March 2009

Rodent outbreaks in the Northern Uplands
Lao PDR

WFP Emergency Food Security Assessment

WFP LAO PDR - Vulnerability Analysis and Mapping

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Available on request from the VAM unit

Currency equivalents, acronyms and abbreviations

Currency equivalents

Currency Unit	Kip
US$ 1	8,495 kip (Exchange rate effective March 2009)

Acronyms and Abbreviations

ACF	Action Against Hunger (*Action Contre la Faim*)
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CO	Country Office
CRWRC	Christian Reformed Church
DAFO	District Agriculture and Forestry Office
DLSW	District Labour and Social Welfare
DO	District Office
EFSA	Emergency Food Security Assessment
FFW	Food For Work
FGD	Focus Group Discussions
GPS	Global Positioning System
ha	Hectare
HH	Household
HQ	Headquarters
KI	Key Informants
Lao PDR	Lao People's Democratic Republic
LECS	Lao Expenditure and Consumption Survey
MAF	Ministry of Agriculture and Forestry
MICS	Multiple Indicator Cluster Survey
MLSW	Ministry of Labour and Social Welfare
mt	Metric tonnes
NCA	Norwegian Church Aid
NFAC	National Food Aid Coordinator
NGO	Non-Governmental Organization
NTFP	Non-Timber Forest Product
PLSW	Provincial Labour and Social Welfare
PAFO	Provincial Agriculture and Forestry Office
PRRO	Protracted Relief and Recovery Operation
UN	United Nations
US$	United States Dollar
VAM	Vulnerability Analysis and Mapping
WB	World Bank
WFP	United Nations World Food Programme

Province acronyms

BOK	Bokeo
HPH	Huaphanh
LNT	Luangnamtha
LPB	Luangprabang
ODX	Oudomxay
PSL	Phongsaly
SYB	Xayabury

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The assessment was set up, led and reported on by the WFP Laos Vulnerability Analysis and Mapping Unit composed of Ms Laura de Franchis – Head of the VAM Unit, Ms Somphavanh Nakhavong National VAM officer, Ms Samantha Wright – Junior VAM Consultant. Mr Jeffrey Himel – Senior VAM consultant - provided much valued support to the mapping. The WFP Regional Bureau in Bangkok provided advisory support on the tool development and final report.

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- Oudomxay Province: Mr. Phosavanh – NFAC MLSW; Mr. Vilay – DAFO (Pakbeng District); Mr. Khamngot – DLSW (Beng District); Mr. Sisomphone –DLSW (Houn District)

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- Ms Jutta Kranh - International Nutrition consultant
- Mr Adam Folkard - International consultant
- Mr Boris Frangi - Projects Coordinator Xayabury Province - CARE International
- Mr Henrik Schmith - Country Program Manager - Norwegian Church Aid
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Rodent outbreaks in the Northern Uplands of the Lao PDR

Emergency Food Security Assessment

Executive Brief

Overview, scope and methods

- The Lao PDR is one of the poorest countries in Southeast Asia. In rural areas, every second child under 5 is chronically malnourished while 13% of the total population is food insecure after harvest. An additional 50% of rural households are at risk of becoming food insecure should a shock affect their livelihood[1].
- Since April 2008, many villages in Northern Laos experienced a major increase in the rodent population. This caused severe damage to upland production (mainly to rice but also to some cash crops). According to villagers, these are the worst rodent outbreaks in over 20 years, adding to an already high strain on household food security. The reason for the rodent outbreaks is not confirmed but appears to be linked to bamboo flowering.
- WFP conducted an Emergency Food Security Assessment (EFSA) between the 11th and 15th of March 2009. Its purpose was to provide WFP and its partners with information on: (1) the extent and impact of the rodent outbreaks; (2) how severely people were affected; and (3) how much immediate assistance is required. This assessment is the basis for formulating the required response and fund-raising efforts.
- The assessment was led and carried out by WFP Laos with support from district officials from the Department of Labour and Social Welfare and the Department of Agriculture and Forestry. Four teams covered 9 districts in the northern provinces of Luangprabang, Oudomxay, Xayabury and Luangnamtha. Some secondary information was also obtained on affected districts in Phongsaly, Huaphan and Bokeo provinces.

How was the assessment carried out?

The assessment was based on analysis of secondary information and primary data collected at the village and households levels. The villages and households were selected by purposive sampling. The teams conducted discussions with key informants and focus groups (men and women) in 29 villages. A total of 113 households were interviewed.

Recommendations for interventions

The rodent outbreak has increased food insecurity amongst the most vulnerable people in Laos. Help is needed urgently before it is too late.

Immediate needs:

- Food assistance is urgently needed for 85,000 to 140,000 food insecure people.
- Seeds need to be provided to severely affected farmers to allow them to plant during the upcoming cultivation season.
- Cash will allow farmers to directly purchase food, seeds and other important items.

Long-term needs: Strengthen the resilience and coping options for upland farmers

- Contribute to community development.
- Improve access to land and labour opportunities.

Further assessments needed:

- Quantify the needs for seeds.
- Assess the impact on nutrition.
- Monitor the situation in the affected areas as well as in other districts and provinces in order to respond in cases where the situation does not improve.
- Identify the causes of the rodent outbreaks and ways to prevent or mitigate future outbreaks.

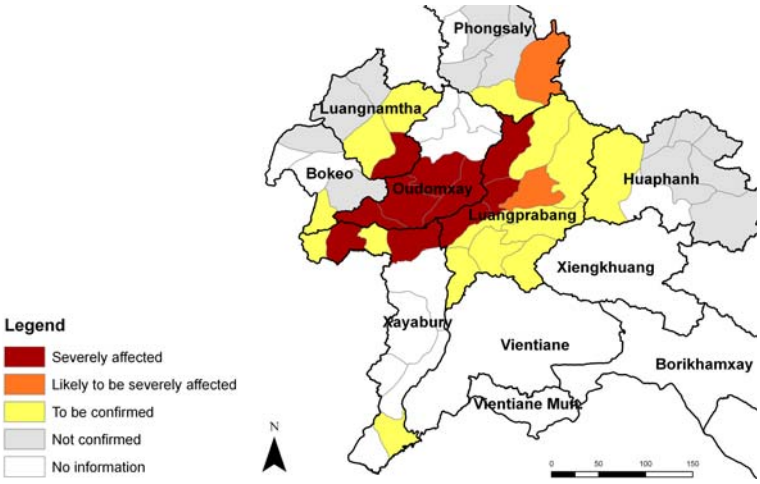
[1] Source: CFSVA, 2006

How many people are food-insecure because of the rodent outbreaks?

- **The affected provinces account for more than half of the chronic and borderline food insecure households in the country.**[2] The rodent outbreaks are an additional shock to their livelihood as coping options run out. Those affected are now in a situation where they did not produce enough rice to meet household needs; meanwhile, opportunities to earn supplementary income are declining. This occurs in a context of higher rice prices and lower cash crop prices. In some cases, communities are also dealing with the continued impacts of earlier shocks (floods, droughts).
- **Between 85,000 and 140,000 people are estimated to be food insecure as a result of the rodent outbreaks**, representing approximately 5% of the population in the affected provinces. The EFSA results show that in very affected villages, all the villagers became food insecure, with many villagers reducing the quantity or quality of meals, or skipping meals altogether. Numbers of food insecure people were determined by identifying the number of people living in villages identified by the local authorities (province and district level) as having been severely affected by the rodent outbreaks.
- **Affected households are struggling to find enough food to eat.** Many households' rice stocks are empty. Wild food sources are under strain. It is not uncommon for people to eat only 1 or 2 meals per day. Affected households are consequently at high risk of hunger, malnutrition and disease.

What areas were affected by the rodent outbreaks?

- Nine districts across four provinces were confirmed to have been severely affected. It is likely that other northern districts in other provinces not included in the EFSA were also affected.
- Affected areas are among the poorest and most food insecure in Laos. Most of the affected districts are characterized by remoteness, mountainous terrain and upland shifting cultivation.



Who are the food insecure people affected by the rodent outbreaks?

- **Non Lao-Tai upland farmers in remote villages are the most affected by the rodent outbreaks.** They are the most vulnerable and food insecure people in Laos. They are characterized by high reliance on self-produced or gathered food and have few alternative means of livelihoods.
- **The rodent outbreaks aggravated food insecurity for particularly vulnerable households.** This includes female-headed households, isolated individuals, and elderly people who have limited labour and few livelihood opportunities.
- **The effect of the rodent outbreaks on food security depends on how well households can cope.** The assessment teams noted differences in the levels of food security among affected villages. The most food insecure villages following the rodent outbreaks were non Lao Tai villages that rely mostly on upland farming, are far away from markets, have poor road access, reduced labour opportunities, and limited access to natural resources. In these villages, since the affected people were already amongst the most food insecure and vulnerable in the country, it is likely that all affected households are now food insecure.

[2] Source: CFSVA 2006.

Why are they food insecure?

- **Rodents damaged entire upland harvests.** 74% of the interviewed households reported losses between 50 and 100%. 100% rice losses were common. Maize harvest was also severely damaged with 43% of households reporting yields of less than 50% of expected production. Widespread damage was similarly reported for Job's Tears, sesame, and cassava. These losses are a major livelihood shock for rural households who rely on their own production as a source of food and income.
- **Opportunities for income generation are declining.** Lower production levels mean both a greater supply of and falling demand for casual labour. Consequently, work is harder to find inside and outside the village. The availability of non-timber forest products, a usual source of food and income, is also under strain as more families harvest them to cope with production losses. This is happening while managed access to natural resources is decreasing.[3] Ultimately, the decline in income opportunities in the wake of the rodent outbreaks reinforces food insecurity in the affected villages.
- **Rising rice prices are occurring at the same time that cash crop prices are falling.** Though price changes are unlikely due to the rodent outbreaks, the net effect is that villagers have a smaller income from which to buy more expensive rice.
- **Physical access to markets is difficult in these remote areas.** Many of the assessed villages, though close to roads, were nonetheless located far away from district centers with limited market access. Market access is even worse for affected villages located far from roads. Without market access, alternative food sources cannot be secured to supplement the significant production losses.
- **Declining food intake will lead to hunger and increased malnutrition.** Already limited production and food access means households have less to eat. To cope, households are reducing the number of meals and the quality of those meals. Households already characterized by poor nutritional status are consequently worsening their diet. This is particularly problematic for children and pregnant women who, if not well nourished, will reduce the mental and physical development of the next generation.

The situation is likely to worsen in the coming months with the rainy season

- **Food insecurity will intensify into the rainy season.** The already scarce rice stocks will be depleted and, as is usual in the lean season, rice prices will rise even more. Casual labour will also be more difficult to find. The situation will be especially troublesome for villages with poor road access. As the rain makes roads inaccessible, alternative food sources and income opportunities will become even scarcer. The result will be greater food insecurity in both extent and severity. Acute hunger could result.
- **If help is not provided soon, the situation is likely to get worse.** As cultivation season approaches, many affected farmers must divert their attention to finding food and income. Seed stocks, meanwhile, are also depleted after several unsuccessful replanting attempts last year. Consequently, affected farmers do not have the time, energy, or resources to plant the next harvest. If the problem is not addressed, the negative impacts of the rodent outbreaks will extend well into 2010.
- **There is no evidence that the rodents have left the affected areas**. Worse, in some areas, villagers have reason to believe that the rodents will come back. Rodents have also reportedly affected new areas in 2009.

For more information on the EFSA, please contact WFP Laos:

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[3] Managed access of natural resources is decreasing for reasons not linked to the rodents (e.g. deforestation, agribusiness).

1. Introduction

In 2008, Northern Laos was affected by the most severe rodent outbreaks in decades. In the affected areas, upland farmers experienced major production losses of rice, maize, job's tear and other important cash crops. Given their well known dependence on rain-fed production, these outbreaks seriously affected household food security, generating an immediate need for food assistance.

Most upland farmers usually suffer annual rice shortages. Rodents are a chronic pest, usually leading to losses of 5-15% of upland production.[13] Consequently, many farmers hold the view that "for every 10 rows of grain sown, two are planted for the rats."[14] These losses due to rodents can significantly aggravate the poor nutritional status characterizing most upland households.[15] Irregularly, conditions that fuel major increases in the rodent population can result in local production losses of over 50%.[16] In some years, farmers can lose as much as 100% of production.[17]

In late 2008, WFP received reports identifying 2008 as a particularly bad year. Requests for assistance came in for over 500 villages with 250,000 people potentially affected. *The Vientiane Times* reported the rat outbreak to be the worst in over 20 years.[18]

Given this information, WFP undertook an Emergency Food Security Assessment (EFSA) to determine the extent and severity of the rodent problem. This report is a summary of the EFSA findings including recommendations for action.

[13] Bounneuang Douangboupha, Ken Aplin, and Grant Singleton, "Rodent Outbreaks in the Uplands of Laos: Analysis of Historical Patterns and the Identity of *Nuu Khii*," in *Rats, Mice and People: Rodent Biology and Management*. p.105.
[14] Grant Singleton and David Petch, *A Review of the Biology and Management of Rodest Pests in Southeast Asia* (Canberra: Australian Centre for International Agricultural Research, 1994). p. 5.
[15] Upland farmers are the most at-risk group for rat vulnerability. Few problems are usually reported in rain-fed lowlands and irrigated farms.
[16] Common causes are believed to include the normal long-term cycle of bamboo flowering (some species flower every 48-50 years), droughts, etc. These causes are not adequately studied leading to a poor understanding of the underlying causes of the rat problem.
[17] John Schiller, Bounneuang Douang Boupha, and Onechanh Bounnaphol, "Rodents in Agriculture in the Lao Pdr - a Problem with an Unknown Future," *Ecologically-based Rodent Management*. p. 383.
[18] "Mice Destroy Luangprabang Crops," *Vientiane Times*, 1 August 2008.

2. Background

The Lao People's Democratic Republic (Lao PDR) is one of the poorest countries in the region. It is classified as a least developed country by the UNDP. In 2004, 71% of its population lived on less than US$2 a day and 23% on less than US$1 a day. Food insecurity affected 13% of the population and an additional 50% of rural households are at risk of becoming food insecure should a shock affect their livelihood.[19]

The population in Northern Laos accounts for about one third of the Lao population.[20] In this region, the most represented ethnic groups are the Austroasiatic and Hmong Mien. These populations practice both paddy and upland farming and are characterized by high levels of chronic malnutrition (55 and 54% respectively). The area is largely mountainous and characterized by remoteness, inaccessibility, and high erosion risk. Shifting cultivation (upland rice) is the predominant land use.

The Lao economy is largely subsistence-based with agriculture constituting the main sector. Only about one quarter of the population lives in urban areas and significant parts of the country are mountainous, uncultivable and inaccessible by road. Unexploded ordnance contamination is still widespread.

Agricultural production is the most important livelihood activity undertaken by rural households. Rice, either glutinous (*sticky*) or non-glutinous, is by far the main cereal produced and consumed. Rice production is divided into either paddy land or upland and the geographical distribution is mostly determined by geography. Some cash crops are also important. The main secondary crops in Laos are maize and cassava.

National net production of food grains (rice) is assumed to be just enough to meet per capita consumption requirements. However, inequalities exist between provinces with the northern provinces experiencing major rice deficits annually. Food imports[21] thus play an important and regular role providing additional supply to food deficit areas. Cross-border trade also plays a significant role in supplementing food supplies in Lao PDR.

Despite steady economic growth over the last 15 years, the nutritional status of the Lao population has not improved. Chronic malnutrition (or stunting) is alarmingly high with every second child under 5 in rural areas being chronically malnourished. The most affected are the non Lao-Tai ethnic groups.

Health, water and sanitation are a serious problem throughout the country. Many do not have access to proper toilet facilities and safe water sources. Access to health services is also a serious problem, especially in the remote uplands. In Laos, only 10% of villages have a health center, although many have a health volunteer and/or a medical kit.

[19] WFP, "Comprehensive Food Security and Vulnerability Analysis (CFSVA) - Lao PDR.," (Vientiane: World Food Programme, 2006).
[20] About 2 million people are estimated to live in the North.
[21] This includes formal, informal, commercial and food assistance.

3. Objectives and methodologies

In response to the rodent outbreaks, WFP Laos decided to conduct an Emergency Food Security Assessment (EFSA) using its local staff and partners. The purpose of this assessment was to provide WFP with rough results on the extent of the outbreaks and their impact on household food security.

3.1 Objectives

The prime objective of the EFSA was to answer the following questions:

1. What is the extent and severity of the rodent outbreaks?
2. In the provinces affected by rodent outbreaks, what is the food security situation?
3. Is there a need to intervene to save lives and protect livelihoods?
4. What are the response options?
5. Are more thorough assessments needed?

The second objective was to test the initial EFSA methodology with WFP Lao staff in order to enhance our capacity to roll out these assessments quickly, analyze quantitative and qualitative information in a timely manner, and produce good quality assessment reports with little external assistance.

3.2 Methodology[22]

The execution of the EFSA involved field staff from affected provinces and all levels of staff at the country office level.[23]

Secondary data collection

In preparation for field assessment, the Vulnerability Analysis and Mapping (VAM) unit collected secondary data in order to highlight anticipated impacts and important background information.

The Comprehensive Food Security and Vulnerability Assessment (CFSVA) conducted by WFP in 2006 served as the basis for pre-crisis information on the food security and nutrition situation in the Lao PDR. Background was drawn from studies on current and past rodent crises. Laos-specific information was limited, putting an even greater emphasis on primary data collection. Food security assessments on rodent outbreaks conducted elsewhere and recent guidance documents produced by headquarters also provided additional supplementary information.

Based on this secondary data, WFP prepared the tools for primary data collection that included a household questionnaire, shortened checklist of priority information for key informant interviews, and a similar checklist for focus group discussions.

Primary data collection

Four field teams conducted assessments in 29 villages in Luangprabang, Oudomxay, Xayabury, and Luangnamtha. Villages were selected based on information from key informants and the anticipated severity of the situation. Efforts were made to select villages representative of other villages to allow for the generalization of findings. The data collection tools are in Annex C.

- Direct Observation (DO): Field staff made general observations of food stocks, rice fields, and the general food security situation. GPS coordinates were taken in all visited villages.
- Key informant interviews (KI):[24] Field teams interviewed key informants (KI) identified to have specific knowledge of the rodent outbreaks. KIs were asked about the outbreaks and helped to determine the severity of the problem overall. KIs included government officials (district, provincial, central), village heads, village elders, and representatives from the Lao Women's Union and agriculture.
- Focus Group Discussions (FGD):[25] Field teams held discussions with groups representing a particular village demographic. The group discussions usually gathered around 10 people and were composed of a particular demographic group such as women, men, upland farmers or lowland farmers. 2 or 3 FGDs were usually held in each village with the aim of identifying the major impacts affecting these groups.

[22] See Annex A3 for a list of terminology and concepts used in this report.
[23] See Annex A3 for a list of staff
[24] See Annex C2 for the KI checklist.
[25] See Annex C3 for the FGD checklist.

- Household Interviews (HI):[26] In each visited village, household interviews were conduced to gather quantitative data on the extent of the damage caused by the rodents as well as on the severity of the food security situation. They were selected based on information from key informants based on the following criteria:
    - 2 households whose situation is typical of the majority of the population
    - 2 households or individuals who represent particular needs, such as female-headed households, isolated individuals, elderly people, and children.

  113 Households were interviewed. They provided direct information about their food and income sources, livelihood strategies, living conditions, difficulties and priorities.
- Data entry: Each team was responsible for the collation and summary of the data collected in the province visited. Village level and province level debriefing sheets were prepared and used.

Assessment quality assurance

A 2-day training workshop was held prior to the field assessments. The training included the testing and modification of the tools – this was key to ensuring an understanding of the questionnaires and the expected outputs of the assessment. The WFP regional bureau in Bangkok checked the Terms of Reference, EFSA tools and Final Report.

Efforts were made to estimate the representativeness of the findings (e.g.: proportion of the total population represented by the interviewed households during the field visits). Triangulation of information helped to minimize biases and mistakes in the generalization of findings.

3.3 Analysis

The emphasis was on qualitative analysis. A debriefing workshop was organized to collect and synthesize qualitative information collected during the field visits. The quantitative data collected at household level was used to support the qualitative findings.

3.4 Limitations

1. Lack of secondary data (especially quantitative): Besides newspaper articles, no information was available on the situation. There were no detailed qualitative or quantitative reports available on the rodent outbreaks and key informants were not always available for discussion or very aware of the local situation. To overcome this gap, secondary information from other rodent outbreaks was collected and consulted[27] and the most recent information on village food security was taken into account.[28] The teams also regularly followed up with local authorities before and after the assessment in order to have more precise information.
2. Elapsed time before assessment: Farmers have been in an alarming situation since planting their crops in April or May 2008. The assessment should have been conducted earlier and the response should have been reaching the beneficiaries long before the assessment started. However, comprehensive reports were not available on the nature and extent of the problem. It was only in early 2009 that WFP received reports of food requests in Oudomxay and Luangprabang, along with scattered information from NGOs. It was then obvious that an assessment was needed to estimate the needs.
3. Sampling: The sample is relatively small and not statistically representative (purposive sampling). It did not allow for quantification of the severity or extent of the crisis across provinces or for detailed analysis of possible causes and the long term effects of the outbreaks. Remoteness of some of the affected villages and the time needed to get there did not allow gathering of information in the most remote and (likely) most food insecure areas. Since the situation was already very severe in accessible areas, it was assumed by the assessment teams that the situation in the more remote villages was similar or worse.
4. Limited time in the field: Although the teams could not cover all the reportedly affected districts and provinces due to time constraints,[29] key informant interviews with local government officials were conducted after the field work to confirm the presence of similar outbreaks in the areas that were not visited by the teams.
5. Translation from Lao to ethnic languages: the questionnaires and checklists were translated from English to Lao, however an additional layer of translation had to be added in many villages since some villagers (especially women) only spoke rudimentary Lao. Although the teams were trained

[26] See Annex C4 for the household questionnaire.
[27] See Annex A1 for references.
[28] Information provided by NCA, ACF (Long district in LNT) and CRWRC (Mai district in PSL)
[29] The teams had 4 days (including travel) to complete the field work. Some areas were at one day drive from Luangprabang where the team briefing and debriefing took place. Therefore most teams had to conduct most of their village visits in 2 days.

on the use of the questionnaires, they had little control over the translation from Lao to the different ethnic languages. Confusion of some concepts might explain some of the discrepancies found between the information collected in focus group discussions and household interviews.

6. Purpose was not to determine the exact species of the rodents or the causes. It is likely that several different outbreaks took place in the Northern provinces in 2008.

4. Extent and severity of the rodent outbreaks

4.1 The worst rodent outbreaks in over 20 years

Beginning in April/May 2008, rodents began infesting several Northern provinces causing widespread crop damage. While rodents are a recurrent problem, the effects are usually minor with production losses of less than 10-15%.[30] Large and severe rodent outbreaks are uncommon.

This rodent outbreak is widely held to be the worst in 20 years. In most areas, the upland farmers believe that the outbreaks are due to the flowering and seeding of certain bamboo species. During the bamboo flowering period, the fruit provides food to a rodent population that can consequently expand exponentially.[31]

Literature suggests that, at least since the 1950s, rodent outbreaks have been an irregular feature of the upland agricultural environment. Although most outbreaks appear fairly local in scale, records from Oudomxay and Luangprabang provinces document at least one widespread and prolonged outbreak between 1988 and 1993.

There are likely a range of rodent species involved in the rodent outbreaks. During the assessment, the villagers commonly identified three types of rats:

- 'Thumb rat': a fast-multiplying 'small' rat was identified as the most dangerous to village livelihoods (also referred to as the *Nuu Khii* or bamboo rats*)*
- 'Wrist rat': A medium-sized house rat, *(*sometimes referred to as *Nuu Ban* or normal rat*)*
- 'Calf rat': Large bush rat

The rodent causing most of the damage in the upland fields was the 'thumb rat', the *Nuu Khii*.

4.2 Affected areas are among the poorest and the most food insecure of Laos

Box 1: Definition of low, medium and severely affected areas

Low affected areas: In visited villages villagers did not consider they lost more than 15% of their harvest to the rodents.

Medium affected areas: In visited villages villagers considered they lost between 15-50% of usual/expected harvest due to the rodent outbreaks.

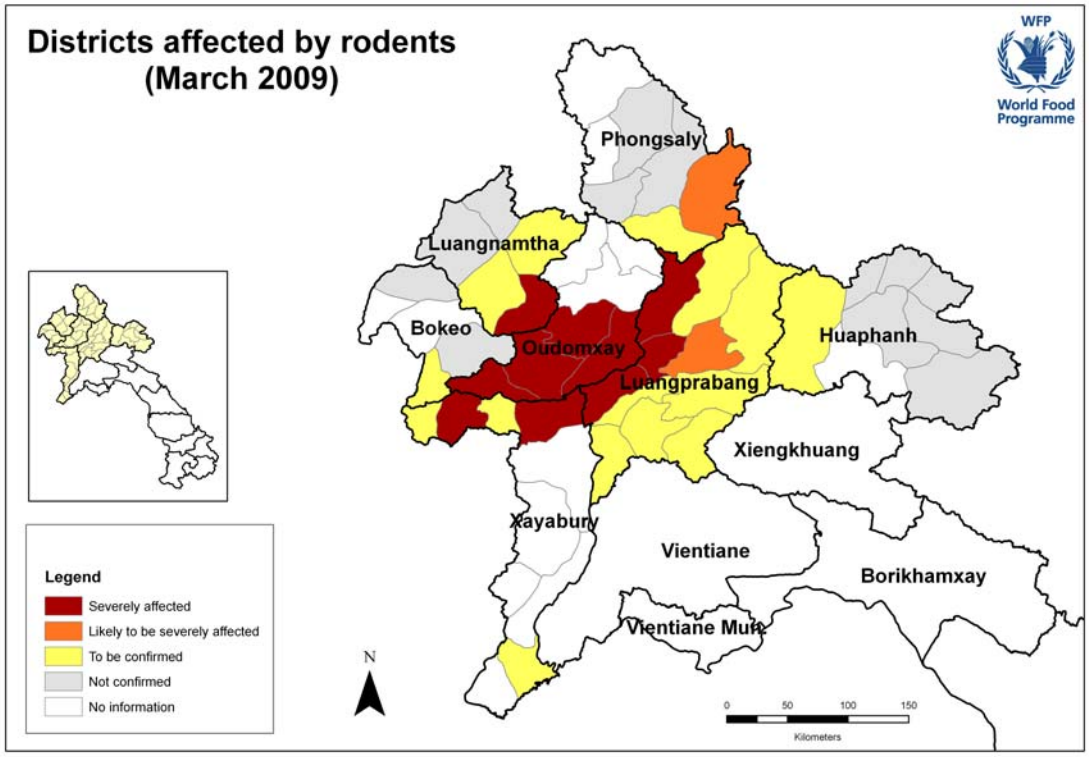
Severely affected areas: In visited villages villagers estimated production losses of more than 50% of usual/expected harvest due to the rodent outbreaks.

The assessment findings confirm that all of the visited districts in Luangprabang, Oudomxay and Xayabury provinces were severely affected by the rodent outbreaks. Nale district in Luangnamtha was also severely affected.

Reports from WFP staff in the field also reported a very severe situation in Nga district of Oudomxay. Though not formally assessed, sources confirm that parts of Huaphanh, Bokeo and Phongsaly were also affected though the severity cannot be determined. The map below summarises the information.

[30] Douangboupha, Aplin, and Singleton, "Rodent Outbreaks in the Uplands of Laos: Analysis of Historical Patterns and the Identity of *Nuu Khii*." p.105. This is confirmed by villages across all assessment areas.
[31] The causes are not well studied.

Map 1: Map of districts affected by rodent outbreaks[32]



1. Severely affected: Field visits in the areas by the assessment teams (or WFP field staff) confirm there this area is severely affected and that poor villages are now food insecure because of the rat infestation

2. Likely to be severely affected: Information provided by local authorities indicates that in these areas are severely affected, this is confirmed by locally based NGOs.

3. To be confirmed: Information provided only from one source: Local authorities. Need to confirm if these areas are affected by rodent outbreaks, and levels of food insecurity need to be checked

4. Not confirmed: Areas were initially reported to have been affected by rodent outbreaks but further enquiry with local authorities did not confirm that the situation is linked to rodent outbreaks

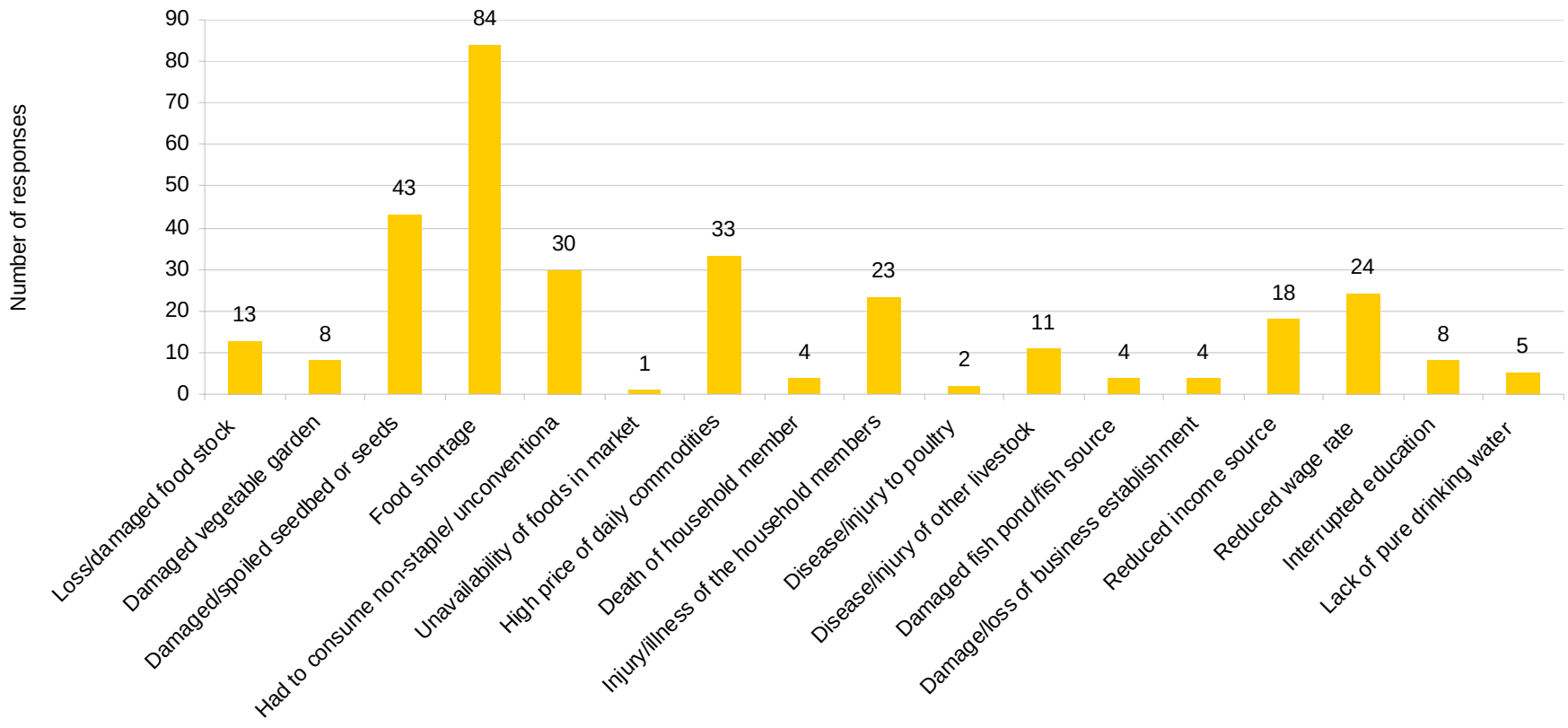
Most of the affected districts are part of the Northern Highlands characterized by remoteness, mountainous terrain, and poor farming conditions.[33] These provinces, according to the CFSVA, account for more than half of the chronically and borderline food insecure households in the country.[34] In fact, of all the districts affected by rodent outbreaks, only those in Luangprabang are not identified as poor by the government.[35]

4.3 Nature and severity of the damage: rodents mostly affected upland rice and cash crop production

The rodents mostly damaged upland fields rather than the villages themselves. As a result, the most severe damage was to farm production. Damage reported in the villages to houses, clothes, people and livestock are mostly anecdotal.

[32] Source: assessment findings and secondary information
[33] "Lao PDR: Rural and Agricultural Sector Issues Paper," in *EASRD* (Vientiane: World Bank, 2006).
[34] "Comprehensive Food Security and Vulnerability Analysis - Lao PDR.," (Vientiane: World Food Programme, 2006).
[35] Source: Lao PDR 72 poorest districts map.

Figure 1: What types of problems did your household face during the rat outbreak?



Source: EFSA, household interviews

Severe losses in crop production

The rodent outbreaks caused severe damage to crop production. 100% losses occurred regularly. Consequently, many villagers lost their primary food source from either subsistence production or cash crop income.

Upland rice was the most affected crop. Rodents ate the planted seeds during the cultivation season effectively eliminating the entire harvest. Production losses are severe with 74% of the interviewed households reporting a loss of more than 50% of expected upland rice production. Though most farmers replanted several times, the rodents repeatedly ate the seeds before they could grow.

The rodents also damaged cash crops. Throughout the planting, growing, and harvesting period, rodents caused severe production losses to important cash crops. 43% of interviewed households reported producing less than 50% of their expected upland corn. There were also production losses of job's tear, sesame, and cassava.

While paddy rice was successfully planted, rodents damaged this crop during the harvest period between August and October. Lowland production losses varied between provinces, usually up to 30%.

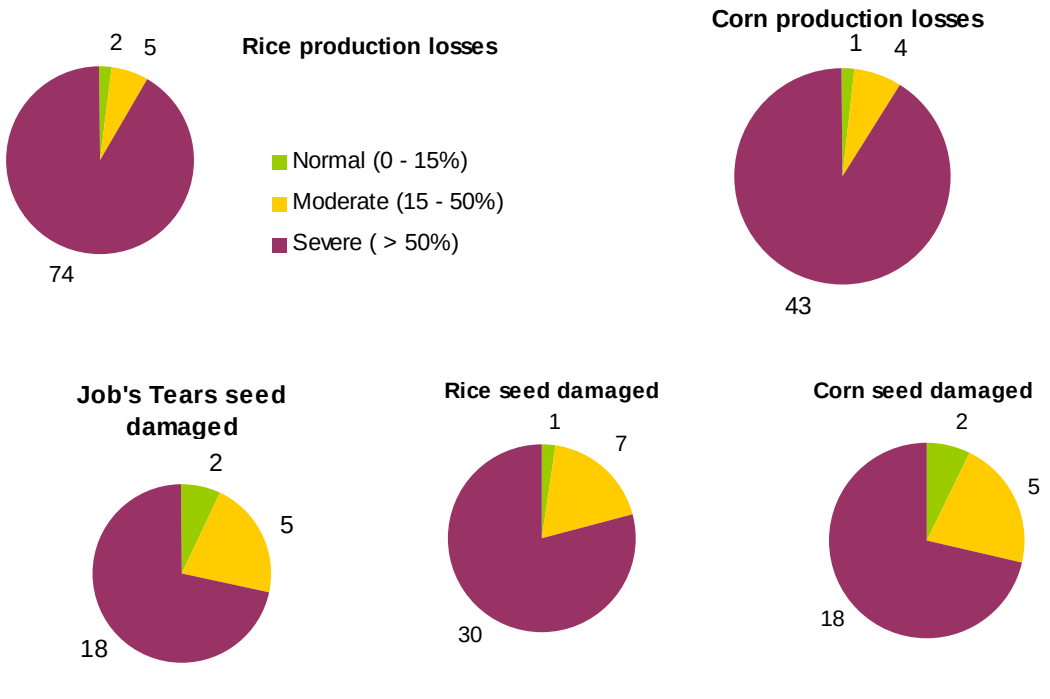
Box 2: Definition of low, medium and severely affected production

Normal: Production lowly affected: production last season was up to 15% less compared to expected harvest (production in a normal year, planting the same amount).

Medium: Production medium affected: production last season was between 15 and 50% less compared to expected harvest (production in a normal year, planting the same amount).

Severe: Production severely affected: production last season was more than 50% losses compared to expected harvest (production in a normal year, planting the same amount).

Figure 2: Percent households reporting production losses or seed damage following the rodent outbreaks



Source: EFSA, household interviews

Losses of seeds

Affected villages reported that damage to seeds occurred mainly during the planting season. The repeated and unsuccessful planting of seeds depleted seed stocks leading to widespread seed shortages.[36] 30% of the interviewed households report severe rice seed losses (over 50%). Some households[37] also reported that seed stocks in the houses were affected, although this was not very frequent since seed stocks are usually well protected. If the seed shortage is not addressed soon, it will lead to problems in the upcoming cultivation season.

Other damage

The rodents affected food stocks in the fields.[38] In some cases, the rodents also damaged food stocks kept in the village.[39] Most often, however, food stock damage was not a major issue since production losses meant that villagers simply had no food stocks.

There were some reports of damage to small livestock with affected villagers reporting that the rodents killed some small chicks.[40] The rodents also damaged vegetables such as chili, cucumber, pumpkin and nuts. Anecdotally, stories were heard of damage to clothes, blankets, and household furniture.[41] In one village, poisoned dead rats contaminated the village water supply.[42]

4.4 Estimated numbers of food insecure

According to the local governments, the most affected people are Northern upland farmers in Luangprababang, Oudomxay and Northern Xayabury. Most of these people are from non Lao-Tai ethnic groups[43] and have been identified by WFP as among the most vulnerable and food insecure and vulnerable people in Laos.[44]

The assessment teams noted differences in the levels of food security among affected villages. Although almost all villages were severely affected by the rodent outbreaks, some had sufficient opportunities to support themselves and do not require any assistance.

The most food insecure villages following the rodent outbreaks are the non Lao-Tai villages that rely mostly on upland farming, are far away from markets, have poor road access, reduced labour opportunities, and limited access to natural resources. In these villages, since the affected people were already amongst the most food insecure and vulnerable in the country, it is likely that all affected households are now food insecure. The village visits largely support this assumption.

Between 85,000 to 140,000 people are estimated to be living in very food insecure villages affected by rodent outbreaks.[45] Since it was not the purpose of this assessment to estimate *the exact* number of people currently food insecure, these figures are largely based on reports by the local authorities.

Province and or district authorities provided lists of vulnerable (poor) villages affected by the rodent outbreaks. NGO reports of rodent outbreaks in vulnerable villages were also taken into account. The assessment teams then confirmed whether the visited areas were actually affected by unusual outbreaks of rodents. Reports from WFP staff and additional secondary information provided the basis of estimates for other areas that were not covered by the assessment.

[36] Farmers reported planting up to 3 times without any success in Oudomxay and Xayabury
[37] B. Hatchone in Luangnamtha
[38] B. Huammeuang, Xienghine District in Oudomxay
[39] Villages in Oudomxay and Xayabury experienced some in village food stock problems. In Xayabury some villagers reported keeping the rice bags next to their pillow so that they could protect them at night.
[40] B. Houameuang, Xienghone district in Oudomxay, B. Houaylee, Pak Ou District in Luangprabang
[41] Xayabury, B. Tengdu in Beng District, Oudomxay
[42] B. Donsaath, Oudomxay
[43] Ethnolinguistic groups in the areas affected by the rodent outbreaks are mostly Austroasiatic and some Hmong Mieng. They represent 24 and 3% of the Lao Population respectively. They are characterized by high levels of chronic malnutrition (55 and 54% respectively) in terms of farming they farm both lowland and upland rice (According to the CFSVA, these ethnic groups farm an equal amount of paddy (0,9 ha/HH) and upland (1 ha/HH)).
[44] Source: CFSVA 2006.
[45] 85,000 = estimate number of people living in poor and rodent affected villages (according to local authorities) in the districts that are either confirmed or likely to be severely affected by rodent outbreaks (cat 1 and 2 in Map page 13);
140,000 = estimate number of people living in poor and rodent affected villages in all affected districts as indicated by the local authorities (cat 1, 2 and 3 in Map page 13).

5. Impact on Food Availability

Food security requires sufficient amounts of food to be available in local markets or other food sources. Especially after a shock, it is important that a sufficient supply of food remains available in local markets in order to stabilize prices and satisfy local demand.

It is unlikely that the rodent outbreaks had an impact on overall food availability in either Laos or the affected provinces. The affected upland rice fields account for only a third of national cultivated land,[46] and represent even less of national rice production.[47] The production losses due to the rodent outbreaks are therefore unlikely to have significantly reduced food availability. In fact, the affected provinces are normally food importing given their chronic food deficits.[48]

The need for food imports was confirmed by villagers in Oudomxay.[49] Villages noted that according to traders, the widespread production losses due to the rodent outbreaks has necessitated rice imports from other provinces to meet local demand.

6. Impact on Access to food

Access is defined as a households' ability to regularly acquire adequate amounts of food through a combination of their own stock, home production, gathering, purchasing, bartering, gifts, borrowing, and food aid.

Traditionally, rural households in Laos rely mainly on their own production as a source of food. Markets usually constitute a second source of food.[50] Many villagers also rely on food from gathering, fishing, and hunting in forests as a regular protein and fat source.[51]

The widespread production losses have placed a heightened importance on access to markets, income and natural resources. Unfortunately, these food access strategies are presently limited. Households face decreasing access to nature resources.[52] At the same time, farmers are experiencing an increase in food commodity prices and a decrease in income levels. Households consequently have decreasing purchasing power with disastrous effects on their food consumption patterns.

6.1 Reduction in the amount of food produced

Household interviews indicate that overall household rice sufficiency was significantly reduced due to the rodent outbreaks. Rice is running out now at a time when households have not even started planting for the next season (lean season starts in July-August).

Figure 3: Lao cropping calendar

	Dry season				Rainy season						Dry season	
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Upland rice, rainfed	Land selection, preparation, slashing and burning				Planting and weeding		Grow	Grow	Grow/ Harvest	Harvest		
Low-land rice, rainfed					Land preparation	Transplanting and weeding		Grow	Grow	Grow/ Harvest	Harvest	

Source: Ministry of Agriculture and Forestry, Department of Agriculture

[46] Only 4% of the total land area is cultivated. Rice constitutes 70% of the net cropped area.
[47] Upland rice yields are much lower than lowland yields, especially irrigated lowland
[48] Per capita net production in the Northern provinces is low when compared to both the per capita requirement and the actual consumption over the past five years. Four of the seven provinces (Phongsaly, Oudomxay, Luangprabang and Huaphanh) of the Northern region have a deficit of more than a third of the estimated per capita requirement (592 g per day) each year.
[49] B. Tengdu, Beng District
[50] A substantial amount of their purchases at markets are made of food items (45%). Seasonal price variation of rice is an important constraint to household access to food, especially during the lean season. More generally, an increase of food commodity prices has a negative impact on households' food consumption.
[51] Non-Timber Forest Products (NTFP) are a food reserve during years of poor agricultural harvest and in some provinces, forest foods are the most important source of food besides rice. This category of items includes wild fish from rivers and other aquatic animals (frogs etc.), wild fruit, vegetables and mushrooms, insects, and wildlife animals (big and small) for meat. Therefore, the collection of NTFPs is both a source of food and a source of income.
[52] Main reason being the overall degradation/reduction of the forest (can be due to concessions, plantations…)

Rice production fell significantly due to the rodent outbreaks—often to nothing and sometimes to only 10% of the expected harvest. Cassava, widely considered as a replacement staple food, was also affected. Since rice production is the main livelihood activity of the majority of rural households, and maize and cassava production are important secondary crops, the large production losses severely reduce household food access. Some food stocks, when available, were affected in addition to affected vegetable gardens and sweet maize (used for own consumption).

Some villagers also reported eating more rats than usual.[53]

6.2 Difficult access to markets

Although enough food is likely to be available in the existing markets, households dealing with the rodent outbreaks have difficulty accessing that food because of monetary and physical constraints. This is a major concern and will get worse in the future.

Limited market access (especially for remote communities)

The assessment teams found that people with better market access tended to be more food secure since they can more easily sell goods and purchase food. But many of the affected villages surveyed were located more than 4 hours away from the nearest market.[54] Even if road conditions are good, most villagers travel by foot resulting in long travel times.

Though traders helped some villages overcome this market access problem, they were also sometimes mentioned to be keeping stock for themselves given the low local supply. This almost one-way trade also resulted in high transaction costs for communities.[55]

With the rainy season coming, the more remote villages will be even more isolated and dependant on self-reliance as they will be cut off from markets and traders.[56]

Increasing rice prices

Although seasonal rice price variations are usual this time of year, villagers report that in March 2009, market rice prices have increased markedly compared to previous years. Rice is reported as being more expensive than last year in all the assessed provinces, rising as much as 40%.[57]

As mentioned earlier, there is no evidence that the rodent outbreaks are part of the main drivers of the rising rice prices. It is more likely that the increases are due to the global trend of rising food prices. Nevertheless, higher rice prices are making it more difficult for affected communities to access food.

Such pressure on already food insecure households is only expected to increase as seasonality drives prices even higher.[58] This will likely be especially apparent in rural Luangprabang and Oudomxay, where prices traditionally increase more because of provincial rice deficits and isolation from surplus production areas.[59]

6.3 Limited access to natural resources

Affected households rely heavily on natural resources[60] to mitigate some of the negative impact of rice shortages. In spite of this, some of the assessed villages mention several constraints on natural resource access including proximity to protected areas, large-scale plantations (rubber mainly) and sometimes hydropower reservoirs and headworks.

In addition, in the areas affected by the rodent outbreaks, NTFPs were at times reported to be over harvested partly because more households were collecting them. This consequently limited the amount that each household could collect for market sale or self-use.

6.4 Reduced purchasing power

When self-production is below household needs, income generation is critical to enabling affected villages to access food. Following the rodent outbreaks, income generation has been under strain

[53] B. Houameuang, Xienghone district in Oudomxay.
[54] On average villages in rural Laos are more than 10km away from district centres where the markets usually are. (source: CFSVA 2006)
[55] ODX example.
[56] Between May and November most of the rural roads are slippery, muddy and flooded
[57] In Laiyai, Beng, ODX, villagers reported prices rising from 3500 Kip/kg to 5000 Kip/kg representing a 43% increase.
[58] Food prices in Laos are seasonal, they usually decrease from October to December; from March to October food prices (especially rice) increase: a short peak in the dry season of April and a long peak during the lean season from July to September. These seasonal price variations of glutinous rice are seen as an important constraint to household access to food, especially during the lean season.
[59] Source: CFSVA 2006.
[60] mainly forests and rivers

because of the combined reduction of income opportunities[61] and lower prices/wages. The result is that households have a smaller income, if any at all, to buy more expensive rice.

Declining income from cash crops

Incomes from cash crops are declining in the wake of the rodent outbreaks. In affected villages, rodents caused severe damage to cash crops averaging more than 50%. The result is that farmers have a smaller amount of production to sell and generate income. In addition, for reasons not linked to the rodent outbreaks, cash crop prices are reportedly falling. The price of maize, sesame and job's tear are currently far lower than the same time in 2008. Thus, farmers must sell their smaller yields for a lower price. Incomes from cash crops are consequently far lower than in a normal year, reducing the ability of households to purchase needed food. Food access is thus a significant problem for affected households that are extensively involved in cash crop production.

Reduced casual labour opportunities

Opportunities for casual labour are falling. Casual labour is thus an unstable income source for coping farmers. According to the key informant interviews and focus group discussions, the demand in affected areas for unskilled labour is decreasing.[62] While people tend to prefer working inside their village, the decreased production levels due to the rodent outbreaks reduce the local need for agricultural labour.[63] The result is that more people must look for work outside their villages. Aggravating the already strained situation is the sudden over-supply of workers. According to many villagers, the increasing labour supply and falling labour demand is lowering wages. Consequently, in affected areas, casual labour is harder to find and is paying less. It is thus even more difficult for affected households to purchase needed food.

Credit can increase household vulnerability

Whereas the access to credit is usually seen as a positive measurement for financial vulnerability, in the case of the rodent outbreaks, credit was instead a source of vulnerability for affected households who had contracted loans to plant crops. The lost production due to the rodents left farmers unable to repay loans used to buy seeds when companies or traders did not accept to cancel the farmer's debt.[64] Any income generated must therefore go to repaying the creditor and not purchasing food.[65] This added stress makes food access even more difficult.

[61] For most households in the affected areas, there were no options for income diversification apart from sourcing labor, or selling cash crops, livestock or NTFPs.
[62] This confirms information from LECS3 according to which the Northern Uplands are by far the Agroecological zone where the share of households usually earning an income is the lowest; with only 23% of HH having an income generating activity.
[63] Common agricultural labour includes bush clearing, paddy land maintenance and land fencing.
[64] Debt was cancelled for corn farmers in B. Houaylee, Luangprabang.
[65] Affected villages with outstanding credit include Nam Liean (ODX) and Khok Ek (XYL)

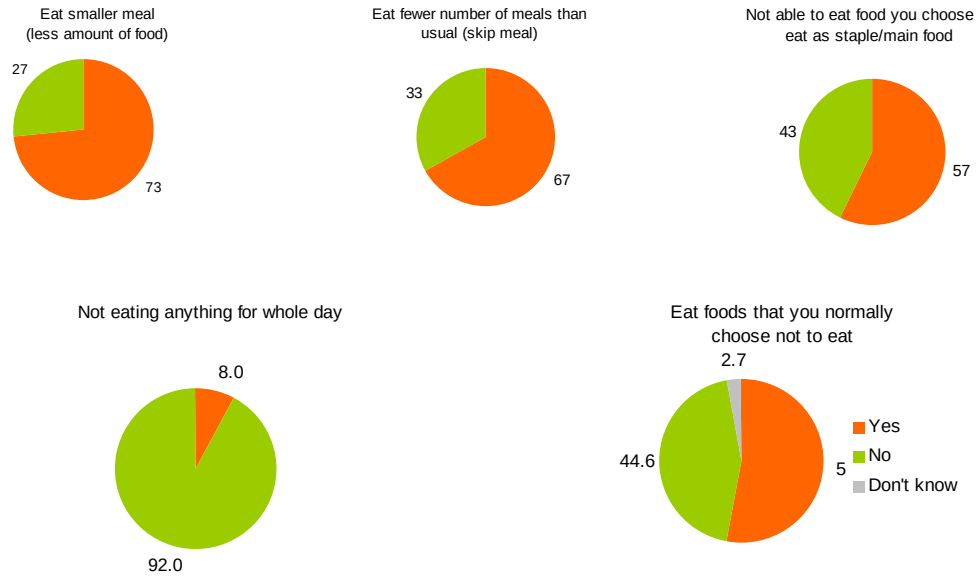
7. Impact on food utilization

7.1 Changing food consumption patterns

The rodent outbreaks drastically affected household consumption of rice. This is a key indicator of severe household food insecurity.

Most Lao households usually eat rice, or rice coupled with other staples, 7 days a week. In the wake of the rodent outbreaks, approximately 80% the interviewed households indicate coping with the food shortages by reducing the quality and/or the quantity of rice consumed at meals, eating wild foods more often, and/or substituting other less preferred or less nutritious foods. Alarmingly, 67 % of households report a reduction in the number of meals per day, sometimes by as much as 3 to 1. 8% of households had skipped at least one whole day without eating in the 7 days preceding the interview. These changes in household consumption patterns indicate a high degree of food insufficiency such that the affected people must downgrade the food they eat in order to cope.

Figure 4: Percent of households that report having adopted food consumption coping strategies in the last 7 days



Source: EFSA, household interviews

7.2 Uncertain effects on health and nutrition

The impact of the rodent outbreaks on the overall health status of the affected communities could not be determined. Even in normal situations, health is a problem across Laos, especially in rural villages and isolated areas.[66] Nevertheless, it should be noted that the villagers identify several health problems possibly linked to the rodents: diarrhea,[67] water contaminated by dead rodents,[68] and the effects on health from the application of pesticides and eating rats that may have been killed by pesticides.[69]

Though it was not the objective of this assessment to determine the nutritional status of the affected population, findings suggest that acute hunger is likely if the situation does not improve. This would negatively impact the nutritional status of the affected people, especially those most vulnerable to malnutrition.

[66] According to the CFSVA, less than one in ten villages has a health centre, although many villages have a health volunteer and/or medical kit.
[67] B. Tengdu Beng district in Oudomxay.
[68] B. Donsaath, Oudomxay.
[69] B. Namkhome, Xienghone district in Xayabury.

8. How are people coping?

The effect of the rodent outbreaks on household food security depends on their resilience: how well they are able cope with the shock?[70]

Key informant interviews, focus group discussions and household interviews consistently found that:

- People were looking for alternative sources of income mostly by increasing the collection of NTFPs looking for casual labour, and looking for things to sell.[71] As mentioned earlier, these dominant coping strategies are increasingly under strain given the sudden increase of people using the same coping strategies in the wake of the rodent outbreaks.
- Many villagers therefore also increased the reliance on mutual support—borrowing or receiving rice from relatives. But, since there was less to share overall in affected villages, affected households also had to resort to purchasing food, sometimes on credit, outside of their villages.[72]
- Finally, as options began to run out, villagers had no choice but to reduce the amount of food they consumed each day in an attempt to ration food for longer.
- In addition, there are reports of children dropping out of school[73] and some indications that children may have been sent to work in cities and factories. Some villagers have resorted to sending their children to stay with relatives.
- In a few cases, families migrated back to their original villages before resettlement.
- Prostitution was implied in one of the household interviews.

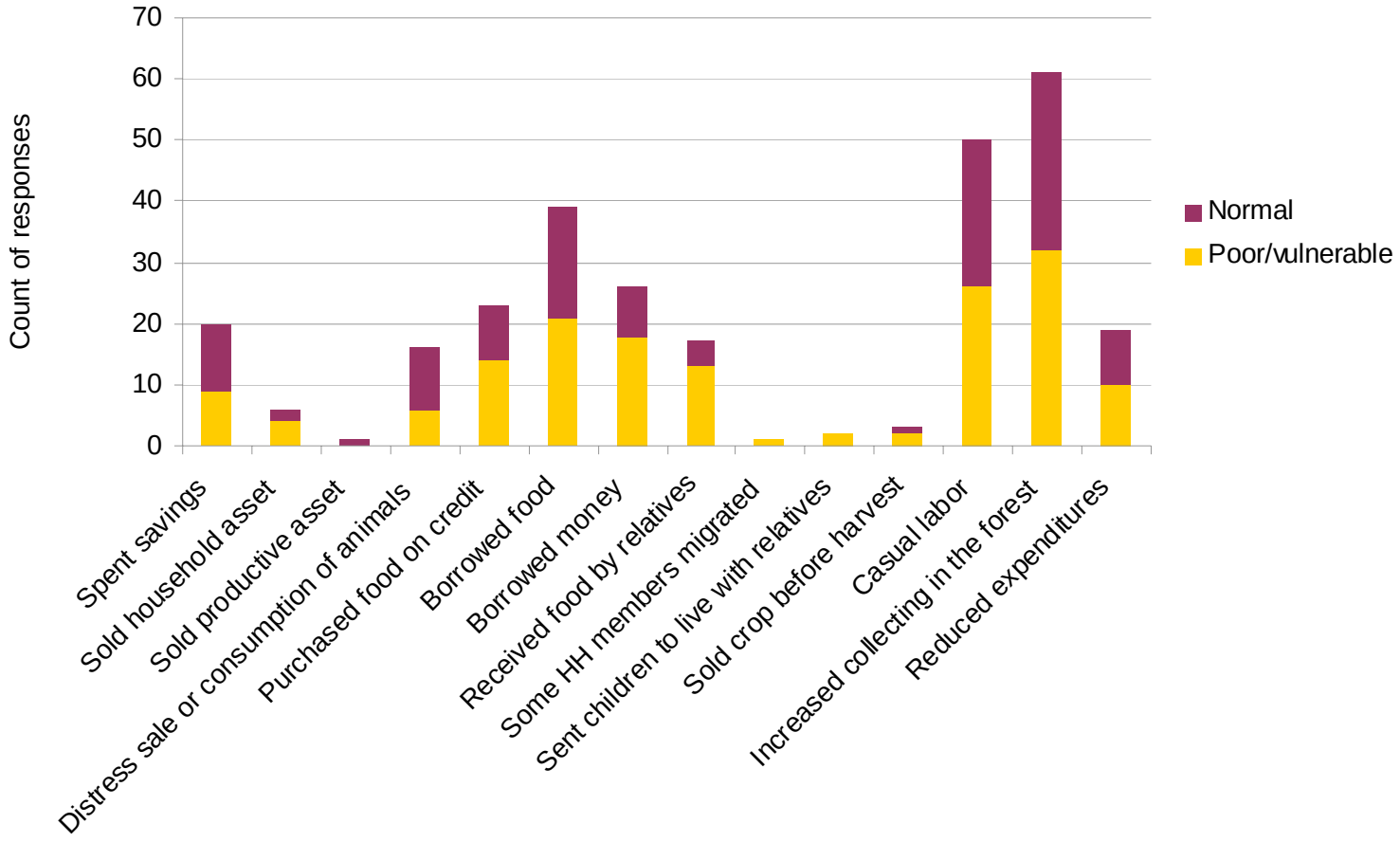
[70] Households generally use a variety of coping strategies. Regardless of the shock and the livelihoods, the most common coping strategies in Laos are: a reduction or change of food consumption; borrowing and help from relatives and friends; the consumption of wild foods; and the use of credit, savings. The choice of coping strategy depends on the household's livelihood orientation and on its wealth: poor households reduce or change their food consumption, and they have to rely on neighbours and friends to get food on credit. By contrast, wealthier households often sell assets or use savings; they also often have access to remittances from migrated relatives.

[71] One village mentioned gold panning B. Huaysengkham, Oudomxay

[72] Eg; in B. Hatchone, Luangnamtha

[73] Eg: in B. Huaysengkham, Oudomxay

Figure 5: How did your household overcome the problems caused by the rats?



Source: EFSA, household interviews

9. Conclusion: the need to intervene to save lives

9.1 The rodent outbreaks are leading to a dramatic rise in food insecurity

The rodent outbreaks affect entire villages and worsen the already vulnerable situation of the very poorest. The worse affected are the most vulnerable to food insecurity: non Lao-Tai upland farmers. They often lost 100% of rice production and have only a few coping options.

Meanwhile, rice prices are increasing more than usual, meaning that the main staple food is now harder to access. This is occurring at the same time that prices of cash crops like maize, sesame, and job's tears are falling. The result is that even the farmers with a small harvest have a significantly smaller income from which to purchase more expensive rice. Accessing food is thus more difficult for everyone.

People are living "day-to-day," finding just enough wild foods or casual labour to feed their families daily. When such food cannot be found, households must skip meals or sometimes not eat at all. It is not uncommon for villagers to now consume only 1 or 2 meals a day. Villagers have expressed widespread hopelessness at the situation.

9.2 Other shocks are also increasingly affecting food security in the Northern Uplands

Although rodent outbreaks of this scale constitute an exceptional shock, many other shocks have contributed to the inherent vulnerability and now acute food insecurity of the upland farmers in the assessed areas. They include:

- Droughts and floods;[74]
- Other pests[75] and problems affecting upland production;
- Limited land availability and new competition for land from agriculture, mining and hydropower concessions;
- Insufficient measures to mitigate the negative effects of certain policies;[76]
- Reduced access to natural resources;[77]
- The global food price crisis;[78]
- The financial crisis affecting cash crops prices;

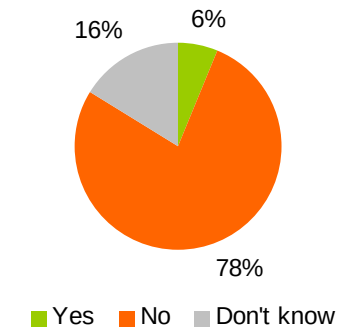
In fact, in some of the areas not affected by rodent outbreaks, communities experienced other problems (no grain in the rice, cut worm, wild pigs, drought) that resulted in similarly critical levels of food insecurity.[79] These people also need immediate relief.

9.3 Help is urgently needed to save lives

No assistance has yet been provided to the communities as a response to the rodent outbreaks. If no help is provided soon, the situation is likely to get worse.

[74] Including the august 2008 floods
[75] Cut worms, wild pigs (no grain)
[76] such as the bans on opium production, shifting cultivation, and the village consolidation strategy, on food security. The opium eradication policy led to a significant decline in opium cultivation but also resulted in the loss of an important source of income for many communities. The resettlement programme has increased vulnerability to food insecurity where resources and services were inadequate for resettled populations.
[77] This includes: environmental degradation from hydropower and mining schemes; rapid and uncontrolled land use planning and management (e.g. large-scale concessions for rubber plantations); and unsustainable harvest. Those observed in the Northern provinces include a lot of land taken or at least planted for cash crops.
[78] A 2008 WFP study on the food price crisis showed that although lower than compared to its regional neighbours, food price increases at global level were transmitted into the Lao rice market.
[79] In Singh district, it was obvious that reduced access to quality productive land and to natural resources had had a significant impact on the food security of the villagers, many of which informally reported having reverted back to opium production. In these areas, access to productive land was reported to be increasingly a problem as rubber plantations and conservation areas expand, and farmers have less land for their own production and in some cases are no longer allowed to keep livestock. According to reports provided by partner NGOs (NCA and ACF), villages in Long district, of Luangnamtha they were also very food insecure.

Figure 6: Has your household recovered from the shock?



Source: EFSA, household interviews

Affected households have not yet recovered from the rodent outbreaks. Moreover, most households are trapped in a vicious cycle whereby resources are geared mostly towards acquiring food and not investing in future activities. By devoting their meager resources to acquiring food for immediate survival, farmers will be unable to find neither the time nor the resources to plant the next harvest. Further limiting cultivation is the seed supply. After replanting several times last year, seed stocks for upland rice are now depleted. If farmers are not supported soon with food and seeds, the negative impacts of the rodents will continue to be felt well into 2010.

Food insecurity will remain a problem in the future even in the best case scenario. Even if households have enough seeds to plant leading to a normal level of production, harvest is not until September or October. This thus leaves many households with less than 1 month of rice for the next 6 months.

People are hungry now and getting hungrier. Given difficulties in finding income or stable food sources, affected villagers are likely to become increasingly food insecure. The urgency is all the more extreme in remote villages. As the rainy season approaches, they will be cut off from markets, traders and opportunities for casual labour. This means that it will be even harder to cope. Given the length of the rainy season, these villagers could become acutely hungry if help is not provided soon.

There is no guarantee that the rodent outbreaks have come to an end.[80] On the contrary, in Xayabury province the bamboos are still flowering and people fear that the rodents will also affect the upcoming season. This scenario appears increasingly likely given reports by Xayabury officials that rodent outbreaks are affecting other (not previously affected) districts in 2009.

Figure 7: Does your household have rice to eat now?

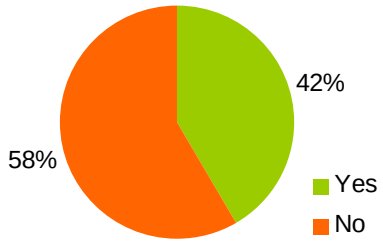
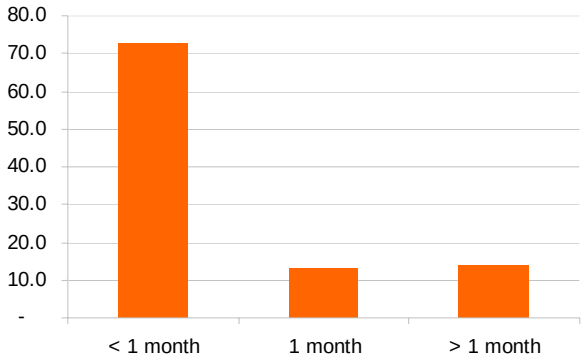


Figure 8: How long will your current rice stock last for your household?



Source: EFSA, household interviews

[80] Literature indicates that in Luangprabang individual outbreaks historically lasted between 1 and 5 years.

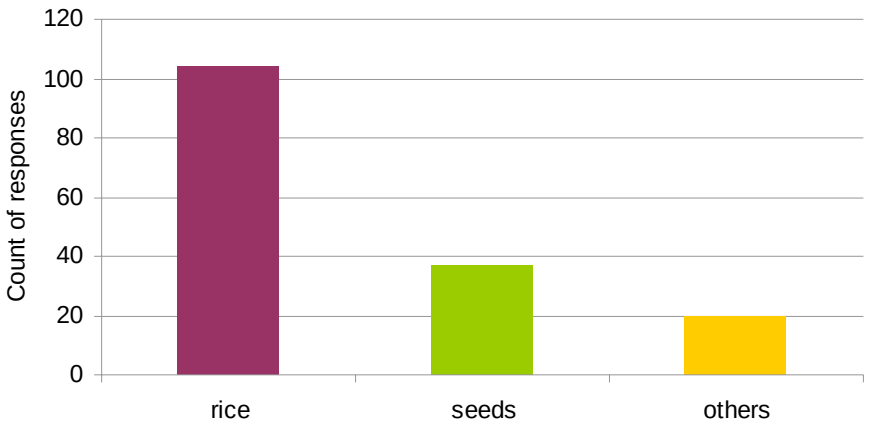
10. Recommendations

To save lives and protect livelihoods, actions must be taken to address the severe food insecurity and to support the upcoming planting season. Food assistance should be provided before the heavy rains start in order that it can be delivered to the most remote villages.

10.1.1 Needs identified by the community

Affected villagers consistently requested food, seeds and money when asked what was needed during the key informant interviews and focus group discussions. Other common answers included medicines, (improved access to) drinking water, toilets, clothes and electricity.

Figure 9: From your household point of view what are the priority needs for assistance?



Source: EFSA, household interviews

10.1.2 Provided support

So far, no support has been provided to the affected villages as a response to the rodent outbreaks.[81]

The WFP School Feeding program was mentioned on several occasions as being a source of food for children.[82] Most remote villages did not receive any support and often never do. A special effort should be made to reach these villages, perhaps by proposing drop off points in schools.[83]

[81] Some villages reported having received clothes and some salt, but no food or seeds and the received support was unrelated to the rodent outbreaks.
[82] In Northern Laos, the WFP school feeding program covers most schools in Oudomxay, Luangnamtha and Luangprabang.
[83] B. Takou and Sapim in Nale are reported to be at 2 days walking in Nale district, Luangnamtha. According to reports from DO who have visited the area they are severely affected by rodents and have no coping options than to stop eating.

10.1.3 Response options

Cause of the intervention	Type of intervention	Primary target groups	Comments
Immediate action			
Severe rice shortage	Between 4-6 months of food assistance	85,000 to 140,000 people in affected and FI villages	Rice needs to be provided urgently or it will be too late. This is especially true for remote villages with little road access. Distribution must be before rainy season (June).
Lack of seeds for planting (upland rice)	Seed distribution	Upland farmers in severely affected villages	Seeds need to be distributed to farmers before planting season (April).
No income sources	Cash based interventions	HH in severely affected and FI villagers	If no seeds or other means of livelihoods can be provided, cash compensations need to be tailored to the local context.
Long-term action			
Remote areas are worse off and cannot be supported in the rainy season	Infrastructure development for rural communities	In remote areas with high food insecurity	
Lack of opportunities	Enhance livelihood opportunities. Improvement of land access	In remote areas with high food insecurity	Understanding livelihood opportunities in different locations of the country is important to better guide what type of interventions can promote better food security. Include land ownership.[84]
Further assessments needed			
• Quantify need for seeds.			
• Identify how to control rodent populations and prevent outbreaks.			
• Assess the impact of the outbreaks on nutrition.			
• Monitor the situation in the affected areas as well as in other districts and provinces, in order to respond in cases where the situation does not improve.			

[84] Ownership of land differs across the country. In the Northern Highlands 34% of households report land ownership. Following the geographical pattern, land ownership also seems to be unequally distributed among the ethnic groups with the Lao-Tai reporting over 60% land ownership when less than 20% for the Sino-Tibetan groups report the same. Of the two other groups approximately 35% have land titles. (Source: CFSVA 2006 p.51)

Annexes

Included in this report

Annex A: EFSA resources
- A1 - References
- A2 - Team composition
- A3 - List and map of visited villages
- A4 - Terminology and concepts

Annex B: EFSA Terms of Reference

Annex C: EFSA tools *(Lao version available on request from VAM unit)*
- C1 - Field guidance note
- C2 - Checklist Key Informants
- C3 - Checklist Focus Group Discussion
- C4 – Household questionnaire
- C5 - Village summary sheet
- C6 - Team debriefing sheet

Included in Volume 2 – Available on request from the VAM unit

D – EFSA results – summary
- D1 - Provincial summaries

E – Detailed EFSA results
- E1 - Village reports – compiled
- E2 - Village summary tables
- E3 - Map of affected districts
- E4 - Map of visited villages

Available on request from the VAM unit
- E5 – HH data - Excel and SPSS files

Annex A1 - References

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Annex A2 – Team Composition

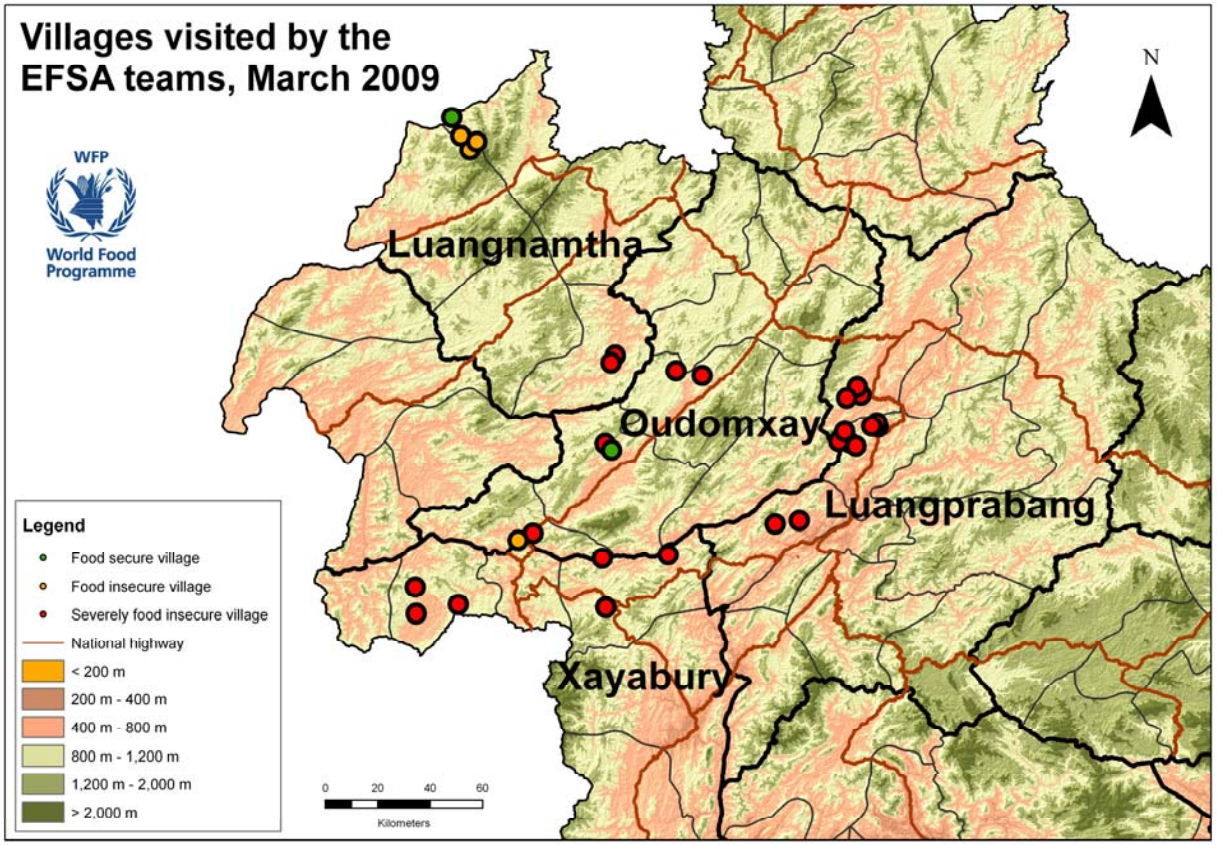
List of WFP staff conducting the EFSA rat assessment

Northern Laos March 2009

Name	Responsibility	Place visited
Ms Laura de Franchis	**Team leader 1**	**Luangnamtha**
Ms KhanNgeun Phommalangsy	Team member (T1)	Luangnamtha
Mr Vongchanh Raxamountry	Team member (T1)	Luangnamtha
Mr Vieng Sengkham	Driver (T1)	Luangnamtha
Ms Somphavanh Nakhavong	**Team leader 2**	**Xayabury**
Mr Khamphay Onechaleunsouk	Team member (T2)	Xayabury
Mr Kongphet Meuangchanh	Driver (T2)	Xayabury
Mr Itthiphone Xayyavong	**Team leader 3**	**Oudomxay**
Mr Phonsavanh[1]	Team member (T3)	Oudomxay
Ms Samantha Wright	Team member (T3)	Oudomxay
Mr Khamkone Keolangsy	Driver (T3)	Oudomxay
Mr Bouakhai Saipaseuth	**Team leader 4**	**Luangprabang**
Mr Kheuab Sitthivong	Team member (T4)	Luangprabang
Mr Saysana Sithirajvongsa	Team member (T4)	Luangprabang
Mr Saykham Inthavong	Driver (T4)	Luangrabang

[1] MLSW

Annex A3 - List and map of visited villages



No.	Province name	District name	Village name English
1	LPB	Pak-ou	Houaykok
2	LPB	Pak-ou	Nanoi
3	LPB	Pak-ou	Houaykuen
4	LPB	Pak-ou	Nasavang
5	LPB	Pak-ou	Nonsavanh
6	LPB	Pak-ou	Houai Le
7	LPB	Pak-ou	Houaymak
8	LPB	Nambak	Phoukoo
9	LPB	Nambak	Thongtueng
10	LPB	Nambak	Pongtai
11	LPB	Chomphet	Houaythum (phounangvang)
12	LPB	Chomphet	Houaymart
13	XYL	Hongsa	Kheng ene
14	XYL	Hongsa	Khok ek
15	XYL	Hongsa	Nongluang
16	XYL	Xienghone	Donexay
17	XYL	Xienghon	Houamuang
18	LNT	Nale	Phouhon
19	LNT	Nale	Hatchon
20	LNT	Sing	Paksane
21	LNT	Sing	MeutorKao
22	LNT	Sing	Xiangkheng
23	LNT	Sing	Chakheun
24	ODX	Beng	Laiyai
25	ODX	Beng	Tangdu
26	ODX	Pakbeng	Huaysengkham
27	ODX	Pakbeng	Donsa-ath
28	ODX	Houn	Namlian
29	ODX	Houn	Somphone

Annex A4 - Terminology and concepts[1]

Below is a list of definitions and explanations for some key concepts used in this report.

Food security: Food security can be defined as the condition when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life .

Food security is normally divided into three aspects: food availability, food access and food utilization.

Food availability: is the amount of food that is physically present in a country or area through all forms of domestic production, commercial imports and food aid .

Food access is the households' ability to regularly acquire adequate amounts of food through a combination of their own stock and home production, purchases, barter, gifts borrowing or food aid.

Food utilization refers to: a) households' use of the food to which they have access, and b) individuals' ability to absorb nutrients – the conversion efficiency of food by the body.

A household is defined as a group of persons who share their resources in order to jointly provide for their basic needs, at a minimum their food consumption ("eating from the same pot"), on a daily basis.

Livelihoods are the resources used and the activities undertaken in order to live. The resources can consist of individual skills and abilities (human capital), land, savings, and equipment (natural, financial and physical capital, respectively) and formal support groups or informal networks that assist in the activities being undertaken (social capital). Livelihood strategies are activities and choices that people make, using their asset base, in order to achieve the most optimal livelihood outcomes. Such livelihood outcomes may include food security, general well-being, ensuring schooling for children, or being able to afford or access health services . A livelihood group is composed of people who utilize similar livelihood strategies.

Coping strategies are decisions made by households to compensate for or meet a shortfall of food. This does not describe a regular situation but a response to a shortfall of food that can be described as a shock. These coping strategies can be short-term alterations of consumption patterns or one-off responses such as asset sales. Long-term alterations of income earning or food production patterns might also be a response to a shortfall of food, but will not be included in the term "coping strategy" in this report .

Vulnerability: refers to the full range of factors that expose households and make them susceptible to specific hazards. A hazard is the probability of a potentially damaging phenomenon (shock) within a given period. Risks result from the interactions between hazards and vulnerable conditions. They can be understood as the combination of the probability of a defined hazard and the magnitude of the expected losses to food security.

[1] Source CFSVA

Annex B - Emergency assessment on rodent outbreaks, and food insecurity in Northern Uplands of Lao PDR of Laos

Terms of reference

Prepared by Laura de Franchis

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1. Background

In Northern Laos, the 2008 highland rice production is reported to have been threatened by continuing rain that impeded the burning of the fields for upland preparation. In addition, articles in the Vientiane times are reporting the worst rodent plague in Laos in the last 20 years[1].

The rodent outbreaks iare affecting the most food insecure provinces in Laos[2]. According to available information[3], rodents have mostly damaged upland rice fields and sweet corn crops in the North. The most affected areas are likely Luangprabang and Oudomxay. Other affected provinces include Luangnamtha, Bokeo, Xayabury, Phongsaly and Huaphanh. Local authorities have requested relief assistance from WFP for more than 500 villages[4] in these provinces, representing an estimate[5] of over 250,000 affected people.

Preliminary information provided by WFP field staff indicates that the livelihoods most affected by the outbreaks are the upland farmers. According to the CFSVA, these farmers are already among the most food insecure populations[6] in Laos.

2. Objectives of the EFSA

WFP needs to conduct an assessment in order to clarify how severely people are affected and how many require immediate assistance. The purpose of this assessment is to provide WFP with rough results on the extent and impact of the rodent outbreaks on the household food security. This will form the basis of formulating and launching the required response and fund-raising efforts.

- **EFSA objectives**

The **prime objective** of this EFSA is to answer the following questions

1/ What is the extent and severity of the rodent outbreaks?
2/ In provinces affected by the rodent outbreaks, what is the food security situation?
3/ Is there a need to intervene to save lives and protect livelihoods?
4/ What are the response options?
5/ Are more thorough assessments needed?

The **secondary objective** is to test initial EFSA methodology with WFP Laos staff and enhance our capacity to roll out these assessments quickly, analyse quantitative and qualitative information in a timely manner and produce good quality assessment reports with little external assistance.

It is expected to build on the existing capacity of field staff to conduct food security assessments and to raise general staff awareness on key issues regarding shocks affecting food security in Laos.

- **Key questions for this Assessment**

1/ What is the extent and the severity of the rodent outbreaks?

- What is the history of the outbreaks?
- What is the nature of the damage?
- What geographical areas are affected?
- How many people/households are potentially affected?
- How severely are they (areas and people) affected?

2/ In the provinces affected by the rodent outbreaks, what is the food security situation?

- What are the main impacts and threats to food security?

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[1] Vientiane times August
[2] as identified by the CFSVA
[3] Information collected by WFP field staff with district and province authorities
[4] (over 50% of these villages are located in Oudomxay and Luangprabang alone)
[5] If we assume an average of around 90HH per village and 6 members per Household, the total amount of affected people would exceed 250,000 people.
[6] Other sources, confirm that in general "Upland smallholder producers regard rodents as their most important pest and the rodent problem ranks second only to weeds as the overall most important constraint to production… it is also the constraint over which they have the least control" M. Schiller et al

- Are they (will they) affecting lives or causing short-term risks to lives?
- How do the current production losses compare to losses in a usual year[7]?

3/ Is there need to intervene to save lives and protect livelihoods[8]?

- How severely are people affected?
- How are people responding to the crisis?
- Has any assistance already been provided – what type, to whom, and where?
- How is the situation likely to evolve in the next three months and in the coming years? (How long are the rodents likely to stay)?

4/ What are the response options for WFP and partners?

- What type of interventions are required?
- Where?
- When?
- For whom[9]?

5/ Are more thorough assessments needed?

- Is any information missing and needed to address the needs of the population (eg: health, medium to long term impact on livelihoods…)?
- What type of information is it?

- **Stakeholders**

The main expected users of the assessment will be WFP and development partners in Laos. The final report will be shared with WFP partners as well as with the WFP regional bureau in Bangkok and Headquarters.

3. Methodology

- **Data collection**

In agreement with the WFP regional bureau in Bangkok, the country office decided to conduct an EFSA requiring little external assistance[10] and only using CO staff and local partners. The EFSA will actively involve all levels of staff working with the CO, especially field staff from affected provinces.

Secondary data collection:

A thorough assessment of available secondary information will provide valuable inputs informing key issues to be addressed by this EFSA.

1. The CFSVA will serve as the basis for the precrisis information on food security and nutrition situation in the country.
2. Available information on the current crisis will be collected to provide as clear a picture as possible of the situation in the affected areas through information from field staff, and key partners. However, it is expected that initial information on the crisis will be limited. More emphasis will be put on primary data collection.
3. FS assessments on rodent outbreaks conducted elsewhere and recent guidance documents produced by HQ will provide important supplementary information.

A simple template[11] will be used to help synthesize the information quickly. It will also help to identify missing, incomplete, conflicting or doubtful data. This will form the basis of a shortened checklist of priority information to be collected directly from key informants and field visits.

Primary data collection

Methods for primary data collection will include mostly key informant interviews, direct observation[12], focus group discussions and some household level checking.

Selection of Key informants

Interviews will be conducted with central[13] and provincial level government staff in the affected provinces, health centers, markets, and l with the affected people and their representatives at village level.

[7] (either due to the rodents or to the rain impeding the timely plantation)
[8] (eg: are there immediate risks to livelihoods that are not being addressed)
[9] Who is affected (main characteristics of the affected people : livelihoods etc…), estimate number of people requiring assistance?
[10] See methodology and planning
[11] (adapted from WFP initial assessment TGS, 2009)
[12] Eg: village walks
[13] (Ministry of Labour and Social Welfare – main WFP partner on relief distributions, Ministry of Agriculture and National Agriculture and Forestry Research Institute)

Village selection

The selection of the villages, the itinerary and the plan will be guided by the information review, including discussions with informants. Possible criteria for distinguishing villages are: anticipated severity of the situation (lowly, medium or severely affected villages) road access/no road access, highland/low-land etc… When selecting the villages, an effort will be made to estimate their representativeness of the other villages so that the findings can be generalized.

GPS coordinates will be taken of the visited sites.

Household selection

No formal household survey will be conducted. However, based on information from key informants, households will be selected[14] for interviews on the following criteria:

- 2-5 households whose situation is typical of that of the majority of the population;

- 2-5 households or individuals who present particular needs, such as women-headed households, isolated individuals, elderly people and children.

The households or individuals interviewed are expected to provide direct information about their food and income sources and strategies, living conditions, difficulties and priorities.

Tool development

A checklist will be developed that can be divided into sub-checklists for semi-structured interviews with key informants and household level interviews.

A pre-coded data collection form will be developed for the collection of quantitative information. The list of questions for the semi-structured interviews will follow a logical sequence and indicate the types of answers that are being sought (such as yes/no, numbers or descriptions).

Analysis

A debriefing workshop will be organized to collect and synthesize the qualitative information collected in the field.

Quantitative data analysis will be done by the VAM unit, with possible support from OMB, using SPSS.

- **Limitations**

1/ Local disparities: Although the rodent outbreaks seems to be affecting the whole northern region, it is very likely that some areas are more widely and severely affected than others. The patchy nature of the damage caused by the rodents will make it difficult to infer on the overall situation in the North (losses can be very bad in one village and much less in a nearby area, depends on the ecosystem and local factors). Therefore the teams will have to cover as representative an area as possible.

2/ Limited availability of secondary data: besides newspaper articles no information was available on the situation in the infested areas. As far as we know, no previous reports on the situation are available. This makes the primary data collection and key informant interviews very important, despite limited resources and staff availability. The assessment will only allow for rough estimations and will not go into detailed analysis of possible causes and the long term effects of the outbreak.

- **Assessment quality assurance**

A 2 day training workshop with the teams that includes testing of questionnaires and checklists is key in ensuring understanding of the questionnaires and expected outputs of the assessment.

Efforts will be made to estimate the representativeness of the findings of the assessment (eg: proportion of the total population represented by the interviewed households during the field visits). Triangulation of information with direct observations will help to minimize biases and mistakes in generalizing the findings of the field work.

The quality of the assessment will be assured by regular reporting of the assessment teams on the progress to CO, OMB staff, and when if/considered relevant, VAM focal points in WFP Headquarters.

4. Expected outputs

-	TOR
-	Training material
-	Debriefing workshop report
-	EFSA questionnaire
-	Report of maximum 25 pages (excluding annexes)
-	Lessons learnt

[14] Possible methods include: snowball approach: Following the indications of key informants, a first family or individual can be interviewed and asked to identify others in a similar or worse situation for the next round of interviews. convenience sampling: When time or access is extremely limited, only those families or individuals who are easiest to reach will be interviewed.

The final report will include:

- an executive summary providing an overview of the situation, the magnitude of the problem, including immediate and short-term risks to lives, and the emergency responses recommended;
- the background and objectives of the assessment;
- a short section on methodology, clearly documenting the sources of secondary and primary information used, the rationale for selecting the communities and areas visited in the field, and the limitations for generalizing results;
- brief descriptions of the findings of the assessment;
- a conclusion and recommendations that review the priority food and nutrition problems causing current or short-term risks to lives, the estimated ranges of communities and people concerned, and proposed emergency responses;
- a final section on follow-up requirements, including monitoring and follow-up assessments to fill information gaps and corroborate the assumptions made.

If time permits the VAM unit will try to map the affected areas. Maps will also be used when compiling information and writing the report, to provide visual information on key issues such as areas where crops have been lost or where markets are still functioning.

5. Team composition, roles and responsibilities

The VAM unit of WFP will be responsible for the coordination, tool development and reporting of the assessment.

Methodological and technical guidance of the assessment will be provided at a distance by OMB and HQ VAM units, especially on the methodology development and analysis phases.

Management: the country director, deputy country director and head of PRRO will be responsible for approving the TORs, the planning and budget as well as the final report. All documents regarding the assessment will be made available to management and regular updates will be provided to all assessment team members by the assessment coordinator.

The assessment teams will be coordinated by 1 assessment coordinator (Head of VAM unit). 4 teams headed by WFP staff composed of at least 2 people (when possible 2 WFP staff), and one PFAC in the field.

WFP staff will be trained during 2 days: first day class room training on the use of the tools, second day on testing questionnaire and feedback/adjustment. This phase is critical for the quality of the information that will be provided by the assessment.

4 days of field visits will be followed by one day debriefing workshop. The PFACs in each team will be responsible for collecting the necessary information before hand.

Coverage: Overall it is expected that the teams will gather primary data in approximately 24 villages. The 4 teams will cover the provinces of

- First priority: Oudomxay and Luangprabang.
- Second priority: Xayabouri.
- If time permits: Bokeo and Luangnamtha. Partner NGOs are sharing information about FS assessments in Bokeo, Luangnamtha (NCA currently conducting FS assessments).
- No field work in Huaphanh or Phongsaly: It is expected that secondary information will suffice to describe the situation (CRWR conducted assessments in Mai district of Phongsaly).

6. Timeline

- **Assessment phases**

Preparation (27 Feb to 9 March)
- TOR developed and approved
- Workplan developed and approved
- Field itinerary proposed and agreed
- Budget developed and approved
- Team set up developed and approved
- Tools developed

Field work (10-15 March)
- Training workshop (10-11/3 – Luangprabang)
- Field work (12-15/3)

Analysis (16-20 March)
- Secondary data analysis
- Debriefing workshop (16/3 – Luangprabang)
- Primary data capturing
- Primary data analysis

Reporting (19-27 March)

Annex C1 - Field guidance note

BEFORE GOING TO THE VILLAGES

At district level, interview local government and line ministry officials, referral health-care facilities, national and international organizations already in the area, local businesses, etc. to find out more about: (i) conditions before the crisis including the way in which services are normally organized; (ii) the extent to which services have been affected, the most affected locations, the main impacts of the crisis; and (iii) any relief activities that are already underway or planned.

PRIMARY DATA COLLECTION:

On-site tasks should be clearly divided among team members according to skill sets and experience for maximum efficiency. Each team member should have a defined role and be ready to conduct his/her own enquiries related to particular sources of information for completing the IRA form while also being sensitive to the information needs of the team as a whole.

Identifying and interviewing key informants (KIs):

- At the start of the site visit, meet with local authorities and/or community leaders (Village head…).
- Other KIs at each site would normally include community health worker, teachers, community development workers, relief workers, traders and NGO programme managers. All are likely to be sources of important information.
- When an interview is clearly not yielding the kind of overview perspective needed, politely bring the discussion to an end and identify other KIs to talk with.

Holding group discussions:

- Select participants based on the issues to be discussed (Upland farmers, Maize farmers, Women) and look for convenient ways and best timimg to get groups together on specific topics.

Observing conditions:

- Walk across the site/village along a transect – not following existing lines such as roads or paths – to obtain a cross-section of points for observation and provide a balanced, representative view of conditions.
- Key sites for observation include fields, stocks, homes, storage facilities, grave sites, and drug stocks in health facilities.
- Observe the site/village from above, if possible, to get a sense of the conditions and variations across the site.

Visiting households (HHs):

- Where impacts are differentiated by location or by group within a community, this will suggest where to go for HH visits. Within a specific area, choose HHs that have specific characteristics, e.g. the most poor-looking.
- Directly observe at least four HHs including one less affected HH and that of a community leader chosen as a KI. The more heterogeneous the population and the more uneven the impact of the crisis, the more careful the sampling approach needs to be and the greater the total sample size in order to be able to confidently draw conclusions.

Synthesizing and recording your findings:

- Wrap up each visit by collectively discussing the data gathered at that site for each sector and consolidating them in a single form. (Village summary sheet)
- Reconcile, as much as possible, any inconsistencies among data collected by different team members or using different methods. Highlight any unresolved issues at the end of each section of the form.

SOME DO'S AND DON'TS

Do:

- Divide tasks by according to expertise of team members, so each can collect information independently. - Choose a limited number of key topics to discuss with a particular KI or group, or during HH visits.
- Once on-site, after introduction to local authorities/leaders, fan out to collect information individually (or in pairs)
- Record observations and any information volunteered that may be related to topics other than your own.
- Introduce yourself properly and give people time to talk about their priority issues or grievances, before asking more targeted questions.
- Find the 'person who knows' – who has already gathered most of the data you're looking for – but beware of bias.

Don't:

- waste precious time talking as a whole team to one respondent (apart from initial introduction to authorities, etc.).
- interrogate respondents as an extractive process; instead, let them talk while guiding the conversation.
- keep any respondent busy for more than half an hour; especially in times of crisis, people have their own priorities.
- limit yourself to one respondent's information with regard to any topic: triangulate by asking other persons.

Annex C2 - Checklist -- Key informant interview

Part I: Agriculture and other gov. officials (district, provincial, central)

1. What is the history of the rat infestation in this area? When was the last major infestation?
2. What is the nature of the damage? When was the damage most – growing, seeding, harvest time?
3. What geographical areas are affected (possibility to draw a map of affected areas and verify the areas that are low, moderate and severe damages)? (districts, villages…)
4. How many households/people are affected? (distinguish between low, medium, highly affected if possible)
5. What proportion (approx. percentage) of the cultivation area is affected?
6. How do the current production losses compare to losses in a usual year?
7. How is the situation likely to evolve in the next three months, and in the coming years (how long are the rats likely to stay)?
8. Has any assistance already been provided to affected people?
    a. What type,
    b. to whom,
    c. where,
    d. from whom?
9. Are there any plans to support farmers to:
    a. Recover from the damage to their crop (e.g. assist in replanting)? What type, to whom, where, from whom?
    b. Preventing future damage? What type, to whom, where, from whom?
10. Collect the records/secondary data where it is applicable and available (examples: records of areas affected, maps (photos of maps), requests or descriptions regarding the situation)
11. Have you heard of rodent control committees? Are they active in your area? What do they do? Where are they can we ask them some questions? Set up a meeting?

Part II: Health centers – (go to centers located close to areas that seem to be very affected - can be province, district, village health facility, if there is a health volunteer in a very affected village also ask him/her the questions)

1. What are the main diseases in the area? Any changes in the last 3 months?
2. Do you have concerns regarding the impacts of rats to human health condition (mention nutrition and disease)? Explain
3. What are the common diseases found in this area due to the rats?
4. Have you observed a change no. of cases/patients due to the rats? Can you quantify the change?
5. Have you observed a change the nutrition status of patients due to the rats? Can you quantify the change?
6. If there is a disease outbreak, is the health center be able to cope with the situation? Explain
7. Collect the records/secondary data where it is applicable and available (examples: recent records of diseases in the area…)

Part III: Village key informants (village head, LWU…)

1. No. of HHs
2. No. of people in the village
3. Main ethnic groups in the village
4. What are the main livelihood activities in the village?
5. What are the main crops grown by the villagers/ in the village
6. Describe village population:
    a. How many “poor”/”vulnerable” households
    b. How many “normal” households
7. What is the general situation of food security in the village – do people have enough to eat (rice and other food) to live an active and healthy life? Discuss.
8. Was the village affected by the rat infestation?
9. Is this year worse than previous years regarding rats?
10. What is the history of the rat infestation in this area?

11. What type of damage did the rats cause this year in your village?
12. How would you consider the damage level in your village (low, moderate, high)? Why?
13. Do you know of other villages in the area that are more affected than your village?
14. What geographical areas are affected in your village (possibility to draw a map of affected areas and verify the areas that are low, moderate and severe damages)? (districts, villages…)
15. How many HH are low, medium, very affected by the rat infestation in your village? Describe the households (any types of households more affected than others?)
16. What problems have people in your village had to cope with because of the rats?
17. What do people in your village do to cope with the food shortage situation?
18. What do people do to deal with the rat problem?
    a. in their fields, Explain
    b. in their stocks? Explain
    c. In their homes? Explain
19. Estimate (ha compare to total,%) cultivation areas that were damaged by rats
    a. Rice (paddy + upland)
    b. Other crops
20. Has any assistance already been provided – what type, to whom, where, and by whom?
21. What immediate assistance do people need most in the short term?
22. What immediate assistance do people need most in the medium-long term?
23. Collect the records/secondary data where it is applicable and available (examples: areas affected by rats…)

Part IV: Traders (village)

1. Is there enough foods available in the local/nearby market to meet demand?
2. Is it more difficult to find sellers (farmers) now compared to previous years at the same time?
3. Has the price of food gone up or down compared to the same time last year, by how much?
4. Check for market prices on some key basic commodities (Sticky rice first and second quality, Ordinary Lao rice, Beef Buffalo chicken second quality, rice alcohol)
5. What are the main causes for the price changes (e.g. the price of the food increase due to food shortage)?

Part V: Rodent control commit½ee

1. What is the role of your committee?
2. What is the history of the rat infestation in this area? When was the last major infestation?
3. What is the nature of the damage? When was the damage most – growing, seeding, harvest time?
4. What geographical areas are affected (possibility to draw a map of affected areas and verify the areas that are low, moderate and severe damages)? (districts, villages…)
5. How is the situation likely to evolve in the next three months, and in the coming years (how long are the rats likely to stay)?
6. Has any assistance already been provided to affected people?
    a. What type,
    b. to whom,
    c. where,
    d. from whom?
7. Are there any plans to support farmers to:
    a. Recover from the damage to their crop (e.g. assist in replanting)? What type, to whom, where, from whom?
    b. Preventing future damage? What type, to whom, where, from whom?
8. Collect the records/secondary data where it is applicable and available (examples: records of areas affected, maps (photos of maps), requests or descriptions regarding the situation)

Annex C3 -Checklist -- Focus group discussion for community/village level

Instructions: Select the most relevant questions based on the group you are working with: eg: rice upland farmers, cash crop farmers (corn), women

I. Food availability and security in the village

1. What are the main livelihoods in the village?
2. What is the general situation of food security in the village – do people have enough to eat (rice and other food) to live an active and healthy life? Discuss.
3. Where is the market, is it easy for the villagers to reach?
4. What are the main problems faced by the households in the village? (not only rats but also other problems like Drought, flood, land slide, other Crop pest/ disease, Illness/accident in the HH, Livestock disease, Lack of income, Lack of food, Other)

II. Extent and severity of the rat infestation

1. Are rats a big problem for this village?
2. What is the history of the rat infestation in this area?
3. Is this year worse than previous years regarding rats?
4. What type of damage did the rats cause this year?
5. What geographical areas are affected?
6. What proportion of HHs are potentially affected?
7. How would you consider the damage level in your village (low, moderate, high)? Why?
8. Try to draw a map of affected areas and verify the areas that are low, moderate and severe damages)?

III. Impacts of rat infestation

1. Which people are having the most problems due to the rat infestation? Describe the people and the problems.
2. What are the rat infestation's main impacts on food in the market?
    - Is there a local/nearby market?
    - Does it have adequate food available?
    - Has the price of food gone up or down compared to the same time last year, by how much?
3. What are the rat infestation's main impacts on food sources for the villagers: Try to quantify (compared to last year or to normal year)
    - What are the main food sources of people?
    - Have they changed since the rat infestation? How?
4. What are the rat infestation's main impacts on production:
    - What type of crops were damaged by rats?
    - How do the current production losses compare to losses in a usual year? (quantify harvest after the rat infestation/ harvest in average years)
    - Are there any possibilities for other crops to be grown now in order to compensate to the losses?
5. Have the rats eaten or damaged food stocks?
    - What types of food?
    - Who's food?
    - quantify?
6. Have the rats eaten or damaged seeds that were kept for planting?
    - What type of seeds?
    - quantify?
7. Is there any indication that Diseases might be increasing due to the rat infestation? Explain.
8. What are the rat infestation's main impacts on Livelihoods?
    - What livelihoods are most affected by the rat infestation? how are they affected?
    - Has the rat infestation changed the income of some people in the village? explain?
    - Are there alternative livelihoods that villagers currently use or are considering as another option?
9. Have the rats been affecting the following:

- Livestock, how?
- (Drinking) water sources, how?

10. How is the situation likely to evolve in the next three months, and in the coming years (how long are the rats likely to stay)?

IV. Coping strategies

1. How do the villagers deal with the outbreak of rats?
    a. What do they do to stop the rats?
    b. What do villagers do to overcome the problems caused by the rats?
2. What are people doing to be able to get enough food for their HHs after being affected by the rat infestation?
3. Are there any changes in their food consumption since the rats came (do people eat more, less, different types of food)?
4. Have you observed any HHs that reduce no. of meals or skip their entire meals, or go without eating for the whole day? What % of people in the village do that?

VI. Assistance received and/or needed

1. Has any assistance already been provided – what type, to whom, where, and by whom?
2. What immediate assistance do you need most in the short term?
3. What immediate assistance do you need most in the medium-long term?

Annex C4 - Household questionnaire

Instructions:

⇒ Recommended to interview at least 2 poor and 2 normal households

A-ASSESSMENT INFORMATION *(to be filled in by the team leader)*	
1. Dates of Assessment: _____/03/2009	
2. Assessment team number: **1 2 3 4** *(circle your team number)*	
3. Place of the assessment:	
Province District Village	
GPS coordinates:	
4. Household number:	
5. What is the status of the HH in the village? *(ask key informant)*	☐ Poor/vulnerable ☐ Normal
***6.* What % of HH in the village are similar to this HH?** *(ask key informant)*	|__||__|% of village HH

B-HOUSEHOLD BACKGROUND INFORMATION			
1. What ethnic group do you belong to?	_____ethnic group	Belongs to *(fill in afterwards)*	☐ Lao Tai ☐ Mon Khmer ☐ Sino-tibetan ☐ Hmong Mien

2. What are your household's main livelihood activities (Tick all that apply)?

Farmer - Crops	Unskilled worker	Salaried
Farmer - Crops, gathering and hunting	Skilled worker	Trader, shopkeeper
Farmer - Crops and livestock		Others_____

3. What are the main problems your household has been facing in the last 3 months (Tick all that apply)

☐ Drought	☐ Illness/accident in the HH	☐ Lack of food
☐ Regular flood	☐ Death of HH member	☐ Lack of income
☐ Flash Flood/ land slide	☐ Livestock disease	☐ Other: _____ *(specify)*
☐ Rat infestation		
☐ Other Crop pest/ disease		

C-DAMAGE CAUSED BY RATS

1. Is your household affected by the rats? ☐ Yes ☐ No ☐ DNK *(if No ⇒ Section E)*

2. What types of problems did your household face during the rat infestation? *Tick all that apply*

☐ Loss/damaged crops in the field	☐ Disease/injury to poultry
☐ Loss/damaged food stock	☐ Disease/injury of other livestock
☐ Damaged vegetable garden	☐ Damaged fish pond/fish source
☐ Damaged/spoiled seedbed or seeds	☐ Damaged house
☐ Food shortage	☐ Damage/loss of business establishment
☐ Had to consume non-staple/ unconventional food	☐ Reduced income source
☐ Unavailability of foods in market	☐ Reduced wage rate
☐ High price of daily commodities	☐ Interrupted education
☐ Death of household member	☐ Lack of pure drinking water
☐ Injury/illness of the household members	☐ Others (specify).____

3. If HH crops have been affected please fill in the below table

Crop affected by rat	**amount planted in normal year** *(Specify unit)*	**amount harvested in normal year**	**amount planted last season**	**amount harvested last season**
Rice	|__||__|	|__||__|	|__||__|	|__||__|
Corn	|__||__|	|__||__|	|__||__|	|__||__|
Cassava	|__||__|	|__||__|	|__||__|	|__||__|
Sesame	|__||__|	|__||__|	|__||__|	|__||__|
Jobs tear	|__||__|	|__||__|	|__||__|	|__||__|
Vegetable gardens	|__||__|	|__||__|	|__||__|	|__||__|
Other:_____	|__||__|	|__||__|	|__||__|	|__||__|

4. If HH food stocks have been affected please fill in the below table

Type of food affected	Amount available before rat *(Specify unit)*	Amount damaged by rat
1.		
2.		
3.		
4.		

5. If HH food stocks seeds have been eaten please fill in the below table

Type of seed eaten	Amount available before rat *(Specify unit)*	Amount damaged by rat
Rice	__|__|	__|__|
Corn	__|__|	__|__|
Cassava	__|__|	__|__|
Sesame	__|__|	__|__|
Jobs tear	__|__|	__|__|
Vegetables	__|__|	__|__|
Other:_____	__|__|	__|__|

6. Has your HH recovered from the shock (is everything gone back to normal now)? ☐ Yes ☐ No ☐ DNK

D-IMPACT OF RATS ON FS

1. How did your household overcome the problems caused by the rats? *Tick all that apply*

- ☐ Spent savings
- ☐ Sold household assets (cooking utensils, jewellery etc.)
- ☐ Sold productive assets (land, agricultural tools, seeds or other inputs, machinery)
- ☐ Distress sale or consumption of animals
- ☐ Rented out land
- ☐ Purchased food on credit
- ☐ Borrowed food
- ☐ Borrowed money
- ☐ Received food by relatives or others (no need to reimburse)
- ☐ Some HH members migrated
- ☐ Sent children to live with relatives
- ☐ Sold crop before harvest
- ☐ Casual labor
- ☐ Increased Collecting of Forest products, Hunting, Fishing
- ☐ Reduced expenditures on health and education
- ☐ Relied on emergency support (specify who?)
- ☐ Other, specify: _____

E- FOOD SECURITY SITUATION

1. Does your household have food to eat now?	RICE ☐ Yes ☐ No ☐ DNK	Other food ☐ Yes ☐ No ☐ DNK
2. How long will the current rice stock last your HH?	RICE __|__|months	

3. For the months in which you do not have food will you be able to purchase/collect/borrow the food? ☐ Yes ☐ No ☐ DNK

4. <u>In the last 7 days</u> Did you or any household member eat a smaller meal (less amount of food) than usual because of food shortage? ☐ Yes ☐ No ☐ DNK

5. <u>In the last 7 days</u> Did you or any other household member eat fewer number of meals (skip meal) than usual, because of food shortage? ☐ Yes ☐ No ☐ DNK

6. <u>In the last 7 days</u> Were you or any household member not able to eat the kinds of foods you choose to eat as staple/main food (e.g. rice) because of shortage of food? ☐ Yes ☐ No ☐ DNK

7. <u>In the last 7 days</u> Did you or any household member was compelled to eat foods that you normally choose not to eat due to shortage of food? ☐ Yes ☐ No ☐ DNK

8. <u>In the last 7 days</u> Did you or any household member go a whole day (24 hours) without eating anything because there was shortage of food? ☐ Yes ☐ No ☐ DNK

RESPONSE

1. Did you receive any Aid/relief given due to the rat infestation? ☐ Yes ☐ No ☐ DNK

2. If yes, what type of aid/relief did you receive? *Tick all that apply*

- ☐ Food
- ☐ Cash
- ☐ Rat traps/pesticides
- ☐ Others (specify).....

3. From your HH point of view, what are the priority needs in terms of assistance?

Name of interviewer: _____ Date of interview:_____ Signature:_____

Annex C5 - Village summary sheet

Instructions:

⇒ To be filled in by the team leader with the team members after the village was visited – if possible on the same day

OVERVIEW OF DATA COLLECTED					
1. Date of Assessment: _____/03/2009					
2. Assessment team number: **1 2 3 4** *(circle your team number)*					
3. Place of the assessment:					
Province		District		Village	
GPS coordinates:					
4. Describe how the information was collected in this village					
☐ Direct observation	Describe what was observed by team members (circle)	1= Afftected upland field 2= Rice stocks in the field 3= Food stocks in the houses 4=other: _____			
☐ Key informants interview	Number of Key informants interviewed	|__| people	Function of Key informants interviewed (circle)		1= Village chief, 2= head of the elders 3= LWU representative 4=LFNC representative 5=head of the young 6=teacher 8=Health volunteer 7=other: _____
☐ Focus Group Discussion	Number of FGDs	|__| FGD	For each FGD describe FGD and people present	FGD 1:	
				FGD 2:	
				FGD 3:	
				FGD 4:	
☐ Normal Households	Number of normal households interviewed	|__| HH	According to the KI what % of the village are in the same situation as these households?		|__||__|% of HH in the village are in a similar situation
☐ Special Households	Number of special households interviewed	|__| HH	According to the KI what % of the village are in the same situation as these households?		|__||__|% of HH in the village are in a similar situation
			Describe main characteristics of the special households		_____ (eg: female headed household, HH with disabled family member, HH with no labor force, elderly)
5. Note any difficulties in collecting information in this village					

Name of team leader: _____ Date of completion:_____ Signature:_____

SUMMARY OF FINDINGS

1. Main findings in the village

- Overall judgment on situation and the severity of needs identified
- Short-term outlook (whether the crisis is worsening or becoming less serious)
- Factors that could worsen the situation or impede relief operations (bad weather, insecurity etc.)

2. Quantitative summary

a-How many HH are potentially affected?
_____% HH lowly affected in the village
_____% HH medium affected in the village
_____% HH very affected in the village

b-How many very food insecure HH?
_____% HH reducing amount of food eaten at each meal, or reducing numbers of meals per day

c-How have the crops been affected in the village
_____% rice production lost compared to a normal year
_____% maize production lost compared to a normal year
_____% other crop production lost compared to a normal year

3. Other problems and priorities identified by the affected population

4. KEY FOR RANKING SEVERITY OF NEED

Red	Severe situation: urgent intervention required
Orange	Situation of concern, or lack of data/unreliable data: further assessment and/or surveillance required
Green	Relatively normal situation or local population able to cope with crisis; no further action required

Ranking of severity of need (Circle one for each)		Problems identified	Recommendations
Food security	Red		
	Orange		
	Green		
Nutrition	Red		
	Orange		
	Green		
Health risks and health status	Red		
	Orange		
	Green		
Other (specify)	Red		
	Orange		
	Green		

5. Attach all outputs (questionnaire, …) of the village visit to this sheet

Name of team leader: _____ Date of completion:_____ Signature:_____

Annex C6 - Team debriefing sheet

Instructions:

⇒ To be filled in by the team leader with the team members at the end of the field work

OVERVIEW OF DATA COLLECTED IN THE AREA		
1. Date of Assessment: _____From ____ to ____ March 2009		
2. Assessment team number: **1 2 3 4** *(circle your team number)*		
3. Place of the assessment:		
Province	District	
4. Describe how the information was collected		
☐ Key informants interviews	Number of Key informants interviewed (do not include the ones that were interviewed at village level) |__| people	Function of Key informants interviewed (circle) and describe 1= Province _____ 2= District _____ 3= Subdistrict _____ 4=Health centre _____ 5=other: _____
☐ Village visits	Number of villages visited |__| villages	Name of villages visited 1. 2. 3. 4. 5. 6. 7.
☐ Other	Describe	
5. Note any difficulties in collecting information in this area		

Name of team leader: _____ Date of completion:_____ Signature:_____

SUMMARY OF FINDINGS IN THE AREA SURVEYED

1. Describe the damage from the rat infestation

Overall judgment on situation and the severity of the rat infestation and the needs? Is the situation worsening or becoming less serious? Factors that could worsen the situation or impede relief operations (bad weather, insecurity etc…)

2. What is the extent and severity of the damage

a) How many HH are potentially affected?
_____% HH lowly affected in the area
_____% HH medium affected in the area
_____% HH very affected in the area

b) How many very food insecure HH?
_____% HH reducing amount of food eaten at each meal, or reducing numbers of meals per day

c) How have the crops been affected in the are
_____% rice production lost compared to a normal year
_____% maize production lost compared to a normal year
_____% other crop production lost compared to a normal year

d) What area has been potentially affected
_____% rice arear
_____% maize area
_____% other crop area

e) Rank severity of affected villages (Severe situation[1], Situation of concern, or lack of data/unreliable data[2], Relatively normal[3])
Village 1
Village 2
Village 3
Village 4
Village 5
Village 6

3. What is the impact on food availability?

What is the food availability situation in the area? Is there less food in the markets? Is the price of food rising? Are these changes affecting lives or causing short-term risks to lives?

[1] urgent intervention required
[2] further assessment and/or surveillance required
[3] situation or local population able to cope with crisis; no further action required

Name of team leader: _____ Date of completion:_____ Signature:_____

4. How has the rat infestation impacted household food security?

What is the general food security situation? Have rice production levels for self-use decreased? Have food stocks been affected? Have incomes declined? Do people still have enough to eat? If yes, for how long? Do people look malnourished? Have you observed health risks? Are these changes affecting lives or causing ST risk to lives?

5. How has the rat infestation affected people's livelihoods?

How has the rat infestation affected peoples livelihoods? Which livelihood groups are most affected? Have people changed their livelihood strategies as a result of the rat infestation? Do you notice any particular ethnic groups to be severely affected?

6. How are households coping?

How are people dealing with the rat infestation? Have HHs changed their consumption patterns (skipping meals, eating smaller meals, eating different foods)? Have HHs sold assets? (which ones?) Are people looking for extra work?

7. Recommendations: How should WFP respond?

Should WFP give food assistance to this village? What is the necessary response according to villagers? What do you think? What support is already available? What type of interventions are needed? Where? When? For Whom?

Name of team leader: _____ Date of completion:_____ Signature:_____

8. Is a more thorough assessment needed?

Are there any other problems not mentioned here? Are these problems urgent to address needs of the population? What type of information is it?

9. Is there anything that according to your team needs mentioning and that was not covered in this form?

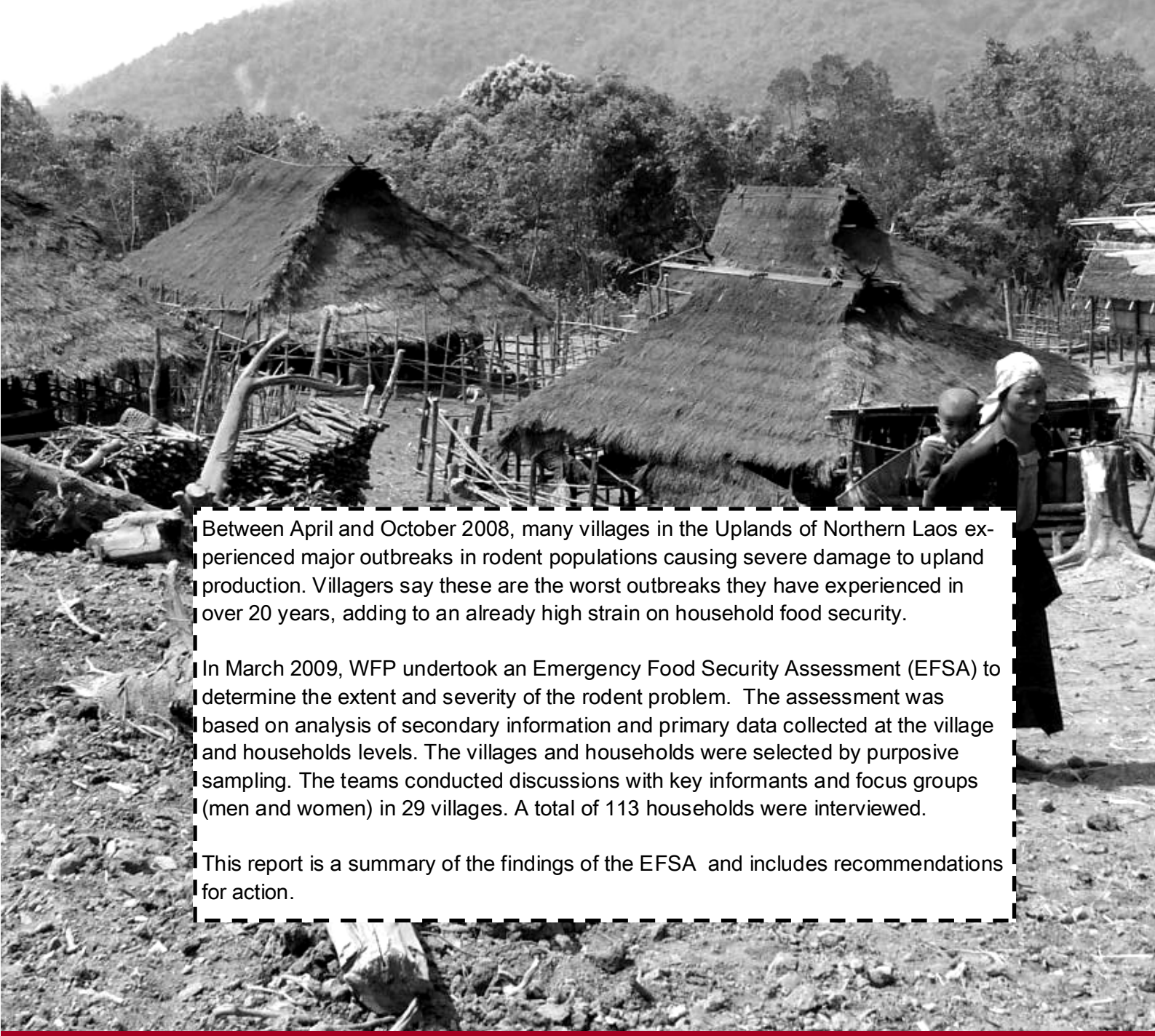
10. KEY FOR RANKING SEVERITY OF NEED IN THE AREA

Red	Severe situation: urgent intervention required
Orange	Situation of concern, or lack of data/unreliable data: further assessment and/or surveillance required
Green	Relatively normal situation or local population able to cope with crisis; no further action required

Ranking of severity of need (Circle one for each)		Problems identified	Recommendations
Food security	Red		
	Orange		
	Green		
Nutrition	Red		
	Orange		
	Green		
Health risks and health status	Red		
	Orange		
	Green		
Other (specify)	Red		
	Orange		
	Green		

11. Attach all outputs (questionnaires, …) of your team's Field work to this sheet

Name of team leader: _____ Date of completion:_____ Signature:_____



Between April and October 2008, many villages in the Uplands of Northern Laos experienced major outbreaks in rodent populations causing severe damage to upland production. Villagers say these are the worst outbreaks they have experienced in over 20 years, adding to an already high strain on household food security.

In March 2009, WFP undertook an Emergency Food Security Assessment (EFSA) to determine the extent and severity of the rodent problem. The assessment was based on analysis of secondary information and primary data collected at the village and households levels. The villages and households were selected by purposive sampling. The teams conducted discussions with key informants and focus groups (men and women) in 29 villages. A total of 113 households were interviewed.

This report is a summary of the findings of the EFSA and includes recommendations for action.

WFP

World Food Programme

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