

REPORT ON RURAL DEVELOPMENT
IN LAOS

This report was prepared by a working Commission which met under the guidance of the Mekong Committee.

This Commission consisted of :

- The Commission General for the Plan**
 - The Agency for the Development of the Plain of Vientiane**
 - The Commission for Rural Affairs**
- and the Ministry of National Economy.**

I - Conditions in the country.

The difficulties provoked by the war as well as by the geographical position of Laos, once more hinder a development already difficult, if we consider the conditions of the country.

In fact, this development is characterized by the following:

- A preponderance of the agricultural sector and of the so-called economy of subsistence since 80% of the active population lives on agriculture. The utilization of mechanized equipment and chemical fertilizers being rare (3,000 tons of fertilizer per year and 400 tractors and mechanized farming implements for the whole country).
- The property is too much parcelled out and the land is cultivated according to traditional methods.
- On one hand a very low average income per capita and a badly shared distribution of incomes between towns and villages, and between the towns themselves on the other hand.
- Limited ways of communication which makes difficult a balanced distribution of agricultural production.
- A set of under-used elements: under-use of arable land since only one-third of the Mekong basin is cultivated; under-use of forests which cover two-thirds of Laos; under-use of water because flood control is unknown, under-use of animal power because shoulder collar is unknown, then, under-use of manpower which is not fully used during the dry season and further restricted by various endemic diseases (malaria).
- A limited industrialization comprising only some small industries and handicraft activities.
- An ill-organized, marketing of agricultural products and importation of commodities which could be produced within the country.

All these obstacles are not insurmountable but require the elaboration of a rural development policy based on agriculture and on the country potentialities : energy, white coal, mines, forests....

II.- Particular zone selected for rural development.

The choice of the area on which the country decides to center its effort is delicate and belongs essentially to political field. In the case of Laos, the chronic insecurity which prevails over the highlands has excluded, first of all, the regions as potentially rich as the Plateaux of Xieng-Khouang (Plain of Jars) and de Boloven.

That is why the choice of the Plain of Vientiane as a zone of Development has indeed been guided by the relative security of this plain, and also for reasons of economic and human potentialities symbolized by the new dam on the Nam Ngum, the region which one intends to convert into a real axis which will serve as mover for the development of Laos as a whole.

Delimited by the Mekong to the South and South-East and, according to a line which corresponds approximatively with the reading 300, to the East between Nam Ngum and Phou Khao Khouay, to the North at the level of Phone Hong and Thin Keo and to the West along the National Highway 13, a little beyond this, the Plain of Vientiane covers an area of over 300,000 ha. the major part of which consists of shrubberies and forests, less than two-tenths of the Plain being cultivated (see-map).

Covered by alluvial deposits-old and recent, the recent deposits forming the most fertile soils - of the Mekong and of the Nam Ngum, the Plain of Vientiane is exposed to a tropical climate with a hot and humid season (May-September) and a dry-season (October-April).

Composed of eight districts (Muong) which form by themselves the major part of the Khoueng of Vientiane (Province), the Plain of Vientiane possesses 303,500 inhabitants (estimates for 1970) of which more than 155,000 persons are in the city of Vientiane, the whole region bordering the Mekong having a high density of population.

III.- Particular conditions existing within the region and justifying a rural development policy :

A.- The role of the city of Vientiane.

The presence of the administrative capital of the kingdom of Laos within the chosen zone and its position as frontier-town have a double effect .

The development policy can be stimulated only by a market of 150,000 persons in a city where the use of a monetary economy is greater than elsewhere within the kingdom.

Therefore, it is important to have this market available for the surplus of production realized thanks to a development policy.

On the other hand, the position of frontier-town and the facility with which one can cross the Mekong place this market at the mercy of a Thai economy which profits by a better infrastructure and which is an organized one.

Therefore, we must take into account, in development policy, the indispensable aid to enable the Lao farmers to compete in the Vientiane Market either by an aid during the initial phase of the program or by a more efficient customs protection.

B.- The Nam Ngum Dam.

The operation start, scheduled for 1972, of the Hydroelectric Plant of the Nam-Ngum dam must have a great importance on the rural development. The plant will have a capacity of 30 MW which could be raised up to 135 MW by increasing the load. Apart from meeting the local needs, and part of the needs of the North-East Thailand, the Plant will enable, at the final stage, the irrigation of 114,000 ha.

C.- Education :

The Wilder's survey (Royal Government of Laos and USAID) reveals the existence in the Plain of Vientiane, of 35% of illiterate among the young people from 15 to 25 years old (26% among men and 54% among women), figures which confirm the agro-literacy survey undertaken in June 1970 within the perimeter of Hat Dok Keo (40% of illiterate among adults over 15 years old distributed into 20% men and 60% women).

This is due, to the short duration of the educational enrolment rate (about 40%) to the short term of schooling in the villages all of which do not have a complete education cycle, and to the relatively high rate of discontinuance of studies (79% from the first to the sixth year in primary-schools of which 54% at the end of that very first year).

D.- Employment :

If unemployment in the Plain of Vientiane appears to be almost non-existent (it is estimated at 2% according to American statistics based in a survey made among a certain number of villages in the Plain) which is natural in a sparsely populated country led into a struggle which forces the army to constantly recruit. It is, however, difficult to assess the figures of seasonal under-employment. One can still estimate that under-employment is high in the zones where Lao farmer undertakes only rice cultivation-the main and sometimes the only crop-during the rainy season. It is otherwise lower along the Mekong and down-stream of Vientiane in view of the possibilities of vegetable cultivation, tobacco, sugar cane,.....

We must also note the important source of labor constituted on one hand by the seasonal laborers coming from the North-East of Thailand and on the other hand, the refugees from the Plain of Jarres and Northern provinces. Nearly six thousand families i.e. about 36,000 persons, have been resettled in various parts of the Plain of Vientiane during 1968/69/70.

F.- PRODUCTIVITY AND INCOME.

Low education, under-employment, bad health add to the low standard in technology, to the inadequate use of fertilizer, to, in general, the low soil fertility, to the lack of water control, to the parcelling out of landsto explain the low productivity and the low income level of the Plain of Vientiane.

The levy realized by the army among the active population also plays an important role, for this is a qualitatively serious levy 52.6% of the male population between 15 and 35 years of the Plain villages being recruited for military and para-military training, women and old people are compelled to work on the agriculture to replace them.

We must also note the inadequacy of accessory structures for the development; there are very few associations, practically no cooperatives and the amount of the credit for farming equipment granted by the Development Bank of Laos absurdly low compared to the needs (6,692,000 Kip for 1970).

All this explains the fact that the rice yield per hectare is low in the Plain of Vientiane when compared with other regions of Asia (about 1 ton); this also explains-productivity and income being linked together-the low agricultural income in the Plain of Vientiane.

The study undertaken by the Israeli mission for Hat Dok Keo (an area where the soils are fertile) shows that the gross income of an average cultivation (a little less than 2 Ha.) is 100,000 Kip per year (i.e, 200 U.S. dollars).

E.- HEALTH

The introduction of double cropping is possible only when the population is in good health and participates efficiently in the social and economic development. Now most of the farmers quit working on their land at the age of fifty, which must be attributed not only to the social structure of the Lao village community but also to the prevailing poor health conditions.

Statistical studies of the Ministry of Public Health show that the most frequent diseases are malaria, bacillary or amoebic dysentery, pulmonary tuberculosis and bronchopneumonia, typhoid and paratyphoid fever, venereal diseases and postnatal complications.

The morbidity and mortality result from transmissible diseases (infectious and parasitic).

Polluted water and human dejections around dwellings are the most dangerous sources of contamination for infectious diseases. To these we must add the consumption of raw vegetables, often grown with manure deriving from human dejections.

There is no problem of under-nourishment in the Plain of Vientiane but rather mal-nutrition with a deficiency in calories and proteins, particularly among the most vulnerable elements of the population (children of pre-school age, pregnant women, old people).

Among the children, the malnutrition brings about the frequency, severity and duration of all kinds of infectious diseases, the association of these diseases with the nutritional troubles during and after the weaning being the origin of the high rate of child mortality (30%). In the plain 20 to 25% of children die before the age of 4 years.

The causes of nutritional problems are :

- the lack of more diversified food products;
- the ignorance of nutritive-value of the regular food and the nutritional vulnerability of certain members of the family;
- the traditions and wrong beliefs about food.

If a large part of the region is malarious, the children are the most affected (school absenteeism, especially during the rainy season).

However a current study undertaken by the Anti-malarial Service of the Ministry of Health in Muong Say Fong appears to exclude malaria from the loop of the Mekong south of Vientiane.

IV.- Objectives

The geo-politic importance of the Plain of Vientiane for Laos makes necessary a global objective, it is the integration of economic, social, cultural and human factors in a development policy. specifically for the zone in order to increase the farmers' income and to improve the infrastructure needed for the well-being of the people.

The first point to be attained is the development of the agricultural sector, basis required for all future industrial development.

This must be realized by a move on the productivity and by a greater diversification.

A better productivity is realized, in the Plain of Vientiane, through a better system of water control: the realization of an irrigation program through pumping for nearly 30,000 ha in the zone responds to this objective as much as is linked to this program an agricultural extension policy for the use of fertilizer, for mechanization, for propagation of new methods of cultivation....

As regards the diversification of crops, which is one of the main objectives of rural development, the presence of water, the researches on cultivation plan realized in the pilote-farms and on demonstration plots, and the marketing investigations should be able to promote it.

To this objective must correspond on the social level, an improvement of infrastructures (roads between villages, access roads, road around the Plain of Vientiane, electrification, dispensaries, Community buildings) on the health level the replacement of curative medicine by the development of preventive medicine; on the structural level, the pre-cooperative associations and the continuation of community development experiences; and

finally on the education level the continuation of an educational policy which must permit the training mid level " cadres" badly needed in Laos, through an increase of technical and secondary teaching on one hand and through the development of adults training on the other hand.

This is therefore an ambitious objective which must take into account at the same time the necessities and potentialities of the Plain of Vientiane.

V.- METHODS TO BE FOLLOWED FOR RURAL DEVELOPMENT

a) Development at the level of individual communities or integrated development at the regional level.

In the history of the rural development of Laos, exception made of the inarticulate and low scale attempts at the national level, two periods are noteworthy : 1) The cluster village program launched by the Commission for Rural Affairs and the Rural Development Division of USAID in 1964 and 2) the development of the Plain of Vientiane the institutional dedication of which is the creation of an Agency for Development in 1970. ("A.D.P.V.").

However, if both approaches are marked by a massive effort at the level of a region, the difference in size of this region necessitates changes of qualitative nature at the intervention level as well as at the result level. In the case of clusters, the area is between 20 and 50 sq. km. covering about twenty villages and between 5 and 15,000 people. In opposition, the plain of Vientiane has an area of about 300,000 hectares, 380 villages and 303,500 people of whom 155,000 are in Vientiane which is the most important town of the country.

The extent and the potential resources of the intervals of intervention in which both programs were taken up have conditioned the means used for their implementation and the economic and social transformations and changes resulted therefrom . The aims also differed. In the case of the Cluster Program, the policy prevailed over and the development was considered less as an end by itself than a particular technique which must ensure the loyalty of the villages and fasten the links between them and the Royal Government.

On the contrary, the development of the Plain of Vientiane is being undertaken in a purely economic context stimulated on one hand by a voluntary policy of growth and, on the other hand, by the logic of the prices and costs because the Agency is an industrial and commercial establishment provided with its own resources and trying to release a surplus. We will see in Chapter IX "Successes and Failures of the Rural Development" an assessment of the results obtained by the methods of cluster villages.

b) Sectorial, pluri-sectorial or integrated development

The classic discussions dealing with the priorities to be shared between the basic investment and directly productive investment, or even between agriculture and industry, did not take place at the time of the preparation of the five-year Development Plan of Laos. In fact, it seems that up to a certain level, the industrialization, without which there is no continuous development, cannot be brought about without the previous presence of an agriculture worthy of its name. In its turn, such an agriculture, considering the prevailing ecological conditions, cannot be anticipated without the regular supply of water during the eight months of the dry season. This would imply the construction of a dam and a hydro-electric power plant as well as the digging of irrigation canals and the installation of a network of pumping stations for supplying water to the canals.

It is therefore evident that the margins of choice were limited and that one should essentially follow a typical sequence: investment of registered capital, development of agriculture and upon it development of small industries located upstream and downstream, as the role of the agriculture is to supply food to meet the needs of a growing population and the expanding city of Vientiane and for the manufacture of products which can be exported after an adequate conditioning thus contributing to the recovery of the disastrous commercial balance. In a parallel direction to this prime function, agriculture plays a stimulative effect on the industrial activities located upstream (establishment of a fertilizer factory) and downstream (canning industry).

VI- Activities or organization which are noteworthy and which come into focus on account of the implementation of single or multi-purpose pilot-project.

Two cases are noteworthy on account of their innovating character and exemplary nature. They are the first perimeter of irrigation of the Plain of Vientiane and the integrated agro-industry project.

A.- The perimeter of irrigation of Tha Ngone

The control of water is - as we have seen - one of the prerequisites to the whole agricultural development of Laos. Because if the zones of irrigation are already in existence in the country, the irrigation of the Plain of Vientiane is fundamentally the first systematic effort of integrated development.

This justifies the importance of this project which must be at the same time an experimental and a model one.

The implementation which is expected to begin in October 1971 comprises the construction of an irrigation system (pumping station, canals, reservoirs), of a protection against the floods of the Nam Ngum and Houei Sam Kha, and work relating to the laying out of rice-fields and installation of adequate infrastructures.

To this project a pilot-farm is linked which has a dual role of experimentation (research on quantitative as well as qualitative improvement of agricultural products and formulation of cultivation plans) and of demonstration (practical training of farmers through familiarization with modern technics of production and management.).

Attached to the "A.D.P.V", this project is financed by the Asian Development Bank and by the Japanese aid. The whole program of the integrated development of the Plain of Vientiane depends on its success, as it should make the farmers confident in it and show the path of success in many directions (production, marketing, association....).

B.- The integrated project of creation of agro-industries.

This project is aimed at the integrated development of Agriculture and livestock through industrial transformation of some of their products. It contemplates three main installations : a factory for enriched food products, an Oil-Mill and a fleet of mechanical equipment.

i.- a factory for enriched cattle-feed.

Upstream, it influences the development of livestock and necessitates the development of vegetable production in dry crops: corn, groundnut, soya, sorghum manioc and potatoes. It will also be able to utilize the by-products of the slaughter house as well as the oilcakes available from the oil-mill; at this level, we can also include a factory for processing of starch, a slaughter house and a tannery for marketing other by-products of the slaughtering.

The implantation of this industrial unit will lead to activities aimed at improving livestock.

ii.- The oil-mill.

Upstream, it also influences the development of dry season vegetable cultivation: groundnut, soya, and cotton seeds. At this stage, one can include the ginning and spinning of cotton the seeds of which are the by-product. Downstream, the mill supply the market with refined oils and hydrogenated grease the whole of which are presently imported. It will also permit the opening of a soap-factory and factory of soya sauce.

iii.- The fleet of mechanical equipment.

The enriched food factory and the oil-mill depend both on the production of raw materials, The productive capacity of the farmers is low and the installation of mechanical equipment will make good this deficiency and will permit the preparation of lands.

The originality of this project is that it is the first experience of its kind in Laos. The multiple technico-economic liaisons created by the implantation of the two industrial units will have a stimulative effect favourable to the establishment of other industries and are the first of the multifarious inter-relations which should be inter-woven between a hesitant agriculture on the threshold of modernization and a new-born industry.

VII.- Result of national policies observed in the economic and social fields

a) Price Policy :

The weakness in purchase power of the majority of the people who depend on market economy and the fight against inflation made the establishment of a price policy essential. At the same time inciting (policy aimed at increasing national production) and repressive (control carried out by the Directorate of Commerce through a system of approval of prices by imposing taxation in case of excess), this price-policy resulted in a moderate rise in prices during the last three years, as the index of retail prices at the consumer level had passed from 145.5 in 1968, to 150.6 in 1970 and to 153 in July 1971.

B. Educational Policy

As the universal and compulsory school enrolment is beyond financial means and teaching staff availability, the Government has concentrated in developing temple schools and it was, since 1962, the origin of the creation of Rural Centers of Community Education ("CREC"). Apart from 900 "CREC" (entrusted at present to monks or laymen chosen by the people), a good number of elementary schools and groupes-scolaires were built (often by the village people themselves), thus increasing the school enrolments by an average of 10% per year since 1962.

Since January 1971, the Government proceeded to a selective action for adult education in the framework of the agro-sylvo-pastoral development of the Plain of Vientiane, by adopting a functional literacy project of farmers of the irrigated perimeters; this is a limited action but depending on precise economic structures and which may be extended, in second stage, to the other zones of the Plain, and then to other regions and even to other sectors of activity.

C.- Employment Policy

A Directorate of Labor has been created some years ago within the Ministry of Social Affairs, and also a Division of Human Resources within the Commission for the Plan. Both of these deal, in conformity with the objectives of the Plan, with the problem of supply and demand of employment, in the public as well as in the private sectors.

A campaign for census of employments as well as for the needs resulting from the above-mentioned objectives should, on the other hand, begin as soon as possible. Its results must be the guiding factor to the Government for its policy of the formation of cadres.

VIII.- Administration and Funding

a) Administrative Bodies

1. Ministry of Coordination

The rural development as a whole is elaborated, controlled and coordinated by the Commission General for the Plan.

The latter, in order to reach as close as possible the objective but at the same time to create interest among the responsible cadres of the nation as a whole, has adopted a method of work in multi-purpose Commission (Agro-Sylvo-Pastoral, Handicraft, Sub-soil - Infrastructures, Education, Population - Health, parcelling out of territory) which enables to join together the officials of various ministries connected with the development.

The agro-sylvo-pastoral Commission, the most important one for rural development, unites the services of Agriculture, Livestock, Water and Forest, Agency for the Development of the Plain of Vientiane, and the Commission for Rural Affairs which elaborates and implements the policy of accelerated rural development.

On the other hand, the foreign aids which play an important role in the development of the country are interested in the elaboration of projects by the Aid Committees which comprise for each project the National Department proposing the project, the Ministry of Finance, the Commission for the Plan and the Aid Mission.

Thus, there exists a certain coherence because a same body - the Plan - defines the broad lines of the rural development and coordinates the activities of various Ministries.

One should also note that the Plan constitutes, along with the Ministry of Finance and National Economy, the Ministry in Support of the Agency for the Development of the Plain of Vientiane, the establishment which, as we have already seen, is in-charge of promoting the integrated Development in the selected zone.

2.- Administration and village participation

The rural Lao society is clearly marked by a total absence of groups, associations, clans or lineages. The basic social cell is the village, often of small size, between fifty and eighty families, headed by a village chief elected by his fellow-citizens for an indefinite period. This lack of social structuration is further marked by the inadequacy of road network mostly unusable for half of the year, the low density of population, eleven inhabitants per square kilometer. So many factors contribute to the reduction of exchanges between the forces of modernization localized in and around distant towns and the Laos of 11,000 villages. Apart from urban areas which comprise a few hundred thousand persons, most of the Lao villages live in a system of subsistence economy.

The Royal Decrees No. 210 and 254, both dating from 1966, stipulate the organization of the institutional framework of rural development and deal particularly with various technical services and village participation.

The Royal Decree No. 210 deals in detail with the territorial structures to which the rural development activities must be inserted. At the level of the general administration, it provides for a Commission for Rural Affairs as well as a National Commission for Rural Development. At the provincial level, the Chief of the Province is the principal agent of rural development, assisted by a Provincial Commission for Rural Development in which participate the provincial chiefs of various technical services, like Education, Health, Public Works, Water and Forests etc.... Ultimately, at the level of districts and villages, the elected chiefs from these territorial divisions will be responsible for rural development. Committees are anticipated to be formed for helping them in their task.

This structure ensures much decentralization, at the provincial level, and incorporates a regular flow from top to bottom and from bottom to top, between the Provincial authorities and the basic communities. In a more concrete way, if a village is willing to undertake the repair of a road or the construction of a school with the help of the Government, it will refer the matter to the rural official who is working in that area. The latter will make a technical report about it and forward it to his superior officer. This officer will propose the project during a Provincial Commission Meeting and, according to the available resources and previously established priorities, the Commission will make the decision.

Regarding the Royal Decree No. 254, it completes the foregoing and sets up the composition and the functions of the Village Committees and District Committees. These committees have a particularly important role for ensuring a process of democratic decision among the basic communities at a period of rapid changes which have destructive effects over traditional institutions. Moreover, they constitute a replacing leadership which will be, at a time, replacing and strengthening the authority of Naiban often incapable of meeting the needs of the development. Once the official responsible for modernization has left the village, they are the reliable guarantors for ensuring that the village does not fall again to its inertness.

The participation of villagers in the development of schools, markets, dispensaries, wells, roads in Plain of Vientiane can further be added to the number of projects for which the farmers have brought gratuitously local materials and labor.

b) Funding

The slender budget resources available for the development mostly due to war expenses (more than 50% of the National Budget) and also to the low level of national revenues and to huge administrative expenses make it difficult to finance the indispensable investments in the country.

This appears in the limited participation of the National Budget to the funding of the Master-Plan, as if we include the big projects (Nam Ngum, Electrification, Resettlement of refugees....) the distribution of the expenses according to various funding sources is as follows :

5.7 % from the National Budget
47.22% from the Aids
11.89% from loans
and 1.63% from other sources.

The remaining percentage, i.e., 33.49%, is presently under negotiation. If the foreign aids are indispensable, they cannot however constitute a panacea.

Therefore, one is trying to mobilize a reticent national saving. It is for this purpose that a national bank was established which had a certain success (the demand deposits have increased from 5.3 to 19.3 million Kip from 1967 to 1969 and the fixed deposits in the course of the same period from 0 to 87.8 million Kip) but still quite weak (besides, it is proposed to increase the rate of interest in order to make the deposits more attractive).

It is also in this perspective that corresponds the expected issue of treasury bonds which, it is hoped, will bring in nearly 600 million Kip.

Noticeable successes and failures of Rural Development.

Analysis of one case : the "cluster villages program"

During the years 1957-58, the American Aid was aimed at the development of villages. During the first years, the slogan was "development in all azimuths" and there was little coordination between various services, government as well as American.

However, in 1963, under the impulse of the Commission for Rural Affairs and the Rural Development Division of USAID, an integrated rural development program was launched and it was the "cluster village program". It has laid down the concentration of efforts in the zones corresponding to a geographical stretch of land and comprising of about ten thousand people.

The circumspect strategy consisted in bringing about a substantial change at the level of the environment (infrastructure) and simultaneously trying to introduce new notions regarding health, agriculture, livestock etc... so as to exercise combined pressures on the farmer and to benefit by the results of the training which one of the programs could provide for. The activity undertaken must be continued for several years and must be watched with a constant follow-up made easier by the concentration of efforts.

In view of the logistic approach adopted by this Program, any judgment on it must be extremely varied. It is certain that the material infrastructures as well as the average conditions of health and education are clearly better in the clusters compared to the situation at the national level. But the intensification of the crops and livestock which would have permitted the development of a monetized economy were not too successful.

Further, it even appears that the program has been utilized by the subversive elements as an instrument of counter-propaganda, creating in villages, not profiting by this program, sentiments of envy and frustration.

However, apart from this political aspect which often makes the task of development of Laos hazardous and which is detrimental to the Program, one can also make reservations as to its very conception.

It appears as if the option was made straightaway to put stress on the social development without sufficiently trying to implant remunerating productive activities. Especially, the relation cities-villages were not given sufficient consideration. Moreover, the reduced size of the clusters does not permit the launching of agro-industries which, in turn, could have created markets for the agricultural products which could not be absorbed by local consumption.

To this lack of a market must be added the absence of national institutions and policies which would have backed up the efforts undertaken locally and broken up the limits of the enclaved economy. It is a serious lacuna that an institutional effort at the national level was not undertaken in a parallel direction with the implementation of the cluster program.

Further, the relations plain-mountain and the difficult problem of ethnic minorities were not dealt with when, in fact, there exists a natural complementarity which one could have developed between the economy of the plain and of the mountain.

The difficulties encountered by the Program must be studied carefully, for, it is none-the-less for Laos the first experience of integrated development, and the lessons which could possibly be drawn from it may be extremely useful for the formulation of plans relating to the plain of Vientiane.

X.- Evaluation of the policy and methods followed and the proposed national strategy.

If several activities connected with rural development were carried out during the past ten years, the elaboration of a master-plan and the choice of the integrated development of the Plain of Vientiane constitute the first attempt at creating a process of coherent development.

If certain doubts still prevails about the global strategy to be adopted - it is just being defined - one can, however, cite the broad lines of the same:

- priority to the productive sector : as substantial results were recorded in the social field and in the field of infrastructures in the course of the last ten years, the Master-Plan is directed towards the development of sectors which are directly productive, thus permitting a general increase in the standard of living.
- priority to agriculture because it covers 80% of the population and because it is indispensable to remove the isolation of the villages.
- finally, the integration of the refugees in an economic development which has to be undertaken in harmony with the people of the plain.

CONCLUSION :

Laos is building its great hopes on the concentration of the means in a relatively restricted zone set out around the main consumption centre of the country. It hopes not only for a market improvement of the standard of living of the people of the region, but also for a stimulative effect on the economy of the country in general.

However, two shadows are hovering over this hope : the war full of uncertainties on one hand, the problematic funding of these projects on the other.

It is quite difficult for a small developing country to establish a long-term strategy and policy of development, while the Aids, however generous they may be, can seldom undertake to extend the assistance for more than one year.

! ! !
! (7-) N N E X E S ! ! !
! ! !
! - Map of the Plain of Vientiane ! ! !
! - Technical information or the Plain of Vientiane. ! ! !
! ! !

Technical information on the Plain of Vientiane (1970-71)

- The figures furnished are mostly estimates.
- They should therefore be taken only as an order of magnitude

1.- Geo-demographic characteristics.

- Area : 300,000 ha.

- Population

Urban : 155,000 (Vientiane)

Rural : 148,500

Less than 20 years old N 50%

Theoretical increase

in urban zone	45 for 1,000
in rural zone	25 for 1,000

- Number of villages : 380

Village of average size : 390 inhabitants

- Movements of the population

Arrival of refugees (68.69.70) : 36,000

New villages (for refugees) : 17 (only for refugees from the Plain of Jars).

2.- Agrarian structure and production

- Average size of the farms : 1.5 to 3 ha

- Renting of farm : very rare

- Cultivated lands : 1/3 of cultivable lands of which :
 - 93% rice cultivation
 - 7% other crops

Yields : between 500 and 3,000 Kg per ha.

Average yield N 1,000 Kg per ha.

3.- Marks of modernization

- Use of chemical fertilizers

1970	Rainy season	600 tons	7441 farmers
	Dry season	60 tons	284 farmers

- Use of insecticides

1970	Rainy season	4 tons	128 farmers
	Dry season	5 tons	69 farmers

- Tractors : 200

Motor cultivators : 50

- Irrigated perimeters: : 4

2,400 ha irrigable during rainy season.

680 ha irrigable during dry season.

- The forces of modernization in the Plain .

a.) Officials of Agriculture	:	50
Water and Forests	:	7
Livestock	:	10
Development Agency (Tha Ngone)	:	7

Rural Affairs	:	12
Teachers	:	630
Male Nurses	:	24

We have to add to these officials the staff of the ADO and of Foreign Aids.

b.) Infrastructure

- Roads		363 Km
Constructed for general interest	:	133 Km
National Highways	:	167 Km
Access Roads	:	63 Km
- Schools	:	350
- Dispensaries	:	24

5.- Participation of the people in the development

a.) Work with self-help (1970-71)

Schools (Class-rooms)	:	113
Dispensaries	:	6
Wells	:	7
Roads	:	9 Km

b.) Training

- Seminars village leaders : 3110 trainee-days
- 120 Village committees formed.