into this area since the streams are conveniently located throughout the area. Drip irrigation could also be used on the longer season row crops. An applied research demonstration and training farm could be located in this 2,500 acre area as a base of operations to increase the productivity of the area.

Rainy season vegetables may also grow in this area with the use of plastic shelters vented at the sides to prevent rain damage.

Since many of the soils are acid in Laos ground limestone facilities are needed in the potential usage areas where crops would respond to Ca and Mg CO<sub>3</sub>. A bulk spreading service and bagged lime distribution system would be needed to get the lime to the user.

#### RESEARCH FACILITIES

The Hat Dok Keo pilot project has been doing extensive research on new cropping systems to supplement rice production. Promising results have been obtained growing soybeans, peanuts, field corn, and improved rice varieties. The research farm staff were asked to propose their needs which would strengthen their research program. A copy of this proposal is attached. It is an example of their desire to get on with the research work which is desperately needed and points up their lack of equipment needed to do the job.

#### AGRICULTURAL SUPPLY SYSTEMS

ADO is the main organization which has established a farm supply distribution system. The Agricultural Development Organization is also engaged in some marketing schemes which have had varying degrees of success.

The ADO managers were requested to present their priority project needs which were provided by Mr. Resseguie. A copy is attached.

#### FARM MACHINERY

Very few tractors were seen doing any field work in the country. The King's farm has 4 or 5, 2 to 4 plow tractors which are used to work in the citrus orchards. The Japanese rice experiment has the largest number of the

small 2 plow tractors, discs and rota tillers. Hat Dok Keo project has a few old tractors for plowing and tillage operations. The Japanese project has a 2 row corn planter made in France which is about 40 years old. The new vocational school near Savannakhet has a new John Deere tractor with a full set of tools. An attempt was made to plow this area using a disc plow earlier but it was an extremely poor job. A mold board plow is needed to do a more effective job of plowing. Near Hat Dok Keo a small 2 plow Japanese tractor was seen attempting to disc a plowed field. This tractor is much too light for general soil preparation. No tractors were found in the country which could be used for small vegetable farms such as the Allis Chalmers G or the IHS -- 130-140 or Super A types. For corn, soybeans, and small vegetables these kinds of tractors are needed for seeding and cultivation. Presently most of the seeding is by hand and weeding is done using hand tools. The Hat Dok Keo farm would be the appropriate place to introduce this kind of small tractor. For plowing and seed bed preparation the 60 HP tractors are needed. This is being done by a few custom operators. Small farms could begin to mechanize using the small tractors after the fields are prepared by the custom operator. The small farm tractors could also be used to pull a tractor or wagon for hauling supplies in and crops out of the fields.

The Japanese roto tiller seen in a few of the ADO stores is used widely in Japan to replace the paddy rice water buffalo. This tiller is not designed to work in dry land farming. It is made for rice paddy work only.

#### NO-TILL SEEDING

There is a possibility that no-till seeding of soybeans could be done in dry season rice fields where the PH and soil fertility are corrected. No-till involves a piece of machinery which seeds into unplowed ground. Herbicides are needed for selective weed control.

#### IRRIGATION

Farmers visited in the Savannakhet area indicated a desire to expand their dry season rice production to grow two crops of rice a year. Numerous irrigation projects are needed to open up the dry season rice production potential.

#### DRIED FRUIT POTENTIAL

According to Duncan, many fruits can be grown in the area. As suggested by Mr. Cosgrove, a dried fruit processing facility could serve as an organization for marketing the fruit after it is produced. Drip irrigation systems would improve any fruit industry development.

## MAXIMUM OPPORTUNITY PROJECTS

1. Establishing range land with aerial application of fertilizer and seed offers possibilities to establish a base for a livestock industry. These trials could be run in the level, rich Pakse area and also in the slash and burn hilly areas around Luang Prabang. On the high PH soils legumes such as alfalfa and ladine clovers may warrant trial along with the desirable grasses. Information needed on the most suitable varieties should be available from the Australian forage test station Na Pani.

## EXTENSION SERVICE

The Laos extension service people have a great need for advanced training in all areas of crop and livestock production. An extension personnel development training office is needed within the Extension Service to assist in upgrading the staff. Fellowships are needed so that the extension staff can take study leaves to colleges in Thailand, Japan, and other countries to improve their skills. With increased skills the extension events should obtain satisfactory salaries to keep them on without the need for other part time employment. Funds should be provided to assist the agents in initiating applied research projects in cooperation with farmers and the appropriate research specialist.

Tobacco production appears to be a good cash crop and purchased by the tobacco companies of Laos.

Had a visit with the Chief of Agriculture, Mr. Oroth and he indicated that there was need for project development but they must be well planned and involve the farmers from the beginning so that they have a feeling of being involved in the project. Too many projects have been imposed on them of such great magnitude that they don't understand or comprehend the purpose. Building a ditch by hand means more to them than the construction of large dams over which they have no control. When something washes out of a big project the farmers are confused and can't get the damage repaired and can't fix it themselves. Projects should be kept small and simple. Mr. Oroth thought airplane spraying was much too advanced for Laos and thought that at least a 50% increase in yield would have to be obtained to make it worth while. He indicated that projects should be conceived which would use livestock and crops as a base so that farmers would not have to buy fertilizer. He would like to see a beef cattle crop and part time plan set up for the KM 8-24 area near Pakse. It should be planned to involve the farmers in the area so that they can produce meat animals and provide manure for the crops and attempt to do it on 5 hec-tar units. He is ready to discuss development projects of any type which are well planned, simple, and with a benefit to the Lao farmer. He felt that the program to assist the farmer in the poppy growing area was a failure so far since the farmers do not have a satisfactory income crop as a substitute. He thought a substitute crop should have been found first before attempts are

made to eliminate poppy growing. The farmers are very disturbed over this loss.

#### Lao Savings & Loan

This is a lending institution for farmers; however, they could lend ten times more money than what they have available, according to the management.

### GENERAL OUTLOOK

Although the Lao farmer grows enough to eat for himself and his family, most years if floods don't wipe the crop out it is done with minimum technology, machinery, fertilizer, or pesticides. To expect rapid change in the agriculture of Laos is wishful thinking. Education from the first grade through high school will be needed to make any impact. Establishment of a college of agriculture will greatly assist the farming sector. However, this will require at least 20 years to establish the results of education on agriculture from within. Agriculture development can occur in some specific areas if outside expertise is encouraged to come in to assist on a project by project basis. Imposing ill conceived programs from western countries on the Lao farmer without his involvement are not generally understood and when the experts leave the program stops. It is a very long term program of trial and error but it can begin with solid research and extension education from those countries who have the means to assist. There are a few successful projects and more trained Lao people than there were 15 years ago. The Lao should take the initiative in requesting programs and projects where they think they need assistance. No one knows the opportunities and problems better than the farmers and their educated agricultural leaders. These observations are based on three week visit and are definitely not conclusive. Appreciation is extended to all Lao farmers and Lao government personnel and cooperating agencies who enabled me to take a first look at the country to view its agriculture.

## AGRICULTURAL IMPROVEMENT ACTIVITIES

A CRS program which would help the farmers of Laos could be effective if the major support is directed to assisting in the technical training of the Extension staff in agriculture. CRS should work directly with the Director of Research and the Director of Extension to assist in establishing an on-going fellowship scholarship training program for the Extension staff.

The success of any program related to the improvement of the farmer in Laos will be in direct proportion to the competence of the agents who teach the farmers in the field. The Directors of Extension and Research and the agents know what their training needs are and know that they can obtain the training at various universities in Thailand, and, possibly, in the Philippines. Due to its proximity and similarity of language, Thailand offers the best possibilities. A fund should be established by CRS or other voluntary agencies which could finance an on-going Extension Personnel Development Program.

### APPLIED RESEARCH PROJECTS

The technically competent agents of Laos should be supported to assist them in establishing applied research projects with farmers where new practices could be introduced. These applied research projects should be prepared by the agents in cooperation both with the appropriate specialist and with the Directors of Research and Extension. CRS could support several of these projects each year to assist the field agents. Examples are:

- 1) Field evaluation of insect and disease control programs on rice in the farmers' rice fields.
- 2) Application of ground limestone on the acid soils to evaluate the effect on rice, corn and soybean yields.
- 3) Evaluation of new rice varieties in various locations.
- 4) Vegetable variety evaluation in potential vegetable areas.
- 5) Establishment of fruit tree plantings with farmer cooperators in various locations.
- 6) Establishment of drip irrigation tests with farmers where water is available for dry season vegetable, sugar cane, or fruit production.

- 7) Evaluation and performance of adapted forage grasses to support livestock for pasture or for hay.
- 8) Insect and disease control programs for fruit trees.
- 9) Livestock projects for small farmers.
- 10) Evaluation of plastic mulches to increase yields of vegetables.

Applied research projects for the field which are well planned, financed and consummated would provide agent training, farmer participation, and adaptive research results. Information developed locally can be used for farmer observation and teaching. CRS should have the opportunity to review projects which are requested and obtain a progress report on projects which are initiated and completed.

Laos has some very competent Extension agents and their programs should be supported. As an agricultural Extension agent for twenty-five years, I know that the applied research project is the best means to introduce new practices to farmers on their farms. Farmers learn by seeing and doing and agents learn the same way. One of the problems is that there is usually no provision for funding this kind of project since it does not "fit" into the pure research category and, therefore, is not usually eligible for funding. New information is useless if it is not tested under local climatic conditions as well as the farmer's peculiar conditions. Field agents who reside in the farmers' area and who have a working relationship with the farmers are the key people who can introduce new technology to the farmers. These are the people CRS should support to have an on-going and lasting impact for agricultural improvement.



## NUTRITION OBSERVATIONS

During the past decades a number of projects have been initiated for the improvement of nutrition in Laos. WHO, Operation Brotherhood and IVS (International Voluntary Services) for a number of years have had nutritionists working in Laos. The Dooley Foundation and some Catholic and Protestant Missions have also been active in the field of nutrition. Some of the programs that were started years ago are still in progress while others have been curtailed or terminated. The extent to which these activities have improved living conditions and promoted human development can not be ascertained by someone not familiar with the conditions as they were at the beginning of the program. One thing is clear and that is that there is an up-hill task to improve rural living in Laos. Those who have pioneered in this field, even if only with limited success, are to be commended for their efforts.

Preliminary plans for a nutrition survey such as the one undertaken by ICNND in Thailand and elsewhere never materialized. Limited food consumption and nutrition surveys have been made in selected areas, but none covering the whole country and the dietary pattern and nutritional status of the various population groups within the country.

A significant achievement in the field of nutrition was the formation in 1973 of the Nutrition Committee for Laos under the distinguished Chairmanship of the Chief of Home Economics Division of the Department of Agriculture, Tiao (Princess) Marina Rangsi. National recognition was given to the Nutrition Committee by the Ministry of Plan on November 27, 1974.

The Ministry of Plan, having expressed interest in the work of the Nutrition Committee, requested that Nutrition Strategies for Laos be developed for inclusion in the next Five Year Plan.

The preparation by the Nutrition Committee of Nutrition Strategies for Laos is another noteworthy achievement.

During a visit to Laos, at the request of the Royal Laos Government through USOM/Laos, Mr. James Pines (Vice-President, Trans-Century Corporation, Washington, D. C. ) had an opportunity to consult with the Nutrition Committee of Laos and to offer his suggestions and recommendations.

Thus there is a definite awakening to the importance of nutrition in the development of Laos and its friendly people.

### General Observations

The rural population of Laos, to a great extent being subsistence farmers, have little or no cash income to buy the necessities for healthful living.

Items such as soap, clothing for the children, utensils for fetching and storing water are difficult to obtain. Some ingenious ways of dealing with daily needs can be seen in the villages, e. g., the hollow bamboo pole that is being used for carrying and storing water, or being used as a "lunch box" for the sticky rice. The bamboo pole, stuffed with uncooked rice, is put in the fire for roasting, the charred outer layer of bamboo pole is then peeled off. The rice having been steamed in the juice of the bamboo pole is ready to eat hot or cold. Protected inside the bamboo pole the rice can easily be carried to the field or on trips to the market.

The lack of cash to buy clothing for the children and something to cover them during the chilly nights contributes to all too common respiratory ailments. Similarly, the absence of soap makes it hard to keep children clean. Wherever water has to be fetched miles from home, children tend to be very dirty. Those living in the vicinity of a river take full advantage of this facility at the end of the day, thoroughly washing themselves together with the clothing they have been wearing during the day. This applies to both young and old. The frequent bathing whenever water is available is evidence of the desire of the Lao people to keep themselves clean. The practice of removing one's shoes before entering a dwelling is another effort to keep things clean. This is worth remembering when, due to circumstances, the appearances are to the contrary.

The boiling of water for drinking has been successfully advocated in some places, while in others, shortage of fuel presents an obstacle to this practice. Home made water filters and community-based water filters could help make water safer for drinking. Though it is said that many villagers don't care to use those facilities for disposal of human waste matter, that so far have been installed, attempts to introduce latrines need to be pursued and a satisfactory solution to the problem of waste disposal found.

The poor conditions of many rural dwellings call for some immediate improvements. Housing made from bamboo and thatch could be improved substantially by placing a panel of bamboo outside the existing walls with a layer of thatch between the two panels, in this way insulating the house against the cold, chilly nights. Similarly, double panes of bamboo or palmleaves could be used for window openings, one pane on the outside and one pane on the inside.

Another way to protect the baby against the chill would be to place bricks, heated in the hot coals of the fire, under the hanging baby cot. The use of a separate cot, covered with mosquito netting, for the baby would help protect the child against malaria mosquitos and other insects.

The importance of adequate clothing and bedding for infants and children so as to offer protection against cold and insects needs to be stressed and given consideration in shipping used clothing to Laos. The value of CRS

clothing was frequently mentioned especially by the Sisters who could enhance the value of the clothing by teaching the people how to alter this to fit the people.

### Nutrition

Though the question of nutrition is given low priority by some medical authorities and only recently been attracting attention by national planners, there is a general agreement among the medical and nursing staff of hospitals and MCH centers that malnutrition is prevalent both among children and adults and in particular among pregnant and nursing women.

From all appearances the food intake seems to be lacking more in vitamins and minerals than in calories. Among deficiencies referred to frequently are those of thiamine, riboflavin, ascorbic acid, iodine, iron and calcium. While there was no mention of vitamin A and D deficiencies reports by the Nutrition Committee also lists vitamin A deficiency as prevalent.

While some reports from medical teams operating in Laos mention widespread protein-calorie malnutrition, no cases of kwashiorkor were observed during this visit. As the visit only allowed for superficial observations there was no possibility of comparing the growth rate of Lao children with that of accepted standards. Studies by Operation Brotherhood indicate that many Lao children fall below the accepted standard.

There appears to be a high degree of anemia among patients in the hospitals as also among people in the villages. While lack of dietary iron may be one of the contributing factors, this is further aggravated by the prevalence of malaria and intestinal parasites.

A number of cases of goiter were observed among the refugee women from the mountainous areas. Iodized salt is being distributed to these refugees though now in a reduced amount. Some surgeons have mentioned the frequency of kidney stones, possibly due to high calcium content of the water. On the other hand, mention has been made of lack of dietary calcium. This, as so many nutritional problems, needs to be investigated further.

Visits to home and market places give an indication about the available food supply and its use in the home. Besides rice, mostly of the glutinous type, there is a variety of green leafy vegetables available on the market and being cultivated in small family plots out in the villages. The consumption of these greens may well be the reason why vitamin A deficiency is less of a problem. The supply of fruits, that is highly seasonal, seems to be more limited. Papaya also a good source of vitamin A was the most commonly seen fruit during the time of this visit.

The market supply of fish and other seafood, of meat, including that of frogs, snakes and beetles, varies with the location. The economic situation of the family determines the consumption of meat and other expensive foods.

For the rural family living on a subsistence economy, rice becomes the chief source of both calories and protein. Presently much of the rice is home pounded. This is a laborious task. The pounding of a family's daily ration of rice may take up to two hours. Some mills are now taking over this task, which may result in a more polished product, but with less of the essential vitamin left. Further losses of this vitamin occur during the customary method of preparing rice with repeated washings and soaking in water for hours before the steaming of the rice takes place. This, together with the unusually high consumption of rice (3.4 kilogram per day) and subsequent greater need for thio-mine, increases the risk of beri-beri.

Attempts to increase and diversify food production, therefore, need to give consideration to present dietary deficiencies. The use of legumes such as mung beans, soybeans and pigeon peas and peanuts, that can be produced locally, needs to be further encouraged and introduced, also, in the child feeding programs.

The commonly reported vitamin C deficiency calls for increased attention to the planting of fruit trees such as guava, mango and citrus fruit wherever this is feasible.

Besides the availability of food and money to buy it, other factors influence the status of nutrition. The frequency of intestinal parasites, up to 90 and even 100%, suffering therefrom, has a detrimental effect upon food absorption and utilization; and, is no doubt one of the factors seriously contributing to malnutrition among the rural population, where the sanitary conditions are most unsatisfactory.

Therefore in order to solve the nutritional problems there is need not only for increased production of essential foodcrops but also for the improvement of sanitary conditions and practices. As long as water from polluted rivers and streams is used for drinking and as long as there is no sanitary disposal of human waste no deworming medicine will help and much of the food intake will be wasted.

It is evident that the introduction of any novel idea needs to be accompanied by a down-to-earth training program. This is true whether it is a matter of hygiene and sanitation, food production and preparation, or child care and feeding.

The basis for such a training program must be a thorough knowledge of the customary habits of the people concerned. What is being consumed by the

household? How is the food distributed within the family? To what extent is the food intake of the women dictated by her low status? Does the work load of the rural woman, being equal, if not surpassing that of a man make her eligible for an equal amount of food? The frequency of pregnancies and the practice of prolonged breastfeeding increase her requirements for food intake, adequate to safeguard her own health as well as the healthy development of her child. To what extent is this given due consideration by family and community?

The high infant mortality rate, said to be up to 50% in some rural areas, give evidence to the fact that grave problems exist that urgently need to be solved. While malnutrition may not to be the main cause of death, it is likely to be one of the major contributing factors. With a poorly nourished mother, the child can not be nursed by his undernourished mother and benefit from the natural immunization provided by mother's milk. Intestinal parasites, gastroenteritis, malaria of a severe kind, including cerebral malaria, and respiratory diseases, ranging from bronchitis and pneumonia to tuberculosis take their toll of life.

Action is needed to cope with existing problems some of which could be solved by rather simple means while others call for substantial efforts involving considerable resources in funds and personnel.

#### Some Suggestions for Action

##### I. In the General Field of Nutrition

In order to make a substantial impact upon the problems affecting the nutritional status of the population in Laos, a number of steps may need to be taken. Some of these may well be undertaken by a voluntary agency while others are more in line with the responsibilities of agencies such as WHO, FAO and UNICEF.

- 1.) Nutrition Survey. The absence of a national nutrition survey hampers nutrition program planning. International agencies may well be approached and recommended to undertake such a task. The lack of a nutrition survey should not prevent work commencing based on available data, however limited these may be.
- 2.) Household Consumption Survey. With the transition from subsistence to cash economy, trends in spending habits may need to be determined and geared in such a direction that the whole family will derive utmost benefit from available resources.
- 3.) Inventory of Existing Projects and Programs. There seems to be a number of scattered efforts aimed at the education of women and girls, from training at the village level to formal training in schools and colleges. Sometimes the less

formal activities are carried out with heroic efforts but in isolation from other programs. Priority is not always given to most pressing needs. Work that can earn an income, such as embroidery, is often given preference over instruction in, for example, child care and feeding. Contact with and support and encouragement from more advanced programs having the benefit of more trained personnel would be of help to those programs that are being launched by well motivated personnel but lacking in knowledge and experience.

To better utilize available resources in personnel and to reach as wide section of the population as possible, there seems to be a need for an inventory of existing programs, including those of various Missions.

CRS could well sponsor a meeting of those Sisters who are actively engaged in the training of girls and women. Other agencies may wish to participate in such a meeting that would provide an opportunity to discuss the present situation and plans for the future. Interest in such a meeting was expressed by the Canadian Oblates of Mary Immaculate.

4.) Seminar for personnel responsible for nutrition/home economics training programs. Such a seminar of 3-5 days duration could further serve as a means of determining what is being done by whom. It would provide a means of sharing experiences of problems and of major obstacles encountered in solving them, of priority needs and how to meet them. Returning to their areas of work participants should be able to review their own situation in view of the findings of the seminar.

CRS may well sponsor a seminar for voluntary agency personnel, especially those attached to various Missions.

5.) Training Course for personnel engaged in or to become engaged in nutrition programs. The urgent need for a unified approach in the teaching of nutrition makes it of utmost importance that all those engaged in such a program "speak with the same voice" so as not to confuse those mothers who may have limited or no formal education. The problem of nutrition being so vast there is need to establish a few priorities and for all involved to work towards their solution rather than to cover the surface of a whole range of activities.

The duration of a training course may range from one to two weeks for those already active in teaching of nutrition, to one to two months for those without prior practical experience.

CRS together with appropriate Government departments could well sponsor such a training program.

#### 6.) Training of Village Cadres.

The need for personnel to work in the villages calls for a special training program for people from the villages and able and willing to remain working there.

Through the assistance of personnel engaged in nutrition programs, it should be possible to select a few candidates for training in courses of short duration, to be followed by periodic in-service training and supervision.

The most crucial problem will be the remuneration of these cadres once they are back in their villages. This calls for cooperation and collaboration of the Ministries of Agriculture, Health, Education and Social Welfare and the possible financial support of an outside agency for a number of years.

The possibility of offering special training to personnel already working in the rural areas, such as nurses and teachers, need to be further investigated. See also Appendix I and II.

Other suitable candidates may be found among widows of military personnel and among the wives of local officials.

CRS may well support and assist in the training of village cadres in collaboration with appropriate Government departments.

7.) Fellowships. Opportunities for further training within Laos or in Thailand should be given to carefully selected candidates who have proven themselves willing to work among their own people even at the village level. Studies in child care and child development should be given high priority. Some of the Sisters working in Laos expressed wish for such additional training and would accept suggestions of suitable training institutions. The suitability of different training institutions in Thailand for the needs of Laos needs to be ascertained.

CRS may like to consider providing some fellowships for studies in Thailand or other nearby countries.

8.) Supervisory and coordinating services. Any program sponsored by an outside agency needs to be carefully supervised and supported to keep it going under adverse conditions. An important role of the supervisor, together with the personnel working at the field level, would be the coordination of all their activities with nutrition and related programs undertaken by the Government and other agencies.

Should CRS or any other voluntary agency wish to launch a nutrition program in Laos, there urgently needs to be appointed an experienced and well-trained nutritionist to initiate, guide, coordinate and supervise the programs.

9.) The Nutrition Committee of Laos. Support to the existing Nutrition Committee and its proposed activities should be given most careful consideration. Any activity that has as its main aim the improvement of nutrition in Laos should first be discussed with the Nutrition Committee and its recommendations and suggestions obtained. Without the full support and approval of the Nutrition Committee it would hardly be possible to get any new program off the ground.

II. Proposals Made by the Acting Chairman of the Nutrition Committee. Following a meeting with members of the Nutrition Committee and members of the Nutrition Advisory Group, lengthy discussions were held with the acting chairman of the Nutrition Committee, Mrs. Theo Thong, who is keenly interested in promoting nutrition education in Laos. Mrs. Thong outlined some of the most urgent needs for the improvement of nutrition in Laos. Details of her suggestions are found in Appendix I.

III. Proposal For An Integrated Rural Development Project. Resettlement of refugees to new areas where they are expected to settle for good offers an unusual opportunity for an integrated rural development project, that would take into consideration all aspects of human needs in a rural community.

The project could be geared to a cluster of villages of approximately 500 families. It should aim at the full participation and involvement of the people with emphasis on self-help, self-reliance and self-sufficiency. For further details see Appendix II.

### Summary and Conclusions

The importance of nutrition is given increased recognition in Laos though not considered a priority problem. Widespread malaria of a most severe type presents the most urgent health problem, the control of which would also effect the nutritional status of the population.

Improvement of sanitary conditions, provision of a safe water supply, prevention and cure of parasitic infestation are other basic requirements.

A more diversified diet, with less emphasis on rice, and more on legumes, vegetables and fruit would provide some of the nutrients that tend to be lacking in the present diet of the rural population living on a subsistence economy.

The preparation of food so as to preserve its nutritive value is of special importance when resources are limited.

The successful introduction of fishponds with the assistance of USAID/Laos is helping to increase the source of available protein for those having access to fishponds.

The emphasis on poultry, duck and rabbit raising is another means of increasing the supply of animal protein. The efforts made by USAID and other agencies operating in Laos are commendable.

While USAID/Laos has had no nutritionist on its staff, USAID support has enabled agencies such as Operation Brotherhood, IVS and the Hawaii Education Team to include nutrition personnel on their staffs.

Dispensaries and MCH programs sponsored by USAID/Laos as well as Home Economics Extension programs are attaching considerable importance to family planning. Apparently, many of the activities in the field of health and preventive medicine are being financed by population funds. Reference is often made to the link between nutrition and family planning. In fact, more information material on family planning than on nutrition were seen in MCH and Home Economics centers.

It is a question whether this present emphasis on family planning corresponds to the mores of the people and to the religious convictions of the Buddhist population. Recent demonstrations by high school students were directed, among other things, against family planning programs.

It is regrettable that full advantage could not have been taken of the availability and distribution of P/L 480 food supplies to reach mothers with a more extensive education program that might have given emphasis to the dietary needs of the pregnant and nursing women and to the care and feeding of infants and children.

The needs for the improvement of living conditions in Laos are tremendous; and, so are the many difficulties that will have to be overcome, among which are problems of language, of communication and transportation between different areas of the country. Their friendliness and their appreciation for the help so urgently needed have endeared the Lao people to those who have accepted the challenge to render assistance under most difficult conditions.

Suggestions for action to be taken to improve nutrition include those reflecting the thinking of a Lao person holding an influential position in the field of nutrition. Her enthusiasm and conviction that possibilities exist to improve the lot of her people was refreshing when others saw little opportunity to move ahead.

## Proposal by the Acting Chairman of the Nutrition Committee

Some of the most needed programs right now is nutrition education programs at different levels.

### Immediate and Specific Needs

#### 1.) Primary Needs

There are 3000 primary schools in Laos with 6-8000 teachers. These teachers are in need of additional training in nutrition and related subjects.

A beginning could be made by training at least one teacher for each school.

Training centers need to be established in three localities: Vientiane, Luang Prabang and Savannakhet.

Number of training courses at each center: Per month, 2; Per Year, 20 (or in all 60 courses per year).

Duration of Course: Two weeks of 35 hours per week.

Number of participants per course: 40

Course Content: Nutrition - 40 hours  
Food Production - 15 hours  
Hygiene and Sanitation - 5 hours  
Organization of 4-H Clubs - 5 hours  
Field trips to observe programs of interest (fishponds, agricultural Projects) - 5 hours

Instructors: Mrs. Theo Thong, M. Sc., Home Economics, Virginia Polytechnic Institute, would be willing to train carefully selected teachers to serve as instructors for the other courses. The first course should be, therefore, specially directed to those who can assume leadership. The training program to be organized in consultation with the Ministry of Education would have to be continued for a period of 2-3 years until all the existing teachers have been reached. Mrs. Theo Thong would assume the role of overall supervision of the program.

Requirements: Three centers, each one accommodating 40 participants, to be built if it would not be possible to utilize already existing buildings. Travel Allowance for the teachers from home base to the Center and return.

Per Diem for participants at a rate of 1200-1500 kips per day  
(equivalent to U. S. Dollar 1.50).  
Teaching aids and demonstration material(s)  
Food and other supplies  
Salary for the instructor: if already paid by the Government it  
is customary to pay a supplementary fee of U.S. \$1.00 per  
hour, or in all U.S. \$70.00 per course.  
Transportation of participants on fieldtrip(s), approximately  
U. S. \$20.00.

## 2.) Secondary Schools

Nutrition is included under the subject of Science, but with little opportunity to teach its application in practical life.

Nutrition is also part of the home economics program in the secondary schools.

There are 40 secondary schools in Laos.

Additional training in nutrition needs to be given to 2-3 teachers in each one of these schools, or to 80-100 teachers in all, preference to be given to teachers of Science and Home Economics.

Number of Participants per Course: 40

Duration of Course: Three weeks or 30 hours per week

Location: Nutrition Training Center in Vientiane

Course Content: Food and Nutrition  
Health and Hygiene  
Childcare and Feeding  
Organization of 4-H Clubs  
Methods of Education

Instructors: As Under Primary Schools

Requirements: Travel Allowance for teachers from home base to Vientiane and return  
Per Diem for participants and other expenditures as under  
Primary Schools

3.) Teacher Training Schools. There are 12 teacher training schools in Laos, most of which offer a four year training program.

Two to three teachers in each school should be given additional training in nutrition or, in all, 24-36 teachers.

Of the Home Economics teachers in the Secondary Schools, some have only basic knowledge of nutrition. These teachers should benefit from additional, in-service training, that could be organized during school holidays.

Instructor for the training course for teachers: Mrs. Theo Thong would prefer to serve as the instructor of this course.

Course content and requirements would be similar to those under Secondary Schools.

4.) 4-H Clubs. These may serve as an excellent channel for the promotion of nutrition. Four H Clubs could be introduced into the 4-6 grades of the primary schools and into the secondary schools. Teachers who have participated in a nutrition course may be instrumental in the organization and work of the 4-H Clubs. The activities of these clubs may well contribute to increased food production and improvement of agricultural practices (poultry raising, vegetable gardening, fish culture, food demonstrations, etc.)

Requirements: Agricultural Tools  
Fingerlings  
Poultry Feed  
Fertilizer  
Insecticides  
Funds for demonstration purposes, etc.

5.) Adult Education Programs. With the assistance of teachers, who have participated in a nutrition course, education programs could be directed to the adult population in the areas served by these teachers. Two hours per week may be devoted to such a program for which the instructors should be remunerated in the amount of 300-500 kips per hour as a supplement to their regular salary.

6.) School Meals Service. Consideration may be given to the setting up of a couple of pilot projects in schools, providing simple, well balanced meals to the children, thereby demonstrating the effect of proper dietary habits on the nutritional status and health of the children.

Requirements: Kitchen to be built by the Community  
Meals to be prepared with the assistance of the students  
Supervision of meal service by teachers who have participated in a nutrition course, and who have been given special training in school-meal service  
Kitchen Utensils, fuel, cleaning agents  
Food at cost of 200 kips per day and student (which of necessity may be reduced to 100 kips per day)

While this may be a worthwhile project it is the opinion of the writer that this is such a costly undertaking that it may well be given low priority for the time being.

7.) Nutrition Coordinator. For the coordination of all nutrition training programs at the National level, there is a need for one locally recruited nutritionist, to be in the service of the Government. Her estimated salary would be 70,000 kips per month or 57,000 kips plus free housing and, in addition, a travel allowance.

Mrs. Theo Thong, who is holding a leading position in the field of nutrition in Laos, would be the likely person to assume this role. She would welcome a CRS nutritionist as her counterpart. No doubt that there is need for additional trained personnel. Every effort, therefore, needs to be given to train Lao personnel to assume responsibility for nutrition programs at national, provincial and community levels.

Mrs. Theo Thong, well aware of the great responsibilities attached to her position, would appreciate an opportunity to participate in a four-months study program, including a course in nutrition program planning and observations of programs at recognized institutions of learning.

This proposal is well worth supporting.

### Proposal for an Integrated Rural Development Project

A. With reference to this chapter in the previous text, the major components of the project should be:

1. Health Services:

MCH/Dispensary/Half-Day-Care Centre, linked with education of the mothers in nutrition, childcare and feeding, health and hygiene;

Water resources: Covered wells, waterfilters, water storage;

Waste disposal: Latrines, composts, incinerators, etc.

Malaria control and prevention/education;

Vaccination of all children against all common childhood diseases;

Survey of height/weight of all children below the age of six years with monthly follow-up

Rats and insect control;

All of the above activities to be linked with education

## 2. Housing

Insulation of housing

Fire protection

Children's cots

Carpentry, basketry, craftwork for household use.

## 3. Food Production

Home gardening: legumes, pumpkins, peanuts, peppers, leeks, green leafy vegetables

Poultry - duck - goat - rabbit and pig raising

Fishponds

Fruit Trees: Guavas, mangoes, citrusfruit, grafting.

Rice Mill

Feed Mill

Protection against soil erosion

Grass for animal feed

Drying of fish, fruits, peanuts

Education and training as under 1) above

## 4. Education

Primary school curricula to include practical subjects relevant to community needs.

Leadership training for men and women

Cement, handpump;

Handmills;

Housing construction material for: Living quarters for personnel

Meeting places

Schools

Dispensaries

Carpentry tools

Funds for operating expenditures, etc.

## 3. Fellowships and Stipends for trainees

## 4. Remuneration for cadres for a period of five years

Training of cadres as under A-6  
Education/demonstration projects for farmers/farmwomen  
Cooperatives: consumer, producer, credit unions, consumer education,  
sewing and care of children's clothing and bedding.

**B. Requirements**

**1. Personnel**

In order to make this a demonstration and test project as well as a practical training center, that could have a wide influence on rural development in Laos, there is need for well-trained and experienced personnel, that may have to be recruited from the outside of Laos; and, for carefully selected Lao counterparts who will be able to continue the program upon termination of international personnel. There also ought to be two trainees assigned to each one of the counterparts in order to build up local staff.

The following type of personnel may be needed:

- 1 Agriculturist/engineer
- 1 Home Economist with a major in nutrition and minors in child care and sewing if possible
- 1 Nurse/midwife with training in public health
- 1 Community Development Worker
- 1 Adult education/mass communication expert  
(the last two posts possibly combined into one)

In all, 4 or 5 international staff and the same number of local counterparts and the double number of trainees should be made available for the first year. At the end of the first year the program should be re-assessed and adjustments made as deemed necessary.

Continuation of the program and its gradual expansion to include new areas would require a period of at least five years.

**2. Supplies**

Agricultural tools, seeds, fertilizers, insecticides, fingerlings, baby chicks, animal feed;  
Medicaments, vaccines, malaria suppressives;  
Scales, weight charts;  
Simple improved looms, sewing machines and equipment;  
Cloth and/or old clothing;  
Mosquito netting;  
Soap, cleaning agents;



## LEADERSHIP TRAINING OBSERVATIONS

### GENERAL SUMMARY OBSERVATIONS

- I. Of all the 11 nations of the East and South Asian countries with whom I have considerable experience over the past 12 years, I have found LAOS to be the weakest in any substantial number of middle technicians in many fields. In several fields of activity related to Development, there is a woeful lack of such type personnel, so key in the transfer of knowledge and skills.

V. g. There is no Ministry of Agriculture, but a Directorate under another Ministry. The Head of the Directorate, both in group sessions and in other private meetings with him, related how critically weak was his whole Directorate. He, the head, had a Master's Degree in Agriculture. In his whole Directorate he had four men with a Bachelor's degree in Agriculture. Worse still, he had only 125 Extension Agents, none of whom had more than six grades of normal schooling.

The same can be seen in the area of health. After two decades of working in Laos, Operation Brotherhood from the Philippines still has 135 doctors and nurses staffing seven hospitals and many clinics, so short is the Laos nation in health services personnel.

- II. Critical, too, is the matter of infrastructures, v. g. roads. For the most part travel to districts some distance from Vientiane is by small plane or helicopter. This has an immediate impact on the type of agriculture which will emerge, i. e. whether it will remain basically and substantially merely of a subsistence level, or at best for a quite limited local market, or grow into a more considerable size commercial operation, let alone the possibility of becoming in some ways also an export oriented enterprise.
- III. Corruption. I suppose such is inevitable in a country ravaged by 35 years of war. But, it is inescapably built in much of the social system. Many sources contend that the scale at which corruption was operating was phenomenal. This has had a very stagnating, dampening effect on agricultural production for market.

- IV. The political situation cannot be avoided in considering possible programs for Development. Can we as a Church agency, without effective political pressure at the command of a government agency, take gambles as easily as might a foreign government entity?

The situation for the past eight months (since April 1974) has been quite a unique one, operating under a facade of national unity in which the major political/military contestants for LAOS physical control and hoped for allegiance sit practically "ex aequo" in each arm of government.

There is still a demarcation of one zone from the other, which in reality means that, while the whole country is relatively open to the Pathet Lao, the actual Pathet Lao area is securely closed to all other Laotians, and, of course, to Westerners not in league with North Vietnam.

While physical hostilities are at a standstill, opinions as to the future vary considerably depending on whom you talk to. I made it a point in trying to make an assessment in this area, to go out of my way, through personal meetings with foreign businessmen presumed to be reasonably knowledgeable in matters Laotian, businessmen both presently in and out of the country; with representatives of international organizations (other than U. S. ), both private and UN affiliated, presently working in Laos; with Catholic clergymen (Bishop and some 35 priests in Vientiane and in the more remote areas of the country) both in groups and privately.

Boiling down all the opinions voiced, I could find hardly anyone who was willing to hazard an opinion beyond five years, even though most really strained at wanting to be hopeful. Yet, always they felt they had to hedge against too much optimism.

I felt that we ought to have some fairly firm notion as to the time span within which we might be able to operate in Development (especially if any projected program was to call for considerable capital outlay), as Development by its very nature calls for some time.

- V. We did see several interesting samples of attempts at Development programs. Some were really large scale, others middle range, and still some quite modest.

I believe that the large scale ones to which I was exposed will not be anywhere near as beneficial as hoped for to a great number of the poor, simple, in a sense ignorant, small farmer.

In different parts of the country, even deep in the interior, we witnessed some very useful and effective middle to modest size operations, in poultry raising, fish culture, seed improvement, reforestation, training centers. As best we could judge, in a short time, they seemed to be really better focused on the needs of the small farmer. How widespread this effect will be is still too soon in their history to judge. But, I do believe in their conception the potentiality is considerable.

## RECOMMENDATIONS

These will generally be on the "micro" level, and in the areas with which I am most familiar, i. e., agricultural production, rural structure organization, training of small farmers and field men.

I have seen too many instances in developing countries where 'macro', i. e., large scale programs, tend to be gradually practically abandoned after not too many years when the outside agency retrenches on the funding angle and the host country does not provide the sizable inputs necessary.

I will classify the recommendations under three headings, but all of them geared to increased agricultural production through which greater income can be assured for the small farmer and his family to enable them to grow in a fuller, wider human development.

- I. Availability, in considerable amount, of better basic inputs, in adapted, improved seeds, improved breeding animals, better fruit tree seedlings.

This would mean setting up Seed Farms and Breeding Stations. These would not be very large operations, but several smaller ones scattered throughout the country, relatively accessible to greater numbers.

They would also serve a second purpose, i. e., the training of actual, small farmers (the leader type in their communities who would become multiplier agents) in better crop production. They would live on these stations through the whole life cycle of an important crop, learning by working and constant exposure to better techniques in their own local area ecological conditions.

These stations would serve a third function, sc. applied research, on a limited scale.

- II. Training of Change Agents, both Agricultural Technician types and Rural Community organizers. Through this instrumentality, we would make a direct contribution in upgrading the government field personnel.

We would envision three such units so that more can be effectively trained by having smaller groups. The training should be on a 3 to 4 month basis, and maybe even rotational by having each of the three centers concentrate on specific subjects, say one in grain and field crops, another in vegetables and fruit, and the third in animals.

The technical and rural community organization training should be a simultaneous one, to which all trainees should be exposed.

III. In view of the sky-high prices of most needed agricultural inputs, if we are going to increase our production per land unit, v. g. fertilizers, insecticides, pesticides, etc., and such high prices putting such items well beyond the reach of the average small farmer in developing countries, some consideration should be given to some - limited and not exotic - research in lining up possible alternate ways of meeting the problems for which the regular inputs have been devised. Such might be, e. g., biological control.

This might be done directly, by ourselves, by setting up a well defined research laboratory program in a carefully limited range of research. Or, we might contemplate helping to further fund on-going operations but somewhat crippled by inadequate financial resources.

IV. Helping to Finance Small Farmers. There is what seems to be a fairly stable organization in operation geared precisely towards farm loans. While still young, just a few years, it has quite an impressive record. Its growth, naturally, is slow, when it has to rely substantially on local funding.

Knowing something in detail of its organization, the principles on which it is based, I judge that it would be a worthwhile venture to weigh the advisability of helping to expand its operating capital considerably, by making an outright grant to it, or a long term non-interest bearing loan. To be effective, the sum cannot be picayune.

V. Finally, thought might be given to the fuller training of "trainers" and Area Rural Leaders, technically and socially in Universities and specialized Institutes outside Laos. There is always a bit of a gamble on some such individuals not returning. Still, if we try to exert some care in the selection of such persons, this danger may be lessened.

## GENERAL RECOMMENDATIONS

1. That Catholic Relief Services approach the Provisional Government of National Union of the Kingdom of Laos with an offer to initiate a new three year program to assist and cooperate in the reconstruction and development of Laos.
2. That Catholic Relief Services ensure that policy and work be related from inception to the whole country of Laos. Special care must be undertaken to see that the style of work and activity undertaken be acceptable to both zones. Projects and activities of CRS under the new program would be visible to representatives of the Neo Lao Hak Sat (Pathet Lao) and would thus demonstrate the proposed activities which would be equally offered to their zone. This will facilitate their appraisal of the role of a voluntary agency when their zone is opened.
3. That Catholic Relief Services accepts the priority setting policy of the Ministry of Economy and the Plan and will seek measures to initiate, maintain and review their work with spokesmen of the Neo Lao Hak Sat (Pathet Lao) either in Vientiane or in Samneua.
4. That Catholic Relief Services, recognizing the infrastructure responsibilities assigned by the Provisional Government of National Union to the Chao Khouangs and Chao Moungs, will mount personnel and program or project activity within and related to those authorities. Development workers of CRS will have from inception of work assignment counterparts selected and assigned by the Chao Khouang responsible.
5. That Catholic Relief Services accept as new program priorities for the next three years, within the priorities of the "Second Development Plan" (Appendix B) the following:
  - (a) Projects to assist in reaching food self-sufficiency
  - (b) Short term assistance for refugees to return or re-establish themselves in accordance with the National Provisional Government for National Union census now being undertaken.
  - (c) Supportive projects and work related to village public health, including maternal/child care, nutrition and rehydration centers for malaria and gastroenteritis sufferers.
  - (d) Projects and work patterns to assist in the broadened training of administrators and counterparts at both Khouang and Moug levels. These may be in the form of on-the-job training or may, if requested by the Chao Khouang, be short term leadership training courses.

6. That Catholic Relief Services, in consultation with the Ministry of Economy and the Plan, invite other American and European voluntary agencies to study the possibility of creating a development bank (or a fund operating under Lao governmental regulations which pertain to a bank) to solicit and bring into Laos external development assistance funds from members and to ensure the responsible utilization of such funds, materials or staff as would be needed. Special attention should be given to the desirability from the start of placing equal funds in escrow for development work on the Neo Lao Sat (Pathet Lao) projects when such activities might be able to commence.
7. That Catholic Relief Services sustain the current CRS Laos program in cooperation with AID Laos until June 30, 1975 to provide short term assistance to refugees and others who need such help. A continuing program of limited emergency and amenities distribution from July 1, 1975 should be negotiated with Caritas Laos. There will continue to be modest but important requests from the Italian and French priests and the Sisters who undertake important village level work.
8. That Catholic Relief Services undertake a review of CRS involvement in the Food for Peace (Public Law 480) commodities distribution program. Recognizing complex facets for the continuation of PL 480 commodity availability, there seems none-the-less no reason why current CRS program should be a conduit between USAID and the Ministry of Interior when a more direct relationship could relieve CRS of the mechanical intervening role.
9. That there be a six month overlap in the evolution of the new CRS development three year program and the current CRS work to allow time for negotiation and commencement of the three year program. This will ensure assistance to the negotiations and detailed working out of the three year program from current CRS staff and will also ensure a continuation of the important presence which CRS has mounted under the leadership of Mr. James Delaney.

## SPECIFIC RECOMMENDATIONS

1. That Catholic Relief Services seek a modest sum for trial and experimentation on development projects, in prior coordination with the Ministry of Economy and the Plan and the relevant Chao Khouang. Such funds (not to exceed \$ 25,000 maximum) could be used in the next seven months to test the practicalities and the problems which might be involved in moving towards the increasing priority which the Ministry of Economy and the Plan is giving to the responsibilities and activities of the Chao Khouangs for Development.
2. That Catholic Relief Services seek a distinguished elder statesman to come to Laos to commence the negotiations leading towards Provisional Government of National Union acceptance of the three year development assistance (which three year period would be subject to joint and mutual review after two years for possible extension). Such an elder statesman might also be invited to coalesce a consortium of voluntary agencies efforts from Europe and North America if a consultation among those agencies would result in such being seen as a facility. The elder statesman, with such additional staff support as might be helpful, would inquire actively into the legal and practical technicalities for the establishment of a voluntary agency development bank or fund.
3. That Catholic Relief Services undertake forthwith a review of communication and logistics requirements for in-country work throughout all of Laos in conversations with the Vientiane representatives of the Neo Lao Hak Sat, Provisional Government of National Union and USAID Laos. This would include the availability of transport vehicles, part time use of heavy duty equipment, tractors, etc. which have been transferred to Lao control or which might be available for pre-agreed transfer.
4. That all Catholic Relief Services personnel assigned on long term (two years or more) duty in Laos be helped to acquire fluency in the Lao language. Special initial recruitment may give particular emphasis to selecting carefully staff who may already acquired language and cultural familiarity. Peace Corps, voluntary agency staff or others who may have served and who, upon formal pre-selection consultation with officials of both zones, are seen as administrators or technicians who will fit harmoniously into the development priorities of the whole country of Laos. There will be advantages to the internationalization of CRS (and other voluntary agency) staff in the development work ahead.
5. That Catholic Relief Services, while recognizing the general urgency for assistance in education, malaria control and forestry work, not enter into any of these three priority fields on a national level; the problems are so

**gigantic that they can only be handled on a national or international governmental program.**

6. That Catholic Relief Services initially commence development and supportive assistance work in Central and Southern Laos in the Vientiane side zone. The transport and special problems related to the tribal and refugee groups in the North make difficult sustained work of a private voluntary agency.
7. That Catholic Relief Services reserve judgment in the initial phases of the new program on activities related to cooperatives, marketing consortia, rural credit. While some test projects on very modest scale might be started, much exploration with the appropriate ministries and departments of the Provisional Government of National Unity, the Chao Khouangs and Chao Moungs is necessary.
8. That Catholic Relief Services utilize skilled personnel in various technologies as the primary resource to be made available. Local manpower needs should be a routine part of the input from the Chao Khouang or Chao Moung or the Tassengs (village chiefs) on all projects. The second resource should be primarily that of modest supplies or materials required for the completion of project activity (e. g. cement, tools, tin sheets).
9. That Catholic Relief Services (and other voluntary agencies) give priority attention to providing secured personnel at all levels of government provided that a counterpart (for on the job training) is selected and available prior to commencement of the work concerned.

A P P E N D I X

- A. SURVEY TEAM ITINERARY
- B. SECOND DEVELOPMENT PLAN, MINISTRY  
OF ECONOMY AND THE PLAN, LAOS
- C. ADO AGRICULTURAL PROJECT STUDIES
- D. HORTICULTURAL SURVEY OF LAOS,  
CHARLES DUNCAN, USAID AGRONOMIST
- E. INVESTMENT CODE, LAOS COMISSARIAT  
AU PLAN

APPENDIX A

CRS SURVEY TEAM ITINERARY  
NOVEMBER, 1974

6 November (Wednesday):

- 0800: Pick up Team at Apollo Hotel by USAID vehicle
- 0830 - 0930: Briefing ORRA (Maynard, Sprowls)
- 1000 - 1030: Meeting with Secretary of State for Information (Ouday Souvannavong)
- 1100: Briefing USAID Mission Director (Mr. Charles Mann)
- 1130: Briefing Ambassador Whitehouse (Hon. Charles S. Whitehouse)
- 1230: Lunch with Mission Director (Mann), Deputy Mission Director (Mr. Gordon B. Ramsey), Assistant Director ORRA (Mr. Leonard Maynard), Assistant Director Finance (Mr. Thomas R. Blacka), Assistant Director Planning & Program Coordination (Mr. George T. Bliss), Admin. Support Branch, ORRA (Mr. Bill Luken) at American Community Association (ACA) Club
- 1500: Meeting with Commissioner of Plan (Dr. Pane Rassavong) & Louis Berger Institute Consultant to Plan (Dr. Fred De Rafols).
- 1930: Dinner with IVA Director (Mr. Jim Linn), IVS Executive Director (Mr. Lake), Berger Institute Consultant (Dr. DeRafols) at Than A Restaurant.

7 November (Thursday):

- 0800: Pick up Team at Apollo Hotel by USAID vehicle
- 0830 - 1000: Briefing Public Health Division/USAID (Dr. John E. Kennedy)
- 1000 - 1200: Briefing Agriculture Division/USAID (Chief, Charles A. Sanders and Dep. Chief, William H. McCluskey)
- 1200 - 1500: Luncheon with Minister of Interior and Social Welfare (Pheng Phongsavanh) and Secretary of State of Interior and Social Welfare (Deuane Sounnalath) at Hotel Lane Xang.

7 November (Thursday): (cont'd)

- 1530 - 1545: Meeting with Minister of Interior at Ministry.
- 1600 - 1815: Meeting with Bishop Loosdregt, CARITAS Director (Fr. Matt Menger), Directress of Centre de Rencontre (Miss Ann Bedard), Khmu Center Director (Fr. Subra).
- 1900: Dinner with Asian Christian Service Director and Fld. Dir. (Mr. Isaac and Mr. Tumiwa), World Vision Acting Director (Mr. Sakda Pharphoum), Mr. W. Luken (ORRA/USAID), Dooley Foundation Coordinator (Miss Linda Koerner)

8 November (Friday):

- 0800: Pick up Team at Apollo Hotel by USAID vehicle
- 0900 - 1000: Meeting with Director General of Social Welfare (Phagna Houmpheng)
- 1100 - 1400: Meeting and Luncheon with Pathet Lao Chief in Vientiane (Mr. Sanan Southichak) Members of Joint Political Council PL (Mr. Maha Boudy Souriyachak, Mr. Visit Santivong) at Lane Xang Hotel.
- 1500: Briefing USAID Mission Director (Mr. Charles Mann).
- 1930: Dinner with Berger Institute Consultant (Dr. DeRafols) at ACA Club.

9 - 10 November (Saturday, Sunday)

Individually arranged meeting dinners with officials and clergy in Vientiane. Japanese Project (Naphok), Thangon Farm surveyed. Also Xieng Khouang, Paksane.

11 November (Monday):

- 0800: Pick up Team at Apollo Hotel by USAID vehicle
- 0930: Meeting with Secretary of State for Foreign Affairs (Me. Chanthone Chanthalasey).
- 1000 - 1200: Meeting with Jacques Cuenod, UN High Commission for refugees.
- 1200 - 1330: Survey Team lunch at Lane Xang Hotel.

11 November (Monday): (cont'd)

- 1400 - 1500: Meeting with Henri Zenger, IRC/League of Red Cross Rep.
- 1530 - 1645: Meeting with Fritz Lherisson, UNICEF Dir.
- 1930: Dinner with Fr. Bertrais, Fr. Daniel Taillez, Fr. Bouchard, (Foyer Hmong) at Lane Xang Hotel.

12 November (Tuesday)

- 0800: Pick up at Apollo Hotel - Travel Rt. 13 North
- 0830: Visit Nong Teng Fish Station (30 Min.) Meet Mr. Sugitani, Advisor
- 0915: Na Sai II Resettled Refugee Village  
Meet Operation Brotherhood personnel  
Child Feeding Center Activity and Dispensary (1 hr.)
- 1030: Visit Thangon Irrigation Project (Japanese and ADB Assistance)
- 1200: Drive through Na Phok Resettlement Project (Japanese Aid) Min. of Social Welfare Admin.
- 1300: Lunch, Return to ACA/VTE  
Rush, ADA/VTE, Jean Eng, IVS Economist join group for lunch.
- 1430: Visit Child Nutrition Center, Dir. of Ag
- 1530: Visit Thadeua Lao Savings and Loan Association  
Meet Mr. Gabino, CUNA Adv.
- 1600: Observe Dong Kalume Flood Dike Road and Flap Gates  
Land Reclamation Activity
- 1700: Return to Hotel

13 November (Wednesday):

- 0830: Pick up at hotel
- 0930: Departure by Porter aircraft for Ban Xon  
Briefing by AC Philip Buechler and staff
- 1130: Departure for Long Chieng

13 November (Wednesday): (cont'd)

- 1200: Meeting with General Vang Pao
- 1230: Lunch with General Vang Pao
- 1330: Tour of development projects, including chicken, pig projects, and Agricultural projects.  
Visit to French Catholic vocational training center.
- 1500: Courtesy visit with Chao Khouang
- 1530: General briefing with USAID Xieng Khouang staff
- 1630: Return to Vientiane
- 1900: Dinner with Dr. Virachit, Assistant Director of Administration, Commission of Plan at Lane Xang Hotel.

14 November (Thursday):

- 1130: Depart Vientiane for Ban Houei Sai
- 1205: Arrive Ban Houei Sai
- 1230: Lunch at Oscar's Restaurant
- 1330: Check into Hotel
- 1500: Meeting with Chao Khouang for Development with USAID and Province Director
- 1530: Briefing by AC and USAID staff and Chao Khouang
- 1700: Return to Hotel
- 1800: Dinner with USAID staff at Oscar's Restaurant

15 November (Friday):

- 0800: Visit by Helicopter to Pha Deng Crop Introduction Center with Gary Alex.
- 0930: Visit Nam Tine (Site of proposed road and resettlement area) on Nam Chang Irrigation Project with Wayne Johnson and SW Chief.

15 November (Friday): (cont'd)

- 1200: Lunch
- 1400: Meet with Province SW Chief (Laphol) and Commission for Rural Affairs Chief (Sivixay) at SW Office.
- 1500: Visit to Meo Village (Midtrip visit by Fr. Charlebois and J. Delaney)
- 1600: Meeting with Italian Fathers and Rev. Torgersen (CMA) at Catholic Mission.
- 1800: Dinner with Mr. & Mrs. Huxtable

16 November (Saturday):

- 1450: Depart Ban Houei Sai for Luang Prabang
- 1500: Arrive via Porter from BHS. Check in to Bungalow Hotel
- 1530: Meeting with Mr. Louis Connick AC/LP
- 1630: Free time
- 1900: Buffet Dinner for CRS Team at Mr. and Mrs. Connick's Residence.

17 November (Sunday):

- 0800: Depart from Bungalow Hotel for tour of Projects KM-10 Pig Raising Association, Kok Ngiou Water System, School. Sy Moun Khoun Water System. Xieng Ngeun Redirective Center (Palacpac)
- 1200: Box Lunch (can be ordered from Bungalow Hotel)
- 1300: Depart Xieng Ngeun for Meo Village (Ban Kio Nya) Tour of Ban Kio Nya (Palacpac); Visit to Refugee Village (Ban Houei Khang); Return to Bungalow Hotel
- 1600: Free Time

18 November 1974 (Monday):

- 0700: Morning Market

18 November 1974 (Monday): (cont'd)

- 0810: Meeting with Xieng Man Noi, USAID I.  
Tour of Provincial Hospital (Dr. La., Director)
- 0900: Tour of Fa Ngum School (Mr. Champhet, Mr. Yamauchi)
- 1000: Meeting with Mr. Bouahom Souvandy, Chao Khoueng/LF  
(Bounteum)
- 1200: Return to Hotel for Lunch
- 1500: Depart LP via RAL Flight 209
- 1540: Arrive Vientiane
- 1930: Dinner at Lane Xang with Dr. DeRafola (Berger Institute)  
and Peter Lumb (CRS/Geneva)

19 November (Tuesday):

- 0700: Depart Vientiane for Pakse (RY 422)
- 0800: Arrive Pakse. Itinerary prepared by AC/Pakse
- 0930: Settle in USAID. Guest House:
- 1000: Meeting at USAID - Discuss Programs and Plans
- 1100: Meeting at Khoueng Office: w/interested Officials
- 1230: Lunch - Samouson
- 1400: Trip to Phu Ba Chieng w/John Tucker, Tem, Bounlay,  
Keopraseuth

20 November (Wednesday):

- 0830: Trip to Khongsedone/Wapi: w/Bill Jackmin, Tem, Bounlay,  
Bounnam (Nousing - Prasong - Ck to Meet)
- 1500 - 1600: Return to Pakse Approx.

21 November (Thursday):

- 0940 Depart Pakse for Savannakhet (RY 301)
- 1025: Arrive Savannakhet. Itinerary prepared by AC/SVKT

22 November (Friday):

Savannakhet

23 November (Saturday):

1250: Arrive Vientiane

1830: Meeting at Hotel Lane Xang with Mr. Villiam of the Commission of Plan.

24 November (Sunday):

Open Time

25 November (Monday):

1000: Meeting with Minister of Health (Dr. Abhay)

1200: 1. Working Meeting at Chez Lyne Restaurant: Ms. Elsa Haglund; Ms. Jean Eng (IVS); Ms. Brenda (OB Hospital); Ms. Diane Lewis & Ms. Linda Koener (Dooley Foundation); Ms. Theo Thong (Nutrition Committee Acting Chairman); Ms. Dorothy Heieie (Hawaii Team); Mr. Windham James (WHO); Dr. Al Mumm (AID Public Health).  
2. Luncheon at Chez Lyne Restaurant with Minister of Health

1500: Meeting with Commissioner of Plan (Dr. Pane Rassavong) (Ministry of Cults)

1630: Meeting with Secretary of State and Royalist Chairman of Joint Political Council (Phagna Soukan Vilaysarn)

26 November (Tuesday):

0900: Exit Interview with Acting AID Mission Director (Mr. Ransey)

1000: Exit Interview with Ambassador Whitehouse

1200: Lunch at ACA Club with ORRA Assistant Director (Maynard) fr. George Cosgrove (ORRA)

EXTERNAL ASSISTANCE REQUIREMENTS IN THE  
SECOND DEVELOPMENT PLAN

FOR

RECONSTRUCTION AND DEVELOPMENT

(FY 1975/1976 - FY 1980/1981)

AND

THE ANNUAL INTERIM PLAN FOR FY 1974/1975

OVERALL REQUIREMENTS

PREPARED BY THE COMMISSION GENERAL OF THE PLAN

MINISTRY OF ECONOMY AND THE PLAN

LAOS

SEPTEMBER, 1974

## INTRODUCTION

The purpose of this document is to familiarize prospective aid donors with the conditions and needs of the Lao Nation. With the recent conclusion of a prolonged conflict, resulting in the successful formation of a coalition government, Laos will require substantial foreign assistance for reconstruction and development.

Volume I contains a review of the current situation of the economy in order to provide a base for examining current achievements and problems. Also, a summary of major governmental policies, plans and targets for the six years is presented. With this as background, specific requirements and proposals are set forth for aid donor consideration. These requirements are couched in three categories: (1) immediate aid requirements (Chapter III), (2) annual development requirements for FY 1974/1975 (Chapter V), and (3) long-term resource requirements for the Second Plan for Development and Reconstruction (Chapter VI). The short-term requirements are specific in terms of foreign exchange, commodities and projects, while the long-term resource requirements presented in Volume I are only indicative and are intended to give a perspective to the immediate aid and specific projects which are being requested in Volume II.

Volume II contains a compendium of projects at a prefeasibility level of formulation. These projects will form the nucleus of the Five-Year Plan and are designed to implement the policies set forth in Volume I. The total cost of these proposed projects exceed \$200 million.

There is a substantial aid flow into Laos presently, as there has been in the recent past (Chapter VII, Annex 2). Although the primary objective of this past aid had not been developmental, the present priorities of the government predicate that aid objectives be directed toward development programs to help Laos move towards the objective of self-sufficiency.

A prerequisite for the acceptance of aid by Laos is that it is given without political conditions. A political condition can be defined as: (1) any prerequisite to change existing policy as a condition of aid or, (2) any aid program or configuration of projects designed to alter the Development Plan's policies, priorities and programs as adopted by the Government of Laos. Technical and financial project controls by donor countries are naturally acceptable.

## I. THE ECONOMY AND THE NATION

With the formation of the Provisional Government of National Union and the Joint National Political Council, and their successful operation since April 6, 1974, Laos is entering a period during which national reunification reconstruction and development will be pursued as priority policies. Since the new government is less than six months old, the two zones are still administered separately. However, efforts are now underway, first to provide general free access to both zones, and then eventually to integrate the administration of the entire country.

Current preliminary estimates indicate Gross Domestic Product (GDP) to be 267 billion Kip in 1973 current prices (\$320 million). This is approximately \$100 output per capita, for a 1973 population of 3,181,000. Consumption is roughly estimated at 302 billion Kip or \$113 per capita indicating a net negative savings rate of over 10 percent. This situation has been brought about by continuing subsidization of the economy by foreign donors.

The adverse effects of the war on the economy consist mainly in the dislocation of the rural population, abandonment of farm lands, loss or neglect of physical assets, and the great dependence of much of the economy particularly the urban centers and refugees on external aid. Military activities and the requirement of economic stabilization have diverted attention from development objectives. Government policies to reverse these priorities are outlined in this document.

In spite of the war, however, some important development projects have been carried out (see Chapter VII, Annex 2). Even before the recent war Laos was predominantly subsistent, rural and segmented. Fiscal and foreign exchange deficits have been chronic. This fragmentation of the economy is the result of internal and external topographic isolation and transport difficulties. Laos, a landlocked country, presently has access to seaports only through Thailand.

The war has not only aggravated the problems of internal transport but has also greatly dislocated agricultural production. As a result, the feeding of the urban centers and other consuming areas is a major problem. Food supply deficits have to be increasingly met by imports, especially from neighboring Thailand. While only about 15 percent of the estimated 3.2 million population is considered to be urbanized, population in the cities greatly expanded during the war years as a result of increased military personnel and government civilian employees. Their incomes have indirectly

stimulated the service, industrial and commercial sectors. Higher domestic prices have, however, greatly affected the population in the cities and surrounding areas.

The refugees, who have been displaced from their ancestral homes, are located predominantly in the rural areas rather than in the cities. Their total number has declined significantly in recent months. Substantial assistance from external sources has been provided for refugee programs. Government planning for the refugees is focused on their resettlement preferably in the context of regional agricultural programs; these programs will require some rural infrastructure and credit facilities.

About 85 percent of the population is engaged in agricultural pursuits largely on a subsistence basis, although the south produces a consistent rice surplus. It is estimated that less than 10 percent of the total land area is now utilized for crops or livestock. This land is located chiefly in the valleys of the Mekong River and its tributaries. (The percentage of total land of sufficient quality for agriculture pursuits, however, is much higher.) About 20,000 hectares are provided with irrigation facilities but a much smaller area is actually being irrigated. Rice is the main crop, and 1973 was an exceptionally good crop year. Although Laos was traditionally an exporter of livestock to its neighbors, in the past 15 years it has become increasingly dependent on imports mainly from Thailand. The forests contain a major exportable asset, and these exports have been a major source of foreign exchange, particularly in recent years. Control of forest exploitation has not been effective. Slash-and-burn cultivation is also extensively practiced in mountainous regions. In addition to tin-concentrate, which is one of the chief exports, there are indications of other mineral deposits such as iron ore and coal. However, more intensive exploration is needed.

Manufacturing enterprises processing agricultural and mineral raw materials therefore appear to be the most desirable industries. A few modern factories have been set up in the Vientiane area in recent years; some, however, rely greatly on imported raw materials. Power production and distribution has greatly improved, especially since the completion of the Nam Ngum Project, Phase I. The completion of Phase II will further enable Laos to both increase its power sales to Thailand as well as to utilize this power, to develop domestic industries and pump irrigation. The transportation infrastructure needs extensive repair and in some cases total reconstruction. The implementation of this program will depend largely on the availability of external aid. An alternate route to the sea is a priority requirement as is the improvement of water transport on the Mekong River.

The bulk of the government budget has been devoted to security-related expenditures including care of deceased soldiers' families and invalids, to constantly increasing civilian payrolls, and to salary increments to compen-

sate for the rising cost-of-living. Over half of the expenditures have been deficit-financed, while development programs absorb only about one percent of the National Budget. Additional tax measures have been introduced but revenues, although increasing sharply have been inadequate to close the gap between foreign exchange availability and expenditures (see Chapter VII, Annex 3). Moreover, the tax structure is highly dependent on imports. Additional budget expenditures have been required for the installation of the coalition government in FY 1974 and a large increase will be needed to integrate the budgets from both sides. To reduce the expansionary impact of fiscal deficits on money supply, on prices, and on imports, as well as to help provide for a certain level of subsidized imports, the Foreign Exchange Operation Fund (FEOF) was instituted beginning in 1964. The local currency proceeds from the sale of the foreign exchange contributed by the donor countries, including Laos, have been predominantly sterilized; i. e., taken out of circulation and used to offset Government borrowing from the National Bank of Laos. But while monetary expansion was greatly reduced to about 10 percent in 1973, prices rose by 42 percent in that year reflecting to a significant degree the higher cost of imports.

Serious economic and financial problems have emerged in the first half of 1974. The inflation rate has exceeded 30 percent for this period and a shortage of foreign exchange available through FEOF to offset the mounting budget deficit has required the government to institute exchange controls (see Chapter III).

A significant volume of foreign trade is unrecorded, perhaps more on the export side. Recorded data show that exports have been equivalent to only a small fraction of imports. In 1973, imports are estimated at about \$48 million while exports are placed at about \$5 million. The principal exports are timber and tin-concentrate, while the main imports are petroleum and foodstuffs, especially rice and meat (see Chapter VII, Annex 3). Hence, the possibilities for increased exports and reduced imports are in the agro-mineral fields. Power, as noted earlier, will be an increasingly important export item.

Much of the foreign economic aid, including FEOF contributions, commodities, technical assistance and project aid, has been directed at bridging the foreign trade gap. The remainder has been directed towards health, education and refugees. External assistance annually averaged about \$74 million during 1968-1973. The commodity import programs (not including commodities in support of aid projects) of donor countries have been phased out. Foreign aid grants have been largely directed to the objectives of economic stabilization and relief, and support for governmental operating expenditures although some development aid has been provided on both grant and loan bases. The re-orientation of aid to more developmental purposes is a primary objective of the Second Plan. A presentation of the fundamental problems and policies for the Annual Plan for FY 1974/1975 and the Second Five-Year Plan follow.

The Short-Term Plan for FY 1975. This is the Interim Plan prior to the launching of the Second Five-Year Plan. (More details on this plan are presented in Chapter V.) During FY 1974/1975, existing development programs in the entire country will continue, while the necessary technical feasibility work will be initiated to identify development projects to be implemented during the Five-Year Plan. During this period every effort will be made to economically integrate the entire nation as well as to resolve the refugee and war victims problems.

Reconstruction of actual war damage will continue, and the reconstruction of the transport system will commence. Continued support through the FEOF will be necessary during this period. Because of increasing requirements for reconstruction, development, and national budget integration, increases in FEOF contributions are being requested.

A budget reform proposal will be introduced during FY 1974/1975 to enable the Government to better deal with development tasks. An outline of this proposal is included in Chapter VII, Annex 2.

A major effort is being launched to mobilize additional external aid from existing sources including the socialist nations. The Asian Development Bank is already active in assisting Laos and the International Bank for Reconstruction and Development is considering its potential role. Negotiations with socialist nations are now underway to explore their potential aid inputs. A proposal is being considered for the formulation of a Development Donor Group to work under the coordination of the Ministry of Economy and the Plan to assure maximum utilization and coordination of aid, and more importantly to facilitate the Ministry's role in formulating the aid program's content.

The Second Plan for Reconstruction and Development. The objectives of this plan are detailed in Chapter VI of this paper.

It is a five-year program which will have as its major objectives the unification of the people and the nation and the achievement of equality among all the people and in all fields of activity. Concurrently, it will build a strong and viable economy with maximum reliance on domestic resources.

During this period Laos will continue to be heavily dependent on foreign aid. Notwithstanding this, it will utilize this aid and its own resources to build a unified nation moving towards economic independence in order to lessen its need for external aid and thereby diminish foreign influence. In the pursuit of this self-sufficiency during this Five-Year Plan, the development policy stresses politically and economically feasible regional and national economic integration. Every effort will be made to maximize external assistance during the Plan Period for the maintenance of monetary stability and for the supply of necessary foreign exchange and technical assistance to attain the objectives of the Plan.

## II. DOMESTIC POLICIES ADOPTED BY THE NATIONAL POLITICAL COUNCIL OF THE COALITION

### "The Program for Building a Peaceful, Independent, Neutral, Democratic, United and Prosperous Kingdom of Laos

#### Domestic Policies

"1) To unite the people of all nationalities, tribes, religions, all walks of life, all classes to struggle for the full implementation of the agreement and the related protocol, and to build a peaceful, independent, neutral, democratic, united and prosperous Kingdom of Laos.

"2) To achieve equality in all fields--political, economic, cultural and social--among the nationalities and tribes. The representatives of the nationalities and tribes must have appropriate positions in the administrative bodies at all levels. Help must be given to the minority nationalities to improve their life and knowledge in all fields.

"3) To ensure the democratic freedoms of the people, namely personal freedom, freedom of belief, freedom of speech, freedom of the press, freedom of assembly, freedom to set up political parties and organizations, freedom to stand for election and to vote, freedom of movement and residence, right to enterprise and right to property ownership and to abolish all laws, regulations and organizations contrary to and strictly prohibit all acts against the democratic freedoms of the people.

"4) To hold democratic elections to consolidate the state bodies at village, district and provincial levels, including the peoples councils and administrative committees. To supervise, amend and complement electoral laws, to hold truly free and democratic general elections to set up the national assembly and the Government of National Union, and to consolidate the legal system so as to make it really equitable. To study, amend and complement the constitution on the basis for respecting the throne and guaranteeing all democratic freedoms of the people with a view to building a peaceful, independent, neutral, democratic, united and prosperous Kingdom of Laos.

"5) To respect Buddhism and other religions, preserve pagodas and temples and other historic sites, defend the right to worship of Buddhist priests and other religious believers.

"6) To achieve equality between men and women on the political, economic, cultural and social plans. To help the women improve their knowledge in all fields and develop their capability in national construction and defence. To improve the life of working women of all nationalities and tribes, and particularly to attach importance to the care for mothers and children.

"7) To build step by step a rich and powerful sovereign national economy and finance by mainly relying on the domestic natural resources and the peoples resources and, at the same time, actively seek unconditional foreign aid so as to make the people happy and strengthen the country.

"To develop industry and agriculture, forestry, industry and handicrafts, trade, communications and transport by taking agriculture and forestry as the basis for the building and development of national industry, proceed towards the all-round development and expansion of a sovereign, rich and strong national economy. Strongly encourage the people's production and at the same time strengthen the state economic sector. To encourage individuals either to carry out private undertakings or to join the state in making investments jointly with the state according to the principle of ensuring the interests of both the state and individuals. To implement a fair and reasonable tax policy and a correct and strict management of finance.

"8) Defend valuable customs and habits of our nation and various tribes, develop a national and progressive culture and education, heighten the spirit of patriotism, friendship and solidarity between nationalities and tribes, and step by step raise the cultural, scientific and technical level of the people of all nationalities. Teach and learn in the spoken and written Lao language at all schools and at all grades, develop education in all respects in a balanced way, as between general education high and secondary professional schools, and foster a contingent of cadres, functionaries and personnel to serve the construction and defense of the homeland.

"9) Develop the health network down to the remotest village and hamlets to care for the people of all nationalities and tribes. Prevent and eliminate infectious diseases, first of all, malaria, leprosy, V. D. and intestinal diseases..., and strive to prolong life expectancy so as to increase the population of the various nationalities and tribes.

"10) Provide work to and improve the material and culture standard of every citizen of Laos in the towns as well as the countryside. Abolish the grabbing of the land, fields and manpower and property of peasants and workers. Help war victims, the aged, homeless orphans and invalids. Help demobilized soldiers, chiefly the wounded and families of soldiers and officers and policemen so that they can earn their living and contribute to national construction. Defend the interests of the overseas Laotians and foreign residents who work honestly and respect the law and order of our country.

"11) Abolish the vestiges of the depraved culture exported by foreign countries and combat social evil, particularly murder, plunder, prostitution and gambling, in order to ensure public order, preserve the nations ethics, defend the purity of the Lao people and the healthy life of our young people.

"12) To build a unified national army and security defence forces, who deeply love their country and their people and are ready to defend the Fatherland, peace, security and the peoples lives, property and interests. The army must engage in productive labour so as to achieve partial self-sufficiency in food and alleviate the levies made upon the people. The army must take part in the building of the economy and culture and in the improvement of the people's living conditions. The army and other forces defending national security must enjoy democracy, heighten the sense of discipline, care for the lives of officers and men of both the army and police.

"The program for building the peace, independence, neutrality, democracy, unity and prosperity of the Kingdom of Laos is executed in three copies:

- One is issued as a report to be submitted to the King.
- One is sent to the Provisional Government of National Union.
- One is kept in the archives of the office of the National Political Council of Coalition.

"Luang Prabang, May 24, 1974

' The National Political Council of Coalition;  
President Prince Souphanouvong, two Vice-Presidents;  
Khamsook Keola and Sisoumang Sisaleumsak. "

Note: This program is now undergoing review, prior to official adoption by the Provisional Government of National Union.

### III. IMMEDIATE AID REQUIREMENTS

Current FEOF assistance levels are not adequate to support the increasing budget deficit. This deficit resulted from large increases in budget expenditures in recent months which were not fully envisioned at the time FEOF agreements for calendar year 1974 were negotiated. These additional budget expenditures introduced excessively large supplies of Kip on the market, stimulating demand for imports and thus foreign exchange. The foreign exchange availability was not sufficient to meet the demand at the 840 rate.

As pressure for foreign exchange mounted, the banks were closed for foreign exchange transactions and the Government decided to institute exchange controls for specific lists of imports and foreign exchange expenditures. These exchange controls established a three-tier exchange system: (1) at 600 Kip to \$1, (2) at 840 Kip to \$1, and (3) the curb (free market) rate which is expected to fluctuate above 840 depending on the availability of foreign exchange in relationship to import demand for items not under the exchange control.

The decision of the Government to establish this system was to assure adequate supplies of essential commodities at stable prices to the majority of the people and to restrict the availability of non-essential imports. These exchange controls are recognized to be "stop gap" short-term measures, since in the longer term they would discourage exports and agriculture production, and result in other economic dislocations as well.

Estimates indicate legal market foreign exchange availability of approximately \$13 million from the end of July until the end of this calendar year (see Table I). At the same time import requirements of items on the exchange control list for this same period (5 months) are estimated at \$16.1 million (see Table II). Although the import requirement estimate has a margin of error, it does indicate that the legal market supply of foreign exchange will probably not be adequate unless essential imports are cut back. The earnings of foreign exchange outside the banking system are estimated at about \$15 million in calendar year 1974, but much of this may be held outside the country and hence unavailable to meet the demand for foreign exchange in the free market.

#### Prospects for 1975

Projected budget deficits (excluding the foreign transfer tax as revenue) in FY 1974/1975 and FY 1975-1976 are 27 billion Kip and 30 billion Kip respectively, assuming present exchange policies and improved Government budget performance. This does not include the integration of the budget on a nation-wide basis, which could add 8 to 10 billion Kip more to expenditures, while foreign exchange availability will decline sharply unless new sources are found. Current projections indicate legal foreign exchange availability will drop from \$43 million in 1974 to \$35 million in 1975, a level insufficient to meet essential import requirements even at 1974 levels, and combined with the large budget deficits would create inflationary pressures which would seriously disrupt the economy.

#### Government Action

A. To insure that the exchange control system achieves its objective of making available essential import items at stable prices to the people, the Government will take the following action:

(1) Import documents for items on the control lists will be verified by physical audit and inspection of entire the transaction and goods imported. This is to assure that scarce foreign exchange is actually used for essential commodities when purchased at the 600 and 840 rates.

(2) Strict price controls will be enforced on items imported under the exchange control system. This is to avoid profiteering by merchants who

use the preferential exchange rate to purchase imports and then mark up their commodities to reflect the curb rate.

(3) No price controls will be levied on any items which are not under the exchange control. This is to allow prices of these items to rise and discourage their import and encourage their local production.

(4) Import taxes on private automobiles will be raised.

(5) Export or re-export of any commodity which is on the exchange control list will be prohibited.

**B. To reduce the budget deficit, and other expansionary forces.**

(1) A new system for budget fund disbursement and approval of expenditures will be established. This is to guard against overspending of initially allotted amounts and leakages in disbursement.

(2) Enforcement of existing taxes will be improved, and additional taxes will be levied on urban land, private construction, gasoline and other non-productive and foreign exchange using items.

(3) The level of FY 1974/1975 budget expenditures will be set according to tax revenues and foreign aid placed at the disposition of the Government. The deficit will be minimized.

(4) A budget reform will be initiated to maximize budgetary development expenditures.

(5) The expansion of credit in the private sector will be sharply reduced through the following measures: increasing the bank discount rate, application of credit ceilings to both domestic and external operations, and strict enforcement of bank reserve requirements of 50 percent.

TABLE I

PROJECTED FOREIGN EXCHANGE AVAILABILITIES

AUGUST THROUGH DECEMBER 31, 1974<sup>1/</sup>

(\$millions)

I.	<u>Net FEOF Availabilities</u>	<u>11.6</u>
	A. Remaining Contributions	<u>10.0</u>
	1. U.S.	4.1
	2. U.K.	.4
	3. Australia	.5
	4. France	.6
	5. Japan	.9
	6. Laos <sup>2/</sup>	3.5
	B. Net Balance	1.6
II.	<u>Other Availabilities<sup>3/</sup></u>	<u>1.4</u>
III.	<u>Total FX Availabilities (I &amp; II)</u>	<u>13.0</u>

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<sup>1/</sup> Approximately 5 months (Estimates as of July 22)

<sup>2/</sup> Includes projected supplementary Lao input of \$3 million.

<sup>3/</sup> The amount of other availabilities is adversely affected by rises in the curb market rate of kip for other currencies.

TABLE II

IMPORTS DURING 12 MONTHS THROUGH OCTOBER 1973

\* Products for which importation can be financed by FX at 1US\$=600 Kip

1. Chemical fertilizers	)	
2. Seeds	)	\$ 1,000,000
3. Insecticides for agricultural use	)	
4. Milk		\$ 527,000
5. Sugar		<u>\$ 1,000,000</u>
		\$ 2,527,000

\* Products for which importation can be financed by FX at 1US\$=600 Kip plus an exchange tax of 240 Kip

\* Priority I

1. Rice		\$12,500,000
2. Live animals (pigs, cattle and buffalo)		\$ 3,232,000
3. Petroleum products		\$ 6,356,300
4. Pharmaceuticals and medical products		\$ 400,400
5. Office furniture and supplies		\$ 671,400
6. School supplies		

\* Priority II and Priority III

1. Cotton		\$ 391,160
2. Cement		\$ 488,600
3. Machines		<u>\$ 1,781,050</u>
		<u>\$25,820,910</u>

Total \$28,347,910

Five month average  $5/12 \times \$28,347,910 = \$11.8$

Increase from 1973 +5% = \$12.4

Price increase and underestimate +30% = \$16.1

C. To seek additional external assistance to reduce the foreign exchange shortage.

(1) Current FEOF donors are being requested to increase their contributions in response to (1) the governmental actions toward austerity and fiscal responsibility outlined above, and (2) increased contribution to FEOF by the Lao Government (Table I).

(2) Membership of socialist countries in FEOF is being explored, since the quickest and most effective means for alleviating the current foreign exchange shortage is through direct hard currency contributions to FEOF.

Additional requirements to satisfy total import demand are estimated at \$6 million for the rest of 1974, while a bare minimum of \$3 million is required for essentials.

(3) If potential donors are unable to make hard currency contributions they are requested to open credits (on a grant basis) to make available their traditional export commodities and manufactured goods on the basis of a commodity import program to Laos. The amount of credit available will be negotiated. The Lao Government is prepared to supply a list of exact specifications for items outlined to those governments interested in providing these items. The goods required will then be ordered directly and shipped commercially by air to Laos, they would then be sold by the Government to commercial contributors who would sell them at controlled prices already in advance for such commodities. This input would have the same impact as a FEOF contribution, except the timing would be slower and the real cost may be higher.

Certain countries may prefer distribution by the Government, which could be arranged.

#### IV. DEVELOPMENT AND STABILIZATION POLICIES

The monetary and fiscal policy of the Government will be aimed at creating and then maintaining a sound financial position for the Nation to permit the effective implementation of the development and reconstruction programs. The FEOF will continue to be utilized as a major policy instrument through which the Government will implement its stabilization policies.

Laos' dependence on external assistance to meet both its development and stabilization requirements places the Government in a position in which the success of national policies and programs depends to a large extent on forces beyond its own control.

**Stabilization.** Total requirements for stabilization through FEOF will be \$38.8 million in 1975 which includes a \$6 million Government contribution. For the Second Plan, projected stabilization requirements are presented below. (Also see Chapter VI, Table I and Chapter VII, Table A-III.)

FEOF Stabilization Requirements  
(millions of dollars)

	1975	1976	1977	1978	1979	1980
External	32.8	40.7	39.8	38.6	33.1	24.8
Government	6.0	10.0	12.0	14.0	15.0	18.0
Total	38.8	50.7	51.8	52.6	48.1	42.8

The external contribution is targeted to decline to \$24.8 million in 1980, with the Government contribution growing to \$18 million in that year.

The cost of reunifying the Government and integrating the two budgets in FY 1975/1976 is the major cause for the upward trend in total FEOF requirements from \$29.2 million in 1973 to over \$50 million per year in 1976-1978, with a decline to \$42.8 in 1980, reflecting efficiencies derived from an integrated budget.

During this entire period (FY 1974/1975 - FY 1980/1981) credit expansion will be held to a minimum and tax revenues will be maximized as outlined in Chapter III. As conditions permit, that is when foreign exchange availabilities are sufficient, the policy is to establish unified exchange rate with free convertability.

Although the budget deficit will increase significantly during the initial years of the Plan Period, declines in the deficit are projected for 1979 and 1980.

The stabilization requirements can be met through direct contributions to FEOF or partially through a commodity import programs as outlined in Chapter III. If requirements are not fully met, shortfalls will result in inflationary pressures which will be disruptive to supplies of essential imports. More importantly shortfalls and the resulting inflationary pressures will also serve to discourage private investment and limit severely the Government's ability to carry out development programs.

Development. Development assistance is required to underwrite the development and reconstruction programs outlined in Chapters V and VI. These programs amount to \$59 million in 1975 and average over \$85 million per year over the Plan Period. They are required to build a productive economic base to generate a sustainable growth in output at the targeted 6 percent per year annual growth rate. Further, this investment can ultimately lead to economic self-sufficiency during the Third Plan.

Current external assistance levels averaged \$75 million per year over the past four years (including \$25 million per year in FEOF). These data are presented by source in detail in Chapter VII, Annex 2. Therefore, non-FEOF levels have averaged about \$50 million per year. Of this \$50 only about \$13 million went to development in 1973, and the rest to other activities such as aid to refugees, health and education. This \$13 million in combination with about \$3 million in private investment and negligible government development expenditures have been insufficient to increase production to even keep up with population growth.

The investment requirements presented below will produce a growth in output of about 6 per cent per year or 3 percent per capita. There is no provision in the budget for these expenditures at the present time. The addition of the Kip portion would double the budget deficit projected in Chapters VI and VII. Therefore, in order to preserve both the stabilization and development objectives, total funding would have to be available from external sources. To be specific, this means that all local currency costs of projects would need to be provided by the donor.

Development Expenditures  
(in millions of dollars)

	1975	1976	1977	1978	1979	1980	Five-year Total
Kip in \$ equivalents	30	40	47	53	56	46	244
Foreign Exchange	29	31	43	38	36	43	191
Total	59	71	90	91	92	89	435

## V. SUMMARY OF FY 1974/1975 DEVELOPMENT PROGRAMS AND POLICIES

The first tasks to be continued with accelerated speed and vigor are the reconstruction of war damage and the effects of neglect, the return or resettlement of refugees, and the return to a normal and productive existence of the demobilized war veterans and other war victims.

A preliminary presentation of project proposals and costs for FY 1975/1976 and the Five-Year Plan is contained in Volume II.

### 1. Reconstruction and Rehabilitation Policies and Programs

1.1. Refugees and other war victims. Determination will be made whether currently settled refugee areas could be made self-sufficient within a two-year period through the use to the extent feasible, of traditional farming techniques. Refugee settlements which cannot meet the above criteria will be reduced in size to a self-sufficiency level. Wherever possible, refugees will be encouraged to return to the original place of settlement, or if not, to an area which can offer them self-sufficiency status before the close of FY 1975/1976. All refugees whether returning to their original homes or settled in new areas will be given the opportunity and support to participate in the Rural Development Loan Fund (described in Section 2.3) over a period of 3-4 years, in addition to food support to those returning to their original homes before their first harvest. This financial aid will be provided in order to provide refugees and other war victims with the capability to invest in their farm holdings, and to stimulate monetization of the rural economy.

The existing refugee support programs will be terminated at the end of FY 1975/1976. An institutionalized program to aid displaced and distressed persons from all causes (natural, civil, and administrative) will replace it in FY 1976/1977 or earlier.

1.2. Reconstruction. Requirements for reconstruction of actual war damage are estimated at \$10 million, and are scheduled to be completed by the end of 1976. The facilities that fell into disrepair because of lack of maintenance during the war will be built under the Nation Building Program. Much of the actual war damage has already been repaired. Separate programs: one, the Nation Building Program and the other, the Rural Development Loan Fund, will be major instruments utilized to bring Laos to a level of productive capacity to move towards self-sufficiency during the Second Plan Period. The Nation Building projects are under Part 1 of Volume II, and the Rural Development Loan Fund is incorporated in Project 2225 in Part 2 of the same volume.

(i) Infrastructure. The need for reconstruction of roads, bridges, port facilities and public buildings will be assessed to determine whether facilities will be reconstructed to original standards, changed, improved, or abandoned. Priorities for sequence of the reconstruction work will be set according to the need, which will be interpreted as the number of persons who are denied the destroyed facility, whether they had access to it previously or not, and concurrently based on the contribution of the work to integrated regional development. Key infrastructure reconstruction work will take priority over new development project initiation.

(ii) Private Property. Low interest long-term loans from the Rural Development Loan Fund will be made available to owners of destroyed private property, including dwellings, shops, livestock and equipment.

A special sub-commission of the Rural Development Loan Fund will be established to administer this activity of the Fund and monitor that money is actually spent for rebuilding and replacement. This commission will be well staffed and have access to every part of the country so that it can perform efficiently. Individuals who borrow for this purpose will be given preferential treatment over those borrowing for newly initiated requirements.

1.3. Veterans. The demobilization rate will be implemented according to agreements within the Provisional Government of National Union. However, soldiers who have a functioning home to return to will be demobilized first, unless their skill is considered as a permanent requirement for the standing army. Every effort will be made to integrate veteran families with non-veteran and refugee families. Veterans can contribute the know-how to provide normal security, especially to new settlements.

The Rural Development Loan Fund will make loans available to demobilized forces to assist them in returning to normal productive activities. These loans will be made available on the same basis as to refugees and other war victims.

## 2. Setting Up the Apparatus to Implement the Second Plan

In order to effectively manage the limited resources available for nation building, development, reconstruction, rehabilitation and stabilization during the Second Five-Year Plan, the following mechanism will be established during FY 1974/1975.

2.1. A Development Donor Group for the Second Plan will be formed under the general auspices of the Minister of Economy and the Plan with the Commissioner General serving as the Chairman of the group's secretariat. The Minister of Finance and the Governor of the National Bank along with the Minister of Economy and the Plan will be permanent members of the group's administrative council. Other operating ministries will participate as

required. All present and potential aid donors (on both grant and loan basis) will be members, including bilateral as well as multilateral donors. The tasks and objectives of the group will include:

(i) The coordination of development aid activities and aid planning under the general guidelines of the Second Plan.

(ii) For the aid participants, the gaining of perspective as to the requirements of the Lao economy through familiarization with the Plan targets and strategy, and particularly the domestic fiscal and monetary constraints on external aid.

(iii) Coordinate with the FEOF donors as to budgetary requirements and stabilization according to the guidelines in Chapter IV.

(iv) Investigation of the desirability of establishing a special fund or budget from which local currency requirements for development projects would be disbursed, and participate in the management of this fund or budget.

2.2. A Nation Building Sub-Group (including reconstruction and rehabilitation) will be formed under the general auspices of the Commissioner General of the Plan. This sub-group will work under the auspices of the Development Donor Group. Membership in the group will include the Ministries of Finance, Public Works and Interior. Members of the group will include technical specialists and donors. The tasks of the group will include:

(i) The setting of priorities for transportation and communication infrastructure reconstruction and construction.

(ii) The coordination of aid to refugee and reconstruction aid activities and the planning of these activities in accordance with the general guidelines for 1975 and for the Second Plan.

(iii) The coordination with the FEOF donors as to the budgetary requirements and stabilization.

(iv) The exploration of the desirability of establishing a special fund for reconstruction and rehabilitation from which local currency requirements would be disbursed.

2.3. A Rural Development Loan Fund will be established. The strategy for financing reconstruction and rehabilitation is to mobilize maximum external assistance for all phases of recovery, not only to rebuild actual war damage but also to help make up for lost opportunities. An important objective is to obtain maximum foreign exchange financing for the local

currency costs of these programs, otherwise Laos will not have the capacity to implement them over the next Plan Period.

Loans to refugees, veterans and other war victims all over the country will have a significant income multiplier effect and will increase income in rural areas. Also, if external financing is obtained for the local currency expenditures, then the import demands created by this additional budget expenditure will be more than offset without inducing exchange rate pressures. This is because the import demand component of Kip spent in remote areas by recipients of loans from the Government is less than 100 percent and less than in urban areas. It will help to monetize the rural economy and stimulate production.

The Rural Development Loan Fund will be operated through the banking system. (Whether through the Lao Development Bank or a combination of credit institutions possibly utilizing ADO, or a new institution, will be determined later.) The primary function of the fund will be to provide supervised credit for rural development programs. The credit will be made available to individuals and cooperatives. Loans will be medium to long term 5-10 years and repayment schedules will be flexible. Terms for refugees and veterans will be somewhat softer than for others.

Additional requirements for reconstruction and rehabilitation of direct war damage are estimated at \$18 million, approximately \$9 million per year for two years (\$8 million of this is for refugees) including both local currency and foreign exchange costs. The requirements to bring the country to a viable level of productive capacity, however, are much greater. These are included under the Development and Nation Building programs described in the Five-Year Plan in Chapter V.

## VI. SUMMARY OF SECOND FIVE-YEAR PLAN FOR RECONSTRUCTION AND DEVELOPMENT

The objectives of the Plan are both quantitative (Economic Growth and Development) and qualitative (Social Development).

### 1. The Economic Growth and Development Targets are:

1.1. Achieve a sustainable, real Gross Domestic Product (GDP) growth rate of 6 percent per year over the Plan Period. This will increase annual family income by over 100,000 Kip in 1980 (in 1973 prices).

1.2. The sectoral expenditure mix will be balanced in such a way so as to develop export earnings while at the same time improving the welfare of the people. The most economically productive sectors will be given priority

while the service sector and the civil service will be kept at a minimum. Industrial development based on the natural resource base of cheap power combined with mineral and forest products will be given priority. Expenditures and investment will also be distributed both geographically and sectorally so as to reduce regional income inequalities which currently exist.

1.3. The State Economic Sector will be strengthened through direct investment and the introduction of mechanism for regulating private enterprise which directly affects the public interest. The private sector of the economy will be given first priority, particularly in agriculture and industry.

1.4. Reduce the balance of payments deficit through export promotion and import substitution.

1.5. Reduce the relative dependence on grant financing and move towards economic self-sufficiency over the long run.

1.6. Continued grant assistance will be sought for stabilization through the FEOF mechanism, while simultaneously increasing the Government participation to attain 40 percent in 1980.

1.7. The above targets will be first directed at achieving self-sufficiency in food.

## 2. The Social Development Targets are:

2.1. Rural development programs will be implemented to improve the welfare of all people in rural areas. Emphasis will be placed on improving the condition of the tribes. A special program will be developed (in addition to the one described in the FY 1974/1975 Plan) to aid war victims, the aged, homeless orphans and invalids.

2.2. Education. Continue the accelerated program of providing educational services to the largest number of people, particularly in rural and remote areas. To further expand teaching in the Lao language to the majority of schools over the Plan Period, and eventually to all schools.

2.3. Health. Continue to expand the scope and level of public health services to reach all the people over the Plan Period. Concentrate on the elimination of debilitating and infectious diseases. To develop over the Plan Period a comprehensive nutrition program to ensure that all the people can be healthy and strong to perform their tasks in a unified society. To develop, over the Plan Period, a national population policy which will ensure that productive employment will be available for a growing population.

### 3. Overall Externally Financed Requirements.

In order to attain the objectives of both the One-Year Interim Plan for FY 1974/1975 and the Five-Year Plan (FY 1975/1976 - FY 1980/1981), external resource requirements of approximately \$500 million will be required over the six-year period for development, and reconstruction. Stabilization requirements over this same period may be as high as \$200 million. However, if the income multiplier effect of development and reconstruction programs can be effectively channelled into savings, this requirement could be significantly reduced. While domestic private investment is targeted to increase from \$4 million in 1974 to \$30 million in 1980, Table I indicates the activity and schedule for this requirement. A partial compendium of preliminary project proposals is presented in Volume II. This initial compendium represents about half of the total \$500 million requirement.

3.1. Stabilization. An integral and essential part of the Second Plan is the continuation of the monetary stabilization program through FEOF. Because of the prolonged conflict which has interrupted normal productive activities and consequently government tax revenues, the national budget deficit has been very large, and with the planned integration of the budgets of both sides for the formation of a national budget in FY 1975/1976, the budget deficit is expected to increase even more. The budget deficit in FY 1973/1974 was 22 billion Kip and is expected to increase to a maximum of 27 billion this fiscal year. (see Table A-II, Annex 4, Chapter VII).

Deficits of this size, if not offset by domestic production or external resource input, would result in extremely high rates of inflation which would create financial chaos and great hardships for the people. Because of these reasons, the FEOF was established on January 1, 1964, upon the recommendation of the International Monetary Fund, as a mechanism to channel the external resource inputs to compensate for the budget deficit as well as other expansionary factors, and thus maintain monetary stability.

Over the Plan Period, Laos will continue to depend on financial support through the FEOF mechanism, although it will significantly increase the government contribution to this fund from \$2.3 million in 1973 to \$18 million in 1980, or from an 8 percent participation rate to contributing 42 percent of the FEOF resources. The stabilization requirements in Table I reflect only the external donor's contributions.

3.2. Development. Because of limited financial resources, Government budget expenditures for development<sup>1/</sup> have been small (600 million Kip in

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<sup>1/</sup> Development expenditures are defined as expenditure for new infrastructure and additions to the output capacity of the Nation. They do not include maintenance, or ongoing government operating expenditures.

Table I

External Resource Requirements (FY 1975-76 - FY 1979-80)  
The Interim Annual Plan FY 1974-75 and the Second Plan  
for Development and Reconstruction  
(Millions of Dollars)

Line	1975	1976	1977	1978	1979	1980	Five Year Total
1 STABILIZATION (FEOF)	32.8	40.7	39.8	38.6	33.1	24.8	177
DEVELOPMENT							
2 Local currency (Rural Dev. Loan)	5	10	10	10	5	-	35
3 Local currency (Other)	12	19	27	28	31	33	138
4 FX	17	19	28	29	31	33	139
5 Total (2+3+4)	34	48	65	66	67	66	312
NATION BUILDING							
6 Local currency	5	5	10	15	20	15	65
7 FX	10	10	15	10	5	10	50
8 Total (6+7)	15	15	25	25	25	25	115
RECONSTRUCTION AND REHABILITATION							
9 Rehabilitation Local currency	5(d)	3(d)	-	-	-	-	3
10 Reconstruction FX	2	2	-	-	-	-	2
11 Local currency	3	3	-	-	-	-	3
12 Total (9+10+11)	10	8	-	-	-	-	8
13 TOTAL REQUIREMENTS (1+5+8+12)	91.8	111.7	129.8	129.6	125.1	115.8	612
SUMMARY BY TYPE							
14 FEOF (1)	32.8	40.7	39.8	38.6	33.1	24.8	177
15 Other FX (4+7+10)	29	31	43	38	36	43	191
16 Local currency (2+3+6+9+11)	30	40	47	53	56	48	244

- Note: a) FX = Foreign Exchange  
b) FEOF = Foreign Exchange Operations Fund  
c) Local currency is all assumed to be purchased with foreign exchange.  
d) In 1975 and 1976, \$5 million and \$3 million are for continuation of the existing refugee program.  
e) Stabilization requirements in Line 1 do not include Lao Government contribution.  
f) Details of calculations, assumptions and definitions are contained in Chapter VII, Annex 4.  
g) Debt servicing which will amount to \$12.3 million over the six-year period is assumed to be met through increased export earnings (see Chapter VII, Annex 2).

FY 1973/1974). The balance of development programs have been undertaken by the private sector or financed through foreign aid.

Expenditures for development from all sources have been insufficient in the past to provide the necessary base for sustainable growth in output. As a result the economy has been stagnating. Estimates indicate that investment, both public and private, in 1974 will reach about \$18 million, accounting for only 6 percent of GDP and resulting in an economic growth rate of 2 percent, less than the rate of increase in population.

The Second Plan development program calls for a doubling of investment in 1975 to \$39 million, of which \$5 million will come from the private sector, \$5 million will be disbursed through the Rural Development Loan program, and the remaining \$29 million will be implemented through the Government's development program for FY 1974/1975 financed by external aid.

During the Five-Year Plan total investment expenditures will increase to \$96 million in 1980 representing 22 percent of GDP, of these \$30 million is targeted to be in the private sector, so that external grant assistance requirements for development will be \$66 million in 1980.

It is recognized that these investment requirements may not be fully realized, particularly during the initial years of the Plan. The reasons for this are many, the most important being: (1) the ability to implement such an increase in investment takes time to develop, even with extensive use of foreign manpower, (2) this level of aid may not be made available, and (3) the lack of projects and programs which are developed to the stage at which foreign assistance can be applied.

External grant assistance in 1974 is estimated to be \$73.9 million (including \$26.9 FEOF contributions). Much of it is not developmental, however, and of the non-FEOF \$47 million, only \$14 million, at maximum, is developmental, with the remainder being humanitarian and operational.

The total levels of grant assistance over the Plan Period will need to be at a higher annual rate than in the past (see Chapter VII, Annex 2). And more importantly the mix of the aid will need to be different. As economic recovery takes place, humanitarian aid will not be needed and as the tax base is strengthened, government operations will be covered increasingly through the national budget. Aid will then be focused principally on development programs.

The terminal year of the Plan (1980) will be the peak year for grant aid requirements. During the Third Plan a solid investment base will have been built and both internal resources as well as increased utilization of loans will provide the necessary financing for investment. It is assumed that

no new grant assistance projects will be required to be initiated during the Third Plan. Such projects which have been initiated during the Second Plan will need to be continued however.

Current debt servicing costs will total over \$12 million during the next six years, which is manageable, assuming a significant realization of grant aid requirements, and increasing Government contributions to FEOF.

The development grant aid requirements shown in Table I include significant amounts of local currency. This is the "counterpart" financing of the domestic costs of projects. This would include such items as local labor, some construction materials, etc. These amounts are identified in Table I and are not included in the national budget. Under the budget reform: (Chapter VII, Annex I) a special budgetary fund would be set up for the control of these expenditures. The foreign exchange would be placed in the National Bank and could be utilized for debt servicing, FEOF or other purposes. The local currency generation would have a significant income multiplier effect, particularly through the Rural Development Loan Fund.

### 3.3. Nation Building

The Nation Building program is directed principally at the rebuilding and expansion of the transportation infrastructure. There are three objectives in the 12-point domestic program (Chapter II) recently adopted by the Joint National Political Council that are applicable to this program. These are:

"(a) To enhance and broaden national unity...

"(b) To build step by step a rich and powerful sovereign national economy and finance by relying mainly on domestic natural resources and peoples resources, and at the same time, actively seek foreign aid so as to make the people happy and strengthen the country.

"To develop industry, agriculture, forestry, handicrafts, trade communications and transport by taking agriculture and forestry as the basis for the building and development of national industry...

"(c) To develop normal relations with all countries irrespective of political and social systems, first of all, with the neighboring countries.

"To broaden trade and economic cooperation with all countries on the principle of equality and mutual benefit and the guarantee of Laos sovereignty and independence."

### 3.3.1. Transportation Priorities

More specifically these objectives indicate the following priorities for transportation:

- 1) Develop transportation links between the various regions of Laos.
- 2) Orient the transportation system primarily toward agriculture and forest development, and other natural resource development.
- 3) Reduce transport costs to the lowest levels feasible for the national economy.
- 4) Increase communication links with neighboring countries.

On the basis of these four general priorities, the following list of specific priorities by sector has been established.

### 3.3.2. Roads and Bridges

- 1) Maintain and enlarge the national road network, particularly with links between the various regions of Laos and links to and within potential development areas.

Given the relatively low traffic volumes on rural highways, the first priority is to maintain the national road network in good operating condition. This requires an investment in equipment and an adequate operating budget. A study and training program to establish most economic maintenance practices and requirements and to meet maintenance management needs is also proposed.

- 2) Road construction will be limited to vital links in the road network and staged construction of secondary roads and feeder roads directly in agricultural development zones as part of an integral agricultural development program in each zone.

Construction of international highways to Asian Highway standards is a long-term goal to be implemented when traffic levels warrant it. However, replacement of damaged bridges is high priority for these highways.

Construction of secondary and feeder roads will be undertaken by Public Works forces wherever possible to reduce construction costs to the minimum.

### 3.3.3. River Transport Infrastructure

1) Traditional river transportation will be maintained and improved. River navigation improvements are the highest priority in this sector with the development of channel maps and markers for the Mekong at the top of the list.

2) Development of additional river access ramps will proceed in conjunction with development zones or international traffic transfer points. River port storage areas will be provided as justified by traffic volume.

3) A hovercraft transport feasibility study is desirable in the long term for both domestic and international transport on the Mekong.

### 3.3.4. Air Transport Infrastructure

1) Airports will provide needed communications links both domestically and internationally. Given the existence of many airfields in Laos, the highest priority will go to the selection and improvement of those airports to be used for regular domestic service. Only minor improvements are necessary in most cases.

2) Airport maintenance and operation are second in priority. A personnel training program is critical for safe airport operation, and an adequate maintenance budget is required as well.

3) Airport improvement will take place in conjunction with increased air travel demand and new infrastructure will be studied in the framework of a general tourism infrastructure study.

## 4. Overall Development Strategy

There follows a broad outline of the major objectives and of the programs to attain them which will be implemented during the Plan Period.

### 4.1. Objective: The elimination of the national food deficit

#### Programs:

1. The implementation of the nation building, reconstruction and rehabilitation programs. To utilize and direct to the maximum extent possible, nation building, reconstruction and rehabilitation programs as a starting point to longer term development.

2. The establishment of the Rural Development Loan Fund.

3. Priority development of areas which have the greatest potential for rapid increases in agricultural output. Subsistence farmers who are working marginal soils should be brought up to acceptable subsistence levels.

- Integrated area development projects will be given priority because they have a greater potential for early pay-off.

- Vertically integrated livestock development projects will be given priority.

4. Elimination of marketing bottlenecks, Administrative bottlenecks to marketing are significant, both because of the high costs incurred through local taxes and payments at road checkpoints and in restrictions placed on commodity movements.

In order to provide incentives to farmers to increase production, a free domestic market in domestically produced agricultural goods will be established. The elimination of area movement restrictions and a reduction of local taxes and other payments which hinder agricultural products mobility will be instituted.

5. The construction of an adequate transport network. Within the context of constructing the national road network, priority will be given to farm to market transport, particularly the development of transport from the agriculturally rich southern region to Vientiane. The development of an additional overland access to the sea will be initiated during the Plan Period.

#### 4.2. Objective: Development of import substitution industries

##### Programs:

1. Determination of eligibility for promotion will be based on adopted development and stabilization guidelines and tax guidelines. The following special feasibility criterion will be applied to each promotion request: That the total foreign exchange cost of the proposed domestic production is less than the wholesale foreign exchange outlays for imports of this commodity in 1974 prices. This criterion based on 1974 will be applied over the entire Plan Period. Exceptions to this criterion will be considered only for essential items for which the import supply may not be reliable.

2. A program will be developed to stimulate cottage industries to produce items currently imported from Thailand, i. e., ready made cloths, cloth, clay pots, baskets, etc.

3. A program will be developed to stimulate output of imported fuel substitutes, i. e., charcoal, wood and coal to replace imported fuels.

**4.3. Objective: Export industry development.** These fall into two major categories: processing and natural resource exploitation.

**Programs:**

**1. Processing**

(a) The rationalization of the saw milling industry. Tobacco curing and rice milling are among the major traditional industries in which there exists an opportunity for expansion. External assistance will be sought for the development of these industries and the identification of others.

(b) Research will begin into the feasibility of new industries using available natural resources.

**2. Natural resource exploitation.** The major presently known potentials are in hydroelectric power development and lumber.

(a) Hydroelectric power development. Immediate work will begin for the planning of additional hydroelectric projects - the feasibility analysis will include export market potentials.

(b) Lumber. A long range lumber development and exploitation program will be formulated. The desirability of granting concessions to private foreign companies will be explored. A reforestation program will be an integral part of future lumber exploitation arrangements. The feasibility for the development of a chemical industry based on lumber will be explored.

(c) Opium. Explore feasibility of Laos entering the legal export market.

(d) Other. Comprehensive mineral resource studies will commence at once. These will not be of a general nature but will be directed at determining possible sites for test drilling, etc.

**4.4. Objective: Currency unification.**

**Programs:**

In formulating the mechanism for currency unification, consultations will be held within the FEOF Committee and other appropriate donors and ministries. The following general criteria will be followed:

1. Money supply of both currencies combined on the day of unification will be determined on the basis of goods and services availability under both currency systems. (Money supply to market goods and services, excluding subsistence.)

2. The amount or exchange rate of PL Kip which will be converted for RLG Kip will be determined by the value of market production in PL areas in terms of RLG Kip; then the money supply formula will be applied to determine the exchange rate or amount if it is to be one for one.

4.5. Objective: To reduce income disparities.

Programs:

Within the external resource constraints and subject to the primary objective of attaining national self-sufficiency, programs and policies will be initiated to reduce income inequalities which exist between regions and between rural and urban areas.

1. Through rural development: Within the context of national and regional development, programs aimed at increasing the income and welfare of rural areas will be continued and accelerated. The Rural Development Loan Fund will be made available to farmers and farmers' cooperatives and other farmers' organizations to finance and give technical assistance in rural development. The objective of the loans will be to raise the sustainable income of the farmer. Other programs will concentrate on community development type activities and small scale public works implemented through the Governor's office. As some of the national force-account public works projects are reduced, some of the equipment and capabilities may be transferred to the Governor's office for rural development activities.

(a) Farmers' organizations and cooperatives will continue to be encouraged, and legislation to promote such activities will be introduced. Limited subsidies through supervised credit and use of rehabilitation funds will be provided.

(b) Rural development strategies and programs pursued by the Pathet Lao in their areas will be evaluated for their effectiveness in rural development and income creation, and will be supported.

(c) Hill tribes. Every effort will be made to utilize productively the vast mountain areas inhabited by the hill tribes.

2. Through urban development: Programs and policies will be initiated to mobilize urban savings so that urban centers will increase their role as "growth points" for rural development. Urban savings will be mobilized through taxation for Government investment and promotion, and through incentives to business to invest in the rural economy to attain geographic decentralization. Both of these methods will be selectively utilized to reduce the urban/rural income gap while promoting economic development on an integrated regional basis.

Urban development public sector infrastructure projects will be undertaken only if they can be financed through service rates. The only exception to this will be if the project is necessitated by application of the Second Plan guidelines for minimum levels of public services to be provided by the Government.

3. Through taxation:

(a) Taxes on imports of non-essential commodities and import oriented establishments (except food) will be increased in order to:

- serve as a deterrent for expansion of imports,
- raise more budget revenues, and
- reduce the urban-rural income gap by using the revenues for increasing domestic production.

Taxes on food industries even though they may use imported raw materials, will not be increased because it would increase the cost of basic necessary commodities on the market for the lower income consumers.

A review of existing customs duties will be made with the objective of increasing duties on luxury items and items which can be locally manufactured and on lowering or eliminating duties on industrial goods to be used for investment purposes.

(b) Reduction of income differentials during inflation. During periods of inflation Government policy will be to raise the money income of the lowest income level groups to reduce the real income inequalities through the following:

- Taxes will be further increased on luxury goods.
- Civil Service salaries at low and intermediate levels will be raised.
- Taxes on food distribution and marketing activities will be lowered.

(c) Investment incentives. The benefits of the National Code of Investment (including tax holidays and limited government subsidies) will be increased to persons who invest in agro-industry, farm input distributorships and agricultural projects. In addition, technical assistance will be made available to potential investors in the form of project identification and assistance in implementation.

#### 4.6. Objective: To implement a manpower development policy.

##### Programs:

The availability of appropriately trained Lao manpower at all skill levels is a prerequisite for attaining economic self-sufficiency in the long run. One of the most serious bottlenecks to the implementation of current development programs is the lack of qualified manpower, - in other words, the lack of "absorptive capacity" to assimilate external capital and other inputs. The attainment of an effective manpower development program is a long-term effort, and one which was accorded high priority during the First Plan Period. This high priority will be maintained during the Second Plan.

1. Short-term manpower policies. A comprehensive study will be made to determine overall manpower supply and requirements during the Second Plan Period. This will entail a project-by-project analysis of proposed Second Plan projects, as well as an estimate of private sector skill requirements. To the extent that it is possible, employment generation will be maximized through selection of relatively labor intensive projects. The manpower development strategy will encompass the following specific fields:

(a) Agriculture. Major emphasis will be placed on developing and upgrading skills and technical competence in the agriculture sector, since 80 percent of the labor force is engaged in some form of agriculture.

- Efforts will be made to increase the presently small number (25 or less) of Laos university graduates with degrees in agriculture;

- Extension services will be expanded through increased training of Lao nationals and possibly use of foreign extension workers for short periods; skills of existing extension workers will be upgraded;

- Mobile rural training will be initiated in basic skills (e. g., literacy, carpentry, masonry, machine repair);

- Education and training of displaced refugees will be continued in order to make them more productive farmers when they return to their place of origin or to newly opened settlement areas;

- The demobilization of military personnel will be scheduled to proceed slowly so that the agricultural labor force can absorb their numbers gradually. The demobilized soldiers, like the displaced refugees, will be given some training to increase their farming skills;

- Efforts will be made, in collaboration with external donors and organizations, to increase the number of personnel engaged in agricultural research and dissemination of research results.

(b) Civil Service. It will be vitally important to expand and upgrade the skills of Government officers if development projects are to be effectively conceived and implemented. This is particularly important for officers at the local and technical project management level.

- The training programs now being offered to Chao Moungs will be supplemented by training programs for Deputy Chao Khouengs:

- A program of selection and training of officers for development planning and implementation in the Provincial Offices will be initiated. Selection of persons will be made from three sources: (1) the ranks of existing civil servants, (2) the best of the Community Development workers, and (3) persons laid off from foreign aid offices as they may reduce their staffs.

- A thorough study will be made of the staffing requirements of the Civil Service as a whole. A position classification system will be introduced, and an assessment will be made to determine the minimum effective size of the Civil Service needed to function effectively.

- Manpower planning activities will be initiated in each major Government ministry and organization in order to define the goals and scheduling of manpower training within each major unit.

- The Civil Service Commission, in conjunction with the Ministry of Education and the Ministry of Economy and the Plan, will be charged with the responsibility for maintaining detailed information on Lao students abroad, and for coordinating foreign study within the manpower requirements of the country.

(c) Industry. While industry as yet represents only a very small percentage (5 percent) of labor force employment, it will nevertheless require increasingly more and better trained manpower as the economy develops.

- Rural mobile training will be initiated to provide basic skills (e. g., electrician, mechanic, engine and pump repair) in rural areas for small industry development.

- Training in artistic crafts (silverware, gold smithing, jewelry and wood-carving) will be expanded.

- The completion of the Centre National de Perfectionnement Professionnel for training of technical and supervisory manpower will be expedited, and the design of curriculum will be adopted to manpower needs of industry in the country.

- Follow-up studies of the graduates of the Colleges Techniques (Vientiane, Savannakhet) will be conducted in order to evaluate the

effectiveness and appropriateness of the training offered, and to determine if the graduates are employed in their specialty.

2. Laoization of Manpower. The policy will be to replace the greatest number of foreign nationals with appropriate trained Lao personnel. The major areas where Laoization will proceed is in the teaching profession. The number of foreign nationals will decline substantially as secondary education teaching is gradually taken over by Lao teachers. There will also be possibilities for Laoization of manpower in the future in certain key occupations (e. g., managerial-supervisory jobs in industry, engineering, mechanical trades, electrical trades, and construction work). This process of training Lao manpower to fill jobs being performed by foreign nationals will proceed with reasonable pace, but not so quickly as to jeopardize the momentum of development.

3. Long-term manpower policies. It will be necessary in the long run to link manpower policy with population policy, since the size of the economically active population is determined primarily by the growth rate of the population. The present policy of the Commission for the study of Population and Family Well-Being is to: (1) reduce the mortality rate and (2) promote, through voluntary family planning, the harmonious growth of the population and family well-being. It will be necessary to establish a more definitive goal for the annual population growth rate (i. e., a target birth rate) since the present rapid rate of population growth (2.7-3.0 percent) will place an extremely heavy burden on social overhead investments (health, education, housing, etc.) in the near future.

The education system and the employment market will need to be carefully coordinated in order to prevent imbalance between increasing number of educated youth and the absorptive capacity of the economy to productively utilize their education.

- The process of reorientation of education to be more responsive to domestic economic and social needs will be accelerated.

- The expansion of Lao language literacy will be given high priority, as will the use of Lao as the language of instruction at all types and levels of education.

- - The education system will aspire to raise the level of cultural, scientific and technical knowledge of all citizens of Laos, and the division of education between general studies and technical and professional education will be balanced, based on the country's needs.

- Efforts will be made to provide more equal educational and employment opportunities for women in the political, economic, social and cultural spheres.

- Similar efforts will be made to improve the educational level and enhance equality between all nationalities and ethnic groups in the country.

- An attempt will be made to develop a system of monetary and non-monetary incentives to motivate educated and trained persons to utilize their education and training effectively. In addition to wages, salaries and monetary fringe benefits, other motivational factors such as security, prestige, patriotism and professionalism will be examined for possible use in an effort to raise the productivity of manpower in the country.

- The future role of the military. A program will be developed to limit the size of full time military units to the minimum size to provide national security. A force of reservists or peoples militia will be organized to provide the necessary expansion in times of national emergency. This militia force will be actively engaged in productive economic activity so as not to be an additional tax burden on the people through the already deficit ridden budget.

#### 4.7. Objective: To establish public service national standards

##### Programs:

With the large demands for resources for economic development, reconstruction, and monetary stabilization, expenditures for public services and its infrastructure will be limited. The Second Plan objective is to provide equitable standards of public services to the whole population.

These standards will be established according to the following classification:

- |                 |                               |
|-----------------|-------------------------------|
| - Education     | - Electricity                 |
| - Health        | - Transportation              |
| - Relief        | - Housing                     |
| - Communication | - Other public utilities      |
| - Water         | - Other public infrastructure |

The above cover the basic services generally provided by the Government in part or in whole. Each category will be evaluated separately: first on the basis of ability to pay by the recipients, and secondly, on the basis of what services the Government will provide on a subsidized basis or without charge because of the low incomes in the area or other reasons. The "Relief" classification does not include war relief.

The level of these services to be provided will be different for a wide range of geographical locations. Equitable standards will be set for several classes of urban areas, rural areas, towns, villages and temporary settlements.

## ANNEX I

### BUDGET REFORM OUTLINE FOR THE SECOND PLAN FOR DEVELOPMENT AND RECONSTRUCTION

The outline below will be utilized by the Government in the preparation of a revised budget law to meet the evolving needs for the post-hostilities era for economic development and reconstruction.

The key elements of the budget reform will be:

1) To establish a development budget for the Second Plan which would include total public development expenditures and establish a control mechanism for external economic assistance. This budget will include:

(a) The existing Ministry of Economy and the Plan development budget.

(b) The budget for the development activities of the line ministries (Public Works, Agriculture, Education, etc.). The portion of the ministry budgets which will be defined as developmental will follow well established accounting procedures currently used by other developing countries and by international institutions.

(c) The counterpart local currency budget for external aid.

(d) The external economic aid availability for budget programming purposes (not part of the development budget per se).

2) To establish Ministry of Economy and the Plan jurisdiction over the formulation of the development budget.

(a) Sectoral five-year plans are formulated by the Ministry of Economy and the Plan in cooperation with appropriate line ministries. These will include sectoral and regional strategies and targets. The determination of fiscal and monetary constraints on the size of the budget, both external and domestic, will be the joint responsibility of the Ministry of Finance and the Ministry of Economy and the Plan.

(b) Monetary and fiscal policy guidelines will be determined by a joint committee of the Ministry of Finance, Ministry of Economy and the Plan and the National Bank of Laos. These guidelines will be used as the Government position within the FEOF framework.

(c) Within the framework of (a) above, major programs and projects will be developed with the Ministry of Economy and the Plan taking the lead with the line ministries in setting priorities and establishing costs for

budget formulation purposes. It will be the responsibility of the Ministry of Economy and the Plan to oversee inter-ministerial coordination and set sectoral budget guidelines.

(d) The Ministry of Economy and the Plan, in cooperation with local government authorities, and provincial representatives of line ministries will formulate regional development plans which will consist principally of projects and programs in small scale rural development. These programs will be supplementary to programs in the national plan. The Regional Development Plans will have a special budget and will seek external assistance support on a 'program aid' basis.

(e) The Ministry of Economy and the Plan, within the framework of monetary and fiscal guidelines, will set up foreign assistance requirements and negotiate the foreign economic aid program inputs, both loan and grant. Those inputs will be integral parts of the budgetary process because much of the development budget will be used in support of foreign assistance.

(f) The development budget will then be submitted to the Ministry of Finance for use in formulating the regular civil budget and disbursement.

(g) Although the Ministry of Economy and the Plan may for a time retain some program implementation functions, particularly in projects in which it is already involved, it will adopt a policy of having the line ministries implement all projects as they gain the ability to do so.

1/ Amounts shown in parentheses are loans, all other amounts are grants.  
 2/ Asia Foundation, Asian Christian Services, Catholic Relief Service, Doolley Fdn.  
 3/ Not Included elsewhere except in Grant Total.

## ANNEX 2

 EXTERNAL AID INPUTS  
 (thousands of dollars)

Fiscal Year	1970/	1971/	1972/	1973/	(Est.)	(Est.)	Total		Nana Ngum <sup>3/</sup> Phase II	Grand Total
	1971	1972	1973	1974	1974/ 1975	1975/ 1976	Loans	Grants		
Asian Dev. Bank	(3370) <sup>1/</sup>		(1350)	(6000)			(10720)			11650
Australia	1175	1517	30	300	300	300		930)		
Belgium	30	25	1350	2000	2200	2500		10742	1500	12242
Canada	390		20	103	63	63		304		304
Fed. Rep. Germany		(2640)	200	450	450	450	(5970)	1140	(2632)	4572
France		850	100	400	700	700	(4894)	2750	(4894)	13614
India	7150	6842	(4894)	8000	8000	8000		43992)		48886
Int'l Red Cross		122	6000	50	50	50		272	132	404
Israel	66	750	60	500	410	300		2020		2020
Japan	4030	70	70	100	100	100		506		506
Netherlands		3730	4500	7000	7500	7500		34260	(11000)	45260
New Zealand		(1500)	150	200	60	60	(1500)	470	145	145
Socialist Countries	150	150	150	300	400	500		1650	695	2665
Thailand		15		70	70	70		225		1650
UNICEF				1750	3250	1000		6000		225
United Kingdom	1950	2297	2300	2300	2300	2300		13447	(117)	6000
United Nations	1084	1690	1660	2100	3000	3000		12534	77	13641
United States	51186	50294	50109	47000	50000	50000		298589	(5000)	12534
World Vision	1460	1130	1130	220	220	150		4310		303589
Private Organ. <sup>2/</sup>	490	1088	829	1130	1500	1500		6537		4310
Total Grants	69161	70570	68658	73973	80573	78543		441478	2549	490754
Total Loans	(3370)	(4140)	(6244)	(9330)	-	-	(23084)		(23643)	444027
Grand Total	92531	74710	74902	83303	80573	78543				(46727)

Debt Servicing During The Plan Period

(As of June 30, 1974)

Millions of Dollars

1974	1975	1976	1977	1978	1979	1980
1.91	2.19	2.06	2.18	2.44	1.99	1.40

- a) Debt servicing payments will begin to rise in 1974, reflecting commencement of Nam Ngum repayments.
- b) If new loans have a minimum of 5 years grace period then no new requirements for debt servicing will be levied over the Plan Period.

ECONOMIC INDICATORS 1970 - 1974

ANNEX - 3

	1970	1971	1972	1973	I/74	II/74
1. Foreign Exchange Supply (\$000)	48881	50930	44706	54780	13353	18297
2. Commercial Market supply <sup>1/</sup>	44704	47018	40332	45542	10332	12673
a. FEOF	24183	28755	25382	28197	...	...
b. Non-FEOF	20521	18263	14950	17645	...	...
3. BNL official receipt	1947	1883	3895	8938	3021	5624
a. Exports	720	648	1535	4907	2131	4603
b. Embassies and missions	963	1048	2093	3652	869	990
c. RLG Administration	264	187	268	379	22	31
4. Official Disbursements	2671	1933	6665	6872	1128	1246
a. Normal	2671	1933	3432	3597	898	672
b. FEOF (Gov't contribution)	-	-	2360	2300	-	388
c. Debt service	-	-	863	975	230	186
5. Balance (3-4)	-724	-50	-2770	+2065	1893	4378
6. Int'l trade in gold (kg)	41766	15916	1451	16575	10806	7846
7. Imports from Japan (Yen Million)	2402	2190	1124	2240	3513	...
8. Imports from the United States (\$000)	8275	6182	8221	9320E	1538	...
9. Imports from Hong Kong (HK \$000) <sup>2/</sup>	8261	12434	13020	17870E	986	...
GOVERNMENT FINANCE (Kip M) <sup>3/</sup>						
10. Revenues	7933	6569	9475	17124	5767	6883P
a. Customs (excl. gold)	3134	2602	3327	4308	1439	1582P
b. Direct Taxes	720	840	938	1135	335	538P
c. Indirect taxes	1163	1842	2125	2450	823	679P
d. Exchange surcharge	-	-	1969	7199	2205	2627P
e. Other (incl. gold customs)	2916	1285	1116	2032	965	1457P

<sup>1/</sup> Legal market

<sup>2/</sup> CY/73 export estimated based on percent increase over CY/72 for 11 months (USA) and 10 months (HK) of available data.

<sup>3/</sup> Vientiane government only.

Kg = Kilogram  
M = Million

- Nil  
E = Estimated

... Data unavailable  
P = Provisional

## ANNEX - 3

	1970	1971	1972	1973	I/74	II/74
11. Expenditures	18766	20760	23115	29207	8404	9942P
a. Civil (incl. Plan cadre)	5533	10925	11903	16437	4867	5633P
b. Police	1234	1271	1356	1677	424	618P
c. Military	8999	3194	9856	11094	3176	3691P
12. Budget deficit	10833	14191	13640	12083	8637	3059P
13. Money supply (MS) (KIP M)*	15393	18955	23474	25840	28991	30335
14. Increase (kip M)	1545	3562	4518	2366	2329	1344
15. Real MS (Index 1966=100)*	125.0	139.8	136.1	105.1	100.1	97.8
16. Percent change 12 months	13.2	11.8	-2.6	-22.8	-24.3	-20.1
17. Factors expanding MS(kip M)	13608	18619	18631	17751	7312	9213
a. Gov'ts inflationary borrowing	9806	14122	14656	11007	3154	4166
b. Net FX position of banks	-250	99	-241	1712	930	3949
c. Private time/savings deposits**	-241	-199	-169	-294	-31	-72
d. Credit to private sector	139	682	830	864	1090	419
e. Foreign mission USAID	3131	2751	3186	3128	732	699
f. French	859	944	859	1029	1392	-
g. Japanese	164	140	510	305	47	73
Banking and credit (Kip M)						
18. Total private deposits*	2536	1774	2469	3836	3352	3926
a. Kip demand deposits	1182	1231	1731	2312	2191	2488
b. FX demand deposits	968	40	66	557	163	231R
c. Kip savings/terms deposits	386	503	672	967	998	1207
19. Reverse deposits by council banks	1596	614	7	1029	...	...
20. Credit to private sector*	2948	3630	4160	5324	6368	6875
a. By BNL	897	858	1148	1172	1368	1419
b. By DBL (Net)	581	717	1070	1378	1089	1265
c. By commercial bank (Net)	1064	1645	1543	2774	3911	4191
d. Traités and Treasury	406	410	699	-	...	...

M = Million

P = Provisional

R = Reserved

\* End of Period

\*\* Negative-increase

- Nil

... Data unavailable

## ANNEX - 3

	1970	1971	1972	1973	I/74	II/74
21. Exassets of authorized Banks*	1775	2106	1920	4672	10994	12264
22. Net assets	173	284	209	-720	-3078	-521
23. Vientiane bank clearings	53023	21291	23110	33406	7786	9720
24. Reserve ratio of comm'l bank (./.)	...	...	...	...	84	70
<u>Price indicator*</u>						
25. Vientiane CPI (1968=100)	101.8	112.1	142.6	203.4	663.1	729.0
26. Percent change in period	-1.6	10.1	84.7	42.6	13.7	6.9
27. US green, paralleled market (K/\$)	501	601	840	840	840	840
<u>PRODUCTION</u>						
28. Timber (thousand M <sup>3</sup> )	73.2	76.4	97.0	129.5	35.9	...
29. Tin concentrate (MT)	1380	1573	1977	1822	410	374
30. Private construction (Kip M)	2515	770	469E	1112	334	...
31. Private construction (000M <sup>2</sup> )	61.9	22.3	14.8E	38.4	11.8	...
32. Electricity (VT, Million KWH)	25.3	28.8	37.5	53.0	12.2	...
33. Buffalo slaughtered (thousand)	11.9	15.6	21.7	18.9	4.2	2.9
34. Cattle slaughtered (thousand)	8.4	7.5	7.9	8.6	2.1	3.3
35. Hogs slaughtered (thousand)	54.2	53.9	662	93.3	24.2	23.4

CIP Commerce price index

K Lip

Kg Kilogram

M Million

M<sup>2</sup> Square meterM<sup>3</sup> Cubic meter

VT Vientiane

E Estimated

\* End of Period

\*\* Negative=increase

- Nil

... Data unavailable

## ANNEX 4

### MACRO-ECONOMIC TARGETS

#### DEFINITIONS, ASSUMPTIONS AND PROJECTIONS

##### 1. Stabilization

Requirements are based on national budget integration in FY 1975/76. Expenditure and revenue performance is presented in Table A-II. Includes only external donor contribution to FEOF. Government contribution and total requirements are presented in Table A-III.

##### 2. Development

Requirements are based on a 3.0 marginal capital/output ratio, with a target of a sustainable 6 percent per annum GDP growth. It is assumed that private investment will be \$5 million in 1975 and \$81 million over the Plan period. Total investment expenditures are estimated to be \$18 million in 1974. Rural Development Loan Program is assumed to partially fill the capital requirements to attain the 6 percent growth rate, and may actually increase it temporarily through the multiplier effect.

##### 3. Nation Building, Reconstruction and Rehabilitation Requirements

a. Nation Building. This category of expenditures covers the construction and repair of the road, navigation, airports and communications systems. Estimates for these repairs and construction range up to \$400 million. Detailed feasibility studies, programs and projects are now being formulated. The requirements presented in Table I and Table A-I represent maximum absorptive capacity. This program will also have an income multiplier effect and raise the growth rate on a temporary basis.

b. Reconstruction aid is for the rebuilding of destroyed buildings and infrastructure because of direct military action. This includes the rebuilding or repairing of roads, streets, bridges, public buildings, administrative centers, etc. The total for the reconstruction of these destroyed facilities is estimated at \$10 million.

c. Rehabilitation. It is assumed that the current USAID supported village program will successfully terminate by 1977. An additional \$8 million is assumed for 1975 and 1976.

MACRO ECONOMIC TARGETS AND PROJECTIONS

TABLE A-I

REQUIREMENTS FOR DEVELOPMENT AND RECONSTRUCTION

(Millions of Dollars)

CY	(1) GDP <sup>1/</sup>	(2) Change in GDP	(3) GDP Growth Rate	(4) Total Invest- ment <sup>2/</sup> Require- ments	(5) External Develop- ment Aid	(6) Private Inter- vestment (3-4)	(7) Rural Devel- opment Loans	(8) Devel- opment Projects (4-6)	(9) Nation Build- ing <sup>3/</sup>	(10) Recon- struc- tion
1973 <sup>4/</sup>	320			17	13	4	-	13	-	4.6
1974 <sup>4/</sup>	326	6	2%	18	14	4	-	14	-	5.0
1975	333			39	34	5	5	29	15	5.0
1976	346	13	4%	54	48	6	10	38	15	5.0
1977	364	18	5%	75	65	10	10	55	25	-
1978	389	25	7%	81	66	15	10	56	25	-
1979	416	27	7%	87	67	20	5	62	25	-
1980	445	29	7%	96	66	30	-	66	25	-
1981	477	32	7%							

GDP = Gross Domestic Product official preliminary estimate in current 1973 prices.  
<sup>1/</sup> 6% average real growth rate targeted for the Plan Period.  
<sup>2/</sup> Marginal capital Output (K/O) ratio = 3.  
<sup>3/</sup> Not included in investment requirements.  
<sup>4/</sup> 1973 and 1974 estimates of actual based on partial data.

TABLE A-II

THE NATIONAL BUDGET

(Billions of Kip)

<u>FY</u>	<u>Revenues</u>	<u>Expenditures</u>	<u>Growth Rate of Expendi- tures</u>	<u>Deficit</u>
1972/1973	8.6	26.5		17.9
1973/1974	13.3	35.3	33%	22.0
1974/1975	14.8	42.0	19%	27.2
1975/1976	17.5	47.6	13%	30.1
1976/1977	18.9	51.4	8%	32.5
1977/1978	20.8	55.5	8%	34.7
1978/1979	22.9	58.3	5%	35.4
1979/1980	25.2	61.2	5%	36.0

1. Expenditures

1975 assumes limited joint costs of formation of Provisional Government of National Union.

1976 - 1980 does not include costs of National Budget integration. These costs were estimated at nearly 10 billion Kip in FY 1974/1975.

2. Revenues

1973 - 1974. Actual

1975 - 1977. Budget estimate

1978 - 1980. Increase of 10 percent per annum excluding FX transfer tax.

3. 1973 - 1974 at current prices. 1975 - 1980 at 1974 prices.

4. Assuming National Budget Integration in FY 1975/1976; deficits are assumed to increase in the general magnitude of:

<u>FY</u>	<u>Additional Deficit</u>	<u>Total Deficit</u>	<u>Change in Deficit</u>
1975/1976	11.5	41.6	
1976/1977	12.0	44.5	+2.9
1977/1978	11.5	46.2	+1.7
1978/1979	7.0	42.4	-3.8
1979/1980	4.0	40.0	-2.4

As governmental operations are integrated economies will emerge which will reduce operating costs for functions which are now being duplicated.

TABLE A-III  
STABILIZATION REQUIREMENTS

FY	Deficit* (Billion Kip)	Other Net Expansion- ary Factors (Billion Kip)	FEOF Require- ments (Billion Kip)	FEOF Require- ments (840 = \$1) (Millions of Dollars)	Leo Govern- ment contri- bution (Millions of Dollars)	External Donors FEOF Require- ment (Millions of Dollars)
74/1975	27.2	5.4	32.6	38.8	6.0	32.8
75/1976	41.6	1	42.6	50.7	10.0	40.7
76/1977	44.5	-1	43.5	51.8	12.0	39.8
77/1978	46.2	-2	44.2	52.6	14.0	38.6
89/1979	42.4	-2	40.4	48.1	15.0	33.1
79/1980	40.0	-4	36.0	42.8	18.0	24.8

From Table A-II. Assuming National Budget Integration in FY 76

Notes:

Below 2 billion kip inflationary gap not covered by FEOF is assumed to result in less than 10 percent internally induced inflation.

The FY 1974 gap was estimated at 3.6 billion kip.

Since reliable balance of payments data don't exist the improvement of the trade balance is reflected in a negative component of other expansionary elements. This item also includes, as contractionary factors, the foreign exchange tax and generation of counterpart funds, and as expansionary, the uses of funds by donors and private sector credit when appropriate.

A P P E N D I X C

AGRICULTURAL DEVELOPMENT ORGANIZATION

AGRICULTURAL PROJECT STUDIES

The attached studies are intended to provide the reader with an idea of the kinds of projects ADO has been considering, which appear to fill a real need and have a reasonable chance for success. Cost estimates used are just that; however, familiarity with these projects and with costs associated with other activities adds an element of confidence to these estimates. All currency conversions are made at the 840 Kip per \$1 U. S. rate.

These project summaries are not expected to answer all your questions but, rather, to stimulate interest and solicit further inquiries. ADO is prepared to discuss all of these projects as well as any others that may be identified.

Priorities needs to facilitate the farmers in the project and experimental farm itself.

- 1)-A small wheat mill to mill the wheat production in the project  
(because Laos imports each year 4500 MT)
- 2)-Tools for the garage
  2. 1. Tools set for work-shop of the mechanics to fix cars and tractors.
  2. 2. Tools set for carpenters for repairing the buildings.
  2. 3. Welding portable unit for the garage (160 A) so they can work even in the field.
- 3)-Equipments:
  3. 1. One tractor Massey Ferguson MF 165 and equipment  
(Disc plough and disc harrow including)
  3. 2. Deep tiller for breaking hard pan after paddy.
  3. 3. Rotary cutter for post-harvest crop.
  3. 4. One small tractor that can work for every crop such as MF. 135 and complete set of equipment.
  3. 5. A corn lister for two rows unit.
- 4)-One plastic green house for the rainy season to grow vegetables and vegetable nursery, in the optimum size.

- 5)-Submersible pump 3 inches diameter for drinking and domestic water. For the time being our personnel drink the Mekong River water.
- 6)-Reparation of the main canal so the water will reach the farmer's fields, estimate cost is about 5000 US \$.
- 7)-Instead of fixing the two all pumps units which had been serving already for 20 years, we need two new pump units that can discharge at rate 3 to 5 cu; meter/sec each, because our project is a sandy soil and high lost rate of water.
- 8)- We have trouble of transportation for our personnel from town to the farm. If possible we need a micro bus that can transport 25 persons.
- 9)-An electronic soil moisture Tester (portable) to use mainly in the vegetable fields and that will indicate when to irrigate.
- 10)-Combine harvester and set of (Alis-Chalmers):
  - Mesh for Harvesting corn
  - Mesh for Harvesting wheat
  - Mesh for Threshing soy bean
  - Mesh for Threshing mung bean
  - Mesh for Threshing peanut
- 11)-4 motorcycles for the extension people so they will be able to reach more places. At the time they are using their own bicycles.

We hope you can help us to get some of these items, and we hope to get an answer soon.

- 12)- Post graduate training to get the MSc. or Ph. D degree in the English speaking language such as United States, Australia or others.

Under graduate to get the .Sc. degrees.

Short term training in the neighbour country as in Thailand for our field technicians and field assistants.

## AGRO-INDUSTRIAL COMPLEX

### I. Description

The concept of an agro-industrial complex germinated in late 1973. The experiences gained from sponsoring and monitoring complex crop and poultry projects convinced us that 1) the technical aspects of production were not in-

surmountable and 2) the biggest problem facing most producers was in the marketing sector. Thus, ADO's focus shifted to studying the feasibility of setting up and operating (or assisting in the operation) of small agri-businesses designed to serve as a focal point for farmers' produce. With visible outlets for their products, farmers would need little encouragement to increase their efforts. And ADO's production technicians would still be available to assist them.

Although some of the enterprises could not be in a single complex, most were envisioned being located in one central area. The various enterprises considered include:

- feedmill
- breeding farm (poultry)
- hatchery
- grain storage
- livestock services (including artificial insemination)
- seed propagation and storage
- oilseed processing
- poultry processing
- vegetable marketing

By having several interrelated activities in one location, economies of size and operational efficiencies could be obtained. This would include transportation, storage, communications, and infrastructure facilities.

Coming under ADO auspices the complex would have access to management systems already established, such as accounting, supply, and transportation.

An area just north of Vientiane city (near Dong Dok college) has been studied and appears to be one of the more favorable locations. The land (about 10 hectares) is government owned and thus could be granted to ADO. There are access roads to rural producing areas and the The Deua port area, without going through Vientiane city. Electric lines and water supplies are known to exist in the area.

The cost of developing such a complex is embodied in each of the various enterprises mentioned above. However, the basic site preparation and infrastructure construction (wires, piping, fencing, common-use buildings, roads, etc.) could approach \$10,000 U. S.

In summation, the basic rationale is to develop a marketing infrastructure to encourage commercial agriculture production. Each of the projects considered as part of the complex is considered capable of lending encouragement to farmers to diversify and increase production. While results are not expected to be dramatic in the short run, ADO feels that as confidence in the various enterprises increases, domestic production will increase geometrically.

## GRAIN STORAGE AND HANDLING

### I. Description

ADO will purchase grains (primarily corn) for use in the feed milling operation. Corn is currently being purchased from the Vientiane plain and as far away as Luang Prabang. A single facility is envisioned initially, located in the Vientiane area, where grains will be received, processed (shelled, ground, dried), and stored. The second stage will involve facilities located in strategic grain producing areas to serve as marketing service centers for producers.

### II. Inputs and costs

<u>Capital costs, 1st stage</u>	(\$ U. S. )
Building	10,000
Silos (200 Mt capacity)	15,000
Augers, elevators, conveyors	3,000
Forklift (1 ea)	5,000
Dryer (2 ea)	5,000
Vehicle (2 ea)	10,000
Miscellaneous	<u>2,000</u>
Total	50,000

<u>Monthly costs, 1st year</u>	
Operations	200
Labor	<u>200</u>
Total	400

<u>Grain purchases</u>	
500 Mt, 1st year @ 110 Kip/kilo	65,000
800 Mt, 2nd year @ 110 Kip/kilo	105,000

### Output

ADO's current success in purchasing corn leads us to believe that purchases of 500 metric tons of corn from dry and wet season harvests are attainable. The final product - dry, ground corn - will be available to one ADO feed mill for animal feed mixing.

## OIL PROCESSING PLANT

### I. Description

A facility producing meal from groundnuts is envisioned to complement the existing small feed mill. A pilot facility has been suggested, which would engage in contract farming with local producers. The equipment will be of the seed pressing type.

### II. Inputs and costs

<u>Capital costs</u>	(\$ U. S. )
Equipment	15,700
Buildings	<u>3,000</u>
	18,700
 <u>Monthly costs</u>	
Operating	200
Labor	200
Peanut purchases (average)	<u>5,000</u>
	5,400
 Total operating costs, 1st year	 64,800

### III. Output

The hourly capacity is estimated at 100 kilos of groundnuts. With a working year of approximately 2,000 hours, 200 metric tons of peanuts can be processed in a year. At an estimated yield of 2,000 kilos of nuts per hectares will have to be cultivated.

Note: The information regarding oilseed processing is largely taken from a report by Mark H. Van Mens, consultant for the Lao National Mekong Committee, dated July, 1974.

## POULTRY PROCESSING PLANT

### I. Description

A labor intensive facility will be established in the Vientiane city area, to provide fresh and frozen poultry on a wholesale basis to local markets. Primary customers will include middlemen (women), restaurants, and institutions. In conjunction with the processing plant, consideration will be given to contract production of birds on an all-in all-out basis with local producers.

The increasing size of the local poultry industry suggests that a point has been reached at which a processing plant can benefit from economies of size and at the same time add some form of regulatory mechanism to the marketing of birds.

### II. Inputs and Cost

<u>Capital costs</u>	(\$ U. S. )
Buildings (land free)	5,000
Equipment (major)	4,500
Equipment (minor)	<u>500</u>
Total	10,000
<u>Monthly costs (1st year)</u>	
Operating	200
Labor	200
Poultry purchasing (average)	<u>7,200</u>
Total	\$ 7,600 U. S.
Total operating costs, 1st year	\$ 91,200 U. S.

### III. Output

Current estimates indicate that the daily demand for chicken in Vientiane city ranges from 2,000-2,500 birds. The majority of these are sold as dressed birds. Planning for the processing plant is based on an initial through-put of 200 birds per day and increasing to 400 by the end of the first year. Output should increase to around 800 per day during the second year, and then to about 1,200 by the end of the third year.

Expansion can be financed from internally generated funds after the first year.

## VEGETABLE MARKETING PROJECT

### I. Description

A facility will be constructed to serve as a collecting and distribution point for vegetable. Here they will be sorted, cleaned, and wholesaled as fresh vegetables. Contracts will be made with local farmers to produce specific vegetables. Production credit could be an integral part of this facility; the operation could also be closely tied in with Lao Savings and Loan Cooperative members. The area from which vegetables will probably come, does not exceed a 20 kilometer radius of Vientiane city. This venture will be an attempt to organize commercial vegetable production and marketing.

Some commercial vegetable production already exists in the Vientiane area. Further market studies would have to be conducted (by ADO), lasting about 3 months. Within 6 months of starting the project, the first vegetables could be collected and marketed.

### II. Inputs and costs

<u>Capital costs</u>	(\$ U. S. )
Buildings (land free)	3,000
Equipment	2,000
Vehicle (2 each)	<u>10,000</u>
<b>Total</b>	<b>15,000</b>
 <u>Monthly costs</u>	
Operating	200
Labor	<u>400</u>
<b>Total</b>	<b>400</b>
 <u>Contract Credit/Purchases</u>	
Per 100 rai, 1st year @ \$100 per rai	<u>10,000</u>
Add 100 rai, 2nd year @ \$100 per rai	10,000

### III. Output

ADO estimates indicate daily sales of vegetables in Vientiane at about 15 metric tons per day in 9 Vientiane city markets.

The marketing facility will primarily serve wholesalers, institutions and restaurants, handling an estimated 10% of the daily sales volume or about 1.5 metric tons.

Production and marketing of vegetables such as asparagus, carrots, sweet peppers, and potatoes will be the primary function of this project. Also included will be a wide variety of regularly grown vegetables.

## SWINE PRODUCTION PROJECT

### Description

Current estimates indicate about 50,000 hogs are slaughtered and consumed in Vientiane each year. Of this number, some 70-80% are imported each year from Thailand (some estimates are as high as 90% from Thailand). Thus, there is a need to produce about 38,000 hogs in Laos. To do this, two types of operations are required swine breeding farms and hog finishing operations.

ADO proposes that one or two large breeding farms be established to provide the necessary weaners to supply several large (and probably many small) finishing operations.

Two 1,000 sow farms could potentially produce 10,000 weaners each per year at a cost of about \$30 U. S. per weaner.

Ten 2,000 hog finishing operations could provide 20,000 marketable hogs (100 kilos each) at a cost of about \$100 U. S. each.

Therefore, to provide 20,000 locally produced hogs in one year, the total cost will approach \$2.6 million dollars (U. S.).

Note that the cost figures used are approximate, based on rough estimates and local rules of thumb.

An additional cost, that has not been included, would be for a qualified technician to monitor the breeding farm aspect during the first year.

Operations of this size will come about only if and when a reasonable pricing structure is established within the hog sector. The present system of controls tends to curtail any expansion in local hog production.

Horticultural Survey of Laos

April - June 1974

Charles A. Duncan

Laos, located in Southeast Asia, is near the center of origin of many famous tropical fruit varieties such as the cavendish and lady finger banana, the mango, the pommelo and the tangerine, to mention a few. Its land area lies between 14 and 22.5 North Latitude within the belt where climatic conditions are favorable for the production of many tropical fruits. The mountain areas in the north and eastern part of the country are suitable for the growth of coffee and tea and some deciduous fruits. Also, a wide assortment of spice, savory herbs, essential oil and drug plants are grown all over the country, particularly in the highlands.

The Lao major fruit crops are mango, banana, jackfruit, pineapple, longan, guava, limes, pommelo, tamarind and papaya. Some sapadilla, longsat, pomegranates, coffee, tangerines and peaches are grown. A few sites are satisfactory for the production of the durien, rambutan, rose apple and litchi. The constraints to fruit production are lack of productive soil, high water table, poor drainage, sloping land, cool temperatures, a lack of water for irrigation, lack of available superior varieties of cultural knowledge and expertise to assist the Lao fruit grower with his many problems of production.

Laos' neighboring country, Thailand, is blessed with far more optimum climatic and environmental conditions for fruit production. Some of the world famous varieties of mangoes, bananas, rambutan, durian, and mangosteen are produced there.

This situation is a benefit to the Lao fruit grower in that there is a nearby source of propagation material for superior fruit varieties; and when and if the agriculture officials decide to embark on a fruit promotion program of any size, small or large, much information about cultural practices for the various fruits could be adapted to Lao conditions where the environment is somewhat similar.

With the more recent influx of people into the cities there has developed a much greater demand for choice fruits by the increased population of the more well-to-do city dwellers. Thailand fruit growers, being so nearby and possessed of superior fruit varieties, better communications and more advanced technology, have been able to grasp a great share of this market. According to the 1970 report of Mr. Ken Brundage, (1) 100 percent of the durian, grapes, longan, oranges, pomegranates, and superior mango, 85 percent of the jackfruit, 88

percent of the lines, 85 percent of papaya, as examples, are of Thai origin. The estimated total value of this annual fruit import into Vientiane is estimated at 45,000,000 kip.

This same situation exists to a much lesser extent in the smaller cities as the people do not demand the higher quality produce. This represents a considerable loss of foreign exchange to Laos. This is a fact which officials and trained technicians must think about. With a little greater effort, more assistance given to Lao growers, better roads and marketing, more available chemicals, Lao growers could take over this market in a few years.

The markets in Vientiane have an enormous array of almost every conceivable kind of spice plants, savory herbs, drug plants, pot herbs, and condiment plants being marketed. Besides the tropical fruits, there are the sub-tropical and temperate fruits available. All of which means that the local people are particularly fond of and consume large quantities of fruits and vegetables of all kinds.

The price for market produce is high according to any standards. For example, as of June 2, 1974, an average papaya in Vientiane sells at 350-400 kip, one large banana 40 kip, tangerines 500 kip per kilo or for nine tangerines, oranges 70 kip each, mango (small) 60 kip, 200 kip for a large one, jackfruit 1,000 kip, pineapple 400 kip each. In the smaller cities, the prices will average about one-third less than in Vientiane but usually the quality of produce is lower. In Luang Prabang on May 28, pineapples were 200 kip each, mango of average quality 50 kip, dessert bananas were unavailable, jackfruit sold at 800 kip each.

A field survey has been made recently (April-May 1974) of fruit growers' farms for purposes of: (1) assessing species, varieties grown, cultural practices, production problems, yields, estimated returns and marketing problems; (2) inspecting research stations as to number and sources of varieties, programs and personnel; (3) to consult agriculture officials. Following is the day to day account of these inspections.

May 1 - One private nursery in Vientiane, the Mixay Gardens, was inspected. The owner and operator is a Vietnamese, highly knowledgeable about varieties of tropical fruits in Southeast Asia and about nursery cultural practices followed in this part of the world. This nursery specializes in ornamentals but a large assortment of fruit trees were also on hand. Only a few plants of each variety were available. A wide assortment of ornamentals were available including roses. The plants were of good varieties, were vigorous and well grown. All plants, whether fruit trees or ornamentals, sold for a flat 1,500 kip per plant.

In fruit trees, there were grafted mangoes, star apple, guava, carambola, longan, rose apple, grapefruit, sapote, litchi, longsat. In mango, the Muk

Mying Man, a large June variety; Ok Long, famous Thai variety; Muk Mying Yiam, a huge fruited mango, each fruit weighing more than a kilogram, and a red-skinned, aromatic-flavored mango were available. The owner operator had tried the modern side graft on some seedling mango but the results looked doubtful because of the rootbound condition of his rootstocks.

The nursery was well managed, and the best use was being made of the surrounding trees which provided shade for the potted plants. The plant shed for preparing potting mixtures, and methods of plant propagation used were suitable, although more use of rootstocks from seeds and of easier, less laborious grafting methods could have been useful.

### Vientiane Province

In surveys made April 18-19th around the Vientiane plain in company of Mr. Vannakone, Acting Director of Research, Mr. Van Henderson and Mr. Monserrat of AID Extension and Research staff, the following observations and comments were made. At Salakham Rice Station: The staff of the station, Mr. Long, Director, and Dr. Godfrey Dean, UK Entomologist, and others are engaged in making a study of the farmers' cropping systems for both annual and tree crops. Their objectives are to evaluate the farmers' situation before selecting subjects for research. A few problems reported by Mr. Long and Dr. Dean were that cultural practices of Lao farmers are very low level, that there is a serious water shortage, particularly for dry season vegetables and fruits, and that pod borer insects are very damaging to the kapok crop that will greatly limit production unless controls are put into effect.

A stop was next made at the Hat Dok Keo Pilot project. This station appears to be developing well. Mr. Michael Merchai, Israeli Advisor, whom we met, plus two colleagues, are doing well and have a diverse program of work. The station has found productive varieties of vegetables, and seeds of these are being made available to farmers. The station has a diversified on-going program of research on vegetables, legumes, corn and rice. The station, in order to help combat the shortage of fertilizers, is using liquid manure to supplement chemical fertilizers, although only limited amounts of this fertilizer is available. There is no work on fruits at the station because of high water table; however, a number of producing mango trees were seen on the farm. The director of the station expressed deep interest in grape culture; some testing work might be done at the Hat Dok Keo project to check adaptability.

Some very promising mango orchards were seen in the Nong Sa village area. Some of these were of a hectare or more in area and the trees looked to be three, four, and five years old. One orchard visited was in its second year of production and had a fair crop of mango fruits set. On closer examination, quite serious infections of anthracnose had blighted the panicles (fruiting stems) causing them to drop their fruit. (It is estimated that 90 percent of the fruit

was lost.) Cultural practices, other than a little uniformity in spacing the trees, were extremely low. For example, some trees had two and three trunks arising from the same hole. The growers' caretaker informed us that the trees had been sprayed once. However, to protect mango fruits and flowers from anthracnose, at least three sprayings are necessary and these must be timely. With timely sprays this crop could have been tripled. These growers were able financially to follow good cultural practices as modern equipment was seen on the farms. Proper spraying programs for mango was explained to the person in charge at this farm but follow-up visits will be necessary.

According to the grower, this orchard had been planted from seeds; this was very evident as the trees and fruit characteristics varied greatly. Many trees were barren or produced mostly worthless fruit. Hardly any two trees were alike in characteristics. The one bad feature of this practice is that there will be such great variability in quality and amount of fruit produced between trees. If grafted trees were available and had been used, the trees would be uniform and could be expected to produce select fruit. Being so near Vientiane, this grower should have known, or have been informed, of the need for planting grafted trees. These orchards are still satisfactory and can be made profitable, if approved practices are adopted. There is a market for variable fruits of lower quality but at prices below that of select varieties.

Mr. Vannakone, the Acting Director of Research, explained that his staff lacks training in plant propagation and cultural methods for the various local fruit trees and he expressed a desire to develop such a training program as soon as possible.

Two refugee communities were visited. These were located on the most barren type of landscape where the soil was of a grayish color highly devoid of any productive capacity. Each villager had been supplied with seedlings of mango and longan trees, a few banana and cassava plants. Many of these trees and plants were in fair growth condition considering that this is the end of the long dry season. Some of the vegetable gardens of chillis and beans also were producing some vegetables; and a rabbit project was seen which looked promising as a method for economically producing protein for the refugee families.

#### Nam Tan Irrigation Project (Sayaboury Province)

The research station at the Nam Tan Irrigation Project was visited April 23 with Mr. Fred Tileston, USAID Irrigation Specialist. The land at this station had a water table within one to two meters of the surface soil. In spite of this factor, fruit trees and pineapples had been planted, none were performing satisfactorily because of "wet feet". A watermelon planting was in excellent growth as was a yard-long bean planting. The soybean and corn were doing fairly well in spite of the soil, although the beans were a little chlorotic. New planting holes had been prepared for a shipment of mango and coffee plants.

The size of the holes were adequate but the spacing of 7m x 6m was too close for mango. A distance of 8m x 8m was recommended.

A shipment of about 100 mango budlings had been received consisting of four varieties, OK Long, Numdog Mai, Pinsinmun, and Kiasurvrai. An equal number of coffee Robusta plants were seen in the plant shed, ready for transplanting.

A visit was made to some private farms lying in the near foothills. Here the soil was found to be deep, high in organic matter, and well drained. Some vigorous pineapple plants, mango and jackfruit trees were seen. It was suggested to the Director, Mr. Khampha Sirisomphone, that the newly arrived mango, coffee and coconut plants should be planted on private farms up in these foothills where the pineapple and jackfruits were seen. It was also recommended that the station personnel make an agreement with the private grower whereby budwood could be collected, inarching practiced, and observations of tree performance could be made. The farmer in turn would be expected to carry out the station's recommended cultural practice.

#### Vientiane Area

During the period April 24-30th, trips to Pakse and Ban Houei Sai had to be delayed due to either a mix-up at the airport or to cancelled flights. The remainder of the week was spent profitably inspecting fruit farms in and around the Vientiane plain and along the Mekong. These were farms where the major cash crops were fruit; and on most farms mango was the principal fruit grown. Mr. Monserrat, AID-TCN and Mr. Chansamone, of Mr. Vannakone's staff, accompanied.

A large collection of mango varieties were found which included some of the popular Thai varieties and the common Lao types, some of which are of high quality. The orchards were all seedling varieties; so there was, as expected, great variation in leaf, fruit size and shape within the same variety; some were barren, some were productive. Due to the morphological variations, the trees were actually different seed varieties, but the farmers called them by the name of the seed variety. Many were good specimen plants and could be used for future clonal propagation. The best varieties seen were: OK Long, Kah Nong Mah, (Heel of a horse) a very long fruited variety, the heel of the fruit being up-lifted resembling the heel of a horse; Nga Sang (Elephant trunk), a long slender mango which must be the same as Kah Nong Mah. This tree was found in a different village where the farmers had given it another name. Another mango of high flavor and very popular among the Lao is the Kah ti (coconut milk). This one is presently ripening, has a green skin when ripe, is oblong and thick in shape, and the better ones are delightfully refreshing in taste although large seeded. Muong Kwai (banana color) is a small local mango which is said to be of rich flavor and is highly productive. It develops

a slight pink blush upon ripening. There were many other more or less wild varieties producing small fruit, more fibrous flesh and not as sweet.

From these trips it was learned that the mango is or can be a very profitable crop for Lao farmers; and it appears that they are trying to supply more of the markets in Vientiane with mangoes. In fact, from observations made at the Vientiane markets, the local types are being sold in much larger volume than fruits of Thai origin. It seems that only the very elite shoppers pay 300 kip per fruit for the Thai mangoes, while the lesser priced Lao varieties are sold at a lower price (30 to 50 kip each) and are sold in a large volume.

The major production problems observed with mangoes were poor cultural practices, fungal diseases and variability within a so-called variety. On some farms, diseases alone had reduced yields by an estimated 300 percent. A few timely sprays used on these trees could have resulted in a minimum of three or four times as many fruit to set and ripen per panicle, instead of the average of less than one per panicle. Spacing was far too close in every orchard visited and no pruning had been practiced, all of which greatly enhanced fungal disease development. Using seedling trees even of the highly polyembryonic Indo-Chinese races is not a reliable method for planting commercial orchards. Many of the Lao growers contacted were interested in asexual propagation in developing their own trees for new plantings and some inquired about procedures to follow in producing their own trees.

The two best mangoes sampled to date are the Numbog Mai from Thailand (a long fruit with mild yellow green flesh, and a long, thin seed and the smaller Kah Ti (coconut milk) Lao variety. The latter lacks the attractive appearance of the Thai varieties but, as mentioned, certain select fruits of it are spritely and refreshing in flavor. More recently, the OK Long variety fruits came into the market. It has the most delicious flesh of any sampled. The ones in Vientiane markets are medium long, slender, green skin and flesh, possessing melting, very sweet flesh. It is one of the finest flavors.

In the Kat Dok Keo area along the Mekong River, many farmers were found cultivating sapadillas called "la mot," in Lao language. The trees were very vigorous and highly productive; they were interplanted with a banana called the Kahn Tong. This banana, undoubtedly, is a Gros Michel or one of its mutants. Papaya and pineapples were also interplanted with the la mot (sapadilla).

In some years, the farmers reported this area became flooded but that the La Mot trees resisted flooding very well as does the banana. The papaya and pineapples, however, were lost since neither can tolerate "wet feet".

The Kahn Tong banana produces a very long, large banana and is of very high quality. The farmer consulted informed that each large banana sold for 30 kip each and that the small ones brought 20 kip per small finger. The expected

yields for each clump of bananas was given as two or three bunches per year or about 200 bunches per acre. The papaya planted were the first and only good quality papayas seen to date in Laos. The variety was a hermaphroditic type, large fruited and productive. Papayas, the farmers reported, were selling at the farm at 300 kip per fruit. When one considers that a papaya may ripen 50 fruits per year, this means that this fruit, when well grown, is very profitable as over 800 trees can be planted per hectare.

The sapadilla orchards seen were vigorous in growth and contained fruits in all stages of maturity from flowering to ripening. The heavy flower set is occurring now and the farmer said fruits were harvested the year round from the trees. This fruit was selling at 300 kip per kilo. The expected yields were given as around 50 kilos of fruit per eight year old tree. Checks made in the market verified this price.

The Chinese dwarf banana (Cavendish) was seen, which one Lao grower gave the name of Kwai Mok See (pig fruit because the stalk which droops near the ground, can be eaten by a pig), and the Kwai Nam (water banana) a small delicious banana; Kwai Khai (egg banana) was also planted to some extent but the Kahn Thong (Gros Michel) occupied the more productive soil and the Kwai Nam, the lesser productive and dryer soil. The farmers gave the Kahn Thong very good care.

Farmers in this area are quite skilled in plant growing. Their practices were far superior to those observed among the mango producers. In fact, on one farm visited, the farmer was carefully tending his plants, removing a banana leaf here that was shading a La Mot tree, smashing leaf rollers on trees by hand over there, cutting out excess suckers on a banana clump to regulate yields. Every square foot of land on the farm was being utilized to its maximum capacity. If it were possible to place such farmers on the mango farms seen, one would soon see a change for the better. The mango farms were most owned by high government officials, ex-ministers and others of such rank. The care and cultural practices were very poor. Almost no care was being given. They were grown as wildings.

Conclusions reached from the surveys made of farms in the Vientiane plains area are (1) the mango offers the best opportunity for growers. It is well adapted to the area and could become a very profitable crop provided the necessary cultural practices are adopted; it appears that growers want to, and are ready to use better practices. They need guidance and direction, however, and the best agency to provide this assistance to the growers would be the host government's Extension and Research Service providing it had the trained manpower.

It is true that Thai mangoes of the same variety will ripen in Thailand two or three weeks earlier than the same variety grown in Laos because of latitude and the earlier onset of warm weather, and possibly better light intensity in

Thailand as compared to Laos. This will mean some loss in the early market for mangoes. From observations made, it is certain that the environment here is suitable for the production of high quality mangoes as well as some other tropical fruits.

It might be appropriate at this time to make some rough estimates of the possible economics for fruit/nut production in Laos. These are as follows:

It is almost impossible to come up with an estimated yield for the Mango crop. Fruit sizes, number of fruit set per tree, and size of trees vary so greatly that an estimate of yields can only be roughly made; not until the varieties are grown, and average yields determined can this be accurately estimated. However, for purposes of comparison, the following estimated yields might be used. (See Table I)

#### Pakse Area

On May 8th thru May 10, Pakse area was visited in company with Mr. Van Henderson and Mr. Tom Wilson. Mr. Kouchong, Director of Extension, showed us around the secure areas in Pakse to observe horticultural and refugee projects.

Many fruit species and varieties were seen. Mango was by far the most heavily planted fruit of which there were a large number of varieties. Other fruits planted extensively were bananas, (dessert types), pineapple, papaya and jackfruit; and of lesser importance were durian, rambutan, sweet sop, langsat, guava and limes.

This area has large acreages of some of the finest soils suitable for fruit production, as well as other crops, from the standpoint of productivity, depth, drainage, and physical condition.

The cropping system followed is to plant bananas after clearing and interplant with peanuts. Bananas are most effective in rapidly absorbing and turning the rich nutrients in this new high humus soil into high value bananas. The banana varieties were of quality dessert types. The two popular varieties cultivated were; Kwong Awh (Longknife) and the Kwong Awh Soup Keo; both medium long and green upon ripening. The second crop, following bananas, is usually pineapple consisting of two varieties, Singapore, and the much larger Myung Chao variety, which is of lower quality. Eventually the land is planted to soybeans, beans and peanuts.

Water seems to be readily available in many newly cleared areas as quite a few annual flowing streams were crossed during our two days of travel. The water table was said to be 25 meters in depth in one area visited. The high

TABLE I

Rough Estimates - Fruit production possible under Laos conditions - 1974

Fruit	Max. Prod. Optimum	Ave. Prod. Optimum	Ave. Prod. Laos (per tree)	Production per ha.	Total Gross Value	Remarks
1. Mango	(1) 10-15,000	(1) 3-5,000	700 to 2,500	37,440 kg 124,000	(2) 3,744,000 12,400,000	1. Yields per ha based on 156 trees per ha. 2. Conservative figures used.
2. Papaya	50	50	40	33,320	(3) 3,320,000	Based on price of 100 kip per fruit.
3. Banana (eating)	(4) 300-350		400	200 to 400	1,100,000 to 2,200,000	3. Gross value based on price of 550 kip per bunch
4. Sapadilla (La mut)			50 kg	10,100	3,000,000	8 year old tree - 50kg fruit per tree; price 300 kip per kilo spacing 7 m <sup>2</sup> .
5. Pineapple	12-15 tons		10 tons or 10,000 fruits	10,000 fruits	2,000,000	40,000 plants per hectare 200 kip per fruit

- 1) Fruits per tree
- 2) 100 kip per kg/market for papaya is limited
- 3) Fruits per ha  
(652 trees per ha)
- 4) Bunches per ha.

soil fertility condition was verified by observing the appearance of the vegetation. Many fruit trees were of enormous size. Banana trunks were generally thick, and the cassava plants were tall and possessed deep green leaves, all of which are indicative of productive soil. The people in Pakse area seemed to be happy, well fed, healthy, and were living in relatively adequate houses and surroundings.

In mangoes, most of the trees were local varieties some of which produce fruit of good quality. The two best local varieties reported were Houa Xang, (Elephant Head); the fruit of this variety is of medium size, thick and oblong with yellow skin and fresh. Fruit quality could not be ascertained. Mying Vang Thong, a very small fruited variety, is two to two and half inches long and pointed, with yellow skin and a slight pink blush. Those fruits sampled were of very high flavor. Both had large seeds in relation to fruit size. In one village along the river almost all trees seen, including the shade trees, were mangoes mostly of the two above named varieties.

Prices for mangoes in the market was 30 kip and 20 kip each depending on the size. The famous super quality OK Long, was among the better quality varieties planted. One grower visited stated that some of her trees of this variety had produced over 1,000 fruits per tree and that the early ripened fruits sold for 100 to 150 kip each but that the price had dropped to 50 kip due to heavy supply of fruit being marketed. The fruit markets at the present time seem to be handling their capacity of mangoes; and fruit supply seems to be exceeding demand due to the heavy harvest of fruit. This indicates that expanded mango production in the Pakse area may not be advisable except for the early maturing varieties.

The fruit trees in general seen in the Pakse area were much more vigorous and freer from insects and diseases than those seen in the vicinity of Vientiane. The environment is the most favorable for the production of the mango and other fruit. Without doubt, the Pakse area could supply a good part of the market requirements for the Vientiane markets provided suitable road communications were available for transporting the fruit from Pakse to other areas of Laos. The OK Long fruit sampled in Pakse was as luscious in flavor as that sampled from Thailand, but was of different shape and larger than the Thai.

The problem facing further improvement for mango production in the Pakse area is the lack of readily available grafted trees of superior producing varieties. Only a few trees in Pakse are of superior varieties. These were planted by well-to-do families who could afford to purchase grafted trees because grafted trees are not locally available. Far too many mango trees seen were of unproductive types.

Some highly productive durian trees were seen in one orchard. This fruit species seems to be adapted, and could be a promising one for the Pakse area.

provided grafted trees could be produced locally. There is a very good market for durians in Vientiane where exceptionally high prices are paid for the smaller ones. Langsat was another productive fruit specie found in Pakse and also pineapples. Langsat is considered to be one of the finest fruits in Southeast Asia. In flavor and in its method of producing fruits in clusters, this tree resembles litchi. The Langsat trees seen were well adapted, were vigorous, and were productive.

Rambutan also is a promising fruit species noted, the trees had just begun to flower but Mr. Xanthong, the host government technician in charge, informed that the tree is productive in the area and that he hoped to expand its culture. It is best multiplied by grafting.

The present nursery site in Pakse was inspected and was found to be located on a very unsuitable site. The soil is a gravelly, laterite, devoid of topsoil which had been removed in grading, leaving a barren, gravelly parent material. It will be impossible to successfully grow satisfactory fruit trees on such soil. Many areas were seen in Pakse which had good, deep, soil and with water available. The present nursery should be moved to one of these sites as soon as possible. This should have priority over any other agricultural activity, as this nursery (if rootstocks can be grown) will be expected soon to supply high producing trees to growers, settlers and others. The present trees which are mostly citrus were in poor growth conditions. However, they are young enough to be successfully transplanted to the better sites provided they are handled properly in moving.

#### Savannakhet Area

Trips were made to Savannakhet province May 13-15th in company with Mr. Tom Wilson, Mr. Vannakone, Acting Research Director, Mr. Chansiry, RLG Savannakhet Province. Mr. Stone, Area Coordinator; and Jerry Neal, Refugee Officer, conducted us on a tour of the province,

Two and one-half days were spent traveling, inspecting fruit trees, soil types, crops, and the livestock and research stations.

The noticeable features about the agriculture in this province were: (1) the large expanse of land covered with scrubby, scattered tree growth, having soil of low productivity; (2) soils were, largely, very deep, fine, sandy loams with some heavier soil found where paddy rice was being cultivated; and (3) the orchard industry is fairly well developed; it seemed much more so than in either the Vientiane or Pakse areas.

Numerous farms of large acreage were seen and some were inspected. These farms were equipped with modern machinery and most were owned by high ranking army officers. The farms featured, besides modern type houses,

excellent fish ponds and some very fine orchards mainly of dessert and common type bananas, mangoes, jackfruit, litchi, limes, jujube, longan and annonas. Bananas were being extensively cultivated and occupied the major portion of cultivated land; mangoes were a close second followed by jackfruit, limes and tamarind. Some large trees of starapples were inspected in Kengkok village. The trees were said to be very productive of high quality fruit which sold for good prices in the market. The famous dwarf Hawaiian papaya was seen planted at two locations. The plants were vigorous and had begun setting fruit. This variety, if found to be adapted and to produce fruit of high quality, will add another excellent fruit variety to the area. Sugar cane seen in one refugee village was vigorous and productive and must be a profitable crop.

Even though the large landed estates here had developed fruit as one of their chief industries, cultural practices were inferior as noted by the many unproductive trees, by the very small fruit produced on many areas and by a survey conducted in the market. Insects and fungus diseases were taking a serious toll of fruit. For instance, on Mr. Paik's farm, which is reported to be one of the best in Savannakhet province, the mature litchi trees had suddenly dropped their fruit caused by what was diagnosed as a fungus infection. This trouble could have been avoided by the application of a few timely sprays. Directions were given to the farm supervisor, which should provide protection for the fruit on litchis in future years.

Again, only a few of the fruit trees seen had been vegetatively reproduced - and these were plants obtained from Thailand. Most trees were seedlings and were variable in morphology, in production as well as in quality of fruit produced. The trees in the lime orchard were found growing on their own roots. Limes are suitable on their own roots but this practice, which developing countries such as Laos use, must be given up if suitable citrus other than limes are to be grown. Spacing of trees was found to be suitable in many orchards. Inter-planting of fruit species was practiced and is a recommended practice for bananas and the smaller fruit plants but mixed plantings of species planted. In most orchards inspected, jackfruit, longan, and mango were interplanted.

A number of dam sites were seen and inspected. Some of these could very well be used, when the host government has the personnel and desire to do so, for constructing small, inexpensive tree nurseries for use in propagating and making available to growers the greatly needed clonal varieties of fruit trees for planing rootstocks of citrus for later budding, and for making a collection of superior clones of adaptable fruit varieties.

The newly-developed research station was inspected. Here the soil was found to be representative of the area. One Lao research technician was stationed there along with a Japanese Peace Corp Volunteer, who works as an advisor. The station is adequate for conducting simple adaptive rice trials. According

to Mr. Chansiry, Director of Agriculture, Savannakhet, a number of rice trials had been conducted at this station, from which plot yield data was available. The Japanese technician, indicated that in future trials only the glutinous rice would be studied because of the reluctance of the Lao growers to produce the non-glutinous rice.

Mr. Vannakone, host country advisor with our group, indicated that he would follow-up in drafting future experiments for this station.

A serious pest (stem borer) was found destroying fruit trees on some farms visited. All fruit trees seemed to be susceptible. In the past, this pest has been very difficult to control. Therefore, this problem should be brought to the attention of Mr. Godfrey Dean, Entomologist at the Salakham Rice Station.

An inspection was made of fruit varieties available in the Savannakhet market. The following observations were made.

There are many mango varieties indigenous to Savannakhet plus the famous OK Long variety of Thai origin. The latter variety was extremely variable indicating the need for close scrutiny in selecting scions for any future multiplication work on this variety. Besides OK Long, another large mango called Phim Sene, was found. This one is long, and thick shaped, yellow with a slight pink tinge and greenish brown color with the heel slightly uplifted. It was fair to good in flavor; fiber not noticeable; not juicy. The small egg mango, Muk Myung Keah, was sampled. It is mostly seed and has a distinct turpentine flavor. Fruit prices were 25 per cent to 50 per cent lower than those encountered in the Vientiane markets.

Most of the bananas seen in the market were of the plantain type except for a medium length banana which was green when ripe. A nut of a palm tree called Mak Tan was found in the market. This nut is cut open in order to pry out a small juicy kernel about two inches in diameter. Each seed sold at 20 kip each. The palm tree, numerous in the province, is dioecious and yields around 100 or more nuts per tree.

The livestock station inspected near Savannakhet looked as though it was being abandoned. It is located at Ban Na Keo. This station is on the poorest soil where the land is almost devoid of plant growth. A pasture had been newly planted with a tropical forage mixture of centrasema and stylanthus. The station Manager, Mr. Vanathet, was trying to improve a poorly constructed dam which had badly silted in. The watershed had not been revegetated after grading, so any repairs made now would be risky as the dam would again silt in unless the necessary sod is developed. He indicated that the pasture could be irrigated to succeed. It would seem that irrigation was not the thing to do here since, by the looks of the surrounding country, it would never be feasible to irrigate such poor land.

The livestock on hand was a group of 12 brood sows of Duroc-Dutch white and Thai breed. There were six boars of Duroc-Dutch and of a local breed, and a few turkeys and one Guinea Fowl. The breeding hogs are used to cross-breed with local hogs. There was a rabbit hutch but the breeding stock had been disposed of.

Other grasses seen in the forage nursery were molasses grass, guinea grass, amon, para and elephant grass. Some were not identified.

### Xieng Khouang Area

Trips were made May 16-17th to MR II in company with Tom Wilson and Bud Lane. The first stop was a short one at Ban Xon where Bob Worley, Assistant Area Coordinator, had a truck load of geese for distribution to villagers. Then at Long Tieng, Mr. Phil Buechler, Area Coordinator, and Colonel Vang Geu, Acting Provincial Agriculture Officer, gave a briefing about the tree and opium crops and livestock grown by the hill people in that region. This region covers an area of 24,000 sq. kilometers on which an estimated 130,000 people are living. We were informed that the estimated population had dropped to this figure from an original of 240,000.

Colonel Van Geu has had four years training at an Agriculture School; he estimates that opium culture is now practiced by less than 20 per cent of the farmers; whereas, formerly some 50 per cent grew poppies. One reason given for this drop was the drain on labor supply as a result of conscription to the armed forces.

The afternoon of the 17th was spent inspecting fruit trees around houses in Long Tieng village with Mr. Yank Kao, Secretary to Major Thaofer. The species seen consisted mostly of Guava which were found to be very vigorous and productive in the hill area. Citrus trees, mostly tangerines, peaches, some pomegranates, bananas, and coffee made up the major tree crops planted. The very healthy and vigorous apple tree was seen. The coffee was identified "arabica," and the plants were healthy and reasonably vigorous; one plant inspected was heavily loaded with small developing berries. This was encouraging because of the possibility that this crop may have in supplanting opium culture in the highlands.

Guava seemed to be the best adapted of all the fruit trees seen. The trees were exceptionally large and vigorous and were heavily loaded with small fruit. The peach and citrus were reasonably vigorous and both species seemed to be well adapted; the peach trees were numerous but they were seedling trees which never bear good quality fruit. The trees had not had any pruning or training or scaffold development which is necessary in order for peaches to succeed. The pomegranates seen were beginning to flower, so productivity of this fruit could not be evaluated. The trees were small to medium sized.

Pineapples were planted in many gardens as was a wide assortment of savory herbs and spice plants. On the flight up to MR II, it was noted numerous slopes among the hills had been planted to pineapples and the lower areas were invariably thickly covered with wild bananas. This pineapple variety produces a long narrow fruit and was quite uniform in size and shape. The new plants inspected seem to have suckered heavily and had many basal slips. It resembles the commonly planted Singapore variety. Color or quality of its flesh was not evaluated.

The Union of Lao Eaces (ULR) Nursery and the poultry unit were also inspected. Mr. Xay Yang, Nursery employee who had received training in mushroom culture, explained the nursery work in progress. The plant species being propagated by cuttings were nutmeg and mace, patchouly, citronella (an oil producing plant) and ginseng, a health herb greatly prized by the Chinese who use it for its invigorating qualities.

The important factor about this ULR Nursery, developed under Mr. Parmenter's guidance, besides the potential value of the present plants being propagated, is for its possible use in small scale testing and multiplication of other crops of potential value from this area. It could serve as a small fruit tree nursery for planting seeds of rootstocks for deciduous fruits such as apples, peaches, plums, chestnuts and for citrus, for evaluating coffee collections and tea. What remains of a citrus grove was observed. The trees were mostly dead due to lack of care during military action which occurred in the area.

Soils in all the MR II areas were found to be productive and loamy with normal range pH. The existing mountains, we were informed, were mostly of limestone and numerous rocky outcrops seen were whitish in color which is indicative of limestone. The valleys were exceptionally green and verdant, also characterized of limestone parent materials. Cassava and of course the major crop, upland rice, were the chief annual crops being grown. The corn looked reasonably productive as were the soybeans.

On the 18th, Colonel Vang Geu escorted us around numerous sites under his area of supervision. Some of the highlights of this day's inspections were the two very promising citrus growing sites, and the wild tea covered hills. Visits were also made to a poppy growing village and to the Forestry and Fish Research stations.

At station five, elevation of 4,600 feet, wild tea plants heavily covered the hill sides. The plants were very healthy; however, no use was being made of the plants. With pruning and proper clipping of leaves, this wild tea might become a useful crop. Some coffee plants which appeared to be liberica were seen but these were not doing well.

At station 14, a heavy rainstorm developed which cut short our visit but some information was learned from personnel stationed there about the economics

for poppy culture; usually a family may cultivate up to a little over an acre in opium and harvest from it about five kilograms of opium. A group of four men might plant enough opium to harvest 10 to 12 kilos opium which sells, according to their report, at 72,000 kip per 2.6 lbs, a standard measure. The price of opium increases about four to five months after harvest but may shrink in weight by 20 percent while in storage.

The seedbeds for opium are prepared in late July and planted in late August on pH or "sweet" soil. It is harvested from the first November to September.

At site 272, a reasonably productive orange grove was inspected, pommelo was by far the most vigorous, productive species among the citrus and some tangerines and sweet oranges were producing fruit.

#### Ban Houei Sai Area

The trip to Ban Houei Sai and to the Introduction Garden Phu Pha Deng (during period May 22 thru 25th) was very worthwhile. Mr. Gary Alex, Area Agricultural Officers, met and briefed us about crops grown, personnel available in agriculture, and the USAID assistance program.

The Gardens at Phu Pha Deng were inspected May 22nd. The gardens area is estimated at 16 ha. with 10 employees and a force of 20 to 30 workers.

Garden #3 located at 4,000 feet elevation was inspected first. The soil here was found friable, relatively deep, and otherwise well suited for the growth of tree crops. Ginseng was under trial for adaptability, shade requirements and productivity using two varieties; these were one Korean and an American. To improve this trial, it was suggested that the shade be varied under the slat house in order to obtain a better idea of response to this treatment. We were informed that more seed of ginseng was to be ordered for further trials. Inquiry needs to be made to determine whether the seed "breeds true" since the seed of most perennials do not. The fruit trees planted at Garden #3 were citrus, longan, litchi and a few others. All had been set rather late in last year's rainy season; consequently, the trees had not had time to recover properly. The response of young trees to transplanting was explained to the personnel at the station and what cultural practices the trees now require in order to stimulate them into more vigorous growth. The trees were also badly in need of training and pruning, which should have been done at planting time to insure greater survival and more rapid recovery from the shock of transplanting. Methods and reasons for training and pruning were explained to the personnel. Soil treatments using natural fertilizer were also given.

During the walk to Garden #1, a number of indigenous fruits and plants were observed including a wild red raspberry and wild cardamon, an essented oil plant. Both of these plants appeared to have promise for developing into useful

plants for production. The tree crops at Garden #1 planted in '73 included litchi, mandarin, longan, mango, mangosteen, rose apple, pommelo, crab apple, sweet orange, and lime. Many of the trees had made good recovery, but they were in need of pruning and training to properly recover.

Garden #5 located at an elevation of 2,700 had been planted this year to red beans, corn, soybeans and peanuts. Coffee was being planted while we were there. Good stands of the vegetables had been obtained. Other cultural practices were suggested and method for growing a living fence using cuttings of an appropriate tropical tree were suggested.

The transplanting of coffee plants was being done using methods which were unsatisfactory for the adequate survival of the plants. The reason given for this type of planting was that this method was used in the Boloven Plateau. The transplanters were called together and the proper techniques for successful transplanting was demonstrated to them; then they were asked to replant and to make other adjustments necessary in the plants already set.

Mushrooms planted on sawed logs were under trial at this garden. Oak or chestnut logs are used for the culture of this type mushroom. The planted grapes were inspected at the site. They were badly in need of training and pruning. Techniques for conducting these operations were demonstrated. This will require much further training for the personnel at Phu Pha Deng to grasp since grape pruning is quite complicated. Rough guides were given at this time. Fungal diseases were developing on the vines; and sprays were suggested for the control of this pest. Upon returning to the main garden at Phu Pha Deng where the nursery slat house and offices were located, the pears, peaches and mango trees were found, again, badly in need of training and pruning. Demonstrations were conducted.

It was obvious that proper cultural practices are not being used on these planted fruit species which is very necessary in order to properly test their adaptability.

The next few days were spent inspecting refugee villages, visiting fruit farms, a Thailand river city, Chiang Kang, to determine agricultural equipment and chemicals available to Lao growers. A refugee village was inspected with Jim Bowman and Tom Wilson. Here Mr. Bowman had newly developed irrigation rice lands for the villagers. A complaint of villagers was that the soil was too sandy for rice; a close inspection of one soil site revealed the soil to be ideal for the production of all cultivated crops adaptable to this area. Methods for developing irrigation by a diversion from the river was suggested to Mr. Bowman. One afternoon was spent instructing and demonstrating to a very enthusiastic farmer, methods for grafting mangoes and for improving his citrus orchard which looked as if it were suffering from a high water table and poor drainage.

### Luang Prabang Area

Luang Prabang was visited, May 27-30th. Mr. Jack Morgan acted as support officer. After meeting with the Lao Government Provincial Director of Agriculture, Mr. Khamphone, for briefing about inspection trips, a visit was made to the proposed site of a tree nursery at Houei Koth. The total environment of the site looked very suitable for use as a nursery except for its location. It is 30 kilometers out of Luang Prabang. The questions are, will growers travel that far for better trees and will the assigned technician be willing to live there? Mr. Khamphone thinks this problem can be solved if a house can be constructed for the assigned technician. He also informed that there were fruit growers nearby the proposed site.

The following morning, the large Luang Prabang market was visited. A very noticeable difference was observed between this one and others inspected in that very little rip fruit was available. The reason being that Luang Prabang lies much farther north, and because of its cooler weather, the mango, papaya and pineapples had not ripened. The market had many Thai-introduced fruits such as mango, tangerines, oranges, sapadilla to mention a few. Prices were not much below those encountered in Vientiane.

The excellent Sinc Manb Fruit Farm was inspected. It is one of the most interesting and one of the best seen in Laos. Here the owner had successfully collected and planted an enormous number of improved fruit tree varieties. The papayas were many and were of the hermaphroditic, long slender type.

Some of the best citrus were seen which included many varieties of oranges, pommelos, lemons and limes. His banana varieties included the dwarf Cavendish (Chinese dwarf). Although, the trees were much too closely planted, fruit yields were still high in spite of heavy fungal infections.

The soil was exceptionally productive, and the farm was located in a valley well protected from damaging winds. A citrus disease was found which had destroyed five or six trees. It appeared to be caused by a lichen which had covered much of the bark of infected trees. The mango trees which included many of the superior Thai varieties had been damaged by last winter's cold weather; and they were heavily infected with a fruit beetle. Almost every ripe fruit had been punctured by this beetle causing a rot down and into the seed.

It was suggested to Mr. Khamphiou, Extension Chief who accompanied us, that on this farm many collections of superior varieties could be obtained for the proposed nursery, when and if it is developed.

Bananas and pineapples are extensively planted in the protected valleys of Luang Prabang. The two important varieties of bananas grown are good dessert types. These were the Souk Leuang - short fruited with a yellow peel and Kwai Ong Soukeo, Peel-green, flesh-white. Both varieties resemble the Cavendish; the

larger one may be the giant Cavendish; and the other is the dwarf Cavendish (yellow when ripe). Both varieties are cold tolerant. The Kwai Nam, a medium to small, yellow, common variety banana and the Muk Kwai Kai, or egg banana, a high quality dessert type, were found among the numerous banana groves.

One of the finest longsat (Mak Fhai) trees was found at the Sinc Mank farm. This tree, as mentioned earlier, is a tremendously heavy-bearing fruit tree. It resembles the litchi, but the fruit is more spritely in flavor. The farmer mentioned he realized 10,000 kip from the sale of fruit of one tree. Pomegranates and weet sop are also popular fruits grown in Luang Prabang; and many trees were planted.

The opium Redirection Training Center was visited. Here, a small nursery was in existence and a few improved fruit trees were seen. There were some kumquat, a few orange and a popular lemon variety imported from Australia. These were to be planted soon on a nearby sloping field. Local materials had been used for the nursery.

Pineapples are planted over much of the rolling hills in Luang Prabang, many of which are too steeply sloped to be used. Unless some form of terraces are used in these fields, Luang Prabang is going to have far too many exhausted hill lands in the future. Some very fine pineapples were seen. The Singapore variety and small fruited local varieties are grown.

Very few pineapples were ripening at this time and the quality could not be ascertained. Spacing used was one meter by one meter on many fields. Another field was planted at two meters between rows by one meter in-row. This spacing could be closer; however, the purpose of these growers is to permit the workers to work around the plants easier, while weeding and cultivating.

In the late afternoon of May 29th, a visit was made to the farm of Mr. Christian Lezy, Director of Hotel Phousi Akhane. Some very productive coffee, lime, and pomegranate were observed on this farm. In fact, his arabica bushes were heavily loaded with young berries. Another coffee variety seen was extraordinarily vigorous and healthy, but it was not heavy in fruit. The lime trees were heavy in fruit as were the pommelos. Mr. Lezy had some lemongrass and peanuts, both crops which he planted to produce on a large scale for marketing essential oils.

Mr. Lezy had lost five or six citrus trees and others were on the verge of being lost due to incorrect application of fertilizers and manure. His other cultural practices used on the newly planted litchi, grapes, sweet sop and Longan trees were incorrect. Correct methods were demonstrated to enhance their growth.

The vocational school at Fa Ngum is an impressive one, and will be of great use to the province. The principal, Mr. Chanthat Flboultha and Mr. Shozun Yamauchi took us on a tour. The plant nursery is a modern one where a few types of most economic plants were being propagated. One point of interest at this nursery was the practice of sinking potted plants in sand held on benches, the purpose being to prevent rapid drying out and reduce watering frequency.

The King's farm was inspected on May 30th in company with Mr. Fiao Hew, brother of the King, and Mr. Khamphone, Provincial Chief of Agriculture. Mr. Fiao informed that the farm had been abandoned for a few years due to military action in the area and the rundown condition was due to lack of care during that period.

The citrus next to the rice field had what appeared to be physiological disorders which is very likely caused by a high water table. There was also evidence of virus infections such as citrus decline and tristiza, two prevalent diseases found in warm climates. Most of the trees were seedlings grown on their own roots. Only the sour orange root is adaptable to heavy wet soils such as this one. This was explained to Mr. Fiao. The Pommelo trees growing in the same field were extremely vigorous and healthy. This citrus thrives near water and was at home on the low soil. Pommelo is used as a rootstock in a few tropical countries but the trees are short lived.

Mr. Kiao mentioned about his shortage of labor and fertilizers. It looked as if he were doing a good job managing his small force on the most urgent projects. He listed these as rice and corn, and said that he planned to rejuvenate a part of the tangerine grove. These three projects will be all he can handle. The rice nurseries were being prepared for planting while we were there. Mr. Kiao showed us his different mango varieties and the fruits of each were sampled. These were:

1. Muk Myung Keohouloup - Medium size, green fruit with a depression at stem end. Very good flavor.
2. Muk Myung Kham - or Golden mango, this one resembles Ok Long in quality-one of the best local mangoes. Some huge trees probably 100 years old were seen and were fruiting.
3. Muk Myung Keohouacho - Medium long pointed. Flavor not good.
4. Ok Long - The famous Thai variety.

Mr. Kiao was interested in propagating his own mango transplants. Methods for doing this were demonstrated for him such as plantinh seed, collecting scionwood and care of young plants including grafting operations. Suitable citrus rootstock for his farm was also given in which he expressed much interest.

A few avocados and budded citrus which the King had brought from California were planted in the orchards. These citrus were, undoubtedly, growing on macrapholia root stocks. All were doing nicely probably due to the adapted rootstock.

Mr. Fiao had not used fertilizers on his fruit trees. He was encouraged to use animal manure which is an excellent fertilizer for this purpose.

Two pumps were seen, both were diesel and were of Taiwan manufacture and were of a size appropriate for irrigating the farm.

Many vigorous coffee plants, some of which were 20-30 feet tall, were seen. Most were Robusta type with large leaves. A few Arabica were seen which had many berries on them. Mr. Fiao informed that he had thousands of seedlings of Arabica ready for planting, that it was not worthwhile to prune the old plants - they were needed as shade and for ornamentals. The young coffee plants were not seen. Coffee, undoubtedly, is well adapted to this area as shown by the few strays plants observed which were developing fruit.

The King's farm is too large to successfully take care of all the planted fields; some will have to be abandoned or left to grow uncared for. In time, Mr. Kiao probably will be able to get things in order.

### Summary and Recommendations

Many of the constraints to production of improved fruit in Laos have relatively simple solutions. For example, the lack of availability (to growers over the country) of grafted young trees of mango and other fruits for planting. With very little effort and expense the Provisional Government of National Union could advise and guide in the collection of good seeds, and planting them in a well-prepared seed bed; after sprouting them, watering well until attaining pencil size, then grafting them to scions of known superior varieties. Thus, an adequate supply of grafted trees of improved varieties could be available, and ready to plant in one year.

One or two trained technicians, assisted by six laborers for weeding and watering, could do the work. Such a small unit could be organized in each province to reproduce thousands of improved grafted plants for distribution to potential producers.

This step would rapidly solve and correct the existing wasteful method of developing commercial orchards through planting seeds. Even though the fruit is excellent from which the seed is obtained, there is no guarantee that the same quality or producing capacity will be transmitted to the seedling plant. In many cases, the new seedling will be much different as it very likely may be crossed. There is no known method for determining whether a seed has been cross-pollinated. In the orchards observed by the writer there were trees producing round fruits; some produced pointed fruits, other large fruits, some no fruit at all. They were from seeds of good varieties. The results from developing orchards from seeds without grafting is that all kinds of trees develop, some good others bad. Improved, high producing plants can only be assured by planting grafted plants. Mangoes and citrus are among the locally adapted fruits that are easily grafted and budded. One trained specialist can graft or bud hundreds of plants in a day, whereas, he could inarch or marcott only eight to 10. In addition to growing trees from seed which may be cross-pollinated, there was little evidence of pruning or training during growth of the young trees. For example: even though some plants may have two or three trunks, none of the excess are cut out. The trunks may be prone on the ground when a stake should have been used to prop the trees up. They may be full of deadwood but none of it is removed. In MR II, not one peach tree, a fruit tree which must be pruned annually in order to produce fruit satisfactorily, had been pruned or had a knife touch it. The need of pruning peaches is known universally but in MR II, of the many trees seen, all resembled wild unpruned trees. This one practice could double the production of peaches and increase the size of the fruit.

Another constraint to horticulture improvement has been anthracnose diseases which caused an estimated loss of 90 per cent of the mango fruit this year in

many orchards. There are fungicides available in Laos, which if timely applied, can hold most of the fruit on the trees until ripe. Not one farmer visited in the tours knew about anthracnose on mangoes but they knew that the flowers had dropped from their trees.

These aforementioned handicaps are only a few examples of problems that can be solved quite readily with a little effort in training the extension staff in these simple culture techniques so that they in turn can teach the growers.

One specific corrective measure is to teach farmers to spray mango panicles timely with fungicides to control anthracnose. This is done by applying the fungicide spray every ten days for one month until the fruits are set.

Every fruit grower should buy a good sprayer when he plants fruit trees. Wherever there are fruit trees there will be diseases and insects. There is always anthracnose fungus to destroy mango flowers unless the flowers are sprayed with fungicide to protect them. This has been known for many years but none of the growers or host country personnel seemed to be aware of this potential.

The ancient practice of air layering, marcottage, or Chinese air layering, as it is sometimes called, is widely practiced in Laos. This is a very useful, worthwhile method of increasing plants. The technique is suitable for the novice or the hobbyist. However, it is extremely laborious and too slow for modern nurseries to use as only a few trees can be propagated when inarching is used. Most citrus do not thrive when grown on their own roots. It is much more effective to plant seed and grow the rootstock than to bud or graft them to desirable varieties. This method should supersede the inarching and marcottage methods. Marcotting is commonly used on litchi and limes as these two plants produce satisfactorily on their own roots but even for these, the system is too slow and requires too much labor to be of economic or commercial use.

The economical method for establishing new varieties of fruit/nut crops in the country is by budwood, scionwood importation rather than through importing grafted trees. With rapid, modern air communications and improved methods of packing perishable budwood, it can arrive in a viable condition.

Most of the nurseries in Laos are located on unsuitable soils and little use is made of modern practices so necessary to properly evaluate the planted fruit introductions. For example, at the Nam Tan Project, the soil is a gray mottled unproductive soil for trees where the water table is within a meter or two of the ground surface. Yet, one of the best banana varieties, Gros Michel, and mango and citrus of superior varieties are planted at this site. This is an impossible situation. It is common knowledge in fruit growing that nurseries must be located on the most productive and deep soils with a deep water table. Fruit trees cannot tolerate "wet feet".

Again, at Pakse, the newly planted citrus and other fruit species are planted in gravelly-laterite soil where the water table is also one or two meters below the surface. These trees must be moved or else it will continue to be difficult, if not impossible, to rejuvenate the orchard. Another site should be sought having a deep, well drained soil with a low water table at least 10 meters or more below the surface. Then the citrus, mango and other trees should be moved to the new site while the trees are still young enough to transplant.

The cultural practices being followed at Phu Pha Deng need improvement. The trees observed had had no training or pruning at planting time. Some had two or three trunks as those in the farmers' fields had; the experimental grape vines had not had training to form the head which is necessary if trellises are to be used. The methods being used in transplanting the new coffee seedling need improvement. No spraying was being done to control diseases, which is a necessary practice for evaluating whether or not a fruit species can adapt itself. This Introductory Garden should be using the most scientific knowledge available in testing the new introductions for replacing opium. Unless proper care is used it will not be known whether a plant is adaptable. This knowledge is available and an attempt should be made to use qualified staff having the required skills to advise in the supervision of the Garden. A tropical horticulturist with experience in both tropical and temperate fruit tree crops should be placed in an advisory capacity to assist PGNU to provide technical guidance for the Poppy Redirection work as well as other fruit industry development.

This is an urgent need. There has been much wasted effort going on for too long a time to allow this to continue. This can rapidly be corrected with just a little guidance from the right trained person - such people are available now.

The PGNU should set down soonest its plan to at least address some of its attention to the above problems. The most important step now is to get a good qualified advisor in tree crops working with a counterpart of medium rank, one that will not be burdened with too much other administrative details; and allow them to plan and begin to implement an action program. The outlying stations are ready, the personnel are willing to adopt approved practices now if a qualified staff in headquarters will provide the technical guidance.



ROYAL KINGDOM OF LAOS

INVESTMENT CODE

COMISSARIAT-GENERAL AU PLAN

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# **INVESTMENT CODE**

## **Title I : Preliminary Provisions**

**Article 1:** The aim of this Investment Code is to define to specify the guarantees granted to the investments, having an economic character, in the Kingdom of Laos, the rights and obligations connected therewith, as well as the various systems to which these investments are subjected.

This Code succeeds Law No. 59/2 dated December 2, 1959 expressing the ratification of the Ordinance-Law No. 134 dated May 23, 1958 amended by the Ordinance-Law No. 389 dated December 12, 1959 ratified by the Law No. 59/19 dated December 21, 1959, the Ordinance-Law No. 277 dated October 1, 1964 and the Ordinance-Law No. 60 dated February 23, 1968, as well as the texts passed for its application :

- Presidential Decree No. 383/PC dated 20-11-1958
- Presidential Decree No. 343/PC dated 3-11-1958

Moreover, it abrogates and replaces :

- Royal-Ordinance No. 53 dated 28-2-1966
- Presidential Decree No. 266/PC dated 31-7-59
- Ministerial Decree No. 178/PC dated 30-7-1966 and Presidential Decree No. 52/PC dated 26-2-1960

as well as the texts passed for its application :

- Ministerial Decree No. 5/Plan dated 26-4-1960
- Presidential Decree No. 438/PC dated 18-11-1960.

**Article 2:** The installation within the territory of the Kingdom of Laos of activities of an economic character, either by the creation of a new enterprise, or by the extension of an existing enterprise, may be made under one of the following three systems :

- a. convention
- b. licence
- c. common law

These systems form the subject of Title IV and Title V of this text.

**Article 3:** In this Code, the term "economic character" applies to industry, mining and forest exploitation, agriculture, livestock breeding, fishing trading, transportation and any activity in line with tourism.

The term "enterprise" applies to companies (corporate bodies) or to any other natural person acting on his own behalf and carrying on an une activity with "economic character".

## Title II: Guarantees

**Article 4:** The freedom of establishing and of investing capital is guaranteed to every person in the territory of the Kingdom of Laos.

The freedom of establishing and of transferring residence is guaranteed to persons employed in the enterprises with economic character or participating in their management, subject to the provisions of public policy and especially with respect to the regulation relating to the conditions of admission and residence of foreigner in Laos.

**Article 5:** The equality in the eyes of the Laos and especially in its fiscal provisions, is guaranteed to foreign natural persons and corporate bodies.

**Article 6:** The Law No. 59/10 dated December 21, 1959 expressing the ratification of the Decree-Law fixing the regulation for the acquisition of real property in Laos by foreigners is still applicable to the system of common law. On the other hand, the authorization of the Minister of Finance shall be required whenever real property shall be necessary, according to the opinion of the committee as foreseen in Article 11, to the installations planned by the enterprises which benefit by the system of licence or convention.

**Article 7:** The rights acquired in connection with real property and personal property and with regard to the legal operation of an economic activity are guaranteed to natural persons and corporate bodies without discrimination, neither between foreign nationalities, nor between foreigners and nationals subject to the provisions of Article 6 above.

**Article 8:** The state undertakes not to nationalize the private enterprises which are under licence or convention.

The State shall not participate in any new economic activity which might be in competition with an enterprise under licence or convention.

**Article 9:** Every enterprise shall be able to assign or transfer funds abroad in the original foreign currency for an amount corresponding to the capital investments made by itself and originating from abroad, to the profits resulting from these capital investments, to the loans raised abroad within the limits of the activities corresponding to its objective and to the interest or obligations resulting from these loans.

If the balance of payments situation in foreign currencies would require measures for their conservation, facilities for transfer into original foreign currency may be granted to the enterprises under licence or convention.

**Article 10:** The foreign natural persons or corporate bodies are bound to comply with the legal or prescribed obligations governing their professional activities and especially those determining the accounting and fiscal rules of these activities.

### Title III : National Investment Commission

**Article 11:** A National Investment Commission is instituted, hereinafter called "The Commission", which replaces the "Commission for Mines and Industry" and the "Commission for the exemption of Customs Duties and fiscal Taxes".

The privileges previously granted by these two commissions still remain valid. However, if an enterprise, already in activity on the date of enactment of this Code, submits an application for convention or for licence based on the desire for an extension, its dossier shall be examined once again in its entirety by the Commission.

This extension shall not be taken into consideration by the Commission unless it leads to an increase at least equal to 30% of its production or previous activity.

**Article 12:** The function of this Commission is to examine all the dossiers concerning the affairs of the enterprises with economic character which request the privileges stipulated by this Code within the framework of the systems defined thereby.

The Commission verifies to what extent these activities tally with

the development programs figuring in the Plan. It proposes to the Royal Government, for decision by the Cabinet Council, the kind and extent of the privileges of this Code to be granted for each case in accordance with the provisions stipulated in the systems .

The Commission does not deal with handicraft activities, as they are defined hereunder in Title IV.

**Article 13:** The Commission is presided over by the Commissioner General of the Plan and is composed of two categories of members:— the permanent and non-permanent members.

**Article 14:** The permanent members represent the ministries or organisation which are concerned with all the affairs submitted to the Commission's examination.

There are:

- Commissioner General for Plan — Chairman  
Substitute : First Deputy Commissioner
- Director General of National Economy  
Substitute : Director of Technical Studies of National Economy
- Director General of Finance  
Substitute : Director of Budget and Control
- Secretary General of the National Bank of Laos  
Substitute : Director of Studies and Research of the National Bank of Laos
- Director General of the Lao Development Bank  
Substitute : Authorized representative of the Lao Development Bank
- Director of the National Investment Fund  
Substitute : Secretary General of the National Investment Bank
- The President of the National Chamber of Commerce
- The permanent Members of the Commission are required to attend personally the meetings of the Commission. If they cannot attend, they may be replaced only, by the substitute members.

**Article 15:** The non-permanent members are the Directors of the National

services who have within their jurisdiction the activities of the enterprises whose dossier are examined.

The Chairman, taking into consideration the agenda prepared for each meeting and the dossiers which will be examine at that time, must summon, as non-permanent members, the Directors of the Services likely to enlighten the Commission during the examination and discussion on the dossiers. Besides, the Commission may summon for consultation any person qualified in a special field.

**Article 16:** The Commission must attempt to reach unanimous agreement in its deliberations. If need be, the Commission shall take a vote among the members present.

– The permanent Secretariat of the Commission is the responsibility of the Commissariat for the Plan .

– The Commission shall specify the procedure according to which the dossiers shall be constituted and examined .

– The Commission is convened by the Chairman or upon the request of one or more permanent members in order to consider the dossiers deposited at the Secretariat or for any other question within its jurisdiction (Article 12 and 17).

The Commission meets at least once every three months in the first fortnight of each quarter.

**Article 17:** To accomplish its mission set forth in Article 12, the Commission shall be required to express its opinion ;

1) in a general manner on all questions relating to the policy of investments in Laos.

2) on the nature and the degree of priority of the sector of economic activity which pertains to the investment projects for which the privileges stipulated in this Code are requested .

3) on the system which applies to each requesting enterprise.

4) on the privileges which may be granted for each specific case.

5) on the special conditions which must be imposed on an enterprise as counterpart to the privileges which are granted to it.

6) on the modifications to the provisions made with respect to an enterprise already benefiting under licence or under convention.

The opinions of the Commission shall have to be justified.

The opinion relating to the application for licence or for convention shall have to be formulated by the commission within a period of two months reckoning from the submission of the complete dossier to the Secretariat of the Commission .

The decision of the Cabinet Council shall be taken within a period of one month after the Commission shall have given its opinions .

#### **Title IV: The Systems**

##### **A. Common Law**

**Article 18:** The creation or the enlarging by any natural person or corporate body of any activity with economic character is not subject to any other formality besides that resulting from the prescriptions of the common law.

**Article 19:** The handicraft enterprises are not included in the scope of application of the Investment Code; their organization and their development shall form the subject of a special regulation, as well as specific incentive measures.

**Article 20:** With regard to this Code, a craftsman is considered to be the autonomous worker who personally carries on a manual craft from which he earns his main income and who runs, by himself, his workshop and the commercialization of its production .

He may work either by hand, or with the aid of motive power, whether the working implements belong or do not belong to him .

He may utilize the assistance of members of his family, mates or apprentices apart from any master craftsman, the total number of these assistants may not exceed twenty persons in addition to the craftsman himself .

The craftsman as the leading person sells the product of his work. He may perform custom work, using raw materials which belong to him or which are supplied by his customers .

He may have sign-board, workshop, warehouses and yards .

**Article 21:** The acceptance of the classification as a craftsman is subject, in addition to the above specifications, to the following two conditions:

a) His registration in the Licence Register pending the setting up of the "Crafts Register".

b) Not to exceed the 10.000.000 kip ceiling of total investment value of stationary or rolling stock and equipment, used for the activity in question; this value shall be calculated at the free exchange rate for foreign currencies.

**Article 22:** The definition of the craftsman given in Articles 20 and 21 above excludes from the category of handicrafts, and includes in the category of Industry, the workshops or stores employing skilled personnel, technicians or master craftsmen; those who employ more than 20 person; or those whose value of equipment utilized is estimated at more than 10.000.000 Kip (ten million kip).

**Article 23:** The installation or enlargement of enterprises, whether under the system of common law, or under the systems of licence or convention, is administered under the law or regulations of the common law.

### **B. Special systems: Licence or Convention**

**Article 24:** Any enterprise with economic character may apply to profit by a special system: Licence or Convention, provided that it complies with the conditions defined in Article 25.

**Article 25:** The enterprise must deposit at the Secretariat of the Commission a dossier showing the legal, economic, technical and financial aspects of its investment projects according to the forms provided by the Commission. These dossiers shall be forwarded to the service concerned for technical comment one month before being submitted to the Commission for examination.

After comment, examination and discussion of the dossier by the Commission, the latter shall have to decide the system—convention, licence or common law applicable to the enterprise that has filed the dossier.

In reaching its decision, the Commission shall take into consideration a certain number of factors, conditions or criteria relating to the enterprise in question, which are:

2) to present, both in the field of financing and in the field of technical matters, guarantees deemed to be sufficient .

2) to give priority to the recruiting and training of personnel of lao nationality .

3) to be able to market its products, both internally and in the export markets, in a manner which will not compete in a detrimental manner with an enterprise already established in Laos and operating under satisfactory conditions .

4) to plan to use raw materials of local origin .

5) to present competent and complete accounts in conformity with the regulations .

6) to contribute to the equilibrium of the trade balance of Laos, either by the reduction of imports, or by the increase of exports ; or to the improvement of the balance of commerce .

The Commission must also take into account :

1) the respective shares of the following forms of financing ; own funds, loans, and the interest charges with which the latter burdens the enterprise, especially from the point of view of obligations in foreign currencies .

2) the novelty or the originality of the product .

3) the relationship between the amount of the investments and the number of jobs created ; an enterprise being considered for priority privileges only if it creates at least 20 permanent jobs

Generally speaking, the enterprise must participate in the economic progress of Laos through the volume of its equipment, through the creation of jobs, through the production of consumption goods or equipment or the supply of services which enable existing enterprises to further develop or which support the creation of new activities Furthermore, it must have been created after the date of enactment of this Code or have undertaken, after this date only, important extensions leading to an increase in production capacity or of its existing machinery and equipment of at least 30 percent .

This last condition does not apply to handicraft enterprises which, because of their increase in size, fall into industrial category which can benefit from the advantages of this Code.

**Article 26:** The benefit of a special system, licence or convention, is granted to the enterprise by a Decree, which must include a summary of all the details required in accordance with Article 46 of this Code.

Upon the expiration of the period of time during which the benefit of one of the special systems is granted, the enterprise returns to the common law system .

**Title V : The privileges pertaining to the**  

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**Special Systems: Licence and**  

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**Convention**

**A. Privileges common to the 2 systems**

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**Article 27:** The Commission, in the decision which it formulates concerning the grant of a given system to an enterprise, must explicitly the list of benefits which are to be included in the system as granted.

**Article 28:** The enterprises constituted in Laos and which are accorded the benefits of a given system, shall benefit during the periode covered by the system by a reduction of the registration fee of the Articles of innoporation. This fee is fixed at 0, 50% for the enterprises under licence and at 0, 25% for the enterprises under convention .

Besides the enterprises under licence or convention shall be exempted from the fees applicable to the inclusion of real property assets in the composition of the register capital.

The benefits of the exemptions above mentioned shall be applicable to the increases of capital occuring within a period of 3 yeary after the formation of the company.

**Article 29:** During the period covered by the system as granted, the tax rate on income distributed from profits through negotiable securities may be reduced by half for the enterprises profiting by the licence system. the enterprises under convention shall be exempted from this tax.

**Article 30:** The enterprises under licence or convention may be exempted from the land tax during the period covered by the system granted ; this exemption shall cover the lands and industrial buildings excluding all residential building.

**Article 31:** During the period covered by the system granted, the enterprises under licence or convention shall be able to profit by the exemption of customs duties and the taxes subsidiary to these duties upon entry into Laos. The Commission shall specify for each case the equipment, component parts, accessories, spare-parts and raw materials that may profit by this exemption. These exemptions shall in no case be applicable to the rolling stock of any kind other than the equipment for earthwork and for handling and other rolling stock which are directly necessary to the production of the enterprise .

**Article 32:** The enterprises under licence or convention may be able to obtain customs protection for the products which the manufacture, either by the increase of customs duties or by the prohibition of imports. These measures shall be limited in time and shall be specified for each specific case in the licence or convention decrees. They are granted only after certified advice of the Commission. In principle, the customs protection must cover only the starting period of the enterprise and the beginning. Its duration shall be limited in time by the Commission and shall in no case exceed five years.

**Article 33:** The enterprises under licence or convention shall be able to profit by the support of the public authorities and of the Administration. In particular with respect to:

- the immigration formalities for the foreign technicians deemed necessary to their activity .
- banking questions
- land questions
- roads questions .

**Article 34:** The enterprises under licence or convention benefit by preferential orders from the Administrations insofar as the prices and the quality of the products shall be comparable to those of the domestic market. The preference shall be automatically granted in relation to the similar imported products .

**Article 35:** Upon the issuance of the Presidential Decree granting the system of licence or of convention, the industrial and trading profits realized in the Kingdom of Laos by the enterprises may be exempted, as the case may be, either from the tax on profits of companies, or from the general income tax on revenues.

**Article 36:** The exemption mentioned in the preceding article shall be subject to the following conditions :

– The taxable profits shall have to be used for a “new investment” carried out in Laos, contributing directly to the increase of production and within a maximum time of 2 years reckoning from the end of the fiscal year during which the profits in question have been realized. However, if the amount of investments contemplated is lower than that of the taxable profit, the non-invested portion shall be taxed at the rate in force,

The commission determines whether an investment can be considered to be “new”.

The following are considered as new investments :

– any investment effected with a view to establishing a new enterprise in Laos with new capital.

– any investment effected with a view to enlarging the exempted enterprise, or another existing in Laos, with new capital or by self financing.

An investment effected by association of old and new capital can also be considered as new investment.

In no case shall an investment be considered to be a new investment if it was made before the end of the fiscal year to which the profits to be invested are attributed .

**Article 37:** The exemption from tax on profits shall in no case be granted whenever the total of the profits distributed since the start of the enterprise shall have reached the amount of the capital invested .

**Article 38:** The applications for exemption mentioned in the preceding articles are compulsorily submitted to the Commission which formulates for each case a considered opinion. It proposes to the Ministry of Finance the exemption from tax on profits taking into consideration the investments that the enterprise undertakes to carry out on-the-spot within a fixed period of time, which shall be at most equal to 2 years from the end of the Fiscal Year during which the profit has been made.

On case of non-execution, the profits which had been exempted shall be added, in view of their taxation, to the profits of the Fiscal Year during which the periode of 2 years ended .

## **B. Special privileges granted to the convention system**

**Article 39:** A new enterprise may be admitted to the convention system whenever it presents certain special characteristics especially:

- exceptional importance for the economic development of the Kingdom within the framework of the objectives of the Plan
- installation in Laos, after the enactment of the Code, of an activity which is a new contribution to the National Economy.
- creation of at least 50 new permanent jobs.
- fixed assets justifying an extended period of amortization.

**Article 40:** The enterprise under convention shall be able, upon decision of Commission, to profit, in addition to the privileges specified in the above Articles.

- 1) by the stabilized fiscal system.
- 2) by the exemption from taxation of commercial and industrial profits without an obligation to reinvest.
- 3) by the exemption from the turnover tax.

These privileges are granted during a time which may not exceed that of the convention.

**Article 41:** The stabilized fiscal system guarantees for the enterprise under convention the stability of the direct taxes during the time of the convention.

**Article 42:** In the event that the enterprise is granted the privileges of the stabilized fiscal system, and during the period of application of this system, no modification may be effected, with regard to the beneficiary enterprise to the methods for tax assessment or collection, nor to the rates in force at the time of the signing of the convention.

During the same period, the enterprise under convention may not be subjected to newly instituted taxes. It profits, should the occasion arise, by subsequent lightening even partial, of the fiscal system mentioned in the first paragraph of this Article.

**Article 43:** The obligation for reinvestment of the profits exempted from taxes (B. I. C, Ind. & Comm. Profits) which is operative for the enterprises under licence is not applicable to the enterprises under convention to

which this privilege has been explicitly granted and which enterprises shall therefore be able to make distribution of tax-exempted profits.

**Article 44:** Exemption from turnover tax shall be granted for the products exported by the enterprise under convention. Besides, the Commission may grant, for a special reason, full exemption from this tax

### Miscellaneous Provisions

**Article 45:** The special systems of licence and of convention are granted for a maximum period of 5 years upon the issuance of the Presidential Decree granting the privileges of one of these systems.

At the end of the period covered by the system as granted, the dossiers of the enterprises shall form the subject of a thorough examination by the Commission which might cancel, renew, or modify the system previously granted for a new period not exceeding 5 years.

The recommendations of the Commission shall take into consideration the results achieved by the enterprise in the achievement of the objectives which had been set for it.

The period covered by the system will start on the date when production starts or when commercial activity is initiated.

Since this date cannot be stated in the Presidential Decree which grants the benefits, the Commission will propose a date which be sanctioned by a Decree of the Minister of National Economy.

**Article 46:** The Presidential Decrees mentioned in Article 27 require that, unless following are clearly stated, the licence or convention may be declared valid:

1) the specific objective of the activities for which the enterprise is admitted to the benefit of a special system; this objective must be strictly limited to the activities directly required for stated production of the enterprise. In no case shall systems of licence or of convention be granted to enterprises with multiple activities;

2) a detailed statement of equipment to be used and working methods employed in the enterprise;

3) a detailed list of all equipment and supplies, stated in terms of specific amounts or items, to be exempted from customs duties upon their entry into Laos.

4) the enumeration of the privileges granted in conformity with the provisions of this Code

5) the duration of the effects of the special system to which the enterprise has been admitted .

**Article 47:** The enterprises admitted to the licence system or the convention system are held, during the period of operation of the system under which they are placed, to the following obligations :

1) Strict compliance with the activity and investment programs presented in the dossier. Modifications to these programs may be authorized by the Commission if unforeseen conditions create these needs.

2) Communication to the Ministry of National Economy and to the Ministry of Plan, by half-yearly periods, of a detailed report in accordance with a model that will have been prescribed, comprising especially the usual accounting documents: balance sheet, working account, profit and loss statement and amortization schedules .

**Article 48:** Upon the proposal of the Commission, the privileges of the licence system and the convention system may be withdrawn at any time from an enterprise which has seriously failed to comply with the provisions of Article 47 or with one of those enacted by the Presidential Decree granting one of these two systems .

Dossiers to be examined for cancellation may be proposed by the Ministry of National Economy or by the Secretariat of the Commission

**Article 49:** However any measure of cancellation or of withdrawal of a convention from an enterprise may take effect only after formal notice by registered letter, with acknowledgment of receipt, and to take effect only after a period of 60 days .

**Article 50:** The Presidential Decree which effects the withdrawal of a licence or cancellation of a convention must, under threat of being declared void, fix the date when the withdrawal or cancellation shall become operative .

**Article 51:** The withdrawal of licence or the cancellation of convention entails the abolishment, on the date when it shall become operative, of the privileges granted by virtue of this Code. However, in the matter of direct taxes, the suppression is retroactive to the first day of the fiscal year of the date when such action becomes operative .

The withdrawal of the special systems may, further more, cause the enterprise in question to be put under a special supervision system stipulated in Article 53 to 55 hereunder .

**Article 52:** Any enterprise cited under the provisions of Article 48 may be placed under the special supervision system stipulated in Articles 54 and 55.

**Article 53:** Furthermore, the supervision system may be applied, upon the request of the services concerned by their activities to the common law enterprises in the event of their having failed to comply with the fiscal, statutory or commercial provisions in force in Laos .

The placing of an enterprise under supervision is pronounced by Presidential Decree upon the certified opinion of the commission .

**Article 54:** The enterprises placed under the special supervision system shall have to submit every month to the Ministry of National Economy and the Ministry of Plan a detailed report according to the prescribed form and comprising in particular the usual accounting documents: balance sheet, working account, profit and loss statement and amortization schedule. They shall also be visited periodically by agents appointed by the Ministry of National Economy for the purpose of those audits deemed necessary .

Furthermore, the enterprises placed under the special supervision system shall be able to submit applications for import or export licences only after having obtained approval from the Ministry of National Economy .

**Article 55:** The infractions which are the subject of the provisions of Articles 53 and 54 shall be punished with the penalties similar to those stipulated by the Law No. 154 dated May 8, 1953 bearing on the regulation and control of prices in Laos .

**Article 56:** The installation of mining enterprises continue to be ruled by

the legislation now in effect, and principally the Ordinance--Law No. 42 of January 26, 1959 and Ordinance--Law No. 161 of May 25, 1959.

Within the limitations established by these laws, the relevant enterprises can enjoy the benefits of this Code .

The provisions of the present Code do not release the new enterprises from any obligation, and especially the regulations now in effect relating to establishments classified as dangerous, unhealthy or anxious.

**Article 57:** The Royal Ordinances, the Presidential and Ministerial Decrees and Circulars shall determine, as far as it is necessary, the methods of application of this Code .

All modifications to this Code shall be valid only for the future, without having the power to impose on the enterprises, established in application of these provisions, conditions less favorable than those which shall already have been granted them .