

Emergency Food Security Assessment (EFSA)

Northern LAOS



November 2009

Data collected between
29 October and 11 November 2009



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Executive Summary

The World Food Programme in partnership with partners (Government, Red Cross, CARE, IFAD and GAA) undertook Emergency Food Security Assessment (EFSA) in northern Lao. The assessment was in response reports of continued rodent infestation, drought and floods and several requests made by local government units for assistance. The assessment was conducted between 29 October and 11 November 2009 covering the provinces of Bokeo, Houaphan, Luang Prabang, Luangnamtha, Oudomxay, Phongsaly, Xayabouli and Xiengkhuang. The fieldwork covered 26 districts with two villages sampled per each district.

The methodology used for the assessment combined secondary data review with primary data collected through household questionnaire and key informant interviews at district and cluster levels. The household questionnaire with modules to capture household food access and on education, health, water and sanitation was administered to 887 households representing 5,613 persons.

Main Findings:

Demographics: The average household size was found to be 6.3, which suggests a high dependency ratio. Nearly one-third of household heads had no formal schooling, about one-half had primary level schooling, and one-fifth had secondary education or higher. Majority of households (over 90%) had at least two adults. The ethnic groups in the sample were Astro-Asiatic (67%), Lao-Tai (17%), Hmong-Mien (12%) and Sino-Tibetan (3.2%).

Education: Although majority (80%) of the households sent all their children to school, some 20% did not send (all or not at all) of their children to school because they could not afford (35.6%), children worked for household income (25%), no school nearby (11.5%), lack of interest (9.6%) or due to illness or disability (6.7%).

Health: More than one-third of households had members with ill health within two weeks of the survey period. About 30% of households had members with diarrhoea and 61.4% had members who suffered from fever or cough and these affected children under five and older persons alike. According to key informants, malaria was one of the main diseases.

Housing, Water & Sanitation: Nearly all households (98%) were living in dwellings they owned – mostly made of non-durable material and a small percentage in houses made of durable material. About 44% of the households used flush latrine or toilet with water, 15.7% used traditional pit latrines and 40% had no latrines or used the bush. Majority (83%) of households obtained drinking water from public tap, but 10% obtained theirs from sources such as river, pond, unprotected well or canal that are unsafe. However, some 90% of households indicated that they boiled their water.

Household Livelihoods: The main livelihood activity among sampled households is farming and this was reported by 95% of households. Some 67% of the households were involved in upland farming and 28% in paddy (lowland) farming. Most households reported secondary livelihood activities that include vegetable/crop gardening, cash crop farming, casual labour, petty trade, fishing, hunting and handicraft making.

The main crop was rice, reported by 95% of the households, mostly from upland production. Maize was the second important crop; 2.6% of households reported producing maize as their main crop and 32% said it was their secondary crop. Other key crops include vegetables, sesame and cassava.

Majority households (83%) had access to upland rice fields and 36.8% had access to lowland for rice production. Nearly one third of the households cultivated less rice than last year and half of the households had less harvest.

Ownership of Livestock: Most households (90%) owned livestock, with 79% having poultry and 63% reporting pigs. But ownership of other stocks was lower; cows and bullocks (by 25%) followed by buffaloes (25%); goats/ sheep and horses were owned by 10% and 3%, respectively.

Household Assets: The main asset owned by households was agricultural tools (shovels, spades and sickles) and this was reported by nearly all. Some 42% reported fishing nets; radio, motorcycle, grinding mill, television were reported by between 20% and 30% of the households; fewer (15% and 20%) reported video/ CD players, mobile phones, tables and chairs, bicycle and ploughs. Most households “owned” the land they farmed that average 1.6 hectares for upland and 0.75 hectare for lowland.

Markets and Expenditure: On average, households spent 44% of their cash income on food, with rice purchases accounting for the largest share (25% of total) followed by meat and meat products (5.8%) and sugar (4.9%). Non-food expenditures average 55.6%, where clothing takes 13.9% (of total), followed by medical services (10.9%) and education (8.2%). Some 35% of households borrowed money to buy food or took food on credit during the previous one month, where two-thirds borrowed two or more times.

Most households had access to daily markets that sell basic commodities. These markets were mostly stalls, mobile vendors or small markets in the village or neighbouring village(s). Larger markets in district centres tended to be far and inaccessible. More than two-thirds of household heads said food prices were higher than same time last year; only 10% who said prices were lower. Meanwhile about 60% said their total expenditure increased compared to last year compared with 18.6% whose expenditure decreased.

Food and non-food assistance: Some 24% of the households received food assistance during the previous two months consisting of general food distribution (15%) and school feeding (11%); and Food for Work (FFW)/ Food for Assets (FFA). Meanwhile only 12% (of total 884) households received other types of external assistance such as “financial” assistance, “education” support and “medical” services.

Food Security Analysis

Aggregate Food Availability: It was not possible to obtain production data for rice for 2009. But the trend for 2006-2008 (in the review) would suggest that production in the northern part of the country was low, implying an overall low aggregate availability. Most of the provinces are predominantly upland production areas and experienced rodent infestation, drought or floods would. The findings of the analysis in this report further confirm that more households cultivated less land and had lower production of rice compared to last year. It is thus expected this will impact on household food access more directly through lower own production, and indirectly through lower market availability.

Household Food Access: In general, households have diverse livelihoods that suggest reasonably good access through own production. Most have access to land for producing the main commodity, rice, which is also their main staple. As was noted, this access can be affected by shocks; and by a fragile production system under the upland production.

The analysis also shows that market purchase was the second important source of food access after own production. On the other hand, household expenditure on food was found to be low and average less than 50%. But there are variations in proportion of household expenditure on food by province. Xayabouli and Luang Prabang have the highest percentages of just below 50% of total expenditure. They are followed closely by Oudomxay, Phongsaly and Luangnamtha all above 40%; and by Xiengkhuang and Houaphan between 30-40%. It has not been possible to establish the causes for these variations, but the generally low shares of household expenditures reflect the fact that the main food items are largely secured through own production.

Food assistance was found to be a source of food for a limited number of households. The highest percentages of households receiving food assistance were in Oudomxay, Phongsaly and Bokeo, with smaller numbers in Xiengkhuang, Xayabouli and Luangnamtha. Other types of assistance were provided to households in Phongsaly, Oudomxay, Luang Prabang, Xiengkhuang and Luangnamtha, with smaller percentages in Bokeo, Houaphan and Xayabouli. Notwithstanding this food assistance, Oudomxay and Bokeo had comparatively low average food consumption scores. It is likely that the situation could have been worse without the assistance, but in general food assistance represents a small fraction of household food access.

Food Utilisation: High level of chronic malnutrition was highlighted in the review. Household level food consumption patterns both in the review and the analysis here broadly confirm the situation. Other compounding factors such as health and nutrition highlighted above would suggest nutritional status will remain a challenge in the light of poor water and sanitation conditions and prevalence of diseases.

Household Food Consumption: An estimated 12.8% of the households in the sample had poor food consumption and a further 15.6% had borderline consumption. Since the assessment was conducted during the harvest season when food availability was high and food consumption was near its peak, it likely that most households in “borderline” and some in “adequate” food consumption categories can fall into the “poor consumption category by peak hunger season in June to August 2010.

Rice is the staple and it is revealed that all households eat rice daily. It is followed by vegetables consumed five days in a week; consumption of bamboo/ mushrooms average 2-3 days a week. Fish, oil, meat and pulses (the main sources of protein and oils) were each consumed between 1-2 days a week. The rest of the food items (maize, cassava, other roots, crabs and shrimps wild meat, eggs, milk and sugar) were reported consumed by very few households and averaged less than 1 day out of 7.

Consistent with the predominant livelihood pattern, households secured most of their main foods predominantly through “own production”, followed by market “purchases”. However, hunting/fishing and gathering were important sources for foods in the wild. Exchange of labour for food, exchange of other items for food, gifts from relatives and friends, borrowing and food aid were generally of low.

The average household food consumption scores by province showed that the province with the lowest average consumption Bokeo and Oudomxay, which is consistent with the higher proportions of households in “poor” and “borderline” consumption categories compared with other provinces.

Household Coping strategy: More than three-quarters (77.8%) of households fell in the “very low” coping strategy category, meaning they used any of the coping options in very limited number of times. However, about 10% of the households fell in “medium” to “very high” coping strategy category. These households used several of the coping options fairly frequently indicating high level of food insecurity and potential threats to lives and household livelihoods.

Oudomxay emerged with the highest score and was the only province that has households in “very high” coping strategy category. It is followed by Luang Prabang, Bokeo, Lunangnamtha, Phongsaly and Xayabouli. Xiengkhuang and Houaphan had the least scores, i.e. households in these provinces using least coping options. Cumulative percentages (including “very high”, “high” and “medium” categories) was highest in Oudomxay at 25.2% followed by Luang Prabang and Bokeo. Other provinces fall below 10%; except Houaphan where there are no households in the three coping strategy categories.

Causes of Food Insecurity: The main shock contributing to food insecurity was rodent infestation, followed by drought or erratic rainfall and floods. The findings corroborate information obtained from key informants in the districts and clusters surveyed. Rodent infestation was reported by 95.7% of households in Bokeo, 88.3% of households in Oudomxay and 73.9% of households in Xayabouli. Although also reported in other provinces, incidences are lower (less than 20%) and in some cases appear to be residual from the previous year or could be ordinary house rats. Drought or irregular rainfall was prominent in the provinces of Luang Prabang, Luangnamtha and Xiengkhuang, and to lesser extent in Xayabouli and Houaphan. Flood mainly affected the provinces of Phongsaly and Houaphan, to a lesser extent Xiengkhuang and Luangnamtha. Other shocks reported but appear to be less widespread include crop diseases, pests and wild animals.

Cross-tabulation of food consumption categories with the three main shocks confirms the importance of the shocks in household food insecurity among the sampled population. It shows that most (37%) of the households in “poor” and “borderline” food were those affected by rodent infestation, 21% were affected by drought or irregular rainfall and (17%) were affected by flood. Cross-tabulating coping strategies by main shocks revealed that the proportion of households that adopted highest coping strategies were affected rodent infestation, again followed by drought or irregular rainfall and by floods.

Food Insecure Provinces and Districts: Ranking of combined percentages of households with “poor” and “borderline” food consumption by district show that the districts with high percentages are: Hoon and Nga (in Oudomxay), Paktha and Phaoudom (in Bokeo), Ngai (Luang Prabang), Long (in Luangnamtha), Xienghorn (in Xayabouli), Maj (in Phongsaly), Nonghaed and Kham (in Xiengkhuang) and Viengthong and XamNeua (in Houaphan).

Ranking of coping strategy index by district also show high coping strategy index for Hoon and Nga (in Oudomxay), Phongsaly, Pakxeng and Xiengngeun (in Luang Prabang), Long (in Luangnamtha), Phaoudom and Paktha (in Bokeo) and Hongsa (in Xayabouli). The findings suggest some association between poor food consumption and high coping in Phaoudom and Paktha (in Bokeo), Hoon and Nga (in Oudomxay) and Long (in Luangnamtha) but it is less clear in other cases.

Profiles Food Insecure Households:

Gender: The proportion of “poor consumption” among female headed households was higher (14.8%) compared to those for male headed households (at 12.6%). The comparisons for “borderline” and “acceptable” seem indeterminate. Overall, this confirms the vulnerability of female-headed households among the sampled population to food security. In many contexts this emanates from labour scarcity and access to resources.

Education: The proportion of food poor consumption was 17.5% among household heads with no formal education compared with 11.5% among those with primary and 8.4% with secondary (plus) levels of education. This pattern is reflected for all food consumption categories and confirms very strong correlation between food security and education levels of household head. This conforms to a general fact that education is positively correlated with better livelihood options as well as better decisions of food consumption.

Number of adults: In general “married” (used for married and co-habiting) status connotes at least 2 adults while “single” (for widowed, separated, divorced or single) connotes one adult. It was established that 12.4% of households in the “married” group had “poor” consumption compared with 17.5% among “single” headed households. The pattern was similar for “borderline” and “adequate” comparisons and consistent with the fact that households with more members working to generate incomes tend to have lower dependency ratio and better food access.

Ethnicity: Sino-Tibetans were found to have the largest proportion of “poor” consumption (28.6%), followed by Austro-Asiatic (14.2%), Hmong-Mien (10.0%) and Lao-Tai with 6.6%. The findings are similar to that reported in the March 2009 EFSA, which concluded that ethnic groups in high upland farming were the most food insecure group.

Cross-tabulation of coping strategy index scores with gender of household head, education, “marital status” (as defined above) and ethnicity point generated mixed results. It showed that female headed households had lower average CSI compared to male-headed households. However, household heads without formal education had the highest average. The heads with secondary level education (and above) had the least mean CSI score, indicating less use of coping options and higher food security.

Conclusion and Recommendation:

Conclusions:

The assessment confirms that households were affected by a wide variety of shocks, the most severe was rodent infestation and others include drought and erratic rainfall and floods. The analysis of food consumption score confirms that 12.8% of the households in the sample had poor food consumption and a further 15.6% had borderline consumption. As the assessment was conducted during peak main harvest season when household consumption was at its peak, it is highly likely that most of the households in the borderline consumption category will fall into the “poor” category. It is also possible, especially at the peak of the hunger season (June to September) that some households in adequate food consumption group could also fall into “poor” consumption category.

It is difficult to predict the changes with certainty at this stage, but the proportion of food insecure households at the peak of the hunger season could rise to 30-50%. However, this is expected to vary from one province to another and between districts in each province.

But it is expected that the situation will deteriorate most markedly in the provinces and districts with already poor consumption and those already demonstrating relatively higher levels of coping. The provinces in the severe category include Bokeo, Oudomxay, Xayabouli and Luang Prabang in that order. These provinces have average food consumption score below sample average. Houphan and Luangnamtha with average scores marginally above sample average are those likely to witness some deterioration in food consumption during the hunger season.

Rodent infestation was most reported in Bokeo, Oudomxay and Xayabouli, to lesser degree in Luang Prabang, Phongsaly and Luangnamtha. Drought or erratic rainfall was most reported in Luang Prabang, Luangnamtha and Xiengkhuang, with lesser degree in Xayabouli and Houaphan. Meanwhile floods were more widespread in Phongsali and Houphan, but Xiengkhuang and Luangnamtha were also affected. But many of the provinces were affected by multiple shocks, and this could lead to greater food insecurity if the shocks are particularly strong.

The findings also show that some of the districts with poor food consumption and also have very high coping strategy scores. Broadly, most of the districts that had poor food consumption score were those affected by rodent infestation, followed by districts that experienced drought or erratic rainfall, but less for the districts that had floods. The pattern appears similar in the case of high coping strategy index – with rodent infested districts recording some of the highest scores, followed by drought and erratic rainfall and by floods in the third place.

There is a striking association between poor food consumption and high coping strategy index scores. This is particularly the case in rodent infested districts of Hoon and Nga (in Oudomxay), and in the districts of Paktha and Phaoudom (in Bokeo). In the case of drought and erratic rainfall, this association appears in the district of Long in Luangnamtha Province. The association is less clear in the rest of the districts and in the flood affected provinces and districts.

Recommendations:

In the light of the findings confirming the incidence of the shocks and their impact, it is recommended programmes to assist those who are/ will be food insecure until the next harvest season. The main purposes would be to save lives and reduce acute malnutrition in the cases where food consumption is “poor” and likely to deteriorate in the run up to the lean season between June and August 2010.

Importantly, the assistance should aim to protect livelihoods and enhance resilience and early recovery. It is important to note that the shocks analysed here followed other shocks of same or similar magnitude in the previous and in doing so undercut the recovery process. The latter assistance would therefore ensure that affected households will have the opportunity to make recovery.

The instruments for intervention should be selected such that they should ensure high chances for the success of programme. In this regard, meeting the immediate nutritional requirements for the food insecure would necessitate the provision of food assistance. The options would be a general food distribution where majority of the population have been affected, and Food-For-Work or Food-For-Asset for households that are able to work in areas where few households are affected, but with provision to assist households that cannot participate.

The recommendation of food here takes into consideration the fact that availability could be a factor and markets may not be functioning particularly well. However, the option providing cash or vouchers

should be explored based on better understanding of the market situation, especially with regards to food availability, market functioning and some good expectation of price stability.

Where FFW/ FFA activities will be undertaken, this should be based on projects that can make greatest impact on recovery. This should of necessity be based on existing main livelihoods – in this case farming would be among the top choices. But in the light of the fragility of upland rice production, other options that would provide viable diversification should be considered. Discussions with key informants highlighted poor sanitation, absence of schools, etc. and these would be ideal choices. Thus, consideration should also be given to projects that contribute to building community assets (roads, schools, etc) and such projects should be selected in full consultation with communities.

In view of the fact that the shocks are also expected to lead to low availability of seeds, the provision of livelihoods inputs (including seeds) would be useful.

It is clear that the situation will be evolving between now and the harvest season, and this calls for field level monitoring to ensure appropriate measures are taken timely, and this is recommended. Monitoring food prices of the main food commodities, household consumption patterns and coping strategies offer some of the ways for doing this.

1. INTRODUCTION

The World Food Programme in collaboration with Government and other partners conducted an Emergency Food Security Assessment (EFSA) in eight provinces in the northern part Democratic People's Republic of LAO (LAO, PDR) in November 2009. The main context of the assessment was reports of continued rodent infestation on top of unfavourable growing condition (erratic rains, drought or floods) in many of the provinces (see the terms of reference in Annex 1). WFP had and continued to receive requests for assistance to populations facing food insecurity in several villages across the provinces. An earlier EFSA in response to 2008 rodent outbreak had established that crops and household food stocks had been damaged or destroyed by the outbreak of rodent infestation in number of provinces and WFP responded by providing food assistance to many of the villages that had been severely affected.

The EFSA was conducted at a time when there were serious concerns being raised about the outcomes of this year's harvest of upland production. In particular, it is believed the cumulative impact of these shocks could cause severe food insecurity among many poor households in the coming consumption year (October 2009 to September 2010). WFP undertook Rapid Emergency Food Security Assessment (EFSA) in March 2009 in response to the rodent infestation and found that approximately 5% of the population in the affected provinces were food insecure and many villagers had resorted to coping strategies such as reducing quantity or quality food, skipping meals, among others that posed risk to lives and livelihoods.

Main Objective:

The main objective of this EFSA was to verify the incidence and prevalence of the shocks (rodent infestation, floods, erratic rains/drought and others) and assess their impacts on the food security situation of the populations and how the food security situation will evolve during the 2009/2010 coming consumption year.

Specific objectives:

- Assess the extent of household exposure and impact on their food production;
- Establish how many households could become food insecure in 2009/2010;
- Determine what categories of persons are likely to face food insecurity; and
- In the event of evidence of food insecurity, determine:
 - what response measures would be most appropriate;
 - magnitude of assistance that will be required; and
 - the period or duration of such assistance.

2. BACKGROUND

2.1 Socio-economic Background

The Lao People's Democratic Republic (Lao PDR) is a landlocked country in Southeast Asia that covers a land area of 236,800 km² bordering China and Myanmar in the north, Vietnam along the north-east and east, Thailand on the west and Cambodia in the south. It is a Low Income Food Deficit Country (LIFDC) and ranks 30 (out of 177 countries) in the UNDP Human Development Index.¹

It is the least developed country in the Mekong region with per capita income of about US \$500 (in 2005) and relies very substantially on external support where about 40 percent of its total public expenditure comes from donors. About 85 percent² of the country's total population of 5.6 million lives in rural areas where levels of food insecurity and poverty are high. Recent reports indicate that about 36 percent of the population lives on less than 1.5 United States Dollars (USD) per day and about 74 percent live on less than USD 2.0 per day.³

The country has mountainous terrain, most especially in the northern and eastern parts which presents particular challenge to transport and communication. This is a key obstacle to development, especially access to social and economic services such as schools, healthcare services and markets.

The country is prone to natural disasters. The most recurring disaster is flood, which during the past three decades have occurred with frequency of 1-2 years on average. Other important disasters in recent years have included drought, fires, landslide, flash flood and rodent infestation and high food prices.

The country is endowed with abundant water resources; the largest river, the Mekong River, runs along 1,900 km of the Lao PDR territory. The rivers are vital natural resource for fishing and irrigation. But they also frequently render many parts of the country vulnerable to perennial floods.

The government committed to liberalizing the economy and under the New Economic Mechanism (NEM) since the mid 1980s, which represented a major shift from the past system of central command economy.⁴ Several reforms have since been undertaken, including the dismantling of state-run monopolies, introduction of property rights and opening up of the country to international trade and direct foreign investment. Although the Government has made substantial progress, the country continues to face major challenges in making substantive improvements in the lives of the population. Most people living in rural areas have not benefited from these changes; it is believed some may have been adversely affected by the changes.

In 2004 the Government launched a National Growth and Poverty Eradication Strategy (NGPES) with focus on attaining the Millennium Development Goals (MDGs) by 2015. Three pillars of the NGPES include: fostering economic growth with equity, modernising social and economic infrastructure, and enhancing resource development. There have also been efforts to integrate the NGPES with the National Socio-Economic Development Plans (NSED) to provide a single, coherent and comprehensive national development and economic growth priorities.

¹ UNDP Human Development Index, 2007

² IFAD, Rural Poverty in Lao PDR, 2006

³ World Bank: Lao PDR Environment Monitor, 2005

⁴ These objectives have recently been reiterated in the National Economic-Social Development Plan (2006-2010) with an emphasis on the promotion of commercial agriculture and private initiatives by foreign investors and traders.

2.2 Food Security Context

The state of food security can best be captured through an understanding of the country's natural resource base and livelihood systems that determine *food availability* at the aggregate level, *food access* at household level, and *food utilization* at the individual level. However, food security is more complex and requires an understanding of various other factors including supportive services and infrastructure, socio-cultural factors, care practices, and health and hygiene conditions among others. Some of the factors are highlighted below, but most are explored in more detail in the analysis in sections that follow later in the report.

2.2.1 Nutrition and Health

Chronic malnutrition remains a major problem in Lao, PDR most especially among children under five years of age. More than 30 percent of pregnant and lactating women are undernourished and risk delivering low-birth weight babies. There is the risk of perpetuating the cycle chronic malnutrition in a situation where almost 11 percent of infants are reported to born below 2500 grams.⁵ According to the Lao PDR's MDG Progress Report 2008, there was no improvement in chronic malnutrition rates over the last 10 years despite a general progress in economic development and positive growth in the gross domestic product (GDP). Some 40 percent of children are stunted, 37 percent underweight and 6.5 percent wasted or severely malnourished.

According to the Multiple Indicator Cluster Survey (MICS 2006) and WFP's Comprehensive Food Security and Vulnerability Analysis (CFSVA 2006), nearly every second child in rural areas is chronically malnourished. The highest prevalence rates for stunting are in the Northern, Southern and Central Highlands, where chronic malnutrition rates among some ethnic groups average more than 60 percent. It has also been established that poverty is pervasive in the uplands - estimated at around 44 percent compared with 28 percent in the lowland areas. The poorest and most food insecure provinces appear to be those that are ethnically diverse and with low levels of education. Healthcare services in these areas are also believed to be generally poor and reflect access issues (due to mountainous terrain) discussed earlier.

2.2.2 Agriculture Sector

Agriculture is the mainstay of the Lao economy and contributes nearly half of the GDP and employs 77 percent of the workforce. Lao PDR has some good agricultural lands and produces a wide variety of crops and livestock. Rice consumed is the main commodity produced and the staple food in the country – this section will focus on rice due to its importance to the national and household food security.

Table 2.1: Paddy Production in LAO by Province

Region	Production (MT)			Growth Rates (%)		
	2006	2007	2008	2006-07	2007-08	2006-08
Northern	1,518,730	1,541,544	1,602,620	2%	4%	3%
Central	607,900	636,795	735,480	5%	15%	10%
Southern	2,663,700	2,710,050	2,925,510	2%	8%	5%
TOTAL	4,790,330	4,888,389	5,263,610	3%	9%	6%

Source: EFSA analysis based on data from Ministry of Agriculture & Forestry Year Book 2008.

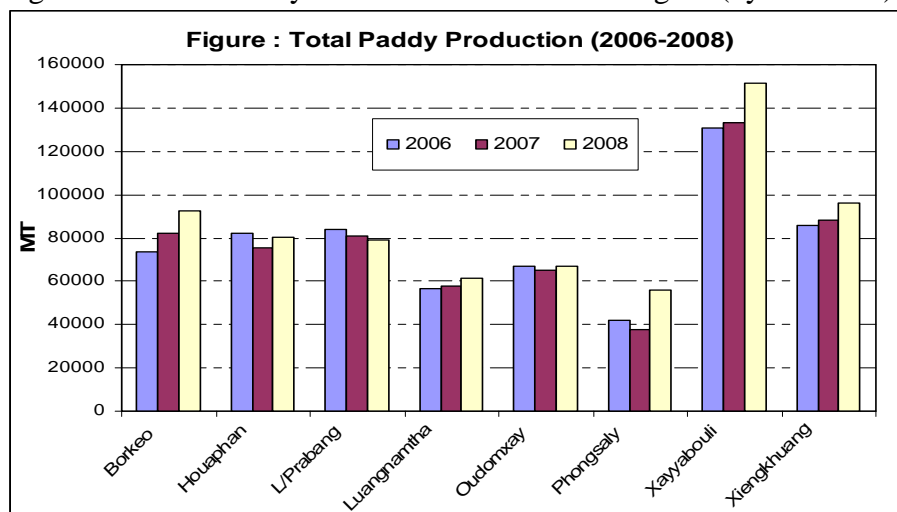
Nearly two-thirds of the national output of rice takes place under lowland production and one-third in upland fields; the latter represents traditional production system. Table 2.1 shows the production of rice by region during the recent three years (2006, 2007 and 2008) for which data is available. It shows

⁵ Ministry of Health (2009) Strategy and Planning Framework for the Integrated package of Maternal Neonatal and Child Health Services 2009-2010

that more than one-half of the production comes from the south and nearly one-third from the north. The table also shows that total rice production grew by an average of 6% per annum between 2006 and 2008, but the growth was lowest in the north at 3%.

Figure 2.1 (below) shows rice production in the provinces that were covered in the assessment and reveals that production varies across these provinces. Xayabouli has the highest production while Phongsali has the lowest. It also shows that production stagnated or grew marginally in most provinces over the three years, most especially in Houaphan, Luang Prabang, Luangnamtha and Oudomxay.

Figure 2.1: Total Paddy Production in Northern Region (by Province)



Source: Ministry of Agriculture & Forestry Year Book 2008.

Overall, rice production is believed to be low and unevenly distributed in the Northern provinces resulting in pockets of deficits. This primarily reflects the high dependence on upland production (rather than low land) and reliance on rainfall. Most have poor soil conditions that are associated with steep slopes and high levels of soil erosion. In addition, unexploded ordinance (UXOs) in some parts of the country especially along the border with Vietnam, have reduced the land available for farming.

A number of recent government policies have had the tendency to reduce the amount of upland under subsistence production and thereby contributing to lower household food production. These include policies on land forest allocation; village consolidation; and the ban on shifting cultivation that directly contribute to reducing the size of upland cultivated. The promotions of tree crops have contributed indirectly through the displacement of food production. This is especially the case with the encouragement of rubber both on commercial plantations and under smallholdings found to take up large tracts of land across most of the provinces covered by the assessment.

2.2.3 Disasters and other factors

Production has been further affected by a series of natural disasters during the past two to three years. These disasters by themselves alone have had cumulative negative impacts on food production for the majority of households who are dependent on farming. The most serious disasters have included the rodent infestation in 2008. WFP conducted an EFSa in mid-March 2009 that estimated “between 85,000 and 140,000” to be food insecure, representing 5% of the population in affected provinces. In August 2008, a number of provinces (including Bokeo, Luangnamtha, Luang Prabang and parts of Houaphan and Xayabouli in the north) were severely affected by floods along the Mekong River basin.

An inter-agency rapid assessment recommended food assistance to an estimated 40,000 people.⁶ Another flood in 2009 in the southern part of the country due to Ketsana Typhoon led to a nother inter-agency assessment that recommended emergency food assistance to 77% of the affected population for three months.⁷ Meanwhile WFP Emergency Food Security Assessment (EFSA) in 2009 in response to rodent infestation revealed that 15% of households in the areas affected faced severe food insecurity.

It should also be noted that surplus rice production in some provinces (or districts) cannot always be traded cost-effectively with deficit province or districts. The main constraints include long distances especially between the south and north of the country that translate into high transportation costs. In addition, the country has difficult terrain that is associated with poor road infrastructure and transport services especially in the north. Moreover, household food insecurity is accentuated by low purchasing power reflecting low income levels of most households who are poor. The situation was worsened by the high food prices in 2008 that severely affected household purchasing power. According to WFP Market Study conducted in 2008, most households that depended predominantly on market purchases were struggling to maintain their consumption. WFP responded with some assistance to the most affected households. Although price levels saw some decline in 2009, the levels remained significantly higher than their levels prior to the crisis. There were unsubstantiated reports around the time of this assessment that price levels were showing an upward trend.

Lao PDR is endowed with large water resources which in principle provide fishing as important livelihood for people living along them. Most households also own poultry and various types of livestock including goats, sheep, pigs, cattle and buffaloes. Thus, fish and livestock provide important sources of protein. Wild animals and other forest products are also key sources of protein, especially in remote rural settings though access to these are is increasingly limited by a number of factors. Various types of pulses are produced by households that provide important sources of plant protein.

Notwithstanding this abundance, the diet of most households tends to be poor. The average meal consists mostly of rice (eaten daily) with some vegetables and very small quantities of proteins, oils and fruits that do not provide satisfactory and balanced nutrition. Other important factors are poor access to health care and sanitation facilities, inadequate child care, and feeding practices (especially the lack of complementary foods for children under two) and poor nutrition knowledge.

3. Methodology

3.1 General

The assessment entailed a review of secondary information, key informant interviews, and extensive primary data collection at the field level. Prior to the field work, the core assessment team reviewed previous assessments, relevant reports and data that provide broader contextual and specific information on the food security situation. In particular, the March 2009 EFSA provided information on the ongoing rodent infestation, as one of the main shocks reported to have hit the Northern uplands.

Prior to the actual fieldwork, consultations were held with Government Ministries/ Departments, UN Agencies and NGOs in both Vientiane and Luang Prabang in order to obtain contextual information and different perspectives to inform the design and implementation of the assessment.

⁶ Rapid Assessment of Impact and Needs arising from the August 2008 Floods.

⁷ Joint Assessment of Impact and Needs arising from the September 2009 Ketsana Typhoon

All Northern provinces were covered, where temporal limitations in relation to travel time meant that some of the most remote districts were excluded in the assessment. However, great care was taken in ensuring that the districts and villages selected would be representative of the local situation. At the district level, this happened through an extensive review of secondary sources (WFP sub offices, NGOs, government offices) prior to and during the initial training. All the districts in each province were ranked according to the type and severity of shock affection, number of villages affected, and travel time. Villages were selected in consultations with local government officials at the field level, and this process ensured a good representative in the selection process.

To ensure the selection of households was representative in each cluster, it was carried out randomly in the selected villages. The process involved an initial verification of the number of households (and mapping as applicable) with the support of the leaders in the settlements. The households were then drawn beginning with a random start; followed using appropriate interval calculated based on total households in the settlement. This method of household sampling was tested and explained to team members during a test field visit during the last day of training in Luang Prabang (31.10.09).

3.2 Team composition and training

Team size and composition was guided by the assessment's need to cover a large area within a limited timeframe. There were nine teams, each consisting of four persons – one team leader (for the most part these were experienced WFP national staff) and three enumerators. Team members were from World Food Programme, Red Cross, governmental departments of Labour and Social Welfare (MLSW/DLSW) and Agriculture and Forestry (MAF), CARE, International Fund for Agricultural Development (IFAD), and German Agro Action (GAA) (see Annex 4). In some cases teams had supervisor (WFP staff from Bangkok or Vientiane) accompanying, who provided general guidance, especially with the sampling process and conducting interviews with senior district government officials. Eight provinces were covered during six days of fieldwork; with one team in each province except Luang Prabang that had two teams (see Annex 3 for map of clusters). WFP provided the vehicles for the assessment, with additional cars rented.

The first three days were dedicated to intensive training, during which the questionnaire was adapted to local conditions and translated into Lao. The training was structured to ensure that enumerators and team leaders understood the objectives and rationale for the assessment, as well as the approach. The discussion of the questionnaire was to ensure that the context was appropriately reflected. Importantly, the final day of the training was dedicated to test the questionnaire in the field (sample village in Luang Prabang) and to make the necessary adjustments prior to final administration. Team leaders and enumerators were given additional training and guidelines on their roles and responsibilities, interview protocols, household selection, quality control and use of GPS devices among others.

3.3 Assessment tools

The main tool used was a household questionnaire based on WFP's Emergency Food Security Assessment framework adapted for the LAO context (see Household Questionnaire in Annex 2). The modules covered included household demographics, livelihoods & income, food consumption, expenditures, shocks/disasters and coping strategies. The questionnaire was administered to the head of each household covered in the assessment. At the start of each interview, the household head was informed of the purpose and content, and his/her consent sought prior to commencing. For the purposes of this survey, a household was defined as a group of people who share food and resources for meals together (i.e. 'eat from the same pot'). A total of 887 questionnaires were administered.

Team leaders were assigned the responsibility of collecting contextual information through observations and interviews with village heads using a checklist. Key information of interest included those on livelihoods, community resources (e.g. water, health facilities, toilet facilities, education facilities, and market access), and other on verification of shocks and impact on food security. The interviews were complemented by transect walk and general observation at each cluster to give a fairly comprehensive overview of each cluster visit. Additional interviews were conducted with district heads of Labour and Social Welfare and Agriculture.

All teams were provided with GPS kits and at least one member was trained to capture the location of each cluster.

Two days after the fieldwork (November 9-10) were devoted to debriefing with all teams during which each team carried out qualitative summary of the situation in each cluster and district. This enabled the assessment teams to get a broader overview of the situation and some preliminary qualitative comparison of the situation across the different districts and provinces, which would inform or qualify the findings from the analysis of the household and key informant questionnaires.

3.4 Data management

Data management was through a Microsoft ACCESS database. It was not logistically possible to train a team dedicated to enter and clean data. To overcome this challenge, four of the teams entered data using their laptops in the field, and the remaining data was entered by team members during the debriefing period in Luang Prabang, with remaining data finally entered in Vientiane by two data encoders who received some training from the database specialist. Although all the data was captured in the database four days after the end of the field collection phase, the cleaning process continued for several weeks after that. The data analysis was carried out using SPSS and MS Excel.

3.5 Limitations

There was a delay of 1-2 weeks in conducting the assessment due to the floods in the south, as staff from both the Country and Regional Offices had to participate in the inter-agency assessment of the impact of Ketsana. Once the assessment team was in the north, the process went smoothly and there were not major issues or challenges to the process. Nevertheless there were some challenges that deserve to be mentioned here:

- Many parts of the Northern uplands were difficult to access. This necessitated a priori exclusion of districts and villages that were physically inaccessible or required very long travelling time, thus introducing bias into the sampling process.
- Most enumerators had little or no prior experience of assessments which necessitated the training that was provided. The material and questionnaire were presented in English, but it was necessary to translate into Lao, as many of the enumerators had poor understanding of the English language. These constituted some limitation that may have had some effect on quality. However, it should be noted that the training and translation of the questionnaire into Lao would have ensured better understanding by enumerators and more consistent administration to households.
- In a limited number of cases, non-Lao-Thai inhabitants encountered language barriers where some enumerators had difficulty in understanding the responses, and likewise, some respondents did not understand the question or the technical nuances.
- Despite the otherwise excellent cooperation with Government partners, there were two to three instances where the selection of clusters did not proceed according to the prescribed criteria. Some

adjustments were made in some instances through the selection of an alternative cluster, but at the expense of valuable time.

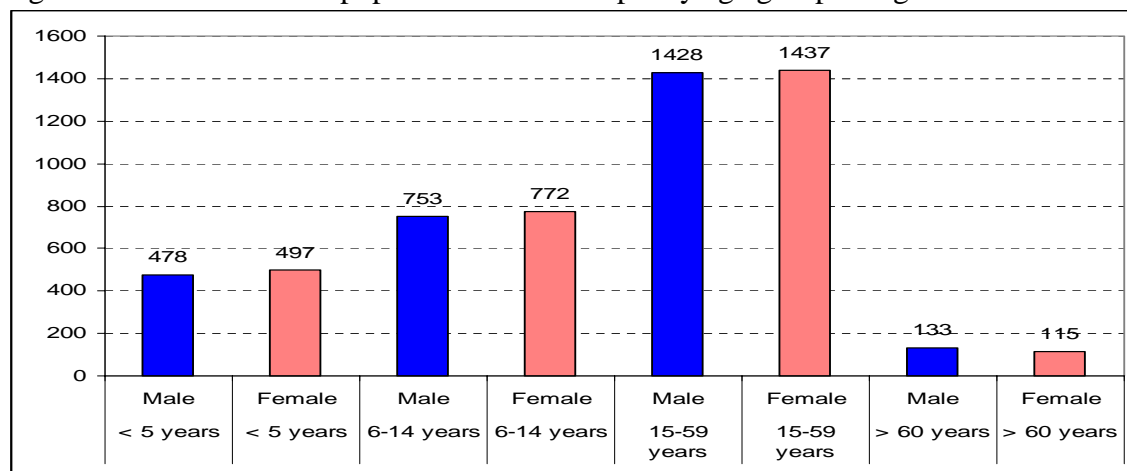
- In general, the timing of the assessment coincided with the upland rice harvest period with the outcome that in a few cases the assessment team arrived when villages had left for the field.
- Importantly, as already noted, one of the most serious challenges was cleaning data for analysis.

4. MAIN FINDINGS

4.1 Demography and Characteristics

The survey covered 887 households representing 5,613 persons; the average household size was 6.3 persons. The breakdown is presented in Figure 4.1, showing that the number of females in each age group was marginally higher than males. The largest age group was 15-59 year-olds who account for 51%, followed by 6-14 year-olds (27%), under-five (17%) and 60 year and above (4%). The majority (93%) of the respondents were male and 7% were female. However, eighty percent of those interviewed were the household heads themselves while 16% were spouses and 4% were 'other' adult members in the household such as older children and grand parents. The mean age of household head was about 42 years and the oldest was 80 years.

Figure 4.1: Breakdown of population in the sample by age group and gender



Source: Northern Lao EFSA (2009)

Some 30% of household heads had no formal schooling, 53% had primary level schooling, 12% had secondary level, 1% had vocational education and the rest had tertiary or college education. The vast majority of households (about 93%) had two adult members and the remaining 7% were single-headed (either separated/divorced, widowed or not married).

Table 4.1: Education of Household Head

Level of Education	Frequency	Percent
No School	263	29.7
Primary School	470	53.0
Secondary School	110	12.4
Vocational and other	44	5.0
Total	887	100.0

Source: Northern Lao EFSA (2009)

Table 4.2: Main Ethnic Groups

Ethnicity	Frequency	Percent
	152	17.2
Austro-Asiatic	595	67.2
Sino-Tibetan	28	3.2
Hmong-Mien	110	12.4
Total	885	100.0

Source: Northern Lao EFSA (2009)

The majority ethnic group in the sample was Astro-Asiatic with 67% share, followed by Lao-Tai with 17%, Hmong-Mien with 12% and Sino-Tibetan with 3.2%.

4.2 Education

Some 634 households (71.5% of total) had children of school age. Of these, 510 (80%) sent all their children to school; 15% sent some (but not all) of their children to school, while 2.5% did not send their children to school at all. The main reasons for not sending children to school included not being able to afford (35.6%); children were working to support household income (25%); there was no school nearby (11.5%); the children did not have interest in school (9.6%); and due to illness or disability (6.7%).

4.3 Health Situation

Out of the 880 households that provided valid response, 269 (30%) experienced illness where one or more of their members had diarrhoea during the previous two weeks. The numbers affected were fairly evenly distributed between children under five and older persons. Meanwhile 61.4% (543 out of 884) the households indicated that their household members had suffered from fever or cough during the same period, majority of them were persons over 5 years of age.

4.4 Shelter, Water and Sanitation

Almost all households (about 98%) were living in dwellings they owned. About 52.5% of them lived in accommodations that can be classified as rooms in collective centre/ public building and 36% lived in private dwelling mostly in non-durable material. Meanwhile 5.5% lived in rooms in rented house or flat, 3.5% lived in private housed in durable material and 2.3% lived in tents or plastic sheeting. The analysis also reveals that 44% of households used flush latrine or toilet with water, about 15.7% used traditional pit latrines, and some 40% had no latrines or use the bush.

Table 4.3: Source of household drinking water

Source	No of HH	Percent
Piped water	12	1.4
Public tap	734	82.8
Tube well/borehole	7	0.8
Protected well	26	2.9
Water tank	22	2.5
River	50	5.6
Unprotected*	9	1.0
Canal	27	3.0
Total	887	100.0

Source: Northern Lao EFSA (2009); *including rain, canal and unprotected wells

Majority (nearly 83%) of the households obtained their drinking water from public tap, but about 10% fetched their drinking water from a variety of other sources including river, pond, unprotected well and canal that are broadly unsafe. About 91% of 884 households with valid entry indicated that they treat their water, mostly by boiling (90%).

4.5 Household Expenditure:

Analysis of household expenditure presented in Table 4.4 shows that on average, households spent around 44% of their cash income on food. Rice purchases accounted for the largest share (more than 25%) of total expenditure. Other food expenditures items include 5.8% on meat and meat products, 4.9% on sugar, salt and msg, 2.1% on wheat, 1.2% on fish, 1.1% each on eggs and fruits, and 0.9% on vegetables. Household expenditure on vegetables, oil, milk, maize coffee/tea, pulses and tubers were less than 1% each but collectively amount to 2% of the total expenditure.

The average expenditure on non-food items was 55.6% of their total expenditure. The top expenditure items include clothing that accounts for 13.9% of total expenditure, followed by medical services at 10.9% and education at 8.2%. Other expenditure items included transport, household supplies, toiletry, tobacco and lighting (candles or gasoline) and each carried between 2.4% and 3.2% of the total expenditure. Other items in order of magnitude include furnishing, alcohol, celebrations, phone card units (communication), livelihoods inputs, non-alcoholic drinks, electricity, water and cooking fuel. Collectively they account for 8.4% of the total expenditure.

Table 4.4: Household Expenditure (Food and Non-Food)

Expenditure Item	Share (%)
A: Food	44.4%
➤ <i>Rice</i>	<i>25.4%</i>
➤ <i>Meat and meat products</i>	<i>5.8%</i>
➤ <i>Sugar/salt/msg</i>	<i>4.9%</i>
➤ <i>Wheat</i>	<i>2.1%</i>
➤ <i>Other</i>	<i>6.2%</i>
B. Non-Food	55.6%
➤ <i>Clothing</i>	<i>13.9%</i>
➤ <i>Medical</i>	<i>10.9%</i>
➤ <i>Education</i>	<i>8.2%</i>
➤ <i>Transport</i>	<i>3.2%</i>
➤ <i>HH supplies</i>	<i>3.0%</i>
➤ <i>Other</i>	<i>13.6%</i>
C: Total (Food + Non-Food)	100.0%

Source: Northern Lao EFSA (2009)

4.6 Credit and Markets

Some 35% of the households (310 out of 886) said they borrowed money to buy food or took food on credit. Out of this number, nearly one-third (32.6%) indicated that they borrowed once, 21.2% borrowed twice and 16.7% borrowed three or more times.

Table 4.5: Borrowing money in past two months

	Frequency	Percent
Once	100	32.6
Two times	65	21.2
Three times	27	8.8
Four or more times	25	8.1
Did not borrow	90	29.3
Total	307	100.0

Source: Northern Lao EFSA (2009)

Table 4.6: Price of rice this year vs last year

Household Head	Frequency	Percent
Much higher	296	33.7
Higher	295	33.6
Same	219	24.9
Lower	65	7.4
Much lower	3	.3
Total	878	100.0

Source: Northern Lao EFSA (2009)

Most of the households had access to markets that were open daily (71%), 2-5 days per week, weekly, bi-weekly or monthly. The market consisted of grocery stalls or organised markets within the village or neighbouring village, mobile vendors or formal markets in district centres. More than two-thirds of respondents said the prices of food in the current year were “higher” or “much higher” than at the same time last year. However, one-quarter (25%) said prices remained the “same” and less than 10% said prices were “lower” or “much lower”. Majority of households (59%) also reported that their total household expenditure increased compared to last year. This contrasts with nearly 23% of the households that reported “same” level and 18.6% whose expenditure “decreased”.

4.7 Household Livelihoods

The first (or main) livelihood activity for the majority of households was farming, where this was reported by approximately 95% of the households. It was also established that 28% of the households were engaged in paddy farming while 67% were in upland farming. Other livelihoods activities that were reported included vegetable farming, cash crop farming, casual labour, livestock rearing, formal employment, trade and crafts.

Table 4.7: Primary (first) livelihood activity

Activity	Frequency	Percent	Percent
Paddy farmer	245	27.6	27.7
Upland farmer	594	67.0	67.0
Official/employee	4	.5	.5
Vegetable garden	16	1.8	1.8
Total	886	99.9	100.0

Source: Northern Lao EFSA (2009)

Almost all households had a second livelihood activity. Some 27.6% of the households report vegetable and crop gardening as their second activity; some 15.5% reported cash crop farming; 12.7% reported upland farming; 8.7% mentioned casual labour; and 4.8% reported paddy farming. Fewer numbers reported other activities that included petty trade, fishing, hunting and handicraft making.

The main crop produced by households was rice, which was reported by 95% of the households. In line with the production structure above, about two-thirds of the rice was from upland farming and 26.6% came from paddy production. The second most important crop was maize, with 2.6% of the households reporting it as their main crop. The importance of maize was further reinforced where 32% (of 751 households) reported it as most important secondary crop. Other crops mentioned by some households included vegetables, sesame and cassava.

Table 4.8: Main crop crops grown by households

	Frequency	Percent
Paddy rice	236	26.8
Upland farmer	601	68.2
Maize	23	2.6
Total	881	100.0

Source: Northern Lao EFSA (2009)

4.8 Lowland vs Upland Production

Consistent with above, about one-third of households had access to lowland for rice production. Of these households, about two-thirds cultivated the same size of land as in the previous year, 20% cultivated less, and 14% cultivated more. About 50% had lower produce compared to the previous year, while 17% had similar production and 33% produced more.

Table 4.9: Household access to land – lowland vs upland

	Lowland		Upland	
	Frequency	Percent	Frequency	Percent
Yes	308	36.8	734	83.0
No	529	63.2	150	17.0
Total	837	100.0	884	100.0

Source: Northern Lao EFSA (2009)

Table 4.10: Change in area planted and harvest lowland production

	Area Planted		Harvent	
	Lowland	Upland	Lowland	Upland
Smaller/ Lower	19.7	27.4	49.8	47.3
Same	65.9	53.3	16.7	13.9
Larger/ Higher	14.4	19.3	33.4	38.7
Total	100.0	100.0	100.0	100.0

Source: Northern Lao EFSA (2009)

Meanwhile majority of households (83%) had access to upland rice fields. Of those who cultivated upland rice, 53% cultivated similar land area, 27% cultivated less while 19% cultivated more. The analysis also reveals that 47% of the households said they had lower harvest, 39% had more and 14% produced similar quantity.

4.9 Livestock ownership

Approximately 90% of households reported having livestock against 10% who did not. As Table 4.11 shows, the livestock most owned by households is poultry (by 79% of the households in the sample), followed by pigs at 63%. Ownership of cows and bullocks stands at 25% and this was the same for buffaloes (25%). Goats/ sheep and horses are reported owned by smaller number of households at 10% and 3%, respectively.

Table 4.11: Structure of Livestock Ownership

Livestock	No of HH	% HH	Mean
Cows / Bullocks	226	25%	3.1
Buffaloes	224	25%	2.8
Goats / sheep	90	10%	4.4
Poultry	702	79%	15.9
Horses	29	3%	3.5
Pig	555	63%	2.9
Other	42	5%	26.0

Source: Northern Lao EFSA (2009)

The average number of stock owned by households varies from one type of stock to another. The highest average number was for poultry at around 16; but the numbers are lower at about 4.4 for goats/sheep; 3.5 for horses; and around 3 for other stocks.

4.10 Food and non-food assistance

Some 24% of households (215 out of 885 with valid response) received food assistance during the previous two months, in contrast to 76% who did not. The types of assistance received were mainly general food distribution (15%) and school feeding (11%); with smaller percentage for Food for Work (FFW) or Food for Assets (FFA).

Table 4.12: Food and non-food assistance in past 2 months

	Food		Other	
	Frequency	Percent	Frequency	Percent
Yes	215	24.3	105	11.9
No	670	75.7	779	88.1
Total	885	100.0	884	100.0

Source: Northern Lao EFSA (2009)

Table 4.13: Types of food assistance

	No of HH	Percent
General food distribution	133	15.0%
School feeding	97	10.9%
Food for work/for assets	11	1.2%
Other	2	0.2%

Source: Northern Lao EFSA (2009)

Only 12% (of total 884) households received other types of external assistance. These included “financial” assistance (2.7%), “education” support (3.4%), “medical” services (2%) and unspecified “other” support (5%).

4.11 Shocks and Coping Strategies

Households were asked to indicate the main shock or disaster that affected them. Top of the list was rodent infestation with nearly 43% of the households stating this, followed by drought or irregular rains (with 23.7%), floods (9.2%) and unusually high levels of crop pests and diseases, and damages by wild animals (3.7%). These disasters were believed to have contributed to the decrease or loss of income (reported by 78.4% of households); loss of both income and assets (reported by 17.4%) and to loss of assets (reported by 2.9% of the households).

Some 91% of households indicated that the disasters decreased their household's ability to produce or purchase enough food. Meanwhile most households (95%) also said they had not recovered or had only partially recovered from the impact of the shock; only 5% indicating that they have recovered fully. This picture is consistent with the fact that household food security will be linked to the next harvest (September-November 2010), showing that most used coping strategy was borrowing followed by eating less preferred food and limiting size of meal. Reducing number of meals and limiting adult consumption were the least frequent.

Households were asked about the use of coping strategies and the frequency of use. Overall, between one fifth and one-third of households adopted at least one of the coping mechanisms, where on average, around 41% reported this daily or often. This translates into approximately 250 out of the 886 households with valid response indicating they used any of the above coping strategies; and around 100 of these households doing so daily or often. The breakdown by category of CS is discussed below.

Eating less preferred foods: Some 30% of the households reported using less preferred food, but only 4.5% reported doing so on daily basis, 9.0% said they did so often (i.e. 3-6 times a week), and 16.6% said they did this once in a while (i.e. 1-2 times a week).

Borrowing food: One third of households (33.8%) reported borrowing food; but less than 1% were doing so daily, 8.4% were borrowing often (i.e. 3-6 times a week), and 35% were borrowing once in a while (i.e. 1-2 times a week).

Limiting size of meal: About 30% of households limited the size of their meals, where only 3.8% did this on daily basis, 8.1% did this often (i.e. 3-6 times a week), and 17.6% limited meals sizes once in a while (i.e. 1-2 times a week).

Reducing number of meals: One fifth (20.2%) of households reported reducing the number of their meals, but 1.7% did so on daily basis, 8.0% reduced number of meals often (i.e. 3-6 times a week) and 10.5% did so once in a while (i.e. 1-2 times a week).

Restricting adult consumption: Nearly one quarter (24%) of households restricted consumption for adults. About 4.4% of the households were doing this daily, 6.7% were doing this often (i.e. 3-6 times a week), and 13% were restricting consumption once in a while (i.e. 1-2 times a week).

4.12 Salt iodisation:

More than one third (38.7%) of the households did not use iodised salt. Of the 59% who were using iodised salt, in nearly half of the cases the colour change was light purple suggesting partial iodisation.

4.13 Household assets:

The assets owned by most households were agricultural tools such as shovels, spades and sickles and these were reported by 99.8% of the households in the sample. Sleeping mats were included as assets, and reportedly owned by 86.7% of the households. Fishing nets were owned by 42%. Ownership of radio, motorcycle, grinding mill, television, rice were reported by between 20% and 30% of the households. Video/ CD players, mobile phones, tables and chairs, bicycle and ploughs were also reported by between 15% and 20% of the households. Other items reported included fan, generators, boats and refrigerators but these were owned by much fewer households.

It was also reported that just over one third (34.7%) of households in the sample owned lowland for rice production. The size of land they owned ranged from less than one hectare to a high of nearly 8 hectares, but averaging around three-quarters of a hectare. On the other hand, ownership of upland was reported for the majority of households in the survey, and land sizes averaged 1.6 hectares, with the highest reported case being 15 hectares. However, the average area cultivated was found to be one hectare, the highest was 6 hectares.

5. ANALYSIS OF FOOD SECURITY SITUATION

5.1 Introduction

Household livelihoods, incomes and assets represent the primary sources of household food access. Using appropriate thresholds, the usual approach would be to group households into categories as falling into “very poor”, “poor”, “average” and “good” food access groups. It was earlier shown that almost all household depend on farming as their main livelihood and most of the households have access to land (either lowland or upland) and have secondary and tertiary livelihood options. Households were also found to have various other forms of assets including livestock, household items etc. Meanwhile it was difficult to gather information on household incomes. Although information was gathered on expenditure that could be used as proxy for incomes, the data was found to be unreliable. It was consequently concluded that none of these indicators provided any meaningful basis to categorise households into access groups. As a result, household food security situation is analysed on the basis of food consumption score and coping strategy index.

5.2 Household Food Consumption

Household food consumption and food sources provide important second order measures of food security. In this case household heads were asked to recall the kinds and frequency of food that were consumed during the previous seven (7) days. This entailed remembering how many days they ate each of the different food groups and what the main sources of these foods were. Food Consumption Score (FCS) was calculated for each household using the information on the types and frequency of food reported consumed.

In calculating the FCS, food groups are weighted according to their nutritional density. Based on empirical evidence in different regions, WFP has defined cut-off points for the calculated food consumption score that allow for differentiation of households into “poor” and “borderline” food “acceptable” food consumption categories. For Lao PDR, households with a food consumption score less than or equal to 25.5 are regarded to have “poor” food consumption, and this reflects the fact that

they do not eat vegetables on a daily basis and hardly consumed other food groups. Households with food consumption score greater than 25.5 and up to 36.5 are considered to have “borderline” food consumption. Meanwhile households with food consumption score greater than greater than 36.5 are considered to have “acceptable” food consumption.⁸

5.2.1 Food Consumption Groups

The analysis of food consumption scores summarised in Table 5.1 shows that an estimated 12.8% of the households in the sample had poor food consumption. A further 15.6% of households fall in borderline category, meaning if the situation deteriorates further, they could fall into the “poor” consumption category. As the assessment was conducted during the harvest season when food availability was high, it is expected household food consumption was near its peak. It is therefore expect that this will deteriorate as stocks become depleted, most especially in lean season. Thus, we would expect that some households in the “borderline” consumption group will lapse into the “poor” consumption category. It is therefore possible that the percentage of households falling into “poor” consumption category could rise to 25% or more at the peak of the hunger season in July-August 2010.

Table 5.1: Food Consumption Group - small amount⁹

Group	Frequency	Percent
Poor (≤ 25.5)	113	12.8
Borderline ($>25.5 - 36.5$)	138	15.6
Acceptable (>36.5)	634	71.6
Total	885	100.0

Source: Northern Lao EFSA (2009)

5.2.2 Pattern of Food Consumption

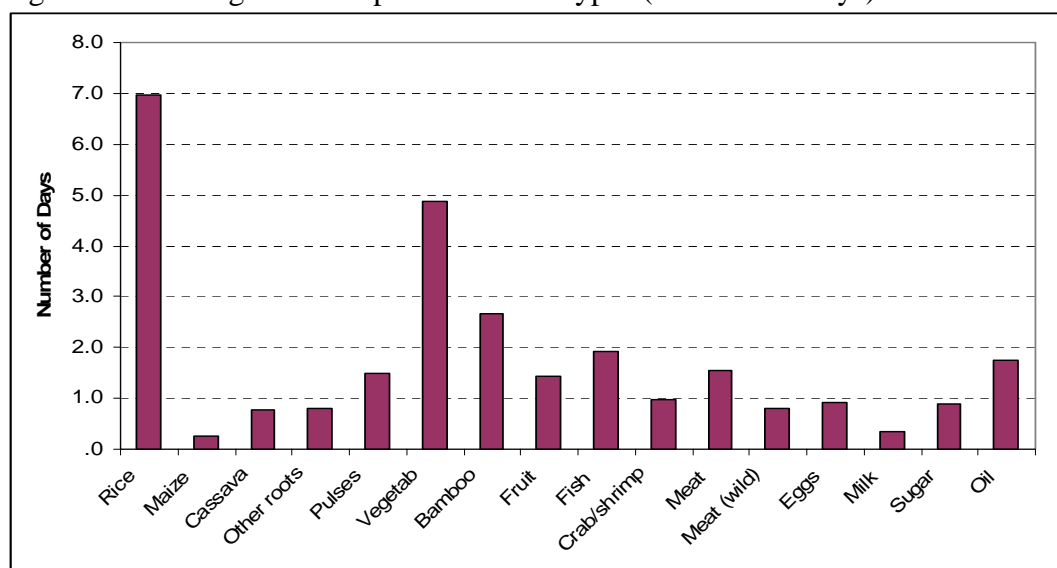
The average consumption pattern by households in the sample is presented in Figure 5.1. This reveals that the food item most frequently eaten by households was rice where nearly all households reported daily consumption. This was followed vegetables where the average consumption was five days, and bamboo/ mushrooms reported 2-3 days out of 7 days. Other food items were eaten less frequently – these include fish, oil, meat and pulses (which are the main sources of protein and oils) were all consumed between 1-2 days a week. The rest of the food items (maize, cassava, other roots, crabs and shrimps wild meat, eggs, milk and sugar) were reported consumed by very few households and averaged less than 1 day out of 7 for the total sample of households.

Further investigation of the consumption of each food items revealed that 99% of the households in the sample reported consuming rice daily while other cereals and starchy foods (tubers) were occasionally eaten. For example, some 91% of households did not eat any maize; 70% did not eat cassava and 72% did not eat other cereals. These very low consumption would seem to be at variance with reported levels of production. However, in Lao, these food items are generally regarded to be snacks and therefore may not have been declared. But it generally the case that maize is usually grown as cash crop that is used to feed livestock.

⁸ These thresholds are based on recent empirical work in Lao that takes into some consideration the quantities of certain food item, e.g. for such as oils

⁹ The analysis of consumption groups carried using the old cut-off points shows that the 7.1% of the households in sample have poor food consumption and 18.8% have borderline food consumption, leaving nearly three quarters (74%) in acceptable food consumption group.

Figure 5.1: Average Consumption of Food Types (Number of Days)



Source: Northern Lao EFSA (2009)

Consumption of pulses was low where they were consumed by just over one-third of the households in the sample. Only 10.4% of households reported daily consumption. Vegetable consumption was fairly high. Half of the households (50.4%) reported eating vegetables on daily basis and a further 30% reported eating 3-6 days on average. But about 8.9% did not any eat any vegetables at all. Bamboo and mushrooms were other important sources of vegetables, though less frequently consumed; 48% of the households reported eating it between 3-7 times. Only 7.8% of the households ate fruits daily while more than half (55%) did not eat any fruits at all.

A wide variety of sources for animal protein were reported, but overall consumption was low. The main source, fish, was consumed by one-third of households in the sample between 3-7 days but more than one-third (36.5%) did not consume it at all. The second main source of protein was meat, where one-quarter (24.8%) reported eating 3-7 days but 43% did not consume it at all. Crabs, shrimps and snails were the third important source but only 15.8% of the households reported eating in 3-7 days while nearly 72% did not consume it. Meanwhile eggs and wild animals were reported consumed for 3-7 days by 14.2% and 13.5% of the households, respectively. Dairy products were consumed by a small proportion of household, with about 90% of the households not consuming any at all, and 5.3% consuming in 3-4 days. Sugar was consumed by 28.5% of households, of which 16.1% did so between 3-7 days, while 71.5% reported not using the commodity at all. Oil consumption was generally low, where 28.7% of household had oil in 3-7 days, with 57.9% indicating they did not.

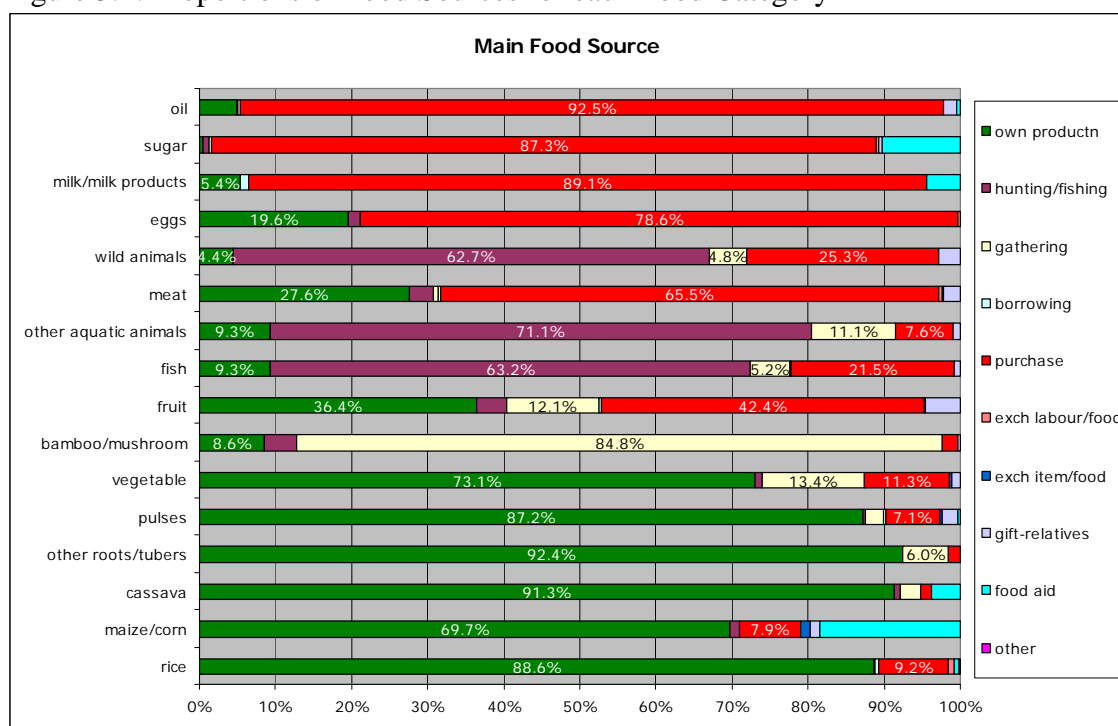
5.2.3 Household Food Sources

Figure 5.2 gives a breakdown of household the main sources for each food category investigated in the survey. The broad picture is that most of the households in the sample have secured their various food groups predominantly through “own production” or market “purchases”. Hunting/fishing and gathering are other important means for securing certain categories of food that are usually in the wild. Exchange of labour for food, exchange of other items for food, gifts from relatives and friends, borrowing and food aid have also featured among the options.

The main staple rice, was largely (88.8%) secured through own production, with 9.2% purchased and residual proportion obtained through food aid and other sources. Other energy foods (maize, cassava

and other tubers) were to a large extent produced by households themselves and small proportions purchased. However, a sizeable proportion of the maize/ Corn Soya Blend (CSB) was reportedly received as food aid.

Figure 5.2: Proportions of Food Sources for each Food Category



Source: Northern Lao EFSA (2009)

Vegetables were obtained through own production (73%), with 13.4% through gathering and 11.3% through purchase. Households obtained most of their bamboo and mushrooms through gathering (84.8%) and to lesser extent through own production and purchases. Meanwhile fruits were obtained through a combination of market purchases (42.4%), own production (36.4%) and gathering (12.1%).

The main sources of fish were reported to be households' own fishing (63.2%) and purchases (21.5%). Ordinary meat was largely secured through market purchases (65.5%) and own production (27.6%). The pattern of securing eggs was similar, but with a larger share being through market purchases (78.6%) and some 19.6% through own production. As would be expected 62.7% of meat from wild animals was through hunting and 25.3% was purchased. Milk and milk products were largely purchased (89.1%), with smaller shares coming from own production and food aid. Sugar was largely purchased (87.3%) and some of it was through food aid. Meanwhile 92.5% of the oil was through market purchases with a small proportion through own production.

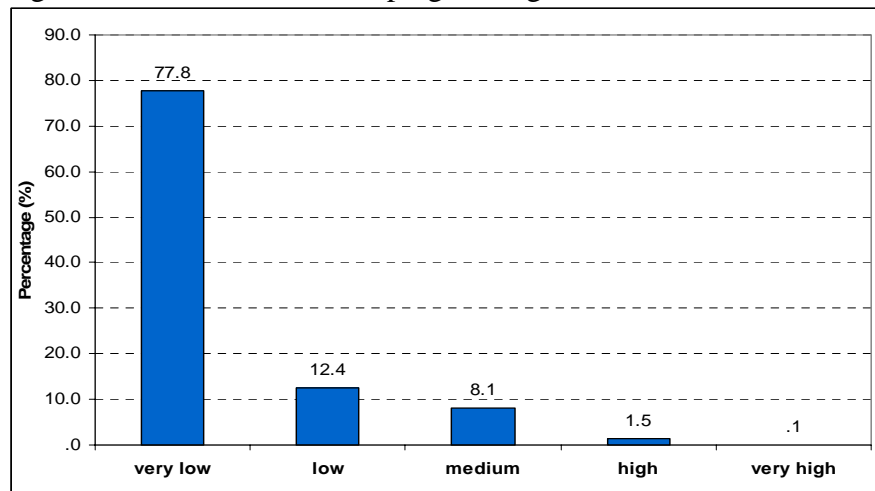
5.3 Coping Strategy Index/Group

Households adopt a wide range of coping strategies¹⁰ to cover their food gaps when faced with acute decline in food access. The analysis here is based on the responses to consumption coping strategies that include: i) relying on less preferred and less expensive foods; ii) limiting portion size at mealtimes;

¹⁰ The term coping strategies can be used very broadly to include compensatory livelihood activities (i.e. those invoked during crisis), sale of assets, begging, and changes in consumption (e.g. reducing meal sizes, skipping meals, etc.). However, the analysis in this section focuses on the latter.

iii) reducing the number of meals eaten in a day and; iv) restricting consumption by adults. The frequency with which each households has used each of these strategies (daily, pretty often i.e. 3-6 days per week, once in a while, i.e. 1-2 times a week, or never) were recorded and used to compute a composite Coping Strategy Index (CSI) for each household. The calculation also takes into account weights attached to each of the options.

Figure 5.3: Distribution of Coping Strategies



Source: Northern Lao EFSA (2009)

The CSI is calculated using scores assigned to the frequency of use of the different options. Daily usage attracts a score of 7, pretty often has a score of 4.5, once in a while has a score of 1.5, and the score for never is 0 (zero). Meanwhile weights are applied to the different options to indicate severity: reduction of consumption by adults attracts a score of 3 points, borrowing food carries a score of 2 points, and the rest (relying on less preferred food, reducing number of meals and limiting size of meal) are each assigned a weigh of 1.

The index computed for each was used to rank households. At one extreme, households that have used all options daily will fall into the “very high” coping strategy category. At the extreme, households that have never used any of the options will fall into “very low” coping strategy category. Using pre-established thresholds, households were grouped into five (5) coping strategy categorized: “very low”, “low”, “medium”, “high” and “very high” Coping Strategy Groups (CSGs).

The findings of the analysis of the survey data are presented in Figure 5.3 which shows that more than three-quarters (77.8%) of the households fall into “very low” coping strategy category. This means these households only used any of the coping options in a limited number of cases. It figure also reveals that 12.4% of the households fall into “low” category; and less than 10% of the households fall into medium to very high coping strategy category (i.e. 8.1% in medium, 1.5% in high and 0.1% in very high category). The latter group of households in effects used several of the coping options fairly frequently.

5.4 Household Food Insecurity by Province

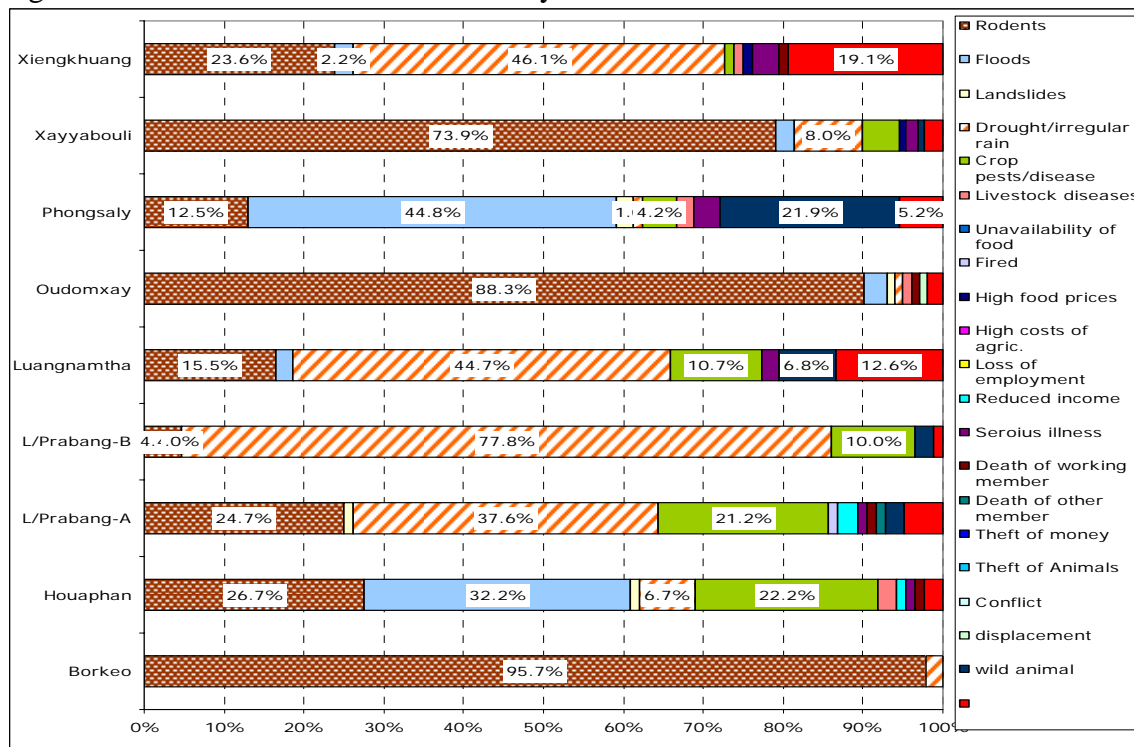
In this section, an attempt was made to present the general profile food insecurity for each province to provide a basis for comparison based on food consumption score and coping strategy index. The section also presents the prevalence and distribution of shocks by province and draws some links between shocks and the food security indicators.

5.4.1 Shocks and Household Food Security

The main shocks identified by households were analysed and presented in Figure 5.4 to show their prevalence and distribution across northern provinces. The percentages represent the share of households in each province indicating a particular shock as the main one to affect their food security situation. The findings broadly corroborate information obtained from key informants in the districts and clusters surveyed. The three main shocks are also presented as a map in Annex 9.

Figure 5.4 shows that the single most important shock reported by households was rodent infestation. This was reported by 95.7% of households in Bokeo, 88.3% of households in Oudomxay and 73.9% of households in Xayabouli. Rodent infestation was also reported in most other provinces, but with the lowest incidences (less than 20%) in Luang Prabang, Phongsaly and Luangnamtha. It should be noted that a number of these provinces were affected by rodent infestation in the previous year. Rodents affect food security through physical destruction of crops in the field and in storage.

Figure 5.4: Distribution of Main Shocks by Province



Source: Northern Lao EFSA (2009)

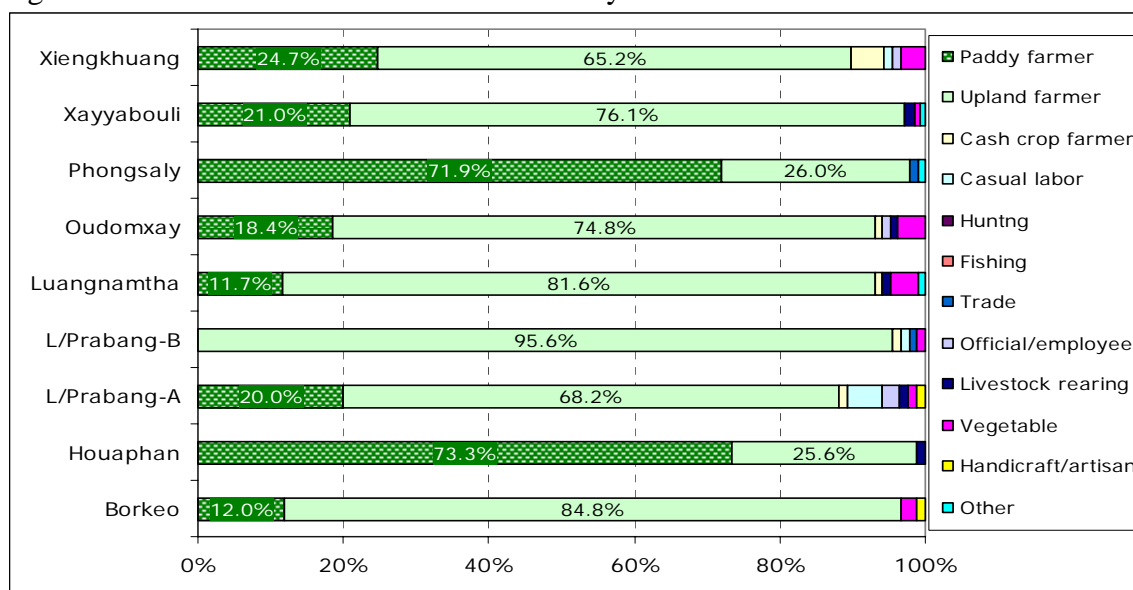
The second highest shock to be reported was “drought or irregular rainfall” where this was prominent in the provinces of Luang Prabang (B), Luangnamtha, Xiengkhuang and Luang Prabang (A), and to lesser extent in Xayabouli and Houaphan. The third important shock was “flood”, which mainly affected the provinces of Phongsaly and Houaphan, to a lesser extent Xiengkhuang and Luangnamtha. Other shocks that were reported but appear to be less widespread include crop diseases, pests and wild animals.

5.4.2 Household Livelihoods

Figure 5.5 shows the patterns of household livelihoods in each province, which clearly confirms rice production as the main livelihood in all provinces. The analysis further reveals that households in most provinces are primarily upland farmers, with the highest proportions in Luang Prabang (B) (95.6%), Bokeo (84.5%) and Luangnamtha (81.6%). In other provinces, the proportions remain high – between two-thirds and three-quarters of samples households, except in Houaphan and Phongsaly that have 25.6% and 26.0%, respectively.

Majority of the households in Houaphan and Phongsaly are paddy (lowland) farmers representing 73.3% and 71.9%, respectively. Other secondary, but important livelihoods include vegetable production (16.3%), cash crop production (8.7%), casual labour (6.9%) and livestock rearing (5.7%) of the total number of households in the sample. The provinces with the highest shares of other non-rice livelihoods are Luang Prabang (A) (11.8%), Xiengkhuang (10.1%) and Luangnamtha and Oudomxay each with 6.8% shares.

Figure 5.5: Pattern of Household Livelihoods by Province

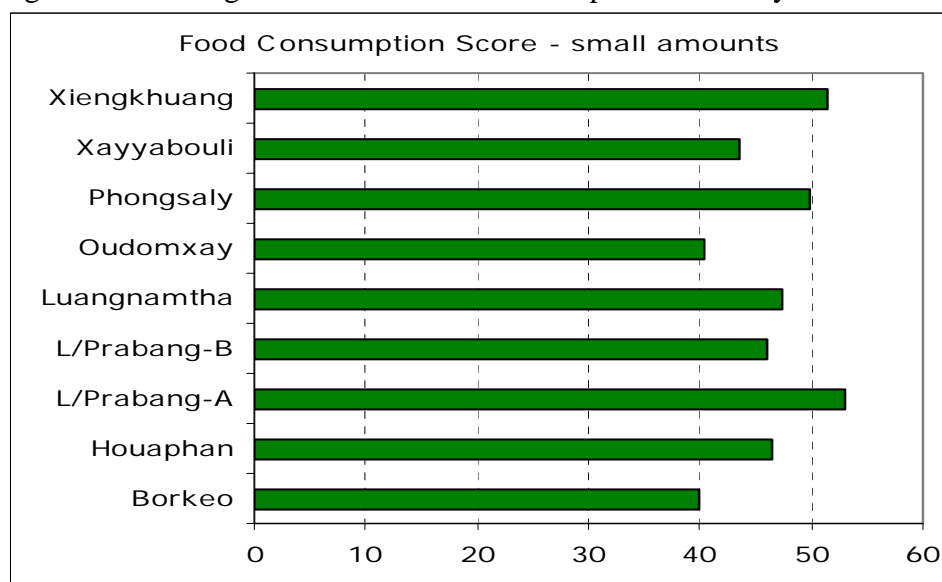


Source: Northern Lao EFSA (2009)

5.4.3 Food Consumption Score

The average household food consumption scores by province (Figure 5.6) is lowest Bokeo and Oudomxay, which is consistent with the higher proportions of households in “poor” and “borderline” consumption categories compared with other provinces.

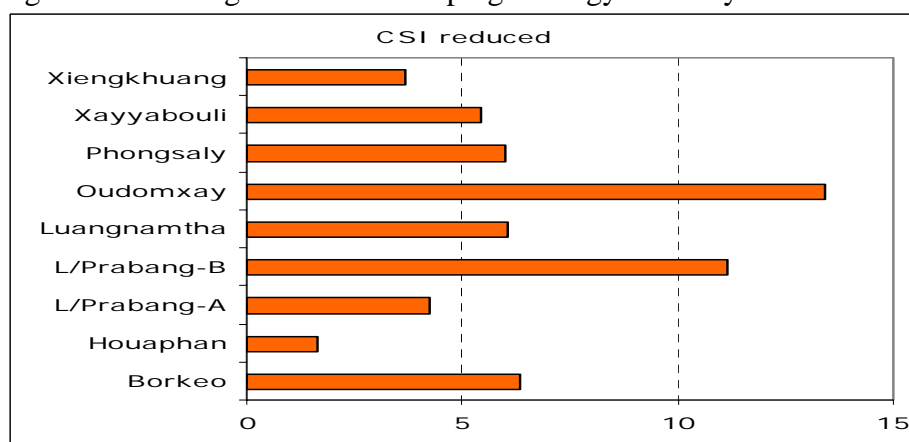
Figure 5.6: Average Household Food Consumption Scores by Province



Source: Northern Lao EFSA (2009)

5.4.4 Coping Strategy Index

Figure 5.7: Average Household Coping Strategy Index by Province



Source: Northern Lao EFSA (2009)

Table 5.2: Coping Strategy Index Categories by Province

Province	Very Low	Low	Medium	High	Very High	<i>Medium to Very High</i>
Bokeo	77.2%	9.8%	12.0%	1.1%	0.0%	13.0%
Houaphan	98.9%	1.1%	0.0%	0.0%	0.0%	0.0%
L/Prabang-A	92.9%	2.4%	4.7%	0.0%	0.0%	4.7%
L/Prabang-B	61.1%	20.0%	13.3%	5.6%	0.0%	18.9%
Luangnamtha	82.7%	9.6%	6.7%	1.0%	0.0%	7.7%
Oudomxay	51.5%	23.3%	23.3%	1.0%	1.0%	25.2%
Phongsaly	71.6%	23.2%	3.2%	2.1%	0.0%	5.3%
Xayabouli	80.1%	11.8%	7.4%	0.7%	0.0%	8.1%
Xiengkhuang	87.6%	9.0%	1.1%	2.2%	0.0%	3.4%
Average	77.8%	12.4%	8.1%	1.5%	0.1%	9.7%

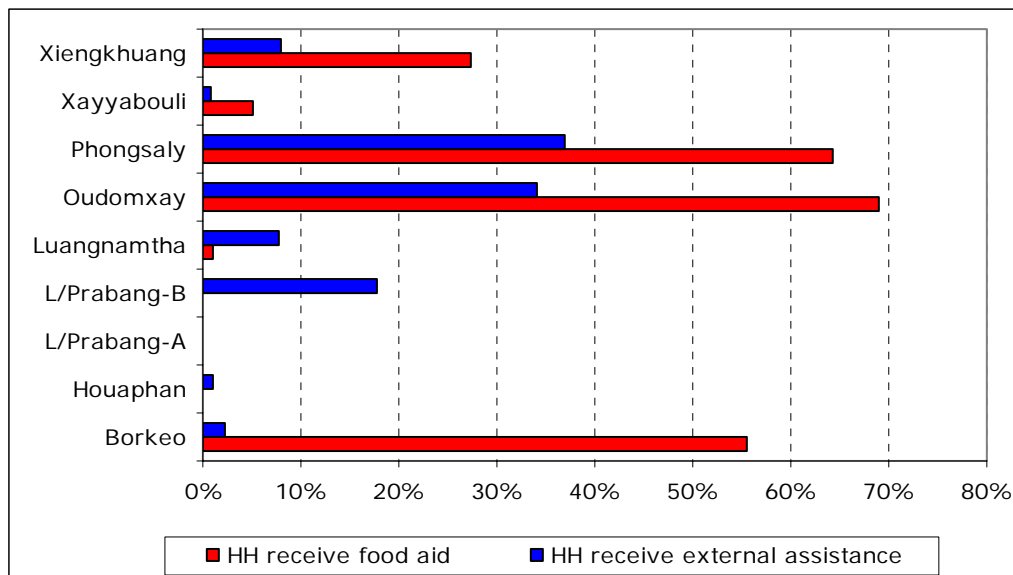
Source: Northern Lao EFSA (2009)

Oudomxay emerges with the highest score, followed by Luang Prabang (B), and by Bokeo, Lunagnamtha, Phongsaly, Xayabouli, Luang Prabang (A). Xiengkhuang and Houaphan had the least scores, meaning the households in these provinces employed the least coping options.

The representation of the provincial distribution of coping strategies (Table 5.2) reveals that only Oudomxay had households (1%) using “very high” coping strategies. It also shows that the average percentage of households using “high” coping strategy for all provinces is 1.5%, with the highest percentage found in Luang Prabang (5.6%). But when “very high”, “high” and “medium” categories are combined (presented in the last column), the percentage is highest in Oudomxay at 25.2% followed by Luang Prabang (B) at 18.9% and Bokeo at 13.0%. Other provinces fall below 10%; the only exception is Houaphan where there are no households in the three coping strategy categories.

5.4.5 Distribution of Food and Other Assistance

Figure 5.8: Food and Other Assistance by Province

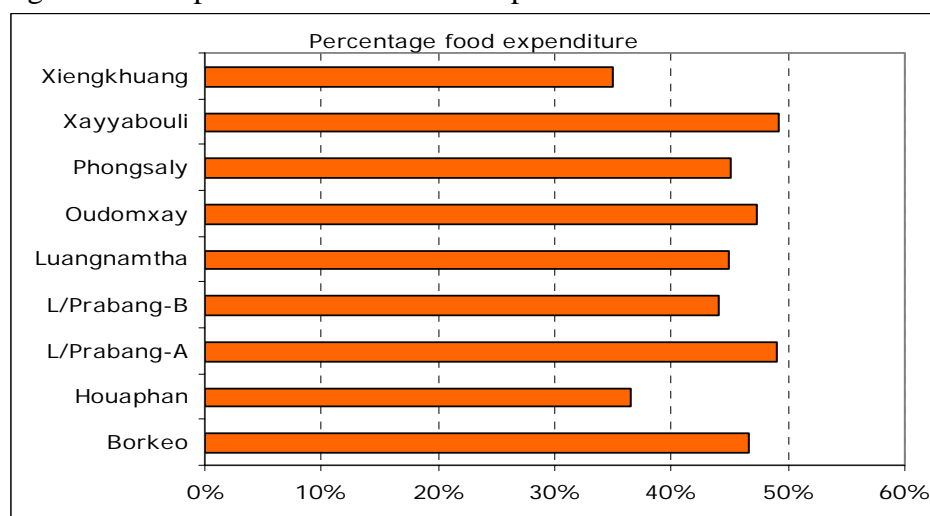


Source: Northern Lao EFSA (2009)

Households in the survey were asked if they received food assistance and any other types of assistance. The breakdown according to province (Figure 5.8) shows that the highest percentages where food assistance had been provided to households were Oudomxay, Phongsaly (65%) and Bokeo (57%), with smaller percentages in Xiengkhuang, Xayabouli and Luangnamtha. Meanwhile other types of assistance were provided to households in Phongsaly, Oudomxay, Luang Prabang (B), Xiengkhuang and Luangnamtha, with smaller percentages in Bokeo, Houaphan and Xayabouli, but neither food nor other types of assistance were reported in the sampled districts in Luang Prabang (A). Notwithstanding the food assistance, Oudomxay and Bokeo were shown to have comparatively low average food consumption scores. This would suggest the situation could have been worse, although it should also be noted that food assistance represented a small fraction of household food access and its contribution to improving the FCS was generally low.

5.4.6 Household Expenditure on Food

Figure 5.9: Proportion of Household Expenditure on Food



Source: Northern Lao EFSA (2009)

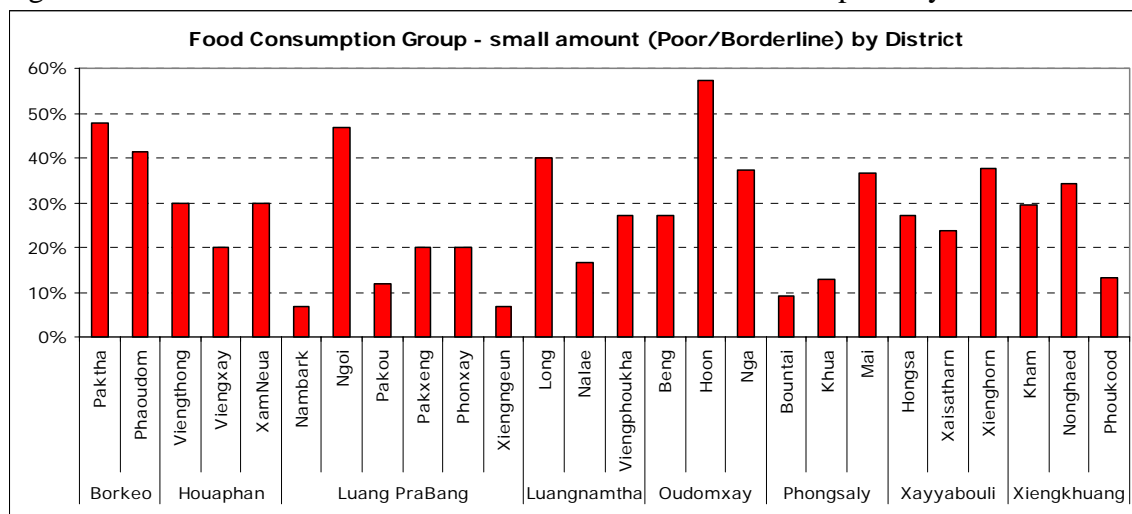
The proportion of household expenditure on food by province (Figure 5.9) shows small variation. This would seem to reflect a general homogeneity in the livelihoods that is dominated by farming and where most households produce their own food. The figure shows that Xayabouli and Luang Prabang have the highest percentages of just less than 50%, followed closely by Oudomxay, Phongsaly and Luangnamtha, all above 40%. Xiengkhuang and Houaphan have the lowest percentages that fall between 30-40%. It should be noted that the percentage of purchase of food items such as sugar, oil, milk, eggs and fruits are large; but these commodities are consumed by very few households.

5.5 Household Food Security at District Level

5.5.1 Food Consumption Score

To rank the extent of food insecurity, the combined percentages of households with “poor” and “borderline” food consumption for each district is computed and presented in Figure 5.10. This reveals that the districts in the sample with the largest proportions of households with “poor” and “borderline” food consumption were Hoon and Nga (in Oudomxay), Paktha and Phaoudom (in Bokeo), Ngai (Luang Prabang), Long (in Luangnamtha), Xienghorn (in Xayabouli), Maj (in Phongsaly), Nonghaed and Kham (in Xiengkhuang) and Viengthong and XamNeua (in Houaphan).

Figure 5.10: Households with Poor and Borderline Food Consumption by District

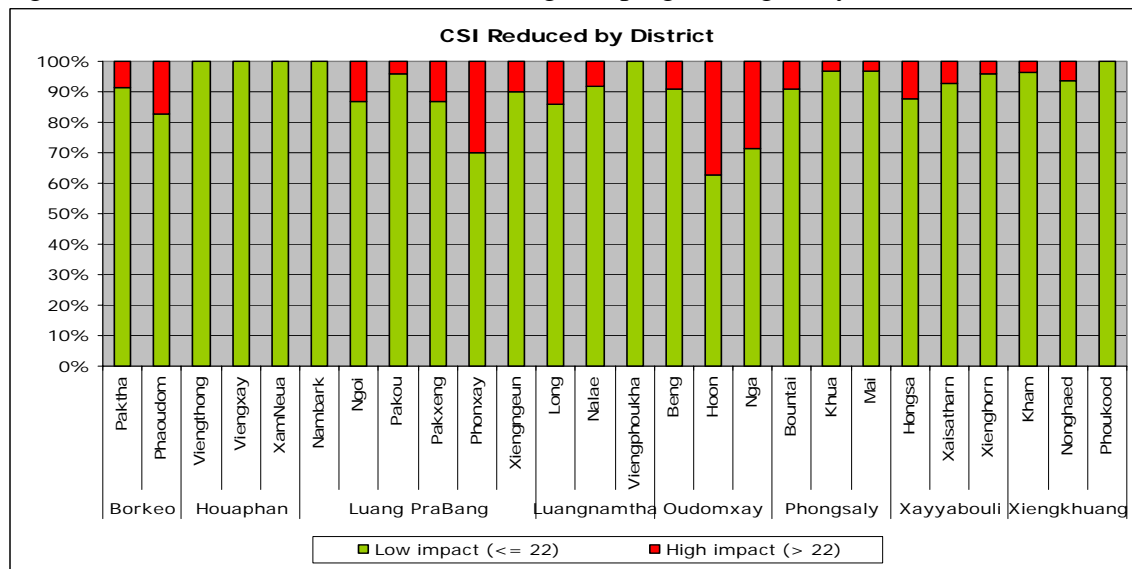


Source: Northern Lao EFSA (2009)

5.5.2 Coping Strategy Index

The coping strategy index for each district is presented as Figure 5.11. The findings show that high coping strategy index was most predominant in Hoon and Nga (in Oudoxay), Phongsay, Pakxeng and Xiengngeun (in Luang Prabang), Long (in Luangnatha), Phaoudom and Paktha (in Bokeo) and Hongsa (in Xayabouli).

Figure 5.11: Households with Low and High Coping Strategies by District

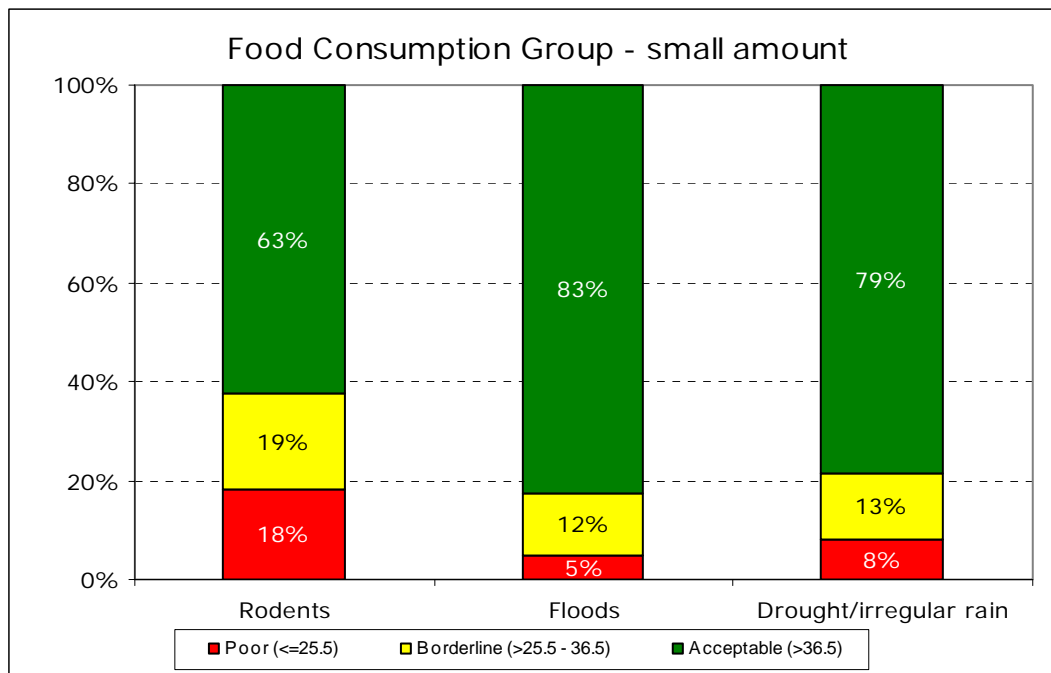


Source: Northern Lao EFSA (2009)

5.5.3 Association between shocks and FCS and CSI

The prevalence of poor, borderline and adequate food consumption were crossed with the three main shocks and the findings are presented in Figure 5.12.

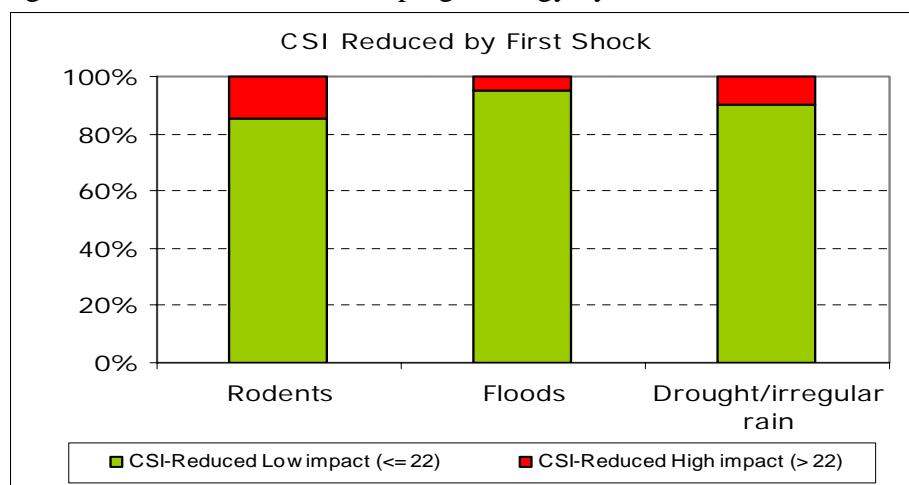
Figure 5.12: Distribution of Food Consumption Score by Shock



Source: Northern Lao EFSA (2009)

It shows that the proportion of the “poor” and “borderline” food consumption categories were disproportionately higher (37%) among households affected by rodent infestation, compared to 21% of households affected by drought or irregular rainfall. The percentage is lowest among households affected by flood (at 17%). In terms of the numbers of food insecure, this association provides some indications that rodent infestation had greater relative importance followed by drought/ irregular rainfall and floods in third place.

Figure 5.13: Distribution of Coping Strategy by Shock



Source: Northern Lao EFSA (2009)

Similar analysis using coping strategies by cross-tabulating the main shocks with coping strategy index shows that the proportion of households that adopted the highest coping strategies were those affected by rodent infestation. This is followed by drought or irregular rainfall and by floods in third place (see Figure 5.13).

5.5 Profiles of Household Food Consumption

Figure 5.14 presents the findings of a disaggregation of food consumption groups based on gender of household head, education group, whether a household head is single or with spouse, and according to ethnicity to understand the characteristics of food insecure household.

5.5.1 Sex of Household Head

The percentage of female headed households in the “poor consumption” category was found to stand at 14.8%, slightly higher than for male headed households at 12.6%. The percentages of male headed households in the “borderline” and “acceptable” categories are slightly higher than for female headed ones. The overall picture appears to be that gender of household heads does not appear to very striking impact on consumption.

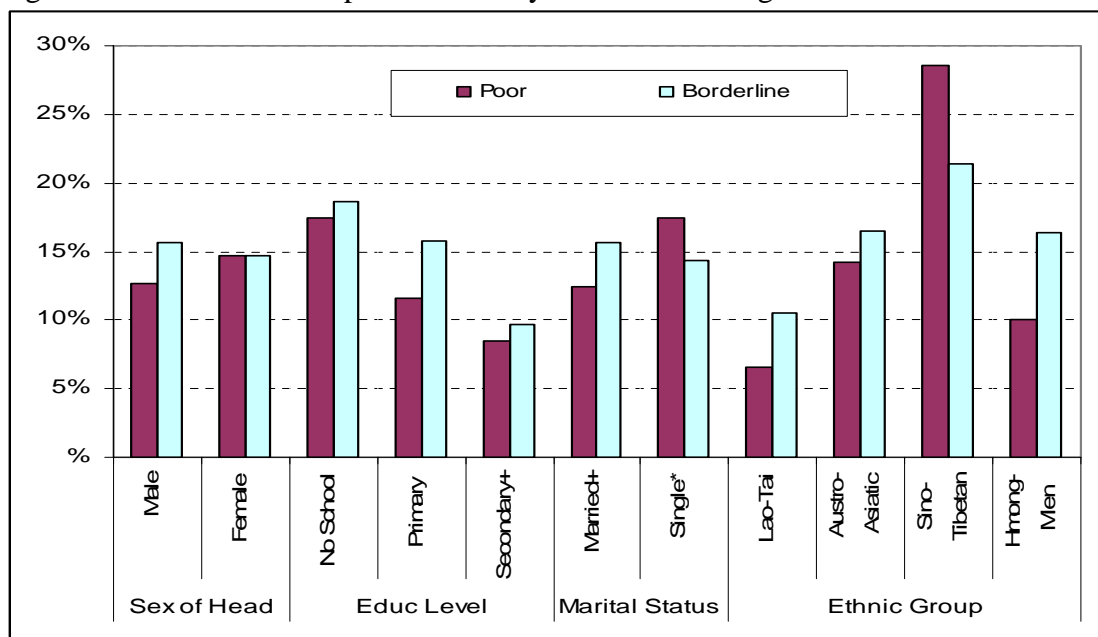
5.5.2 Education

There are distinct differences in household food consumption between the three main categories of education, showing a strong positive correlation between education and the education of household heads. Households whose heads had no formal education were shown to have the poorest food consumption scores, followed by households whose heads had primary education. On the other hand, households with secondary education or above have better overall food consumption. This pattern is reflected across all three food consumption categories where 17.5% of household heads with no formal education had the largest proportion of “poor” consumption in comparison with 11.5% and 8.4% for primary and secondary (and above) levels of education. It is also shown that 81.8% of the households with secondary level education had “adequate” consumption compared to 72.6% for primary and 63.9% for no education levels, respectively. The pattern conforms to a general fact that education is positively correlated with better livelihood options and better decisions of food consumption.

5.5.3 Married and Single

Married households (comprising married and co-habiting) were found to have much better consumption profile than for single (defined here as comprising widowed, separated, divorced or single). Some 12.4% of married households were found to have “poor” consumption compared to 17.5% for single headed households. Equivalent comparison for borderline with 15.6% versus 14.3%; and for “acceptable” these are 72.0% for married in comparison with 68.3% for singles. This pattern is consistent with the fact that households with more members working to generate incomes would lower dependency ration and thereby have better food access and food consumption.

Figure 5.14: Food Consumption Profile by Household Categories



Source: Northern Lao EFSA (2009)

5.5.4 Ethnicity:

There emerged some differences in consumption according to ethnicity, where Sino-Tibetans have emerged with the largest proportion of “poor” consumption (28.6%), followed by Austro-Asiatic with 14.2%, Hmong-Mien at 10.0% and Lao-Tai with 6.6%. The percentages in the “borderline” category are broadly along the same pattern with Sino-Tibetans in the worst position with a proportion of 21.4% followed by Astro-Asiatic, Hmong-Mien and Lao-Tai at 16.5%, 16.4% and 10.5%, respectively. The findings are consistent with those in the March 2009 EFSA which concluded that ethnic minorities in the high upland farming were the most affected.

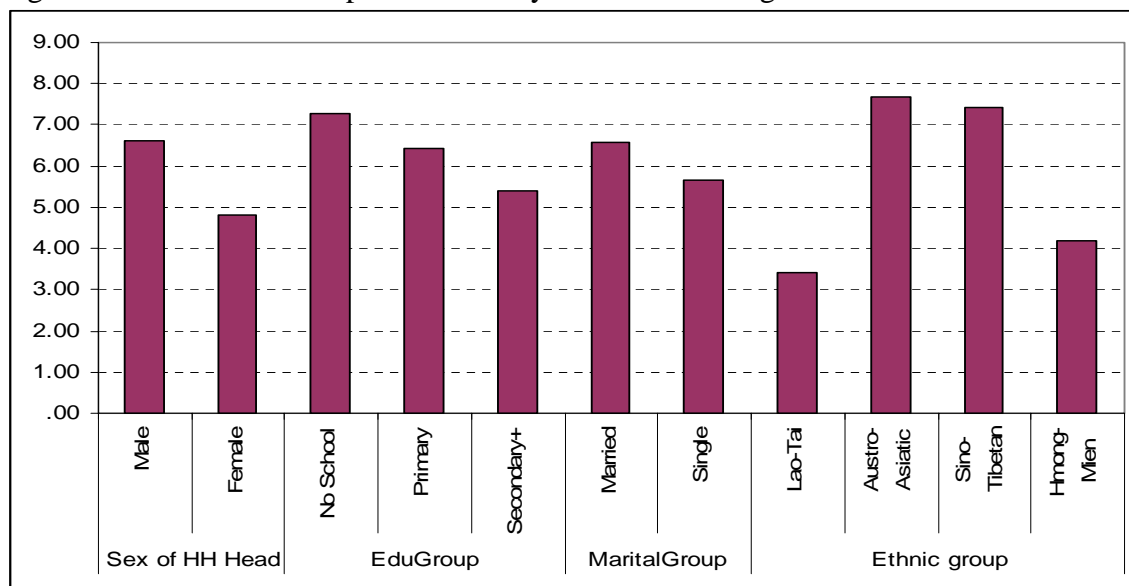
5.6 Profiles of Household Coping Strategies

Figure 5.15 shows the findings mean coping strategy index scores by household categories including gender of household head, education group, “single” or “couple”, and according to ethnicity.

The findings suggest a lower mean coping strategy score for female headed households compared with male-headed households, which is surprising in view of the fact that female headed households were earlier shown to have poorer food consumption.

In the case of levels of education, the mean coping strategy score is highest among households suggesting they used coping strategies most compared with others. This group is followed by households whose heads had primary level education. Those with secondary education (and above) had the least mean coping index scores, suggesting they were more likely to use less coping options than the other two.

Figure 5.15: Food Consumption Profile by Household Categories

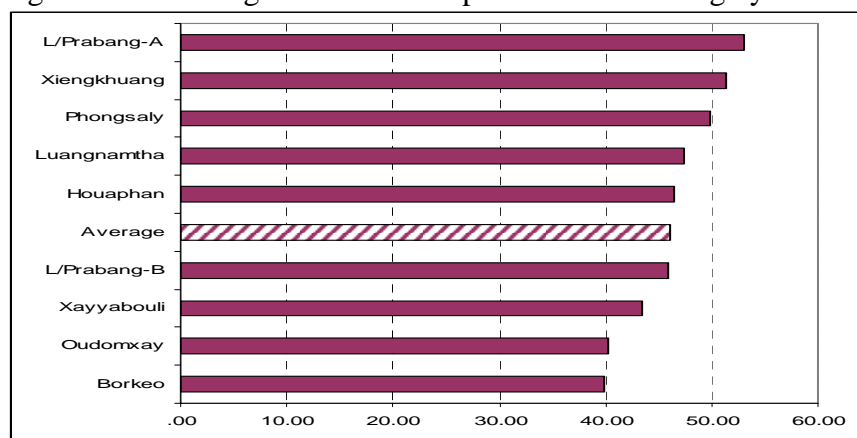


Source: Northern Lao EFSA (2009)

5.7 Household Food Insecurity by Province

The provinces with the poorest (low) food consumption score depicted earlier (and reproduced in below) shows that that the provinces that have the poorest food consumption status is Bokeo followed by Oudomxay, Xayabouli and Luang Prabang in that order. These provinces have average food consumption score below the sample average. Houphan and Luangnamtha are marginally above the average. A likely deterioration of food consumption during the hunger season will affect more households in these provinces.

Figure 5.16: Average Food Consumption Score Ranking by Province



Source: Northern Lao EFSA (2009)

The ranking of coping strategy index scores provides less clear picture, but does reveal that Oudoxay, Luang Prabang, Bokeo Luangnamtha and Xayabouli fall below or close to the sample average. It should be noted that Bokeo, Oudoxay, Luang Prabang have appeared in both cases, which this reinforces their position as the provinces with some of the poorest food security indicators.

The distribution of the main shocks (Table 6.2) reveals that rodent infestation, drought/ erratic rainfall and floods affected different provinces differently. Rodent infestation was most reported in Bokeo, Oudomxay and Xayabouli, to lesser degree in Luang Prabang, Phongsaly and Luangnamtha. Drought or erratic rainfall was most reported in Luang Prabang, Luangnamtha and Xiengkhuang, with lesser degree in Xayabouli and Houaphan. Meanwhile floods were more widespread in Phongsaly and Houaphan, but Xiengkhuang and Luangnamtha were also affected. However, the table shows, many of the provinces were affected by multiple shocks. However, this should not necessarily imply greater levels of household food insecurity.

Table 6.2: Main Shocks & Provinces and the Districts with Poor FCS and CSI

Main Shock	Province	Food Consumption Score (FCS)	Coping Strategy Index (CSI)
1. Rodent Infestation	1. Oudomxay	○ Hoon ○ Nga	○ Hoon ○ Nga
	2. Bokeo	○ Paktha ○ Phaoudom	○ Phaoudom ○ Paktha
	5. Xayabouli	○ Xienghorn	○ Hongsa
2, Drought/erratic rain	3. Luang Prabang	○ Ngai	○ Phongsay ○ Pakxeng ○ Xiengngeun
	4. Luangnamtha	○ Long	○ Long
	7. Xiengkhuang	○ Nonghaed ○ Kham	○
3. Floods	6. Phongsaly	○ Maj	○
	8. Houaphan	○ Viengthong ○ XamNeua	○

Source: Northern Lao EFSA (2009)

The table also presents a summary of the districts with poor food consumption as well as those with very high coping strategy scores. These broadly show that most districts that had poor food consumption score were those affected by rodent infestation, followed by the districts that experienced drought or erratic rainfall, but to lesser degree the districts that experienced floods. The pattern appears similar in the case of high coping strategy index – with rodent infested districts recording some of the highest scores, followed by drought and erratic rainfall and by floods in the third place.

The reveals a striking association between poor food consumption and high coping strategy index scores. This is particularly the case in the rodent infested districts of Hoon and Nga (in Oudomxay), and in the districts of Paktha and Phaoudom (in Bokeo). In the case of drought and erratic rainfall, this association appears in the district of Long in Luangnamtha Province, but remains less clear in the rest of the districts and in the flood affected provinces and districts. The districts featured above show some food insecurity and the case is strongest in the case of those that have features in both columns.

6 Conclusions and Recommendations

6.1 *Conclusions:*

The assessment confirms that households were affected by a wide variety of shocks, the most severe was rodent infestation and others include drought and erratic rainfall and floods. The analysis of food consumption score confirms that 12.8% of the households in the sample had poor food consumption and a further 15.6% had borderline consumption. As the assessment was conducted during peak main harvest season when household consumption was at its peak, it is highly likely that most of the households in the borderline consumption category will fall into the “poor” category. It is also possible, especially at the peak of the hunger season (June to September) that some households in adequate food consumption group could also fall into “poor” consumption category.

It is difficult to predict the changes with certainty at this stage, but the proportion of food insecure households at the peak of the hunger season could rise to 30-50%. However, this is expected to vary from one province to another and between districts in each province.

But it is expected that the situation will deteriorate most markedly in the provinces and districts with already poor consumption and those already demonstrating relatively higher levels of coping. The provinces in the severe category include Bokeo, Oudomxay, Xayabouli and Luang Prabang in that order. These provinces have average food consumption score below sample average. Houphan and Luangnamtha with average scores marginally above sample average are those likely to witness some deterioration in food consumption during the hunger season.

Rodent infestation was most reported in Bokeo, Oudomxay and Xayabouli, to lesser degree in Luang Prabang, Phongsaly and Luangnamtha. Drought or erratic rainfall was most reported in Luang Prabang, Luangnamtha and Xiengkhuang, with lesser degree in Xayabouli and Houaphan. Meanwhile floods were more widespread in Phongsali and Houphan, but Xiengkhuang and Luangnamtha were also affected. But many of the provinces were affected by multiple shocks, and this could lead to greater food insecurity if the shocks are particularly strong.

The findings also show that some of the districts with poor food consumption and also have very high coping strategy scores. Broadly, most of the districts that had poor food consumption score were those affected by rodent infestation, followed by districts that experienced drought or erratic rainfall, but less for the districts that had floods. The pattern appears similar in the case of high coping strategy index – with rodent infested districts recording some of the highest scores, followed by drought and erratic rainfall and by floods in the third place.

There is a striking association between poor food consumption and high coping strategy index scores. This is particularly the case in rodent infested districts of Hoon and Nga (in Oudomxay), and in the districts of Paktha and Phaoudom (in Bokeo). In the case of drought and erratic rainfall, this association appears in the district of Long in Luangnamtha Province. The association is less clear in the rest of the districts and in the flood affected provinces and districts.

6.2 Recommendations:

In the light of the findings confirming the incidence of the shocks and their impact, it is recommended programmes to assist those who are/ will be food insecure until the next harvest season. The main purposes would be to save lives and reduce acute malnutrition in the cases where food consumption is “poor” and likely to deteriorate in the run up to the lean season between June and August 2010.

Importantly, the assistance should aim to protect livelihoods and enhance resilience and early recovery. It is important to note that the shocks analysed here followed other shocks of same or similar magnitude in the previous and in doing so undercut the recovery process. The latter assistance would therefore ensure that affected households will have the opportunity to make recovery.

The instruments for intervention should be selected such that they should ensure high chances for the success of programme. In this regard, meeting the immediate nutritional requirements for the food insecure would necessitate the provision of food assistance. The options would be either as general food distribution in locations where the majority of the population have been affected, or as Food For Work or Food For Asset where fewer households are affected and those affected are able to participate.

The recommendation of food here takes into consideration the fact that availability could be a factor and markets may not be functioning particularly well. However, the option providing cash or vouchers should be explored based on better understanding of the market situation, especially with regards to food availability, market functioning and some good expectation of price stability.

Where FFW/ FFA activities will be undertaken, this should be based on projects that can make greatest impact on recovery. This should of necessity be based selection on existing main livelihoods – in this case farming would be among the top choices. But in the light of the fragility of upland rice production, other options that would provide viable diversification should be considered. Discussions with key informants highlighted poor sanitation, absence of schools, etc. and these would be ideal choices. Thus, consideration should also be given to projects that contribute to building community assets (roads, schools, etc) and such projects should be selected in full consultation with communities.

In view of the fact that the shocks are also expected to lead to low availability of seeds, the provision of livelihoods inputs (including seeds) would be useful.

It is clear that the situation will be evolving between now and the harvest season, and this calls for field level monitoring to ensure appropriate measures are taken timely, and this is recommended. Monitoring food prices of the main food commodities, household consumption patterns and coping strategies offer some of the ways for doing this.

Annexes

Annex 1: Terms of Reference

LAO, PDR: Emergency Food Security Assessment October/November 2009

Background

Many villages in the northern part of Lao People's Democratic Republic (Lao, PDR) experienced shocks during the past two years. The shocks include floods, rodent infestation, and more recently early rains that delayed land preparations in upland rice farming. It is believed these shocks (or their combination) have affected production and are contributing to increasing levels of household insecurity.

- Early rains in 2009 hampered land preparation for upland rice farming and led to delayed sowing and lower than expected production in Klangkhouang, Houaphan and Luangprabang provinces.
- Seasonal flash floods and land slides in 2009 affected upland food production in the provinces of Vientiane, Oudomxai, Luangprabang and Phongsali. This has come after one year of very severe floods in 2008 that caused damages in Vientiane Province and surrounding areas.
- Between April and October 2008, there was a major outbreak of rodent infestation that caused severe damage to upland production in the provinces of Oudomxai, Luangprabang, Houaphan, Phongsali, Luangnamtha, Bokeo and Xyyanbouli. Reports coming from the field in 2009, rodent infestations continue in some areas that were affected in 2008.
- In addition, many farmers are shifting towards commercial agriculture and this is creating food insecurity. This is compounded by falling cash crop prices that translate into reduced incomes that is likely to increase food access insecurity, particularly in vulnerable rural areas where transition to large scale commercial farming is underway. This is taking place in the backdrop of high rice prices that are creating food access problems for those households who rely on market purchases that is affecting both the quantity and quality for household consumptions.

There are serious concerns being raised about the outcomes of this year's harvest of upland production. Overall, it is believed the cumulative impact of these shocks on the food security situation of many poor households in the coming consumption year (October 2009 to September 2010) could be severe. WFP Field staff have in recent times reported rising levels of food insecurity in some districts. In March 2009, WFP undertook Rapid Emergency Food Security Assessment (EFSA) on the rodent infestation and found that approximately 5% of the population in the affected provinces became food insecure and many villagers had resorted to consumption coping strategies including reducing the quantity or quality food or skipping meals. It is in this broad context that WFP plans to undertake an EFSA in collaboration with Government and partners.

Purpose and Objectives of the assessment

Main Objective:

The purpose of the assessment is to establish the extent to which household food security has been impacted by the shocks (floods, rodent infestation and early rains); and how the food security situation will evolve during the 2009/2010 coming consumption year. This is expected to provide important information that will enable the Government and humanitarian partners (including WFP) to plan any necessary interventions.

Specific objectives:

- Assess the extent of household exposure and impact on their food production
- Establish if, and how many households (persons) could become food insecure in 2009/2010
- Determine what categories of persons are likely to face food insecurity and reasons for this
- In the event food insecurity, determine:
 - what response measures would be most appropriate to mitigate food insecurity
 - what magnitude of assistance be need
 - what period/ duration such assistance would be needed.

Other objectives:

- The EFSA is expected will provide important information towards anticipated joint CFSAM with FAO – especially for the household food access part of CFSAM analysis.
- This assessment be undertaken in close collaboration with Government and partners and thereby help to foster stronger partnership on food security in the country.
- It is also expected that it will contribute towards building the capacity in food security assessments for WFP field staff, and staff of key Government Ministries of Labour & Social Welfare and Agriculture and Forestry, and partner organisations – to ensure appropriate capacity for timely assessments in the future.

Methodology

The methodology that used for this assessment will entail: consultations with stakeholders; review of secondary information; and primary data collection using household questionnaire, key informant interviews and focus group discussions. Information gathered will be analysed and reported using WFP's Emergency Food Security Assessment framework and procedures.

Stakeholder consultations:

This entails consultations with relevant stakeholders – Government, other UN Agencies (FAO, UNICEF, etc) Donors and NGOs, etc. during the initial stages of the assessment. The consultations will help build consensus and refine the scope of the assessment; and help gather background information including secondary data.

This will also be an opportunity to establish which of the partners might be able and willing to participate in the assessment, including the assigning of staff and other resources (e.g. vehicles) to the assessment.

Secondary data collection:

A thorough review of available secondary information will be undertaken. This will provide the context for this assessment, but also help identify key issues to inform the design of the assessment and to interpret the findings, conclusions and recommendations. There is a wealth of secondary information to draw from including: WFP sources (various VAM products - CFSVA, DVAs, 2009 Rodent EFSA, etc); Government sources (e.g. MAF/FAO-led Rapid Assessment Survey); and from a wide range of other organizations/ institutions working in the country.

Primary data collection

The principal purpose for primary data collection will be to fill gaps in data requirement as shall be identified in analysis plan, and highlighted by the secondary data review. The methods for primary data collection will include those discussed below, that will employ a wide range of PRA tools as determined appropriate for the context:

- Household Questionnaire: this will be an adaptation of the generic EFSA household questionnaire to the context, and building on the tools used in recent assessments in the country.
- Key informant interviews (KI): consisting of knowledgeable persons in specific areas for the assessment – such provincial and district level officials, agricultural officers, etc. These will be based on checklists developed to capture the key issues of interest – which represent information gaps that need to be filled.
- Focus group discussions (FGD): this constitutes group discussion using checklists of key issues of interest. The choice of focus groups will be determined on the requirement as identified in the analysis plan.
- Observations: field observations will be carried out and recorded as an important part of fieldwork.

Limitations

This assessment will have inherent limitations which will have implications for the findings:

- Local disparities: it is likely that there will be differences between areas in terms of how much they were affected by shocks (some areas might have been severely affected by rodents, high prices, floods and early rains, or just by one of the shocks).
- Data limitations: information on upland rice production is very limited at best, and updated information on the food security situation in Laos is not readily available. These suggest very important role for the primary data collection; but this might not be easy to do effectively due to limited resources and staff availability.

Quality assurance

- Three-day training workshop will be provided to field teams – the training will include field testing of questionnaires and checklists; and field level protocols for team leaders and enumerators.
- In addition, the questionnaires and checklists will be translated in the local language to ensure a shared understanding and consistent delivery.

Expected outputs

The main output of this assessment will be a detailed analytical report on the food security situation that included clear recommendations and follow-up actions/ measures. The report will include an executive summary; and sections on: background; objectives; methodology and limitations; main findings; conclusions; and recommendations. Appropriate referencing of secondary information, tables and figures; and acknowledgements will be included. The final report will be shared with WFP partners in Laos and with WFP Regional Bureau in Bangkok and Headquarters in Rome. Debriefing sessions will be organised on the findings of the workshop with WFP Country Director and CO staff, and with key stakeholders in Vientiane.

Team composition, roles and responsibilities

The assessment will be conducted by WFP in close collaboration with Government, partners and stakeholders. WFP Laos Country Office will be supported by WFP regional staff from WFP Regional Bureau for Asia in Bangkok, and other WFP staff in other country offices in Asia. Field level data collection will be carried out with support from WFP field staff, Government staff from Central, Provincial and District levels; and staff of partner institutions. From the government side the main counterparts will be the Ministry of Labour and Social Welfare and the Ministry of Agriculture and Ministry of Labour and Social Welfare).

Following three days of training, the rest of field level data collection shall take a further 7-9 days. This will be followed by two days of team debriefing workshop in the field.

Coverage: The teams will gather primary data in all the 8 provinces that have been identified to be affected by the shocks. These provinces include Oudomxay, Luangprabang, Xayabouri, Bokeo, Luangnamtha, Huaphanh and Phongsaly.

Timing-line for assessment:

The assessment will take place in October/November 2009

Annex 2: Emergency Food Security Assessment: LAO, PDR 2009

INSTRUCTIONS:

A: Guidance: Introducing yourself and the purpose of the interview:

My name is _____ and I work for _____ (Government Department/ WFP/UNICEF/NGO name) and my colleague is _____ and works for _____. We are part of a team carrying out a survey in this area to gather information on the food security and overall well-being of the people living in this village. Your household is one of a few selected by chance from among all households to be interviewed. The information that you provide us will be combined with information from other households to help us understand the way the people are living and challenges that they face. This will be used to prepare a report.

This survey is voluntary; and the information that you provide will be kept confidential. For example, we will not ask or record your name; there will be no way to trace any information in the report. Will you please spare some time for the interview that will last around 45 minutes?

NOTE TO ENUMERATOR:

- *DO NOT suggest in any way that household entitlements could depend on the outcome of the interview, as this will prejudice the answers.*
- *Respondent should be the head or spouse of the household head.*

B: NOTES for Completing Questionnaire ID:

This provides a unique identification of each questionnaire that consists of six digits defined as follows:

ID |_|_| - |_|_| - |_|_|

- The first two boxes (left) stand for Team and Enumerator numbers, respectively. First digit represents Team (e.g. 1, 2 or 3) and Enumerator (e.g. 1, 2 or 3).
- The two middle boxes represent village number that the team visited (i.e. 01, 02, ...)
- The last two boxes represent questionnaire number by each Enumerator (e.g. 01, 02, 03, etc.)

EXAMPLE: 22-05-04: stands for: Team #2, Enumerator #2; Cluster #05; and Questionnaire #04.

SECTION 1 – DEMOGRAPHICS:				
Read - “May I ask you a few questions on the composition of your household?” (NB: For the purpose of this survey, a household is defined as people eating together)				
1.1 How many persons (in total) live in your household? _ _				
1.2 How many persons in your household fall in the following age groups? (write the number, if none write 00)				
Age group	Male	Female	1.3 Are any member disabled?	1.4 Have any members been chronically ill?
Under 5 years	_ _	_ _	_ _	_ _
5-14 years?	_ _	_ _	_ _	_ _
15-59 years?	_ _	_ _	_ _	_ _
Over 60 years?	_ _	_ _	_ _	_ _
Total	_ _	_ _	_ _	_ _

*Chronically ill means more than 3 months of continuous illness (write the number, if none write 00)

1.5	Do you have children of primary school-age (6-12 years)? (<i>circle</i>)	1=yes 2=no (If no, go to 1.8)
1.6	Are the children attending school? (<i>circle</i>)	1= Yes, all (If yes, go to 1.8) 2= Yes, not all 3= No
1.7	If any of the children is/are not attending school, what is the main reason? (<i>circle</i>)	1= Sickness/disability 2= Cannot afford (school fees, uniforms, textbooks) 3= NO school nearby or no place in nearby school 4= working to support household (domestic chores, work for cash or food) 5= Not interested in school 6= Other reasons (specify) _____

Health Status		
1.8	Did any family member have diarrhea during the last 2 weeks? (<i>circle</i>)	1 = Yes, children under 5 years 2 = Yes, person over 5 3 = Yes both, (children under 5 years and person over 5 years) 4 = No
1.9	Did any family member have fever / cough (ARI) during the last 2 weeks? (<i>circle</i>)	1 = Yes, children under 5 years 2 = Yes, person over 5 3 = Yes both, (children under 5 years and person over 5 years) 4 = No

SECTION 2 – HOUSING, TOILET FACILITIES, WATER SOURCE AND COOKING FUEL		
Housing		
2.1	Type of dwelling does this household live in? (Circle one based on observation)	1 = Private house (brick, cement) 2 = Private house (wood) 3 = Mixed (cement + wood) 4 = Hut 5 = Other (specify) _____
2.2	Do you own this dwelling? (<i>circle</i>)	1=Yes 2=No
Toilet Facilities		
2.3	Where do household members go for toilet? (<i>Circle</i>)	1 = Flush latrine/toilet with water 2 = Traditional pit latrine (no water)/Open pit 3 = Communal latrine 4 = None/bush
Water Sources		
2.4	What is the main source of drinking water for your household?	1 = Piped water 2 = Public tap 3 = Tube well/borehole 4 = Protected/common well 5 = Rain water 6 = Water tank 7 = River 8 = Pond

		9 = Canal	10 = Other (specify)_____
2.5	Do you treat your drinking water? (<i>circle</i>)	1 = Yes using chlorine 3 = Filtration	2 = Yes by boiling it 4 = No
2.6	How long does it take to collect water from the source? (return journey walking – in <i>minutes</i>) (<i>write "0" if within the house or dwelling</i>)	_____ minutes	
Cooking Fuel			
2.7	What is your main source of fuel for cooking? (<i>circle</i>)	1 = Fire Wood 3 = Gas 5 = Sawdust 7 = Other (specify)_____	2 = Electricity 4 = Kerosene 6 = Charcoal

SECTION 3 – HOUSEHOLD ASSETS, PRODUCTIVE ASSETS AND ACCESS TO CREDIT

		Types of Assets	Qty & unit	Types of Assets	Qty & unit	
3.1	Does the household own these assets? (<i>Circle and record quantity or number including its unit in space provided</i>)	1	Shovel/spade/Sickle	13	Stove (gas/fuel)	
		2	Fishing net	14	Generator (run by fuel/water)	
		3	Plough	15	Radio	
		4	Weaving tool	16	TV	
		5	Pounding mill (wood), foot or hand	17	Satellite	
		6	Rice mill (Electricity/fuel)	18	Video, CD player, speaker	
		7	Bicycle	19	Fan	
		8	Motorcycle	20	Refrigerator	
		9	Hand tractor	21	Electric rice cooker, pot, electric pan	
		10	Boat/canoe	22	Big fried pan	
		11	Sleeping mats	23	Telephone, mobile	
		12	Table, chair, bed	24	Other_____	
3.2	If your household is in need of financial credit, what sources would be available to you? (<i>Circle all that apply</i>)	01	Relatives / friends			
		02	Charities / NGOs			
		03	Local lender / pawn shop			
		04	Bank			
		05	Village fund			
		06	No place to borrow, no condition to borrow			
		07	Other, specify_____			
3.3	Do you normally borrow money to buy food or take food on credit?	01 = Yes		02 = No → 3.4		
3.4	If YES, in the last 2 months, how <u>often</u> did you borrow money to buy food or take food on credit? (<i>Circle one</i>)	01 = Once 02 = Two times 03 = Three times 04 = Four or more times 05 = Not borrow in the last 2 months				
3.5	Where can you buy and sell food and other commodities? (<i>Circle all that apply</i>)	1 = Village shop/village market 2 = Mobile traders 3 = District shop/district market 4 = Other, specify_____				
3.6	How the rice price is now compared to same time last year? (<i>Circle one</i>)	1 = Much higher 2 = Higher 3 = Same 4 = Lower 5 = Much lower				

3.7	How often does this market open?	01 = Daily 03 = Weekly	02 = 2 to 5 days per week 04 = Bi-weekly or monthly
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SECTION 4 HOUSEHOLD LIVELIHOODS /INCOME

4.1 What are your household's main livelihoods activities? **(List up to three activities in order of importance)**

First	□□□	1 = Paddy farmer Upland farmer	2 = 3 = Cash crop farmers (e.g. rubber, coffee, etc.)	7 = Trade 8 = Official/employee
Second	□□□	4 = Casual labor	5 = 6 = Fishing	9 = Livestock rearing 10 = Vegetable/crop garden 11 = Handicraft/artisan 12 = Other, specify _____
Third	□□□			

4.2 What main crops do your household produce?

First	□□□	1 = Paddy rice 2 = Upland rice	9 = Mulberry tree 10 = Sugar cane
Second	□□□	3 = Maize 4 = Long beans	11 = Vegetable 12 = Fruits
Third	□□□	5 = Cassava 6 = Jobs tear	13 = Tobacco 14 = Groundnuts and other nuts/seeds
Fourth	□□□	7 = Sesame 8 = Cardamom	15 = Other, specify _____

4.3 Does your household have sufficient upland and lowland to grow crops? What is the size? Please fill in information in the tables below

Low land rice production		Upland rice production	
4.3.1 Do you have sufficient access to land? 1 = Yes 2 = No		4.3.2 Do you have sufficient access to land? 1 = Yes 2 = No	
4.3.3 Total area available _____ hectares		4.3.4 Total area available _____ hectares	
4.3.5 Area cultivated this year _____ hectares		4.3.6 Area cultivated this year _____ hectares	
4.3.7 Was the area cultivated this year smaller, same or larger than last year? (circle) 1 = Smaller 2 = Same size 3 = Larger		4.3.8 Was the area cultivated this year smaller, same or larger than last year? (circle) 1 = Smaller 2 = Same size 3 = Larger	
4.3.9 If the area cultivated was lower this year, explain? _____		4.3.10 If the area cultivated was lower this year, explain? _____	
4.4 When did you plant rice this year? _____ What was the timing compared to usual? (circle) 1 = Earlier 2 = Same time 3 = Later		4.5 When did you plant rice this year? _____ What was the timing compared to usual? (circle) 1 = Earlier 2 = Same time 3 = Later	
4.6 How much rice do you expect to harvest? _____kg		4.7 How much rice do you expect to harvest? _____kg	
4.8 How does this compare with production last year? (circle) 1 = lower 2 = similar 3 = higher If lower than last year, what is the main reason? _____		4.9 How does this compare with production last year? (circle) 1 = lower 2 = similar 3 = higher If lower than last year, what is the main reason? _____	

4.10 How long do you expect your harvest last? _____ months

4.11 How long does your harvest usually last? _____ months

4.5	Do you own any farm animals? 1 = Yes 2 = No	
	If Yes, which farm animals? (state number where applicable, and write 00 if not owned) (DO NOT READ THE FOLLOWING LIST TO THE RESPONDENT!)	
	Livestock	Number
1	Cows / Bullocks	□□□□
2	Buffaloes	□□□□

3	Goats/sheep	□□□□
4	Poultry (Chickens/Ducks/geese)	□□□□
5	Horses	□□□□
6	Pig	□□□□
7	Other, specify _____	□□□□

SECTION 5 – EXPENDITURE

Read: "In the Past <u>MONTH</u>, how much money did you spend on the following items or services? (If goods were exchanged, please give value in Kip).		a. Did you spend in past one month 01 = YES 02 = NO (if NO, go to next item)	b. Estimate cash expenditure during the past one month (Kip) (write "-" if no expenditure).	c. Estimate credit expenditure during the past one month (Kip) (write "-" if no expenditure)
5.1	Rice	□	□□□□.□□□□	□□□□.□□□□
5.2	Corn	□	□□□□.□□□□	□□□□.□□□□
5.3	Wheat and other cereals/products (bread, biscuits, instant noodles)	□	□□□□.□□□□	□□□□.□□□□
5.4	Roots and tubers (such as cassava, potatoes, sweet potatoes (camote), gabi)	□	□□□□.□□□□	□□□□.□□□□
5.5	Pulses (beans, lentils, groundnuts)	□	□□□□.□□□□	□□□□.□□□□
5.6	Fruits	□	□□□□.□□□□	□□□□.□□□□
5.7	Vegetables, chili	□	□□□□.□□□□	□□□□.□□□□
5.8	Milk & Milk products	□	□□□□.□□□□	□□□□.□□□□
5.9	Eggs	□	□□□□.□□□□	□□□□.□□□□
5.10	Meat and meat products (chicken, beef, pork, other meat)	□	□□□□.□□□□	□□□□.□□□□
5.11	Fish and marine products	□	□□□□.□□□□	□□□□.□□□□
5.12	Coffee, cocoa and tea	□	□□□□.□□□□	□□□□.□□□□
5.13	Sugar/salt/ msg	□	□□□□.□□□□	□□□□.□□□□
5.14	Butter/ cooking oil/ margarine	□	□□□□.□□□□	□□□□.□□□□
5.15	Non-alcoholic beverages	□	□□□□.□□□□	□□□□.□□□□
5.16	Tobacco/betel nut	□	□□□□.□□□□	□□□□.□□□□
5.17	Alcoholic beverages	□	□□□□.□□□□	□□□□.□□□□
5.18	Household supplies (laundry soap / matches / brooms / batteries/ etc.)	□	□□□□.□□□□	□□□□.□□□□
5.19	Toilet articles (soap, shampoo, etc.)	□	□□□□.□□□□	□□□□.□□□□
5.20	Transportation	□	□□□□.□□□□	□□□□.□□□□
5.21	Cooking Fuel,	□	□□□□.□□□□	□□□□.□□□□
5.22	Electricity and water	□	□□□□.□□□□	□□□□.□□□□
5.23	Communication/mobile phone load	□	□□□□.□□□□	□□□□.□□□□
5.24	Candle/gasoline (for lighting)	□	□□□□.□□□□	□□□□.□□□□
<p>5.25 Was the total amount spent (in 5.1 to 5.24) more or less than same time last year? 01 = more, 02 = much more ; 03 = same ; 05 = less; 04 = much less (circle only one)</p> <p>In the past One month, how much money did you spend (in Kip) on each of the following? (Use the following table, write 0 if no expenditure)</p>				
5.26	Clothing, shoes and other wear		□□□□.□□□□	

5.27	Education (<i>school fees/uniforms/supplies</i>)	_ _ _ _ . _ _ _ _	
5.28	Medical care	_ _ _ _ . _ _ _ _	
5.29	Furnishing and household equipment (<i>such as household utensils, accessories, household linen, mosquito nets</i>)	_ _ _ _ . _ _ _ _	
5.30	Celebrations, social events, funerals, weddings	_ _ _ _ . _ _ _ _	
5.31	Livelihood inputs (e.g. tractor, truck, computer, fishing net,...)	_ _ _ _ . _ _ _ _	

SECTION 6 – FOOD CONSUMPTION AND SOURCES

6.0	In the last 7 days what was the average number of meals/days?	_ _
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Could you please tell me:

1) How many **days** in the past **week** did your household eat the following foods? 2) What were the main sources of these foods? (*use the codes in the last column, and write 0 for items not eaten over the last 7 days*)

	Food Item	# of days Eaten <i>last 7 days</i>	# of days eaten in small amounts during last 7 days (1 tablespoon/person/day or less)	Food Source (write all)	
				Main	Second
6.1a	Rice (Glutinous rice, white rice)	_ _		_ _	_ _
6.1b	Maize / Corn	_ _		_ _	_ _
6.1c	Cassava	_ _		_ _	_ _
6.1d	Other roots and tubers (<i>potatoes, yam</i>)	_ _		_ _	_ _
6.1e	Pulses/Lentils/Tofu/Bean curd	_ _	_ _	_ _	_ _
6.1g	Vegetables (green leafy, carrots, onions, tomatoes, etc.)	_ _	_ _	_ _	_ _
6.1f	Bamboo shoots/mushrooms	_ _	_ _	_ _	_ _
6.1h	Fruits	_ _	_ _	_ _	_ _
6.1i	Fish, fish paste	_ _	_ _	_ _	_ _
6.1j	Other aquatic animals (crabs, snails, shrimps, etc)	_ _	_ _	_ _	_ _
6.1k	Meat (beef, pork, chicken)	_ _	_ _	_ _	_ _
6.1l	Wild animals	_ _	_ _	_ _	_ _
6.1m	Eggs	_ _	_ _	_ _	_ _
6.1n	Milk/ milk products	_ _	_ _	_ _	_ _
6.1o	Sugar	_ _		_ _	_ _
6.1p	Oil/Butter	_ _		_ _	_ _

Food Source codes

1 = Own production (crops, animals)
2 = Hunting, fishing
3 = Gathering

4 = Borrowed
5 = Purchase
6 = Exchange labor for food
7 = Exchange items for food

8 = Gift (food) from family relatives
9 = Food aid (NGOs etc.)
10 = Other specify _____

6.2a	Did any member of your household receive food aid last months?	01 = Yes	02 = No	If No → 6.3a
6.2b	If YES, please specify the type of program and the number of beneficiary in your household? (circle all that apply and specify number of beneficiaries in the last column)	01	General food distribution (FFR)	_ _
		02	School feeding	_ _
		03	Food for work/for assets	_ _
		04	Other, specify _____	_ _
6.3a	Did any member of your household receive any other type of external assistance beside food aid in the last 2 month?	01 = Yes	2 = No	NO → Section 7
6.3b	What type of assistance? (Circle all that apply)	01	Money allowances / loans	
		02	Education (fees, books, uniforms)	
		03	Medical services (hygiene promotion/ immunization, etc)	
		04	Construction material, building	
		05	Agricultural assistance (tools / seeds)	
		06	Other, specify _____	

SECTION 7 – SHOCK/DISASTER AND FOOD SECURITY

Read: What main shocks/ disasters did your household experience in the last 12 months that could affect your food?

(Do not read the options! Once all disasters have been identified ask respondent to rank the most important ones and write them down in the table below.

- | | |
|---|--|
| A. = Rodents | K. = Loss of employment for a household member |
| B. = Floods | L. = Reduced income of a household member |
| C. = Landslides, erosion | M. = Serious illness or accident of household member |
| D. = Drought/ irregular rains | N. = Death of a working household member |
| E. = Unusually high level of crop pests & disease | O. = Death of other household member |
| F. = Unusually high level of livestock diseases | P. = Theft of Money/valuables |
| G. = Unavailability of food | Q. = Theft of Animals |
| H. = Fired | R. = Conflict |
| I. = High food prices | S. = Displacement |
| J. = High costs of agric. inputs (seed, fertilizer, etc.) | T. = (wild) animal destroyed crops |
| | U. = other (specify) |

7.1a - Rank & Cause (copy code from above the four main causes)	First	Second	Third	Fourth
	_____	_____	_____	_____
7.1b - Did the disaster create a decrease or loss for your household of: 1 = Income & in-kind receipts 2 = Assets (e.g. livestock, cash savings) 3 = Both income and assets 4 = No change (Write number)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.1c - Did the disaster cause a decrease in your household's ability to produce or purchase enough food to eat for a period of time? 1 = Yes 2 = No 3 = Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.1d - Has the household recovered from the decrease in income or assets or both from the disasters? 1 = Not recovered at all 2 = Partially recovered 3 = Completely recovered	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Coping Strategy

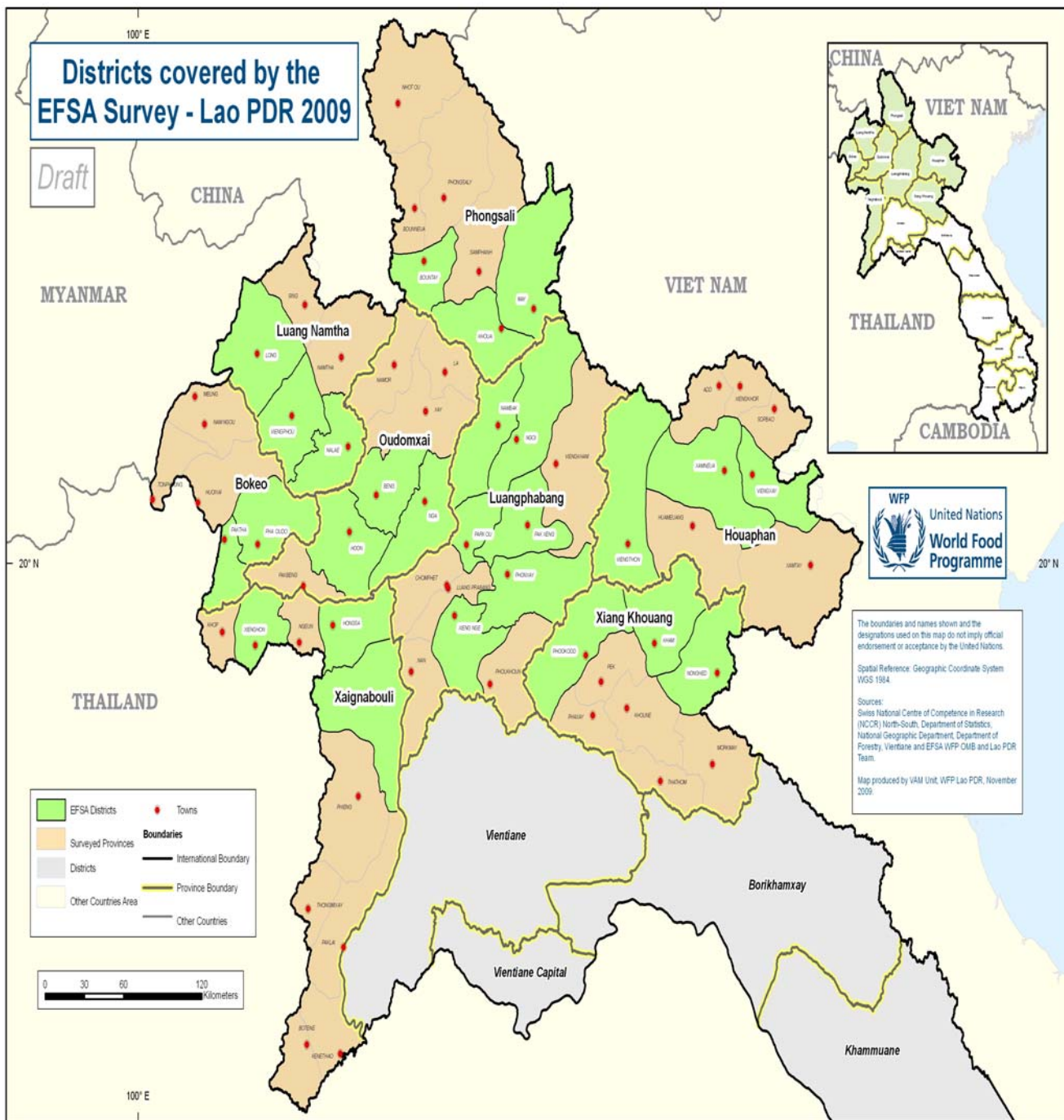
7.2 - In the "past month", have often have you used any of the strategies when you did not have enough food or money to buy food?	Frequency
	1= daily, 2= pretty often (3-6 days/week) 3= once in a while (1-2times/week) 4= Never
01 - Rely on less preferred and less expensive foods?	<input type="checkbox"/>
02 - Borrow food, or rely on help from a friend or relative?	<input type="checkbox"/>
03 - Limit portion size at mealtimes?	<input type="checkbox"/>
04 - Restrict consumption by adults in order for small children to eat?	<input type="checkbox"/>
05 - Reduce number of meals eaten in a day?	<input type="checkbox"/>

SECTION 8 – SALT TESTING

8.1	Ask to have a sample of the salt from the HH for iodine testing (Circle)	1= Dark Purple 2= Light Colour 3= No Change 4= No Salt in Home
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Thank Respondents for their Time and Participation

Annex 3: Districts Covered by the EFSA Survey



Annex 4: List of Participants, Agencies, Team and Province

No.	Name	Agency	Team No.	Province
1	Simon Dradri	WFP OMB		
2	Somphavanh Nakhavong	WFP VTE		
3	Jesper Lemke	WFP OMB		
4	Ruangdech Pongprom	WFP OMB		
5	Pasouphab Moukdala	WFP PSL	1	Phongsaly
6	Thongvanh Chentaphom	MLSW	1	
7	Vanxay Keosouvanh	DLSW PSL	1	
8	Khammouy Sisouthichack	GAA PSL	1	
9	Tiziana Zoccheddu	WFP LNT	2	Luangnamtha
10	Phonesavanh Khemthong	WFP LNT	2	
11	Donkeo Phanthavong	MLSW	2	
12	Chansamone Phansimueng	DLSW LNT	2	
13	Bouavone Phasouk	WFP ODX	3	Oudomxay
14	Phoumma Phanthavong	DLSW ODX	3	
15	Somphan Kosada	IFAD ODX	3	
16	Vilaphanh Khanthavong	MLSW	3	
17	Sinxay Silipanya	RC BK	4	Bokeo
18	Thongvanh Keopaseuth	MAF	4	
19	Khamhoung Keobounngern	RC PSL	4	
20	Mai Sengdavanh	WFP LNT	4	
21	Khanngoun Phommalangsy	WFP HPH	5	Huaphanh
22	Pinkeo Khankhamsay	MAF	5	
23	Sivanh Deuangvongsa	DLSW HPH	5	
24	Phiengphaneth Chanthalangsy	WFP VTE	5	
25	Khamsing Namsavanh	WFP XKH	6	Xiengkhuang
26	Bouaphanh Phonasa	DLSW XKH	6	
27	Yeryang Naotreu	DLSW XKH	6	
28	Souny Vongsengkham	RC HPH	6	
29	Souphaphone Simalavong	MAF	6	
30	Khamphay Onechaleunsouk	WFP VTE	7	Sayabury
31	Lianexay Saisomsaard	MAF	7	
32	SingAloun Linthavong	DLSW XYL	7	
33	Phonglamphanh Lotkhamnga	CARE XYL	7	
34	Pathana Phommala	CARE XYL	7	
35	Bouakhai Saipaseuth	WFP LPB	8	Luangprabang
36	Sylao Yiatoua	MAF	8	
37	Phengsone Bounmyxai	RC HPH	8	
38	Amphone Sitpaseuth	DLSW LPB	8	
39	Saysana Sithirajvongsa	WFP LPB	9	Luangprabang
40	Vanly Sounantha	MLSW	9	
41	Somboun Souksavath	DLSW LPB	9	
42	Thanongsith Thepphongeun	WFP VTE	9	
43	Erica Holzaepfel	WFP VTE		
44	Vongchanh Raxamountry	WFP ODX		
Note:	VTE = Vientiane PSL = Phongsaly LNT = Luangnamtha ODX = Oudomxay BK = Bokeo LPB = Luangprabang XKH = Xiengkhuang HPH = Huaphanh	XYL = Xayabuly MLSW = Ministry of Labor and Social Welfare MAF = Ministry of Agriculture and Forestry DLSW = Department of Labor and Social Welfare (at the provincial level) RC = Red Cross GAA = German Agro Action		

Annex 5: Provinces and Districts in the EFSA

Province	District	No of HH	Percentage
Borkeo	Paktha	46	5.2%
	Phaoudom	46	5.2%
	Total	92	10.4%
Houaphan	Viengthong	30	3.4%
	Viengxay	30	3.4%
	XamNeua	30	3.4%
	Total	90	10.1%
Luang Prabang	Nambark	30	3.4%
	Ngoi	30	3.4%
	Pakou	25	2.8%
	Pakxeng	30	3.4%
	Phonxay	30	3.4%
	Xiengngeun	30	3.4%
	Total	175	19.7%
Luangnamtha	Long	35	3.9%
	Nalae	36	4.1%
	Viengphoukha	33	3.7%
	Total	104	11.7%
Oudomxay	Beng	33	3.7%
	Hoon	35	3.9%
	Nga	35	3.9%
	Total	103	11.6%
Phongsaly	Bountai	33	3.7%
	Khua	33	3.7%
	Mai	30	3.4%
	Total	96	10.8%
Xayabouli	Hongsa	48	5.4%
	Xaisatharn	42	4.7%
	Xienghorn	48	5.4%
	Total	138	15.6%
Xiengkhuang	Kham	27	3.0%
	Nonghaed	32	3.6%
	Phoukood	30	3.4%
	Total	89	10.0%

Annex 6: Structure of Asset Ownership (Number of HH, Number of Assets)

	N		Minimum	Maximum	Mean
Shovel/spade/sickle	885	99.8%	1	38	10.79
Sleeping mats	769	86.7%	1	30	5.14
Fishing net	376	42.4%	1	12	1.78
Radio	254	28.6%	1	2	1.03
Motorcycle	241	27.2%	1	4	1.12
Rounding mill	217	24.5%	1	3	1.06
Television	208	23.4%	1	2	1.01
Rice mill	204	23.0%	1	2	1.02
Video/CD player	184	20.7%	1	6	1.15
Telephone/mobile	175	19.7%	1	5	1.49
Satellite	173	19.5%	1	1	1.00
Table/ chair/ bed	149	16.8%	1	25	4.23
Bicycle	143	16.1%	1	3	1.10
Plough	133	15.0%	1	4	1.24
Hand tractor	116	13.1%	1	2	1.01
Bie fried pan	103	11.6%	1	8	1.83
Weaving tool	102	11.5%	1	7	1.46
Fan	90	10.1%	1	3	1.08
Generator	72	8.1%	1	1	1.00
Other	54	6.1%	1	5	1.24
Boat/canoe	49	5.5%	1	14	1.59
Refrigerator	45	5.1%	1	2	1.02
Stove (gas/fuel)	27	3.0%	1	3	1.07
Electric rice cooker, pot, electric pan	27	3.0%	1	3	1.26

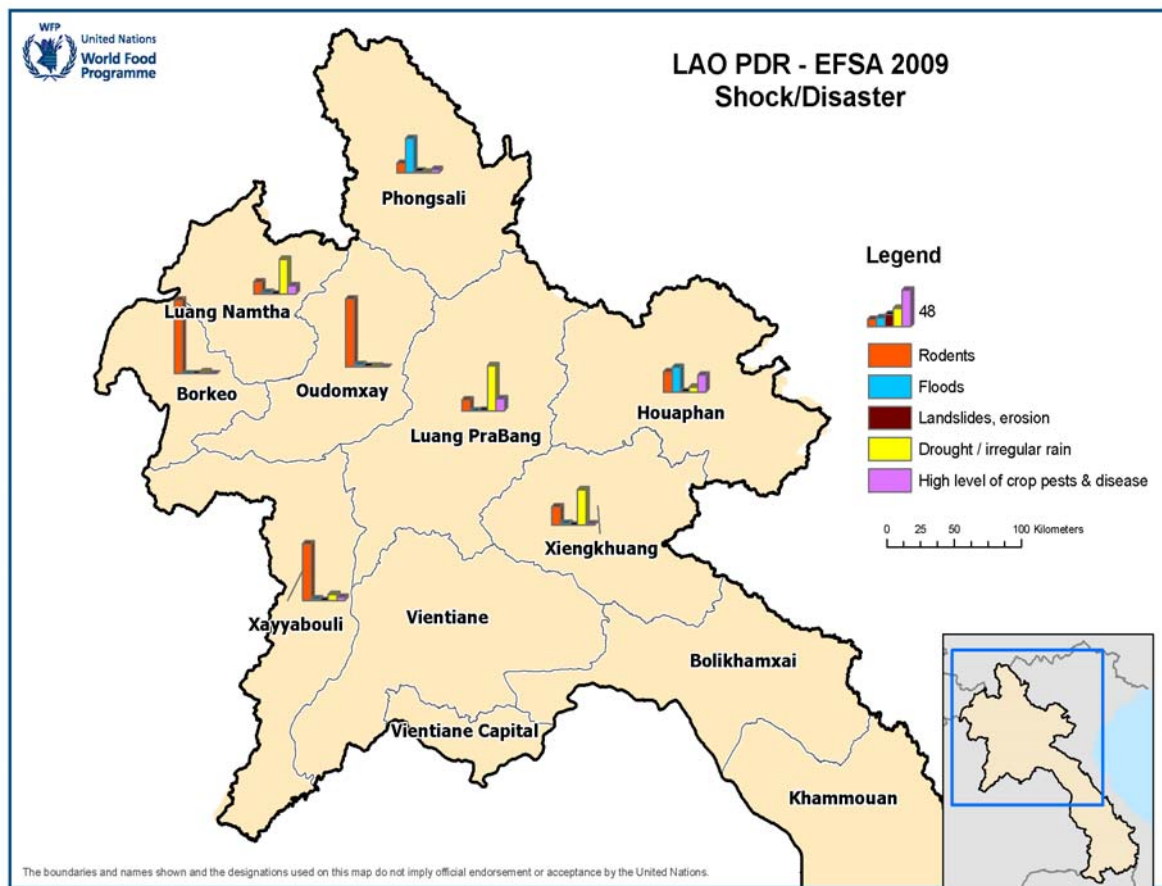
Annex 7: Household Expenditure Shares (%)

Expenditure Item	Share (%)
Rice	25.4%
Meat and meat products	5.8%
Sugar/salt/msg	4.9%
Wheat	2.1%
Wish	1.2%
Eggs	1.1%
Fruits	1.1%
Vegetable	0.9%
Oil/butter	0.6%
Milk	0.5%
Maize	0.4%
Coffee/tea	0.3%
Pulses	0.1%
Tuber	0.1%
Clothing	13.9%
Medical	10.9%
Education	8.2%
Transport	3.2%
HH supplies	3.0%
Toiletry	2.8%
Tobacco	2.7%
Lighting (candle/gasoline)	2.4%
Furnishing	1.8%
Alcohol	1.7%
Celebrations	1.6%
Communication/phone card	1.3%
Livelihood input	1.2%
Non-alcohol	0.4%
Electricity and water	0.4%
Cooking fuel	0.1%
Total	100.0%

Annex 8: CSI: Distribution of Household Responses by Province

Province	Less Preferred Foods		Borrow		Limit Meal Size		Reduce Meals		Restrict Adult	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
	%	%	%	%	%	%	%	%	%	%
Borkeo	90.2%	9.8%	68.5%	31.5%	72.8%	27.2%	90.2%	9.8%	78.3%	21.7%
Houaphan	85.6%	14.4%	76.7%	23.3%	84.4%	15.6%	92.2%	7.8%	97.8%	2.2%
Luang Prabang	80.6%	19.4%	52.6%	47.4%	62.3%	37.7%	78.9%	21.1%	76.0%	24.0%
Luangnamtha	55.8%	44.2%	64.4%	35.6%	76.0%	24.0%	88.5%	11.5%	70.2%	29.8%
Oudomxay	35.9%	64.1%	51.5%	48.5%	40.8%	59.2%	40.8%	59.2%	41.7%	58.3%
Phongsaly	55.8%	44.2%	67.4%	32.6%	69.5%	30.5%	76.8%	23.2%	76.8%	23.2%
Xayabouli	68.8%	31.2%	78.7%	21.3%	78.3%	21.7%	83.3%	16.7%	81.9%	18.1%
Xiengkhuang	84.3%	15.7%	78.7%	21.3%	86.5%	13.5%	91.0%	9.0%	87.6%	12.4%

Annex 9: Distribution of disasters as reported by households:



Annex 10: Distribution of coping strategies by province:

