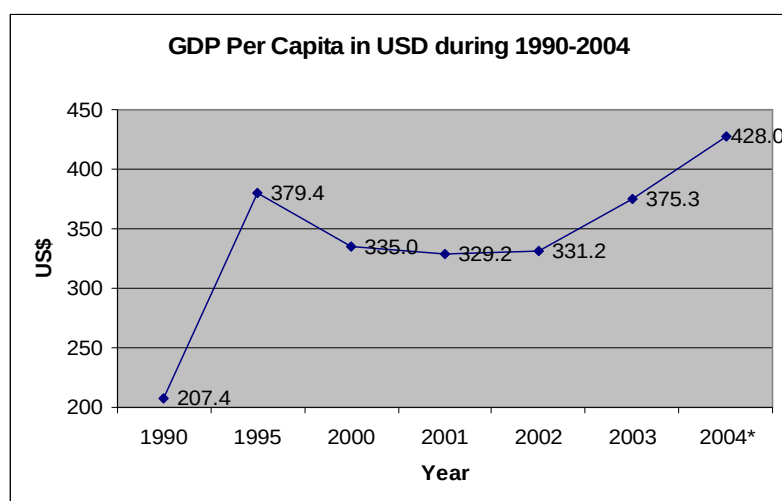


Desk Review of Food Security and Food Market System in PDR Lao: A Preliminary Analysis, December 2006

by Bal Paritosh Dash (WFP India on temporary duty to Lao PDR)

1. Background

The Lao People's Democratic Republic (Lao PDR) is a landlocked country. Large parts of the country are mountainous and sparsely populated. The country has a population of about 5.6 million, comprising about officially recognized 50 ethnic groups and unofficially more than 100 such groups. It is one of the least developed



countries in Asia Pacific. The GDP per capita of the country was unstable during the nineties. In the recent years, however, the GDP growth rate has made significant improvement at the rate of about 6 percent

per annum. As a result, the per capita GDP has reached 428 US\$ in the year 2004. Unfortunately, however, still a third of the population in the country live below the national poverty line.

The staple food of the population in PDR Laos is rice¹. As a result, majority of the people draw their calorie requirement from rice consumption. Officially, the country does not export any rice although at times, the import of food has been resorted to by the government in smaller magnitudes. In the absence of cross country trade of food-grains in the country, people largely rely on own production of food, in particular rice production, especially in the rural areas. As a result, on an average, the households spent about 55 percent of total household expenditure on food. Own produced food constitutes about 29 percent of the total household consumption expenditure.

¹ Rice is the most common staple food in the country. In the recent years, however, the quantity of production of coarse cereals like maize has gone up. However, as per local information, much of the maize is exported to China through unofficial trade thereby leaving very little for local consumption.

Nonetheless, there are large variations across the country, and own production in some remote areas can constitute more than 80 percent of total food consumption.

The general vulnerability linked to poverty is compounded mostly by two important factors, the impact of Unexploded Ordnances (UXO) on the ability to grow crops and the poor status of the road network for large parts of the country. Secondly, majority of the cultivating households rely on rain-fed agriculture, and are thus exposed to frequent floods, and, in some parts of the country, to droughts. As a result, even though the official statistics in the country indicate a comfortable level of food production and availability of food thereof, there is significant regional variation in the production of food grains. Generally, while the low land areas along river Mekong are surplus producers, the low land in other areas are comfortable producers and upland are deficit producers.

With a high percentage of total geographical area being in the upland, uplands are spread all over the country. Its therefore important to understand the accessibility of food in uplands in various regions of the country. The upland in the provinces of northern region have hard road inaccessibility thus resulting in difficulties for transporting food to these localities. Similar situations also prevail in the upland areas of central and southern regions of the country. Even if some food is transported to the inaccessible areas, the food thus transported is inaccessible to the communities in general. This happens so due to increased prices of food, partly due to high transportation cost and partly because of high demand-supply gap of food-grains. On the other hand, as per unofficial sources, farmers in the surplus producing areas along river Mekong prefer to sell their surplus produce to traders across the river, i.e. in Thailand as it fetches them more competitive prices². Similarly, in the northern hilly region, there are patches of land along with water streams. Much of these fertile lands, however, are concentrated in the hands of few big farmers. The other communities that are located in inaccessible areas have access to plenty of land but such lands are mostly rain-fed and productivity is also low in such area. Furthermore, production and post harvest losses are high in the upland areas. In these areas therefore, the

² The Lao rice is usually cheaper than the Thai rice and as a result, the Lao farmers get a better price for their produce in Thailand. Unfortunately, such trading of rice is usually not registered in the official import/export transactions of the country's trade balance.

production is not enough to meet the per capita food requirement of the population. Furthermore, wage employment opportunities in these areas are almost non-existent due to close economy characteristics of the production system. As a result, people have less purchasing power and poverty is high in the region. Therefore, an average household faces about three to six months of food shortage in the region. Unfortunately, the availability of data on indicators linked to various dimensions of food security is not very standardized in the country and not easily available at various levels of disaggregation.

WFP currently responds to these problems by assisting flood-affected and other households through food for work. The food for work activities are designed in collaboration with the affected communities to reduce the vulnerability by mitigating the effects of future floods to agriculture, by providing alternative livelihoods activities such as fish ponds, and through building better roads.

Given the regional diversity in availability and access of food and WFP's focus of intervention, it would be important to understand the factors that influence **production/availability and access of rice** in various parts of the country. The major objective of this report, therefore, is to identify the factors that govern the access to food at market and household level vis-à-vis food security. Within this broader framework, the scope of this study is limited to a review of the existing data bases and reports and present a preliminary analysis of factors affecting food markets and prices and their implications on household level food security in the country. The report thus presents an overview of sources of data available, their reliability in terms of methodology of collection and aggregation and gaps thereof. The report presents a brief overview of availability and access dimensions of food security in PDR Lao, their links to market and purchasing power and the associated indicators that need to be monitored for regular updates on food security links.

2. Objective

In the back drop of the above overview, the major objectives of the study have been set down as; to assemble the relevant and available sources of information in the form of reports and statistics, to overview methodology of collection of such data, to make a preliminary analysis of available data on food security and to identify their links with labour and food market indicators. In specific, following are the key objectives of the study;

- 1) To collate available reports and summary statistics on national and international macro-economic trends and policies that affect food markets in Lao PDR, including time series data wherever available.
- 2) To collate available reports and statistics on the overall food security situation (especially food availability and accessibility), household participation to markets and the linkages with commodity market development (including food and cash products).
- 3) To collate food market-related information and analysis (e.g., agriculture performance, food supply and demand conditions, food price patterns, spatial and temporal differences, formal and informal trade flows at local, regional and national level, etc.) in different areas of the country.
- 4) To collect information and data on market and prices of food and essential non-food items and analyse on how specific national food markets work (conduct, structure and performance), and on the most recurrent crises that affect food markets.

3. Framework of the Report:

Given the above objectives of the study, the report is presented in three sections. Section I provides a brief account of the available information/data on indicators representing various dimensions of food security in PDR Laos, the national information collection system thereof and methodology of collection of information. A special focus has been made on the availability of information on food and labour market in the country and the gaps thereof. Following this section, section II provides a preliminary analysis of available information on availability, access and utilization dimensions of food security. This section presents an overview of macro trends in

food availability, level of accessibility of the households to food vis-à-vis market and price conditions of food. Section III records the summary findings of the study and presents recommendations concerning the need for generating information on market and prices of food in the upcoming surveys and analysis like CFSVA, etc. This section also focuses on the requirement and possible way for establishing a market and food security monitoring system in the country. At the end, the report provides a set of annexes giving the list of main sources of databases on food security and food and labour market indicators. The annexes also provide tables on availability and access dimensions of food security and market related indicators.

SECTION – I

SYSTEM OF AGRICULTURE, FOOD AND PRICE STATISTICS IN PDR LAO

There is a good deal of information in PDR Lao. Most of the data are collected by government sources through a decentralized statistical system. The National Statistics Centre (NSC) under the State Committee for Planning and Cooperation coordinates the national statistical activities among the governmental and non-governmental organizations. The NSC is responsible for collection and dissemination of data on socio-economic statistics, population and other non-agricultural Censuses. The NSC conducts the Census for population enumeration every ten years. Besides, the NSC is also responsible for collection and dissemination of national accounts statistics like GDP, Consumer Price Indices, etc. The NSC also compiles statistics from own and other sources on various socio-economic and demographic indicators on an annual basis. Furthermore, the NSC has conducted three Expenditure and Consumption Surveys in Lao in 1992-93, 1997-98 and 2002-03, popularly known as LECS-I, LECS-II and LECS-III, respectively, in collaboration with the World Bank and others.

The Ministry of Agriculture (MAF) is the key department for the collection of data related to cropping and agricultural production. The MAF has a special division called the Statistics and Planning Division which is responsible for collection and compilation of data on agriculture, livestock and forestry on an annual basis. The division is also responsible for cooperation and coordination with other relevant agencies over specific survey activities on agriculture, livestock and forestry. The agriculture sections of agriculture and forestry offices in each provincial, municipal and special zone send regular reports and tables to the Department of Agriculture. The sub-national level agriculture sections collect data and information from the district agriculture and forestry offices. The staff at this level also collect information from the grassroots level whenever necessary. The agriculture units at the district level collect data from the households and send the reports to the agriculture section of the corresponding province.

The current agricultural statistics system is based on administrative reporting from district level officials to the Statistics and Planning Division through the provincial offices for collection of information on agricultural statistics. The information collected and compiled by MAF could be classified into four groups; ***Agricultural Censuses, Current agricultural statistics, early warning information and other agricultural statistics.***

The **Agricultural Census** is conducted every five year with the basic objective of establishing a standardized set of information on agricultural land and its use for crops as also on number and holding of livestock and secondly for providing a base for surveys on crops and livestock. So far, one agricultural Census has been conducted in the country viz. in the year 1998, the results of which were published in the year 1999. The Agricultural Census Office, comprises of staff of the MAF and NSC. Specifically, the agricultural Census of 1999 provides data mainly on area under crops, land tenure and use thereof, cropping pattern, availability of irrigation facility, agricultural inputs, demographic characteristics of farmers and agricultural labourers, livestock information, etc. The results were published in a series of reports at national, provincial and district level³.

The **Current Agricultural Statistics** presents data on agricultural production and outputs, productivity of agricultural land in various locations, contribution of agricultural output in the GNP and livestock information, etc. The information is collected through a two stage sampling method, the agricultural holding of households being the First Stage Units (FSUs) and villages being the Second Stage Units (SSUs). The Current Statistics on agriculture is conducted in both dry and rainy seasons and published every year. The results are disseminated both at national and provincial level. The current statistics also includes estimates of number of live stocks, livestock products and their values.

The MAF also monitors the key indicators on agricultural activities on a monthly basis for use of **Early warning information**. The data is compiled to prepare both

³ The provincial level results in the Agricultural Census Reports have been published in Lao language only.

seasonal and monthly reports on growing conditions of various crops during the year. These reports are based on information from the field level agricultural offices using the information from agricultural censuses as the baseline. The growing conditions of rice and other crops are monitored and reported on a monthly basis. The monthly reports are however not disseminated for academic or public use and are mainly used for reporting upwards in the government, beyond agriculture ministry. Apart from the regular reporting system, urgent reports are also prepared on emergencies or occurrence of any unforeseen event. For instance, in the case of natural calamities such as floods, droughts and pest infestations, crop diseases, etc. emergency field information are collected and an assessment report is prepared to understand the ground situation. The early warning information of the ministry of agriculture is complemented by the data on rainfall monitoring by the department of Meteorology and Hydrology.

Among the other agricultural statistics, the MAF also collects information on production losses in the post harvest seasons, productivity of various crops and information on livestock products on an annual basis. Besides the above agricultural information, recently, the MAF has started preparing the agricultural balance sheet for each agricultural year following the standard FAO methodology⁴.

Besides crop production and livestock statistics, there are also a number of other indicators that have direct and indirect bearing on food security concerning access and utilization dimensions of food security. Periodic data on indicators in these dimensions are collected mostly by the NSC, in collaboration with national and international agencies. Some of these pertinent indicators are discussed below.

As discussed at the beginning of the section, three **Lao Consumption Expenditure Surveys (LECS)** have been conducted at an interval of 5 years each and results published during 1992-2003. The LECS provide important information on indicators on consumption expenditure of households in PDR Laos at national, regional and

⁴ The MAF has been preparing the agricultural balance sheet for the country since 2002. The detailed of the methodology and implications of the balance sheets are presented in the section on food security analysis. See section II of the report.

provincial level. The results of these surveys pertain to access dimension of food security like average household expenditure on rice and its percentage share in the total expenditure, the average amount of rice intake of people of Lao, average quantity of intake of various food items, etc. as also information on sectoral employment and unemployment situation in the country, average income of people from various sources, etc. The LECS also provide an important basis for calculation of poverty. Furthermore, the results of LECS also provide a baseline for updating the National Accounts Statistics of GDP. The CPI which are used for deflating the GDP at current prices to calculate the real GDP are based on the commodity composition noted in various LECS. The current CPI is based on the commodity composition of LECS-II (1997-98). The LECS-III (2002-03) will provide the base for calculation of CPI from 2006 onwards. Please see the following sub-section on “Database on market and price information” for details of methodology and process of collection and analysis of market and price data.

Besides, a **Report on Employment and Unemployment** was published in year 2000, jointly by the Ministry of Labour and Social Welfare and National Statistics Centre. The report was based on a sample survey and provided important information on conditions of workforce and labour force in the country. The report is however a bit outdated as it reports data corresponding to the year 2000.

On the Utilization dimension, there is plenty of reliable information from various sources. On health and child care behaviour and demographic reflections of under development on reproductive health, there are three major sources; **Lao Reproductive Health Survey (LRHS) – 2000**. This report was published by the NSC in collaboration with other international partners. Similarly, on nutrition and health status of the population, especially on that of women and children and on child health and care practices, the Ministry of Health prepared and published the report on **Lao National Health Survey (LNHS) – 2000**. In the year 2000, the UNICEF also prepared a report called **Multi-Indicator Cluster Survey** in collaboration with other partners, in line with UNICEF’s Global MICS framework. The report provides a good set of information on situation of children, women and households in areas such as education, water supply and sanitation, child malnutrition and reproductive health.

The results of all these reports are however felt a bit outdated, the reporting year being 2000. Nonetheless, the UNICEF has conducted another **MICS in 2005** to update the information on health, nutrition and other socio-economic links. The report is yet to be published officially but is expected to come out very shortly.

Database on market and price information:

Given the high levels of geographical disparity among various regions like upland and low land, accessible and inaccessible locations, population groups with and without access to markets, etc, prices and purchasing power thereof play an important role in the level of accessibility of food by the people. Unfortunately, however, despite liberalization of the economy in the 1990s, the market system in the country, especially for agricultural and food products, is not yet fully developed. This is largely the result of lack of an established system for monitoring and management of food and labour markets.

The market and price information on food items could be classified into output or seller prices, which are determined by both the input prices of production, demand for buying the produce and availability of market for selling the products. Consumer or retail price of food, on the other hand are determined by demand and supply of food in the market. While the supply is determined by both production and transportation costs, the demand is governed by purchasing power of the people which is a direct function of income and indirectly linked to availability of employment and livelihood opportunities.

So far as the demand and supply of food in markets, input and output prices of farmers produces, etc. are concerned, there is no source of availability of information at this moment. The MAF used to collect these information on a time series scale during 1997 to 2002. Unfortunately, this system of monitoring has been discontinued due to lack of motivation and secondly, due to lack of availability of skilled staff and funds thereof. For this project, however, the MAF had developed a decentralized reporting system with the base at grassroots level. This institutional structure of the MAF is still existent at the province and district levels catering to the data collection

need on other indicators like monthly monitoring of growth of crops, early warning monitoring, etc. It seems to be a good opportunity to rejuvenate the system of agricultural input and output price monitoring system. Keeping this in mind, it would be useful to note some of the important features of the erstwhile system of market and price information collection.

The system of agricultural input and output price data collection was started with the purpose to help farmers know the farm gate prices and plan their crop production and marketing strategies. The major items on which provincial level prices were collected are various types of paddy in rain-fed, irrigated and upland areas, both for dry and wet seasons. Besides, price information were also collected on other food crops like maize, soyabeans, peanuts, mung beans, sesames, and livestock and poultry like buffalo, cattle, pig, duck, chicken, eggs, etc. More importantly, the MAF also used to collect data on prices of inputs like fertilizers and insecticides, etc. The methodology that was used for this monthly survey was two-stage sampling method – a sample of markets in each sample village was selected in each district as the second stage unit. A sample of households (producers) in each of the sample village consisted of the first stage units.

Information were collected both from the market and households (by agricultural holding). Agricultural holdings were identified by asking each sample household about its produce and input prices. In most of the districts, a sample of 3 to 5 villages were covered in the survey and an average of about 5 households were selected in each village. Thus, the number of households selected per district was on an average between 15 to 25. At the district level, the agriculture and forestry office was responsible for collection of agricultural price data. The district level staff in this office acted as enumerators for collection of price information. At the provincial level, the agriculture and forestry provincial office used to aggregate all the information from districts and send the same to the Statistics Division of the Planning Department at MAF.

Regarding the consumer prices of food products and other essential commodities, the National Statistics Centre collects information on retail prices on a monthly basis

through its decentralized institutional system. The NSC collects information on retail prices of various food and non-food items since year 2000. The NSC however aggregates and presents the data only at the national level. Based on the 1997-98 LECS, the NSC has identified about 197 household consumption items on which price information is collected from the three regions. At the moment, it covers only 8 provinces, 3 in the north, 3 in the centre and 2 in the south. The survey covers about 14 markets altogether in the three regions. The central region covers about 8 markets, followed by the northern region covering 3 markets and the southern region covering only 3 markets. Most of these markets are however located in the urban centers. Thus, the prices collected through the institutional system of the NSC do not reflect the rural character of the retail prices. As such it is not representative of the trends in prices of the whole country because it covers only 8 out of 18 provinces and the sample frame has been drawn more as a matter of convenience rather than representation of economic and consumption characters of the population. The consumer price index is calculated using the formula for Laspeyzer's Index. Appropriate weights are assigned when calculating the Index. The CPI Index in Lao is calculated as follows;

$$CPI_{ot} = \frac{\sum_{\substack{j \in g \\ j \in h}} W_{bo}^{jgh} I_{ot}^{jgh}}{\sum_{\substack{j \in g \\ j \in h}} W_{bo}^{jgh}} * 100$$

$$\text{where } I = \frac{P_t}{P_0}$$

- W - Weight
- j - Item
- g - Item group
- h - Province

The monthly data on CPI is disseminated only at the national level through a **Monthly CPI bulletin**. Furthermore, the CPI figures for food items are available only at the aggregative level for food group and non-food groups. While the prices of non-food groups are given in further disaggregation of heads like alcoholic beverages and

tobacco, clothing and footwear, housing, household goods, medical care, transport and communications, Recreation, Education and Printed matter and personal care effects, the CPI for food is not given in disaggregation for various items. The collection of CPI price indices on food and non-food items is worked out only for the purpose of calculating and deflating the Gross National Product Accounts to obtain real GDPs. It would however be useful to have the price information on all the food items⁵.

Gaps in Existing Databases:

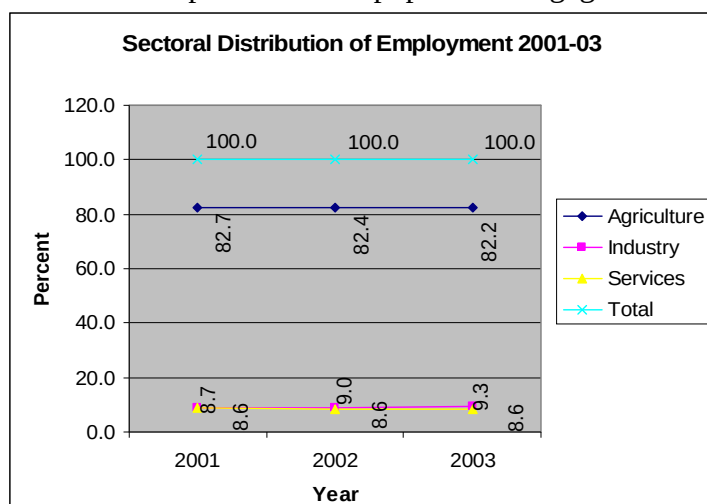
The review of existing databases revealed that the availability of information is very poor on the key indicators like - access of the remote habitations to market, e.g. distance traveled by a common man to buy and sell products, the prices of essential commodities besides food products, availability of various essential and food commodities in these markets, prices of locally produced food in the remote areas, the purchasing power of people and associated indicators like availability of employment and wage rates thereof in the very remote areas, etc. Furthermore, there is apparently no information on the system and channels of agricultural marketing. Associated with these, information on inter-location transportation of food, informal trading of rice, etc. are also not available from any organized source.

⁵ The month-wise price information on all the food items have been procured from NSC by all the eight provinces besides the national level figures aggregated for all the 8 provinces. Even if these results would not have a national character, such information will be useful for analyzing the regional markets and observing the indicative price trends. The set of information would also be useful for evolving a market monitoring system on food supply vs. demand and prices thereof.

SECTION – II

A BRIEF OVERVIEW OF FOOD SECURITY INDICATORS IN PDR LAO

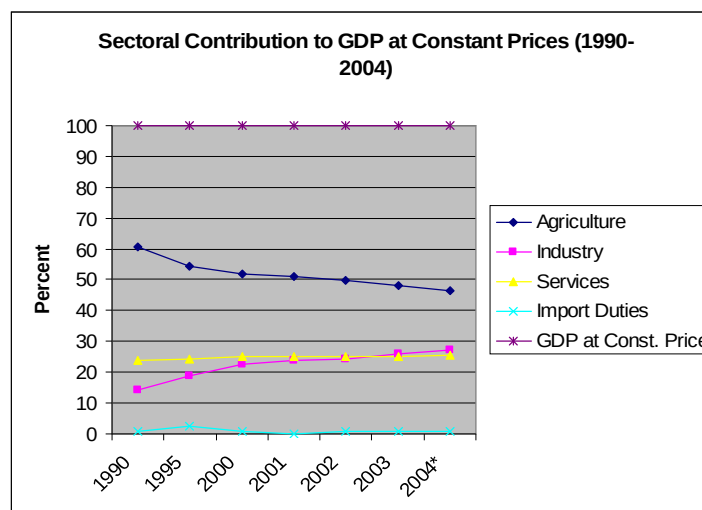
The Lao PDR is a poor country with about a third of the population living below the national poverty line. The major source of livelihood of the population is agriculture with about 80 percent of the population engaged in the agricultural activities. Industry



and services sectors are least developed in the country absorbing only a little more than 17 percent of the workforce. Although the share of agricultural employment in total employment has remained the same, the share of GDP

has gone down over the last one and a half decade, i.e. from about 61 percent in 1990 to about 47 percent in the recent year.

Rice is the staple food of the people in the country and thus the production of rice bears a significant importance in the food security of the country. The total geographical area of the country is about 234,250 square kms out of which only



about 10,204 square kms constitute the total net cropped area in the country. Out of the total cropped area, about 7,360 sq. kms are under rice crops⁶. Most of the crops are rain-fed in the country. The agricultural activities thus start in June-July with the onset of monsoon and the harvesting activities take place in October-November.

⁶ Total net cropped area in hectare = 1,020,400 Ha and Total area under rice in hectare = 736,000 Ha (Source: Agricultural Statistics, Ministry of Agriculture, PDR Lao)

Based on cropping conditions of rice, the agricultural land in the country is mainly classified into three groups – low land, upland and irrigated land. The low land cropping area under rice comprises of about 77.4 percent of the total area under rice in the country, the same under upland rice cropped area being only 14.3 percent of the total area under rice crops. The irrigated area is a meager 8.3 percent of the total rice cropped area. It is pertinent to mention that both the share and amount of area under upland rice cultivation have declined during the 1990s and 2000s. This could largely be attributed to the relative diversification of cropping pattern, with an increase in maize cultivation in the upland hilly regions, especially in the recent years. The crop productivity in the country is poor with 3.49 tons per hectare. In the upland area the productivity of land is only 2.04 tons per hectare while the same in lowland is much higher at 3.65 tons per hectare.

In the policy papers of the government of Lao, it is estimated and claimed that the country has achieved food security since the year 1999. An overview of data on various dimension of food security, however, suggests that the country has achieved a comfortable position in the production of rice vis-à-vis the demand for rice. However, some of the indicators in the access and utilization dimensions are still weak. Following is a brief account of situations in various dimensions of food security.

Availability of Food in PDR Lao:

The Ministry of Agriculture has prepared a Rice balance sheet for last three years⁷ stating a balance of surplus in the production of rice. For the calculations, the MAF has used the formulae for conversion of rice paddy into white rice @ 60 percent. Furthermore, it also estimated the post harvest and production losses as 10 percent, 3 percent as seed and feed use and about 1 percent for other uses. Thus the total production of milled rice was deflated by about 14 percent to work out the net availability of rice for consumption of the population. During the 2000s, no import or export was recorded excepting in 2002-03 and 2003-04, during which some small figures have been shown in the trade balance of food. The net of import over export has been deducted for both the years for calculating the total production. The MAF

⁷ Unpublished source – to be used for quoting only in internal WFP documents.

has then considered the LECS finding on per capita actual consumption of rice at 575 grams per capita and used this as a proxy for per capita requirement of rice. Using the mid-year population estimations between 1995 (Census) and 2005 (Census), the total requirement of food has been estimated for 2002-03, 2003-04 and 2004-05. This requirement and actual net availability of rice were used to prepare the national balance of rice. In the MAF balance sheet, for a particular year, the opening stocks from previous years carry forwards were also included in the total availability of food production.

Using the above formulations, the agricultural balance sheets have been prepared in this report for the year 1995/96 and for all the five years since 2000/01⁸. The total rice availability net of exports and imports and opening stock was recorded as about 0.85 million Mts in 1995. The same saw a remarkable increase to 1.32 million Mts in 2000-01 and increased further to about 1.66 million Mts. in the year 2005-06. Given this availability situation in the country, in this report, two scenarios have been shown with varying degrees of per capita food requirement – **one**, as per the actual per capita consumption of 575 grams⁹ as reported in LECS-III and **two**, the per capita requirement to achieve 2,100 Kcal per capita per day, i.e. 591.6 grams¹⁰. In both the scenarios, the national availability of rice has systematically moved from a deficit situation in 1995-96 to a surplus of rice availability during 2000-01 till 2005-06. (See table in annex for details).

It is interesting to mention here that since there is no organized storage of foodgrains in the country, the opening balance need not strictly be available for consumption in the country. It was thus tried to show the scenario of rice availability balance without taking the opening balance of rice into account. Notwithstanding this, its still a surplus

⁸ Backward estimations of population have been made for the mid-year population by using the growth rate in the population between 1995 and 2005. The estimated mid-year population figures in this report vary from the MAF estimations of the same because MAF has not used the actual growth rate and has rather used the forward estimations from 1995 based on research reports. Probably, the 2005 Census were not available with MAF at the time of preparing the food balance sheet.

⁹ The actual consumption of rice of 582 grams per capita per day has been used for the estimation of actual consumption of rice during the years 1995 and 2000-01 to correspond with results of LECS-II (1997-98)

¹⁰ The calorie content of various types of rice might differ with sticky rice having a higher calorie content compared to non-sticky white rice. For the purpose of estimation here, however, the average calorie of all forms of rice has been used @ 1 kg rice=3550 Kcal. (See p.46, Kakwani et. al, 2000)

in the balance. The balance, however, seems to be on the knife-edge and any significant disaster¹¹ leading to failure of crops would lead to high levels of deficit and might need import of food through commercial imports of food-aid.

Access to food:

Despite the surplus of rice production and availability at the national level, a natural question arises as to why the actual per capita consumption of rice (582 grams in 1997-98 and 575 grams in 2000-02) has been consistently lower than the per capita requirement of rice (591.6 grams) for a calorie intake of 2,100 Kcal. Although this could be partially explained in terms of changing commodity preference and composition of food basket¹² of the people in general, it would be important to examine other factors like lack of accessibility of the people to the total available quantity of food, availability of purchasing power at market prices of food, etc. that may have a negative bearing on the decline and deficit in actual consumption vis-à-vis the norms.

The provincial level availability of rice production net of seed, feed and other uses as also for production and harvest losses shows that the net availability of food for consumption in the northern region has been recurrently low. Four out of the seven provinces in the region show to have significantly low per capita availability of rice than requirement since 1995. The other three provinces show just enough availability of rice vis-à-vis requirement per capita. Furthermore, even in the central region, the provinces like Xienkhuang, and in the southern region, Sekong, with a high share of upland and mountainous land-scape face deficit in the availability vs. per capita requirement of food production. This deficit is based on the assumption that no or very little inter-location transfer takes place between surplus producing regions and the deficit producing regions. The assumption has two strong reasons to believe – one, that although officially, the trade transactions of export and import of food is not recorded, there is a huge farmer to farmer trading of rice across the borders with

¹¹ Discussions with the MAF and NAFRI revealed that about 30,000 to 70, 000 hectares of land are affected by floods and droughts every year.

¹² The percentage share of meat intake in the total food intake has on an average gone up during 1997-98 to 2004-05. (See LECS-III).

Thailand and Vietnam. Even to the extent that the deficit producing region in the north also sells a huge quantity of their rice production to the Chinese. Such trading benefits the larger farmers¹³ with agricultural produce thus further reducing the availability of food for consumption. Secondly, because of remoteness of the localities in the mountainous areas, often on road transportation of rice to these deficit producing areas is considered as unviable among the farmers in the surplus producing regions. This is largely influenced by high transportation cost which leads to higher market prices in the deficit regions on the one hand and on the other hand, lack of purchasing power among people in the most remote highlands. Due to lack of agricultural activities and subsistence farming in the high land, both production and availability of food thereof is low, and due to lack of employment¹⁴, the purchasing power among the people is also low. Given this situation, the surplus producer farmers prefer to sell their produce across the border as it fetches them much higher prices compared to in-country selling of the rice. As a result, it has been noted in the community level studies that the people in remote upland areas face about 3 to 6 months of food insecurity on a recurring basis. During this period, the upland households resort to eating low quality food, including wild plants. Any fluctuation in the country level production and distortion in prices thereof might thus have serious repercussions on the food security status of the already striving population, especially in the upland. It would therefore be important to monitor the market conditions of food and prices thereof at various locations, especially in the remote regions without having access to road networks and integrated market systems.

The above disparity across regions is also reflected in the expenditure pattern of the households in various regions. In the country, on an average, the share of household expenditure on food is 55 percent, the same being much higher in the rural areas at about 63 percent of the total expenditure. In some provinces like Phongsaly, the

¹³ Smaller and subsistence farmers produce enough just to meet their own household requirement of rice. If, however, these farmers wish to sell a portion of their produce at a higher price across the boarder, it is economically not viable to sell their produce at profitable prices due to heavy transportation cost. As a result, the small and subsistence farmers sell their produce at very low prices in the local markets, mostly to the traders. At the times of deficit, however, the farmers buy the same rice at a much higher price. (Source – Discussion with experts)

¹⁴ An important characteristic of labour market in PDR Lao is that employment is almost entirely dependant on self employment. Employment outside the own household (paid labour activities) exists only in Vientiane City, but is close to zero or around 5% at most in centres such as Luangprabang, Xayaboury, Vientiane P, Savannakhet and Champasack. (See LECS-III)

percentage of expenditure on food is as high as 69 percent. Almost all the provinces in the northern region show higher level of household expenditure on food compared to the national average. As a result, the prices of food commodities have a special bearing on the pattern of household expenditure, especially on food during periods of food shortages. Any instability in prices of food items as also other household consumer items during the food deficit periods will need readjustment in the food intake pattern or commodity basket bought from the market, in detriment to the consumption requirement of the poorest of the poor.

What is important to note here that all the three LECS noted that own produced rice forms the major share of the total expenditure on rice in the northern region. Of the total expenditure on food (62 percent in the rural areas of northern region in general and 74 percent of the rural areas of northern region without access to road in particular), about 46 percent and 64 percent are own produced food and 24 and 36 percent of the same are own produced rice, respectively. The trend is similar even in the south for areas without access to road. This is indicative of the fact that the remote areas, especially in the hilly regions are not integrated with the market of the surplus areas. As a result, they are not encouraged to produce more commercial products for the market but only for self consumption. For example, if they have to sell a cattle, both the seller and the animal will have to walk very long distances to reach the market whereby both of them are tired. On the other hand, the seller has to come back home by evening or will have to bear the expenditure for staying put a night in the market. The seller would therefore sell the livestock at throw away prices. Therefore, people in the remote upland areas prefer not to rear more high value livestock or poultry for commercial purpose but for their own use only¹⁵. Thus, if market accessibility is improved both in terms of infrastructure and purchasing power, food security of the most remote and inaccessible areas could be improved significantly.

System of Food Marketing and Implications for Food Prices:

¹⁵ Excepting Bokeo province in the north where traditionally the major livelihood means of the population is livestock raising.

Given the above segmentation in regional availability and access to food, it would be important to understand the ground situations in the market and establish a monitoring system to track the demand-supply and other market indicators, including prices of food and other essential commodities. Before establishing a market monitoring system in a country, however, it is essential to understand the structure of the market for food products, say paddy and rice and other essential commodities. Unfortunately, however, there is very little information about the market structure and marketing channels in the secondary literature in the country. Interviews with local experts and State Food Enterprise however revealed that the food production and market thereof could be divided into three regional groups. The **southern low-land paddy field along river Mekong** that are usually surplus producer of rice, the **northern upland paddy field** (plains along rivers on the northern hilly region) **and upland subsistence farming areas**, especially in the north, which are usually remote and least accessible due to lack of roads.

In the upland subsistence farming areas, the markets for agricultural products are not developed. As a result, the people here live on their own produce and have least access to food in the market and thereby face food shortages during lean agricultural seasons. The northern upland paddy field areas are totally segmented from the integrated market system in the country with very few traders dealing in purchase and sell of agricultural produce. Even the State Food Enterprise does not have any trading (procurement and selling) centre in the northern market. This is largely because of low accessibility and high transportation cost due to bad road networks. In the northern paddy field region, farmers mostly prefer to sell their produce to markets in China, where they fetch a much higher price than selling it locally or in the central part of the country, i.e. Vientiane.

In the southern low-land areas, the productivity is high and the marketing channels involve small private traders, the State Food Enterprise (SFE) ¹⁶ and trading across the

¹⁶ The State Foodstuff Enterprise (SFE) of the Government of Laos is the major trading player in the marketing of food and agricultural produce in the country. The major role of the SFE is to maintain stability in price of food, especially rice,

boarder. Due to presence of large scale traders like SFEs and many small private traders, the farm gate price is usually a bit competitive thus resulting in a normal profit price for the farmers. As a result, farmer to farmer trading across the boarder in Thailand is largely practiced among the big farmers as that fetches them a much higher price than that in the local markets. Majority of the small farmers in the low land, however, sell their surplus produce to local traders at the competitive prices. The production and marketability of rice and lack of wage employment opportunities reflect in the consumption expenditure pattern of the households. The upland and especially inaccessible upland population incur very high level of expenditure on food as compared than that of those in low-land areas.

Trends in Market Prices of Food:

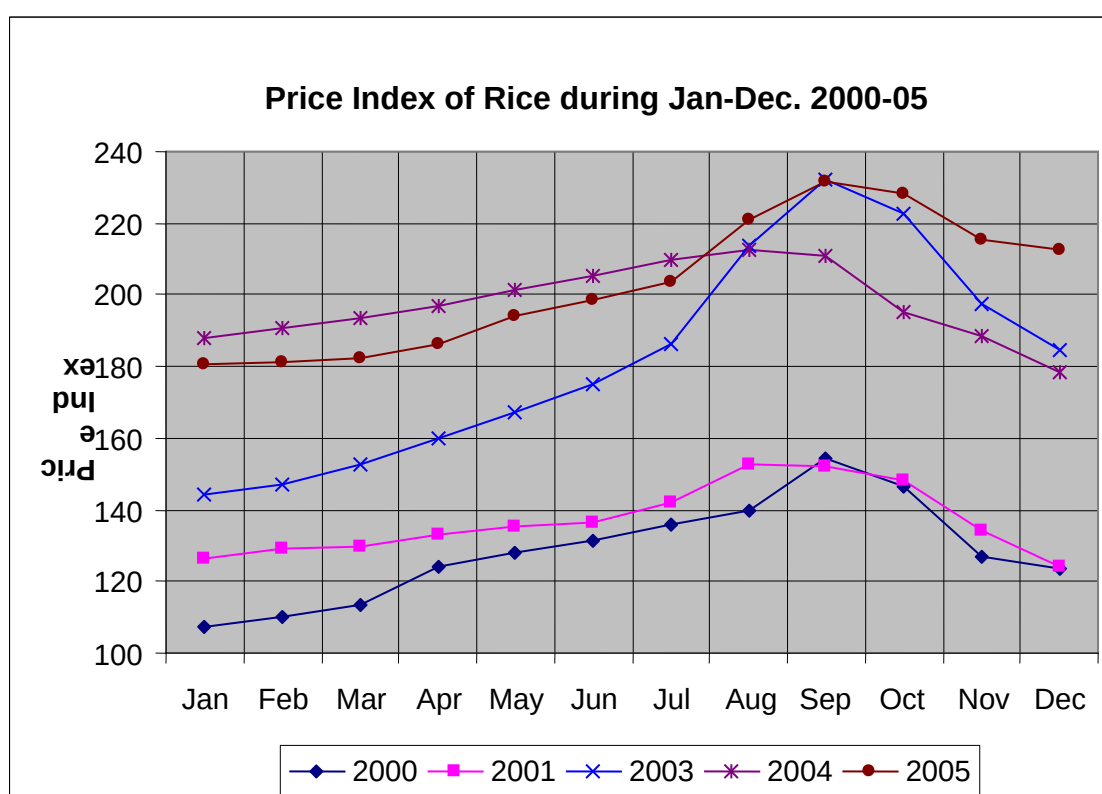
As mentioned earlier in the report, the consumer price information are being collected by the NSC from 14 markets in 8 provinces since 2000. The prices are collected on a monthly basis for 197 items. Out of these there are about 75 food items listed on which data on prices are collected from these markets. These 75 items are classified into (i) Rice, Bread, Flour and Other Cereals, (ii) Meats, Poultry and Fish, (iii) Dairy products and eggs, (iv) Oils and fats, (v) Fruit and vegetables, (vi) Sugar, Sweets and Spices, (vii) Meals and (viii) Other Drinks.

The consumer price index (CPI) for both food and rice show high seasonality with prices of both going up during June-July to November-December in all the years during 2000 to 2005. The rise in price index of rice could be observed taking a sharp upward movement compared to all food during the same period. This could largely be

to cater to the food needs of the general population and especially to cater to the food needs of the Ministry of Defence, Ministry of Interior and Government Police Schools besides dome other government set-ups in the field. Besides other foodstuffs, the SFE procures about 20 to 25 thousand Mts of rice per annum through its network of food procurement from farmers and traders at 14 procurement centres in the central and southern administrative zones. The SFEs has been established as a profit making organization. The official rate offered by the SFE is usually based on market supply and demand equilibrium prices. The SFE has however an indirect influence on the market price as it engages farmers into contract farming – usually does forward trading of crops with farmers making advance payments for their produce and distributing seed and fertilizer among the tied-up farmers.

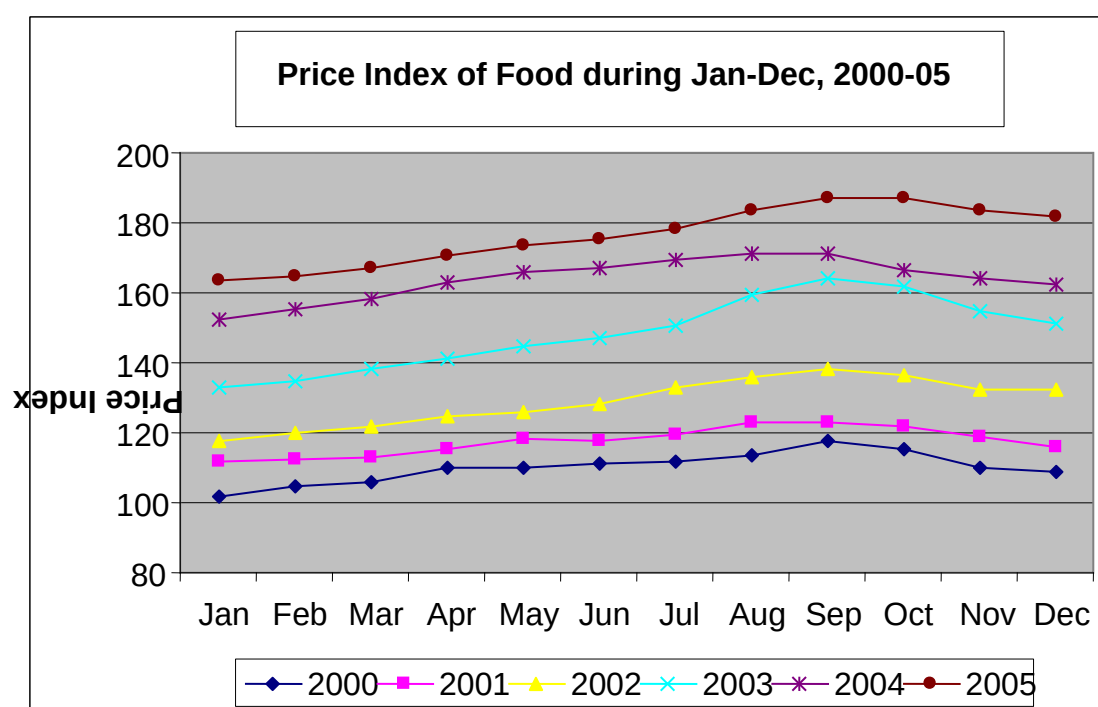
explained by the fact that due to sufficient availability of food-grains during the post harvest period (Nov-Dec in low land to Jan-Feb in upland), the supply-demand factors keep the market price low. In the subsequent months, the trading and home consumption together reduce the availability of food thus resulting in a rise in price. The systematic rise in the prices of food from January to October is indicative of the fact that the trading of rice is mostly cross-border thus reducing the supply or say availability of food for in-country consumption.

The prices of rice start rising more sharply at the beginning of the planting season (June-July) due to high demand for rice for which supply is usually short. The rise in demand could be attributed to (i) by this time a large proportion of the people exhaust their stock and (ii) the high demand for paddy for use of seeds during this period. On the other hand, the investment needs at the initial stage of the plantation leads to cross border selling of rice stock thus reducing the supply or availability of rice.



Rice being the staple food and having a high share in the total expenditure on food, the seasonality in food prices are partially explained by the rise in price of rice. The

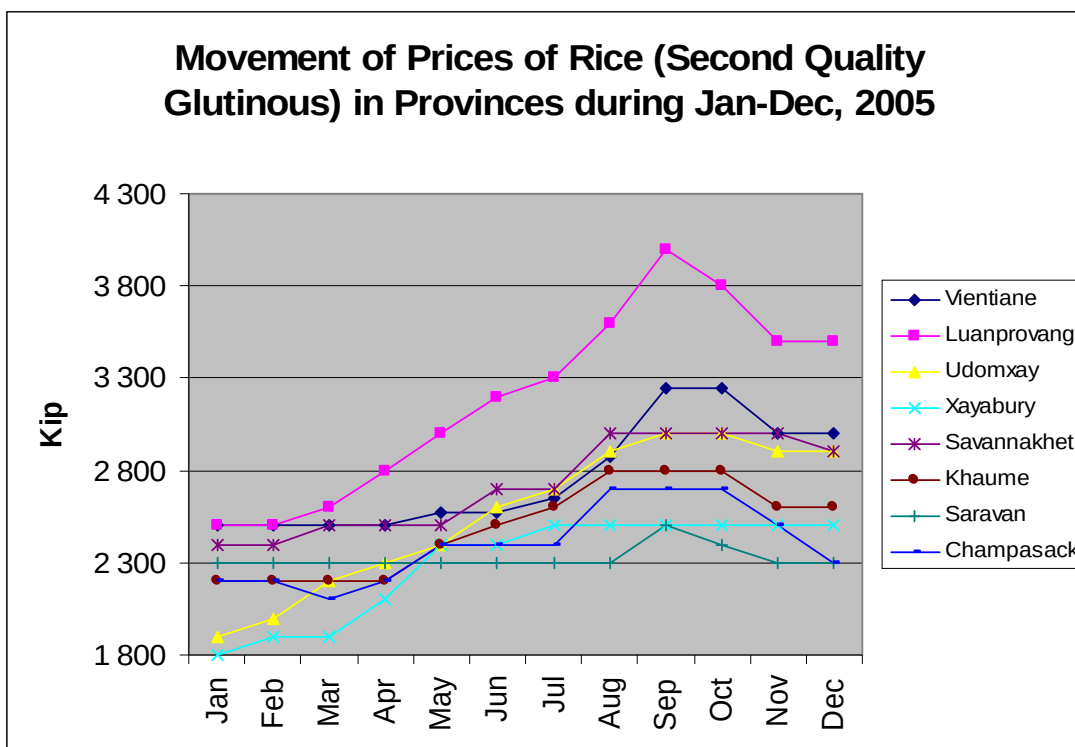
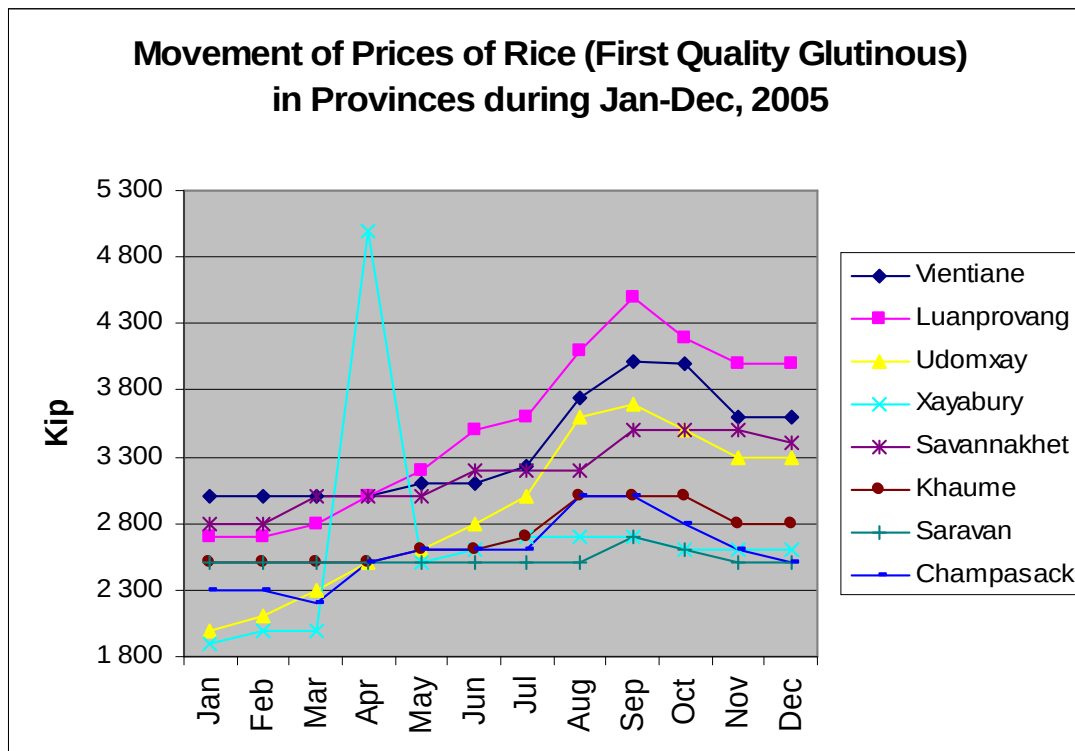
rise in the price of food is especially influenced by the rise in the price of price during July to October.



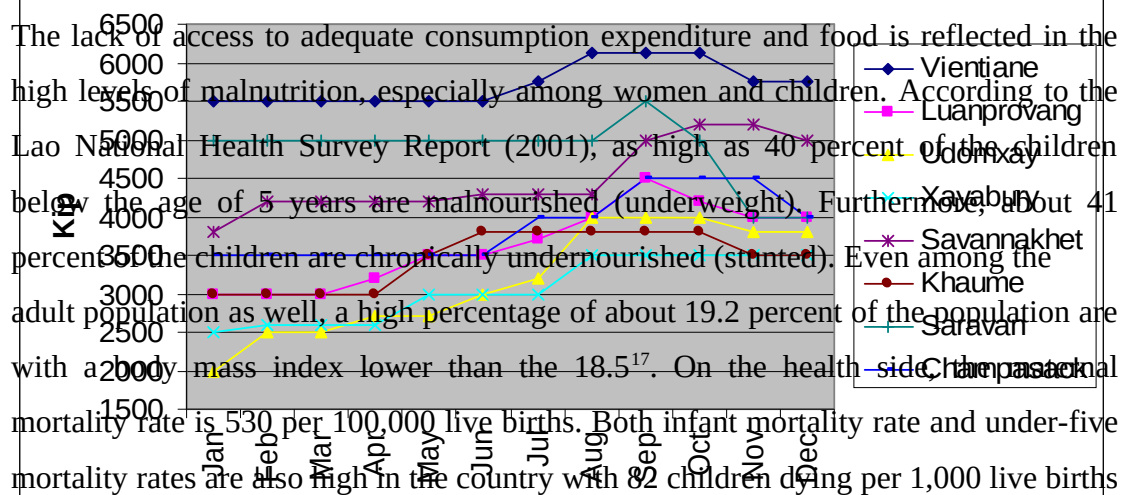
It has been tried to understand the trends of prices of various varieties of rice using the price data at the provincial level. Although the method of price information collected from the provinces does not make it representative at the regional level, an attempt has been made here to look at the indicative trends of prices of various varieties of food-grains. Keeping in view, the varieties of rice eaten in PDR Laos, prices of rice have been analysed only for three varieties of rice, viz. First quality glutinous rice, Second quality glutinous rice, Ordinary Lao rice.

The provincial level analysis of various varieties of rice in 2005 reveals that prices of most of the varieties of rice go up during June-July to October-November, 2005 in almost all the provinces. The prices of most of the varieties of rice are relatively higher in Vientiane compared to other provinces, excepting for second quality glutinous rice in Luanprovang. The higher price in Vientiane could be attributed to the high transportation cost from the south and higher net margin of trading by traders. The prices of rice, especially glutinous first quality or glutinous second quality, however, have been more stable during months in 2006 compared to that in other hilly

deficit areas. For example, the prices of both first quality and second quality glutinous rice has been more volatile showing high variations during months in Udomxay, Luanprovang, Xayabury, etc. The price of ordinary Lao rice is however more stable compared to the in most of the provinces compared to the glutinous varieties of rice.



Movement of Prices of Rice (Ordinary Lao Rice) in Utilization of Food: Provinces during Jan-Dec, 2005



The lack of access to adequate consumption expenditure and food is reflected in the high levels of malnutrition, especially among women and children. According to the Lao National Health Survey Report (2001), as high as 40 percent of the children below the age of 5 years are malnourished (underweight). Furthermore, about 41 percent of the children are chronically undernourished (stunted). Even among the adult population as well, a high percentage of about 19.2 percent of the population are with a body mass index lower than the 18.5¹⁷. On the health side, the national mortality rate is 530 per 100,000 live births. Both infant mortality rate and under-five mortality rates are also high in the country with 82 children dying per 1,000 live births before reaching the age of 1 and 107 children among 1,000 dying before reaching the age of 5. The poor state of nutrition and health status of the population, especially among the children could be attributed not only to lack of availability of food but also to low levels of household expenditure on health and nutrition of children and secondly, also because of poor child health and nutrition care practices. Food being the major component in the total household expenditure (55% as per LECS-III), inaccessibility of food and any instability in the prices of food affects the expenditure access to health heavily. A more in-depth analysis of the utilization dimension of food would reveal the exact causes of poor nutritional status of the population. The scope of the current study, however, is limited to availability and access dimensions of food security and market and price links thereof.

¹⁷ Population with a body mass index (BMI) in the range of 18.5 to 24.9 are considered as nutritionally well nourished. As per WHO international norm, a BMI < 18.5 is considered as nutritionally undernourished.

SECTION III: SUMAMRY AND RECOMMENDATIONS

- As discussed above, the macro level of production of food-grains (rice) and average availability of food thereof is surplus in the food balance sheet in PDR Lao. However, unfortunately, there is wide regional diversity in per capita production (availability) and per capita consumption (access) to food, especially rice.
- In the absence of inter-location transfer of food from surplus to deficit rice production areas, the food deficit regions, especially the upland, face mild to acute shortage of food for three to six months in a year.
- The redistributive transfer of food is not viable because of lack of road facility, poorly developed markets in the remote areas (most production meant for self consumption), lack of wages and employment and lack of purchasing power. This often results in household food insecurity in remote areas on the upland.
- On the other hand, the dynamics of market and trading of agricultural production, even in the low-land agricultural areas sometimes leads to distress sales, especially among small-scale farmers. This often results in food insecurity even among the poor farmers in the low land.
- There is a gap in the availability of information on food and labour market indicators and the information on market and trading activities are almost non-existent in literature.

Recommendations:

- Given the lack of information on food and labour market and pricing and wage systems, it would be important to understand the labour and food market system through a survey based study. Thus, undertaking a separate market study with intensive questionnaire to collect information at market level as well as retail level as also a detail investigation into the access of people to food and employment and purchasing power thereof would be useful setting up of a price and wage monitoring system in the country.
- The CFSVA has been scheduled for PDR Lao during the current calendar year. The CFSVA usually collects market related information on *food like storage and*

stock of food, access to markets, selling and buying of agricultural products including reasons for selling and buying, retail prices of various food commodities and livestock prices as also on employment and wage situations.

- From economy and convergence point of view, rather than undertaking a separate market study, it is recommended that the scope of CFSVA should be suitably modified to gather information on market. This could be accomplished by incorporating intensified schedules to include, **in addition to above**, *marketing system and channels of trading of agricultural produces – links among traders, transporters, food producers, consumers, etc., especially of food in various geographical regions, livelihood opportunities, wages and purchasing power in various regions, food storage and warehousing system and their links with prices, formal and informal trading of food and its products, etc.* These information would be useful in understanding the basic market and pricing system in the country and provide a base for developing a regular monitoring system thereof.
- Given the high levels of market segmentation in the country, it is essential to monitor the food market conditions and prices thereof on a regular basis. For establishing a food and labour market monitoring system, it would be important to understand the following issues; namely, **variables** to monitor, **sites or locations** for monitoring, **reference time** for monitoring, **staff (enumerators) requirement** for monitoring and the **methodology for collection and analysis** of data.
 - Given that rice is the staple food in PDR Lao and also the major crop in a agricultural year, the following variables should form the essential components of the market and labour monitoring system; (1) rice production (including harvested areas), (2) rice prices (at producer, trader and consumer level), and (3) agricultural input prices including agricultural wages by activities and (4) non-agricultural wages by activities. The findings of CFSVA should be taken care of while selecting the indicators.
 - The monitoring sites/locations should be decided taking into account the available infrastructure and the indicators responsible for segmentation of markets. The locations should be so chosen that these represent both rural and urban areas as also upland and low-land. Within upland, the road access

should also be taken into consideration. The findings of CFSVA would be useful for selection of exact locations.

- Since MAF has already established a institutional system for collection of early warning system, it would be a good opportunity to use the same institutional system for monitoring of input and output prices of agricultural and allied production. This will help integrating the early warning monitoring system with food market and wages monitoring system.
- The MAF staff could be used for enumeration and collection of such information in addition to the information they are collecting this moment. However, there is a need to improve the technical capacity of the grassroots level staff to take off the additional responsibility for collecting the additional information.
- Furthermore, it would also be important to revise the methodology that was followed by MAF for collection of market information. MAF methodology was based largely on administrative reporting and it did not consider the collection of prices from traders. It depended largely on information from the farmers by agricultural holding. Furthermore, the sample of the FSUs per district was too small to represent the districts and provinces thereof. Care should thus be taken regarding the sample size for collection of regular information.
- The information can be collected in correspondence with the monthly crop situation reporting of the MAF. This will provide the scope for integration and cross comparison of these information with the complementary information on consumer prices of food and essential commodities collected by the NSC.

ANNEXES: 1-3

Annex 1:

List of reports/databases providing useful information on indicators related to food security and market

General Population and Demographic Indicators

- **Population Census –**
 - o Year – 1995, 2005
 - o Level of Disaggregation – national, regional and provincial
 - o Published by National Statistics Centre
- **Annual Statistical Year Book –**
 - o Year - Annual
 - o Level of Disaggregation – national, regional and provincial
 - o Published by National Statistics Centre

Availability Dimension of Food Security: Agricultural production and availability balance sheet

- **Agricultural Statistics –**
 - o Year – Annual, updated till 2005
 - o Level of Disaggregation – national, regional and provincial
 - o Published by Statistics Division, Department of Planning, MAF
- **Agricultural Census –**
 - o Year - 1999
 - o Level of Disaggregation – national, regional, provincial and district
 - o The statistical report is available in English only upto provincial level. Data below the provincial level, i.e. at district level are available only in the country's national language, i.r. Lao.
 - o Published by Department of Planning, Ministry of Forestry and Fishery (MAF)

Access Dimension of Food Security: Agricultural prices, availability of wage employment and access to food thereof

- **Bulletin on Monthly Consumer Price Index –**
 - o **Period:** Monthly available upto 2005
 - o **Level of Disaggregation** – national – Data is collected at market centres in four regions and only from rural markets.
 - o **Published by** National Statistics Centre
 - o **Language:** Bulletin in Lao; Tables are however available in soft copy at 500 Kip per KB
- **Agricultural input and market prices**
 - o **Period:** 1997 to 2002. Department of agriculture has stopped collecting these data in 2002 as the Ministry thought it is a duplication of work with the department of planning in MAF that started collecting such information starting from the year 2003. Subsequently, however, the department of planning has stopped the collection of this data. Currently, thus, the agricultural input and production prices are not being collected by any agency in the government.
 - o **Level of Disaggregation** – provincial level
 - o **Published by** Department of Statistics, Ministry of Agriculture.
 - o **Language:** Lao
- **Report on Employment and Unemployment in Lao –**
 - o Year - 2000, published every 10 years
 - o Level of Disaggregation – national, regional and provincial level
 - o Published jointly by Ministry of Labour and Social Welfare and National Statistics Centre
- **Lao Expenditure and Consumption Survey (LECS) –**
 - o Year – LECS-1 (1992-93), LECS-2 (1997-98) and LECS-3 (2002-03)
 - o Level of Disaggregation – national, regional
 - o Published by Ministry National Statistics Centre in collaboration with other partners

Utilization Dimension of Food Security: Nutritional Outcomes of food insecurity

- **Lao Reproductive Health Survey (LRHS) –**
 - o Year - 2000

- o Level of Dis-aggregation – national and regional.
- o Published by National Statistics Centre
- **Lao National Health Survey Report (LNHS) –**
 - o Year - 2001
 - o Level of Disaggregation – national and regional
 - o Published by Ministry of Health
- **Multi-Indicator Cluster Survey (MICS) – UNICEF, etc. –**
 - o Year – 2005-06 – not yet published
 - o Level of Disaggregation – national, regional, **check**
 - o Published by UNICEF, Lao in collaboration with other partners

Besides, the following research reports were also used;

- Kakwani, N., G. Datt, B. Sisouphanthong, P. Souksavath and L. Wang: (2002): “Poverty in Lao PDR during the 1990’s” – National Statistics Office and The World Bank, PDR Lao
- National Statistics Office, PDR Lao, in collaboration with ADB, SIDA and the World Bank: (April, 2006): “Lao PDR Poverty Assessment Report: From Valleys to Hilltops – 15 Years of Poverty Reduction” – Draft Report.
- State Planning Committee, National Statistics Centre and ADB: (2001): “Participatory Poverty Assessment: Lao PDR”.
- Government Report to 7th Round Table Meeting: (2000): “Fighting Poverty through Human Resource Development, Rural Development and People’s Participation”

Annex 2: List of Meetings with Non-WFP officials, Government Officials and Experts in Vientiane

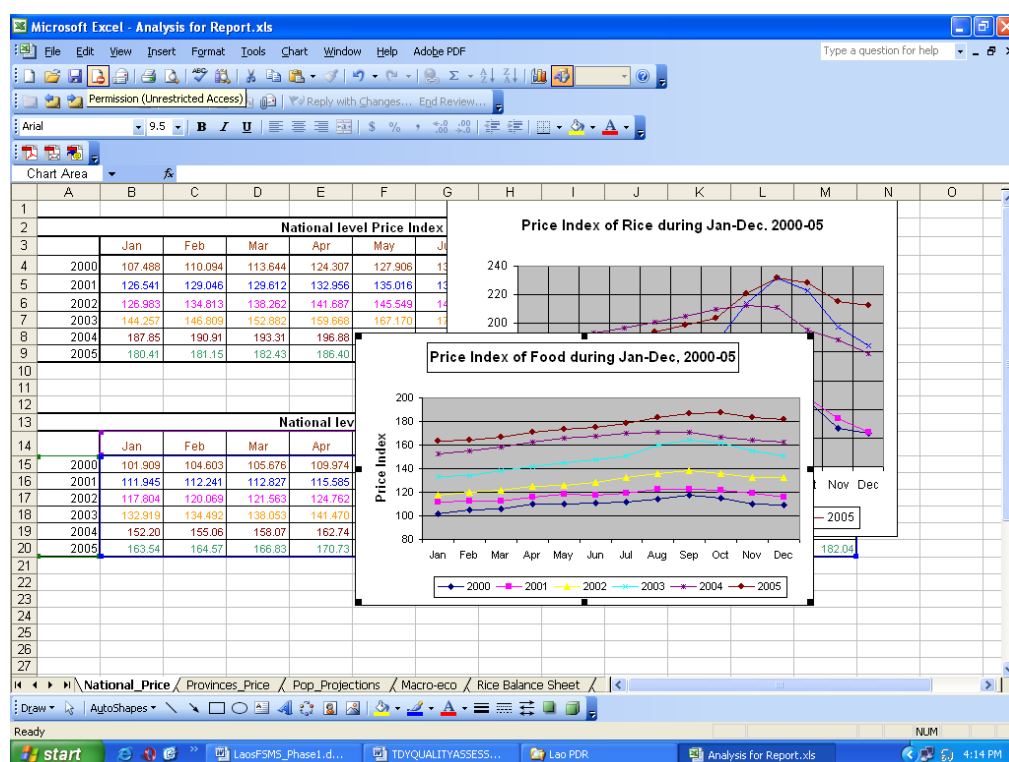
1. FAO Meeting for Food Insecurity and Vulnerability Information Mapping System. Representatives from Ministry of Agriculture, Ministry of Labour and Social Welfare, Ministry of Health, etc.
2. The Statistics Division in the Department of Planning of the Ministry of Agriculture

3. State Foodstuff Enterprise,
4. National Statistics Centre
5. National Agriculture and Forestry Research Institute (NAFRI)
6. Social Science Experts in Vientiane

Annex 3: List of data analysis spreadsheetsⓈPlease see Xls Attachment

- Price Index of Food and Rice (National) during 2000-2005
- Price Index of Rice (Provincial)
- Population Projections
- Macro Economic Indicators
- Balance Sheet of Rice Production
- Agricultural Production: Provincial
- Agricultural Income: Provincial
- LECS Data on consumption expenditure and rice intake: National
- LECS Data on consumption expenditure and rice intake: Provincial
- LECS Data on Livestock

Pls see the following pictures for names of the spreadsheet mentioned above in the file name “Analysis for Report”



Rice Balance Sheet: Rice is the major cereal/foodgrain in the country.									
	A	B	C	D	E	F	G	H	I
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68									
69									
70									
71									
72									
73									
74									
75									
76									
77									
78									
79									
80									
81									
82									
83									
84									
85									
86									
87									
88									
89									
90									
91									
92									
93									
94									
95									
96									
97									
98									
99									
100									

Microsoft Excel - Analysis for Report.xls

File Edit View Insert Format Tools Data Window Help Adobe PDF

Type a question for help

Font Size

Average household consumption expenditure in 1000-Kip by various heads

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Average household consumption expenditure in 1000-Kip by various heads														
2		% Share in total 1992/93	% Share in total 1997/98	% Share in total 2002/3	Exp. (1,000 Kip) 2002/3										
3															
4	Food	26.3	26.9	26.4	288.2										
5	Own produced food	38.0	33.9	28.6	312.2										
6	Clothing and footwear	4.1	2.8	2.4	26.7										
7	Housing	7.1	7.1	12.6	138										
8	Households utensils and operations	4.0	5.1	4.1	44.6										
9	Medical care	2.4	2.2	1.7	19										
10	Transport and communication	6.7	10.6	11.8	128.8										
11	Education	0.8	0.5	1.0	11										
12	Personal care	3.1	0.8	2.2	24.5										
13	Recreation	3.8	6.1	3.7	40.3										
14	Alcohol and tobacco	3.0	2.9	2.5	27.5										
15	Others	0.7	1.1	2.8	30.5										
16	Total	100.0	100.0	100.0	1091.3										
17	Total Food	64.3	60.6	55.0	600.4										
18	Total Non-food	35.7	39.2	45.0	490.9										
19	Percentage share of quantity of various food items														
20		1992/93	1997/98	2002/3											
21															

Ready NUM

start LaosFSMS_Phase1.d... TDYQUALITYASSESS... Lao PDR Analysis for Report.xls 4:17 PM