IMPACT OF HIGH FOOD PRICES IN CAMBODIA

SURVEY REPORT

CAMBODIA DEVELOPMENT RESOURCE INSTITUTE (CDRI)

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Executive Summary

1. Like many other countries, Cambodia in 2008 has experienced rising prices, especially of fuels and food, pushing year-on-year inflation above 20 percent during March–August. Food prices increased by 36.8 percent and transportation and housing materials by 27 percent each. This inflation is mainly caused by rising world and, to some extent, local demand, while supply is contracted or more costly due to increasing fuel costs. In this situation, the Cambodian economy has received both negative impacts on consumers and opportunities for producers to earn more.
2. High inflation impacts more severely on the poor. The prices of all varieties of rice, the staple food, jumped by 100 percent between March–July 2007 and March–July 2008. Meat prices increased by 50–70 percent, while fish and vegetables rose by 20–30 percent. High food prices have negatively affected all walks of life. However, the extent of the adverse impact varies according to economic status; the poorest 40 percent of the population spend 70 percent of their incomes on food. The poor and net food buyers were the worst hit by these rising prices. They generally reside in poor rural areas. Most of the food-insecure households are in the Tonle Sap and plains regions. The urban poor have also been badly affected, although there have been adequate income opportunities for them.
3. On the bright side, there has been an increase in prices for many agricultural commodities received by farmers, most of whom are relatively poor. Our study found that farmers who this year produced dry season rice, cassava, maize or soybeans have received net benefits from the higher prices. However, this positive impact was limited because not all rural residents produce a surplus to sell. Only about 34 percent did so, because 21 percent of rural households are landless and another 45 percent land poor (owning not more than one hectare). Table 1 presents the landholding situation by region. The landless and land poor require higher nominal incomes in order to keep up with high food prices.
4. Fortunately, wages for day labour, such as transplanting rice, harvesting, weeding and clearing degraded forest, which are the main source of income for the landless and land poor, increased by around 50 percent in the past year. On average, daily wages increased from 7500 to 11,000 riels (USD1.83–2.68) between the second half of 2007 and first half of 2008. This market-based adjustment enabled many to maintain the status quo or not fall into more severe poverty. Nevertheless, only about 30 percent of households or about 50 percent of the landless and land poor did some day labour during January–April 2008. While some of the landless and land poor had work other than day labour, at least one-fourth of them were unable to generate more income due to lack of employment and were therefore hit hardest by high food prices. These people tend to be located in the poorest areas, especially the Tonle Sap and part of the plains region, where there was little potential for income generation. There were considerable job opportunities in the plateau region, where conversion of degraded forests to farm land was on the rise.
5. For the very poor, both urban and rural, obtaining sufficient food is a daily struggle. Forming 20 percent of the population, they live “from hand to mouth”, using their USD2–3 per day to buy rice and other essential food within the same day. Using the World Food Programme’s definition, the survey found that 19.1 percent of the households did not have “acceptable” food consumption: 7.0 percent had “poor” consumption, 12.1 percent had “borderline” consumption, and the rest had acceptable

food consumption. About 50 percent of households reported cutting back on food as a way of coping with high food prices. This threatens their nutritional status and worsens health, and might result in lasting adverse impacts. The school drop-out problem was highest for food-insecure households: 13 percent of them had children dropping out of school in January 2008, and 22 percent in June 2008. This also confirmed concern over the long-term impact of high food prices.

6. Fishing communities are among those most severely affected. The doubled rice price pushed fishing households deeper into poverty. Their average daily income deteriorated due to a decreasing fish catch, while the daily expenditure increased. The prices of their catch rose, but by only about 20 percent, which did not compare with the rising costs of inputs or fishing gear.
7. There were still four to five months until the next rice harvest in late 2008. About 74 percent of households will run out of their current stock of rice and have to rely on purchasing from the market before the next harvest. From June to December, a total of 328,890 tonnes of paddy rice (worth about $115 million) were needed in the sample villages. However, if there is no net outflow from the existing paddy rice and if existing stocks in the country are reserved for local distribution and consumption, then there is no net shortage in the country.
8. Some net rice producers have benefited from the sharp price rise. Based on the costs of agricultural inputs and market prices of paddy in the observation period, June 2008, it is projected that rice production in 2008 will be more profitable than in 2007. Dry-season rice farmers found their gross margins up by 32 percent, despite production costs rising by 50 percent. If the price of wet-season paddy remains at the present level, producers' gross margins will be up by 40 percent. Meanwhile, wet-season rice farmers are bearing the 50 percent increase of production costs and doubtful rainfall. Rather than reducing inputs such as fertiliser, whose price doubled or tripled, farmers are seeking loans or purchase inputs expensively on credit.
9. Higher prices of rice have encouraged production. At least three percentage points more households reported that they would cultivate their land in the coming season rather than leaving it idle or renting it out, as they had done last year. However, there are long-standing constraints on the expansion and intensification of agriculture. Many farmers reported the sharp rise of fertiliser as a constraint. The others most cited were the lack of family labour or draught animals and absence of irrigation. Table 5 indicates constraints for the major crops studied.
10. There should be a way to reduce the price of fertiliser, which increased two- or three-fold over the past year. All chemical fertilisers are imported, reportedly through highly inefficient channels that rely heavily and informally on Vietnamese and Thai traders. Importing fertilisers in bulk directly might cut costs considerably. The government and development partners may consider address this largest constraint cited by farmers.
11. Lack of water or irrigation is a fundamental problem, although there has been a significant increase in public provision of and commitment to irrigation. A controlled water supply, which is now available for only 20 percent of rice fields, provides stability and certainty to crop production. It is a critical prerequisite for farmers to apply other inputs such as fertiliser and higher yielding seeds. A reliable water supply enables crop intensification and reduces the costs of production. Without irrigation, production in many areas is impossible or too risky to apply good inputs.

12. Many farmers did not have the capital to start or expand production. Some could obtain loans, mostly at high interest rates, to maintain production. This plus borrowing for consumption put about half the households in debt, which is a worrying sign. Farmers need to borrow more money to meet rising production costs, essentially fertiliser, pesticide, machinery and labour. It is imperative for government and development partners to inject funds to creditors and earmark them for agriculture. This would need an effective monitoring system to ensure that funds reach the right farmers and the right activities.
13. Technical support through extension services should be also expanded. Increased availability of vaccines for livestock would also be a great contribution to increasing the supply of food and bringing down prices. Local and international agricultural market information should be more widely available to traders and farmers so that they receive the right market signals. With improved conditions, agricultural producers will be able to seize the opportunity of rising agricultural prices by increasing production for export.
14. A long-term strategy should include a better land allocation and management policy. A current goal of maintaining forest coverage at 60 percent of the country area is perhaps desirable but not realistic when demographic and economic pressures are paramount. Because of this goal, new agricultural lands have an unclear legal status, which tends to favour those with the financial means, power or backing to take them.
15. As for the poor and very poor hard hit by rising prices, immediate interventions by government, development partners and civil society organisations are needed. Food aid and/or food for work should be the best solutions to meet their short-term needs. This requires enhanced cooperation among government agencies, development partners and civil society. These kinds of assistance are much preferred by needy populations and have been implemented before in times of flood and drought.
16. Food assistance based social safety nets should be introduced in order to avoid an increase in malnutrition and other negative coping strategies used by food insecure households, as they have already experienced low food consumption pattern and about 98 percent of them have contracted new debts in addition to the old ones since March 2007 in order to cope with current shock. About 50 percent of the households reported cutting back food consumption as a way of coping with the high food prices. This threatens their nutritional status and worsens their health, which might result in lasting adverse impact. The largest proportion of food insecure people was found in Tonle Sap zone, Plain zone and Plateau zone. During the lean season, the proportion of food insecure people could increase significantly to **about 2.8 million individuals**.

Impact of High Food Prices in Cambodia

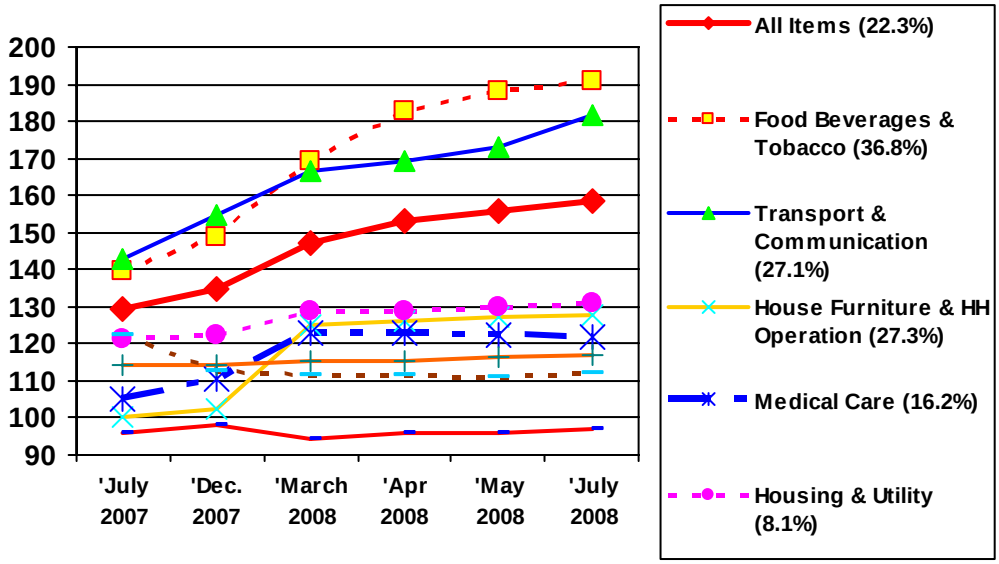
I. Introduction

1.1. Rationale

As many countries in the world, Cambodia has been experiencing rising prices of essential goods, mainly oil and food. The year on year inflation rate rose to 18.7 percent in January 2008 according to the monthly Consumer Price Index of the National Institute of Statistics (NIS). Yet, prices continued to rise rapidly in till July 2008, alarming all sections of society (See Figure 1.1).[1] The category of food, beverages and tobacco rose most rapidly to 36.8% between July 2007 and July 2008. In particular, the price of rice, which is the most commonly consumed staple, increased by approximately 100 percent between May 2007 and May 2008 soon before the survey took place. This was clearly linked to the international market, which saw the prices of rice up by 180 percent on average during the period of July 2007 to June 2008 (Ministry of Commerce, 2008). Other essential food items also became 20 percent to 70 percent more expensive within one year.

Figure 1.1 Consumer Price Index in Phnom Penh, July 2007 to July 2008 (Figure in parentheses is percentage change between July 2007 and July 2008)

Index: July-December 200 = 1000



Source: National Institute of Statistics, Ministry of Planning

Chief concern is how this aggravates the food security status of the Cambodian poor, which still accounts for about 30 percent or four million in 2008.[2] Food consumption for the poorest first and second quintiles (40 percent population) shares 70 percent of their total household expenditure. Moreover, 65 percent of rural households are either landless or land poor, according to the 2004 Cambodia Socio-Economic Survey (CSES) (20 percent landless and 45

[1] In fact, is based on the new, updated weights, inflation was above 30 percent after March 2008.

2 Poverty rate in 2004 was 34.7 percent according the World Bank (2006). No other up to date figures on poverty have been produced since then. Assuming poverty reduction at 1.2 percent per annum as found the WB report, poverty rate in 2008 could be 30 percent.

percent land poor). It is important to note that the "land poor" refers to those households owning one hectare or less. One hectare of rice land is the borderline that produces a bare minimum of rice sufficient for consumption by one household of five, assuming the whole produce can be kept for consumption.[3] Therefore, the majority of rural residents do not produce a surplus of paddy but are net buyers. Even among the net food producers of wet season rice, much of the paddy was sold soon after the harvest, in November and December, when the price of paddy did not yet increase significantly.

Cambodia is not alone to experience this unusually high inflation. In the latest flagship reports of IFPRI (The World Food Situation: new driving forces and required actions), World Bank (World Development Report 2008: Agriculture for Development) and FAO (Agricultural Outlook 2007-2016), a strong concern is expressed about the impact of high commodity prices on developing countries, especially on the net food importers, mostly located in the Sub-Saharan Africa, and on the poorest sectors of the population, characterised by a higher percentage of basic food expenditure over total expenditure.

At the same time, high international commodity prices may represent an incentive that offers a unique opportunity to boost agricultural production in many developing countries, in favour of rural development and supporting sustainable rural livelihoods. Whether this is actually happening, and under what conditions would this opportunity favour smallholder production is of study interest.

The aim of this research is to understand the impact of high food prices for both producers and consumers, especially on the vulnerable groups, and identify opportunities and obstacles, if present, for farmers to benefit from the universal increase in agricultural prices. The study identifies the different kinds of impact on all walks of life. It also documents the actions undertaken by the government in response to the steeply surging inflation and proposes immediate and long term interventions.

Following the introduction of rationale and methodology of the study, Section II presents the context in terms of macroeconomic performance and rising prices based on various sources of data. Section III then assesses the impact on household food security before Section IV discusses the responses households adopted to cope with rising prices. Section V addresses the potentials and constraints to increase food production in order to seize the opportunity of increasing farmers' income. Section VI concludes the report with provision of policy recommendations.

1.2. Methodology

The current report draws on both secondary and primary data. A brief overview of macroeconomic performance relies on the most recent national account data produced by the National Institute of Statistics (NIS). Analysis of price trends is based on systemic price collection in Phnom Penh and the Provinces by the Ministry of Commerce and Ministry of Agriculture (MAFF). The latter ministry provides wholesale prices of agricultural commodities and major inputs collected in various provinces. Two types of household surveys were conducted for different objectives. In addition, Focused Group Discussions

3 One hectare of rice land produces 2.5 tons of paddy rice on average. Production costs account for 50 percent, thus leaving 1.25 tons for five people to consume at the average rate of 250 kg of paddy rice per year. Many households tend to sell part of their produce soon after harvest although the whole produce is not even sufficient for one year consumption, and then buy back milled rice in the period leading up to the next harvest.

were carried out to complement the household surveys. Details of each data generation method are summarised as follows.

Nationally Representative Sample Survey:

The nationally representative survey (NRS) selected 2,235 households on a random, probability proportional to size method. With weights applied, the results are representative at the national level with acceptable precision for urban and rural areas in the four agro-climatic zones (Plains, Tonle Sap, Coastal, and Plateau) and Phnom Penh (Table 1.1). Covering 24 provinces and 149 villages (15 households per village) the survey is essentially used to assess how the high food prices affected the households in different locations and what coping strategies were being employed by the adversely affected households. It also attempts to capture the dynamic picture of the agricultural situation in the aftermath of rising costs and prices.

In each selected village, a checklist with pre-coded as well as open-ended questions was used to register the context and useful information such as village population and estimation of the landless, market access, overall trends in prices, village coping strategies including labour migration, paddy stock in rice mills or wholesale places, if any, overall food security and agricultural situation. The survey team leader for each team was responsible for collecting the information from the village chief and/or other key informants. Where most appropriate data from the checklist is used to cross-check with that from other sources.

Table 1.1 Number of surveyed villages by province and agro-climatic zone

Agro-climatic Zone	Province	Number of villages surveyed			Total number of villages by zone		
		Rural	Urban	Total	Rural	Urban	Total
Phnom Penh	Phnom Penh	2	26	28	**2**	**26**	**28**
Plains	Kandal	5	1	6	**27**	**3**	**30**
	Kompong Cham	9	1	10			
	Prey Veng	6	1	7			
	Svay Rieng	3	0	3			
	Takeo	4	0	4			
Tonle Sap	Banteay Meanchey	4	2	6	**21**	**6**	**27**
	Battambang	6	1	7			
	Pursat	3	0	3			
	Kompong Chhnang	3	1	4			
	Siem Reap	5	2	7			
Plateau	Kompong Speu	11	2	13	**31**	**2**	**33**
	Kompong Thom	4	0	4			
	Kracheh	5	0	5			
	Krong Pailin	1	0	1			
	Mondul Kiri	1	0	1			
	Otdar Meanchey	3	0	3			
	Preah Vihear	3	0	3			
	Ratanak Kiri	2	0	2			
	Stung Treng	1	0	1			
Coastal	Krong Kep	1	0	1	**25**	**6**	**31**
	Krong Preah SHN	3	4	7			
	Koh Kong	3	2	5			
	Kampot	18	0	18			
Total		**106**	**43**	**149**	**106**	**43**	**149**

Note: In each village, 15 households were selected randomly using the random number table. The sample villages were drawn by WFP from the population projection for 2008 by the NIS.

The interviewers were asked to take note of the attitude of the respondents and the conditions for interviews. The results are quite favourable. The majority of the respondents were recorded as cooperative/pleasant (88 percent), while only 2 percent were considered uncooperative/unpleasant. The rest was either too busy or very slow to answer the questions. As for the condition for the interviews, 86 percent was characterised as very good, 9 percent disturbed by other people and 5 percent was interrupted by raining.

Purposive Sampling Survey and Focused Group Discussions:

Given that the minimum sample of the nationally representative survey cannot provide robust statistics for many variables at the disaggregated level, a purposive sampling survey was conducted to complement this weakness. A total of 991 households were selected from 14 villages that represent special areas of interest such as the urban poor, the rural poor, the wet-season rice farmers, dry-season farmers, fishing communities and other cash crop producers, which theoretically have been affected differently by the high prices. In each site or village, about 70 households were randomly chosen for interview. This is a large enough sample size (about 30 percent of the households) that can represent the village. Table 1.2 provides the pre-identified sites and criteria for each site.

Table 1.2 Sites for Purposive Sample Survey and Focused Group Discussions*

	Criteria	Site (Village)	Province
1.	Urban poor	Damnak Thom village, Sangkat Stoeung Meanchey, Khan Meanchey	Phnom Penh
2.	Urban poor	Phoum 14, Sangkat Tonle Bassac, Khan Chamkar Morn	Phnom Penh
3.	Poorest areas in poorest provinces	Anha Ses village, Toap Moan commune, Thpong district	Kompong Speu
4.	Poorest areas in poorest provinces	Sambu village, Popok commune, Stoung district	Kompong Thom
5.	Wet-season rice surplus	Nikum Krave village, Chroy Sdao commune, Thmar Korl district	Battambang
6.	Wet-season rice surplus	Ta Ngok Sre village, Phnov Ti Pi commune, Sithor Kandal district	Prey Veng
7.	Dry season rice surplus	Ponley Choeung village, Ponley commune, Angkor Borey district	Takeo
8.	Dry season rice surplus	Ponley village, Babaong commune, Peam Ro district	Prey Veng
9.	Maize production	Kbal Tumnop village, Ou Sampor commune, Malai district	Banteay Mean Chey
10.	Cassava production	Spean village, Dar commune, Memut district	Kompong Cham
11.	Soybean production	Sampor village, Ta Ong commune, Chamkar Leu district	Kompong Cham
12.	Fishing	Kompong Preah village, Chnok Trou commune, Boribo district	Kompong Chhnang
13.	Land abundant and potential to increase production	Tumnop Trakuon village, Kdol Tahen commune, Bavel district	Battambang
14.	Land abundant and potential to increase production	Kang Meas village, Thnaot Chum commune, Baray district	Kompong Thom

Note: * The selection for the criteria was based on WFP Cambodia (2004) "Commune-level Agricultural Production and Food Security in Cambodia" Unpublished report based on survey of agricultural production by MAFF in 2004

A qualitative component was added to the surveys to improve the reliability of findings. Focused group discussions (focus group discussions) were conducted in the 14 villages selected purposively. Two teams of two experienced researchers covered seven villages each. In each village, they facilitated discussions with two groups of six participants chosen to address the primary issues for each village. Checklists of questions were used for the discussions.

Overall, the nationally representative survey results are used as a basis for national level and regional interpretation. Based on this comprehensive dataset, interventions by government and development partners will be called for to prevent people from seriously falling into poverty or extreme poverty particularly around the upcoming lean period of August-October 2008 and likely beyond.

The results of the purposive sample survey coupled with the focus group discussion ones provide disaggregated stories by areas of particular interest. Moreover, the targeted survey and interviews yield important inputs to assist in defining policies for agricultural development in the medium and long term.

Survey limitations

The survey was prepared and conducted within a short time frame. Rapid analyses were undertaken in order to understand the impact of food price rises. Further in-depth analysis of food security will be undertaken by WFP and provided in Comprehensive Food Security and Vulnerability Analysis (CFSVA) report. The preparation was in May 2008 and participated actively by partners sponsoring the study. A total of 55 enumerators were employed to carry out the survey, which took place from 1 – 14 June 2008. The main motive of the study was to generate results in a timely manner for inputs for programme design, and policy debates and interventions by various actors. The questionnaire was therefore designed in a way that could realistically gather reliable information within the time and resource constraints. For instance, it could not capture actual income but rather only asked for the change of cash income and sources of cash income. Likewise, it could not ask for the actual amount and value of food consumption and other expenditures by the households. It could collect only the frequency of consumption of a number of essential food items. Hence, data regarding consumption and income, which are of crucially importance for analysis of change in livelihood, is not highly robust. The answers to the questions whether income, expenditure and consumption have increased, whether households have faced any difficulties or shortage of money, are generally hard to evaluate. Moreover, the surveys relied heavily on recalls of the situation six months ago or one year ago in order to assess changes caused by the high prices or seasonality. As always, recall is subject to memory deficiencies, among other things.

II. Recent Macroeconomic Performance and Rising Prices

The recent macroeconomic performance is summarised to indicate a context of growing aggregate demand. Price trends for retail, wholesale and producer goods are presented. High economic growth means more income is generated, which increases consumption demand. Higher demand can mean more money chasing the same amount of goods, resulting in higher prices unless supply also increases. However, in a small and open economy like Cambodia, determinants of prices go beyond the border. Increasing world prices directly raise prices of

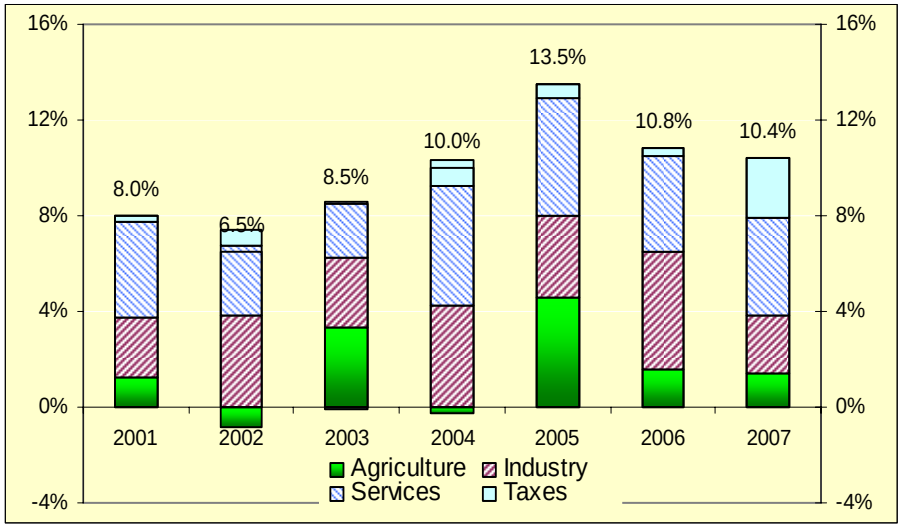
traded goods in Cambodia, which is generally a price taker. The story is different for non-tradable goods and services; their prices tend to move with domestic demand.

2.1. Recent Macroeconomic Performance

The real gross domestic product grew by 9.3 percent per year over the period 2001–06 and by 10.4 percent in 2007, the fourth consecutive year of double-digit growth (NIS 2008b). The growth came chiefly from industry—substantial increases in garments and construction—and from services, with significant increases in tourism, real estate and other services. Agriculture also contributed to growth, but to a lesser degree (Figure 2.1). However, this sector is still important in rural areas, where most depend on paddy cultivation for subsistence. High growth in the past seven years has raised demand for goods and services, resulting in high prices for non-tradables that do not have unlimited potential for expansion. Moreover, it has enabled a higher rate of savings, which can cushion price shocks.

In 2007, Cambodia's agriculture accounted for 26.7 percent of GDP and employed 57.4 percent of the labour force. The real value added of this sector in 2007 expanded by 5.0 percent and contributed 1.4 percentage points to the overall GDP growth. In general, the growth rate of crop value was highly variable, marked by peaks and troughs, reflecting the high reliance on adequate rainfall and weather. More value added would be created if more agricultural products were processed locally before being exported.

Figure 2.1: Real GDP Growth, 2001–2007



Source: NIS 2008b

Industry expanded by 8.4 percent over the previous year. All sub-sectors grew moderately compared to the previous year. Mining increased by 6.4 percent, down from 15.9 percent in 2006. Manufacturing expanded by 8.9 percent, slower than the 17.4 percent in the previous year, as the garment industry seemed to reach maturity. Electricity, gas and water rose by 11.5 percent in 2007, compared to the gain of 31.3 percent in 2006. Construction grew by 6.7 percent in 2007, down from 20 percent in 2006.

Services grew by 10.7 percent in 2007. Trade, hotels and restaurants and other services, which directly benefited from tourism growth and infrastructure development, grew by 9.5 percent, 10.7 percent and 15.6 percent, respectively. Transport and communications increased by 5.3 percent, reflecting an increase in tourist visits. Finance expanded by 22.2 percent, showing improved confidence in the banking system. Real estate businesses posted healthy growth of 10.7 percent.

There has been a rapid increase in lending in the past two years, raising concern that too much money is chasing the same amount of goods, leading to higher inflation. Credit expanded by more than 100 percent between 2006 and 2007. This prompted the government to increase the bank reserve ratio from 8 percent to 16 percent. While this reduces the money supply and domestic demand, it also constrains lending for production, which is needed to increase supply.

Foreign reserves increased to $2 billion in 2008 or about four months of imports. However, the capacity to import in times of crisis is greater than this because there are many dollars in circulation outside banks. There is little concern that Cambodia lacks the foreign currency to import food and other necessities.

2.2. Rising Prices

Cambodia has faced rising prices of both consumer and producer goods, essentially food, fuels and labour. The consumer price index in January 2008 was up 18.7 percent from January 2007.[4] Although no more issues of the monthly "Consumer Price Index Bulletin" of NIS have been published since January 2008, other sources indicated that prices continued to rise rapidly in February–May. The government reacted by banning rice exports for a time and later raised the bank reserve ratio. It remains to be seen whether this will work, because it is essentially world, not domestic, demand that has pulled up prices.

Since this study is about the impact of high food prices, comprehensive price data have been compiled from various sources and are presented here. The availability of some food items and therefore prices tends to vary with the season. Hence, the analysis compares prices during the same month, i.e. May 2007 and May 2008. In some cases, subject to data availability, the comparison period is June 2008 to July 2008. Prices before May 2007 did not increase significantly.

2.2.1 Rising Prices in Consumer Goods

Table 2.1 presents household food consumption by value and by calories. It is derived from a national survey of 15,000 households in 2003–04. The survey found that cereals contributed almost 70 percent of caloric intake of rural residents. Cereals were cheaper than other foods, and so took only 34.5 percent of rural household spending on food. The current picture would be very different because prices of cereals have risen most.

4 Year-on-year inflation in 2006 was 5.1 percent. By the end of 2007 overall inflation was 16.3 percent, while the prices of food and beverages were up 21.3 percent.

Table 2.1: Structure of Household Food Consumption, 2004

Food groups	% of total food expenditure				% of total calories			
	Cam-bodia	Urban Phnom Penh	Other urban areas	Rural areas	Cam-bodia	Urban Phnom Penh	Other urban areas	Rural areas
Cereals	31.3	11.4	24.6	34.5	65.4	33.7	57.7	69.4
Fish & seafood	19.9	15.4	21.2	20.2	8.0	20.7	11.4	6.3
Meat & poultry	15.6	20.7	15.8	15.0	6.0	12.0	6.9	5.4
Vegetables	8.7	9.7	8.4	8.7	5.6	10.5	8.1	4.8
Food out of home	8.0	20.8	11.3	6.2	5.7	8.0	5.0	5.7
Seasonings, salt etc.	5.8	3.9	6.7	5.8	2.3	5.4	3.2	1.9
Fruits	4.3	7.0	4.5	4.0	3.6	3.6	4.4	3.4
Take-home food	2.1	5.4	2.8	1.6	1.8	3.5	1.5	1.7
Eggs & dairy	1.7	2.6	2.2	1.5	0.7	1.3	0.9	0.6
Alcoholic beverages	1.1	1.1	1.0	1.1	0.4	1.0	0.4	0.3
Non-alcoholic bev.	0.7	1.1	0.8	0.7	0.5	0.2	0.4	0.6
Oils & fats	0.7	0.7	0.7	0.7	0.1	0.2	0.1	0.1
Group Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Johansson & Bäcklund (2005)

In recent months, prices of many consumer goods have soared. Rice has risen at a record rate. Between May 2007 and May 2008, the prices of all types of milled rice approximately doubled. The increase intensified in March and April 2008 (Table 2.2a), mainly to readjust to world prices because Cambodia exports rice to the world, especially through Vietnam and Thailand. The price increase slowed in May. The patterns were similar between all categories of milled rice. However, the prices of top quality rice rose at a marginally lower rate than other categories. This could be explain by consumers shifting to cheaper varieties, which was reported by focus group discussions.

Since there are many types of rice, with widely varying prices, it is important to compare prices of the same types. For this reason, the prices collected systematically by the Ministry of Commerce are used. Although they cannot represent precise price changes, they indicate the same trends. Price trends for milled rice from November 2007 to June 2008 are presented in Table 2.2b, while prices of paddy rice in each province are presented in Table A2.2 in the annex.

Table 2.2a: Retail Prices of Milled Rice in Phnom Penh Markets

	Type of milled rice	**May 07**	**Nov 07**	**Jan 08**	**Feb-08**	**Mar 08**	**Apr 08**	**May 08**
		Retail Prices (riels per kg)						
	Category 1							
1	Somali or Pka Mlih from B'bang	1870	2029	2050	2236	2892	3299	3548
2	Somali from Moung Russey	1750	1900	1960	2092	2712	3250	3437
	Category 2							
3	Pka Knhei from Battambang	1491	1652	1759	1851	2523	2939	3058
4	Pka Knhei from Moung Russey	1445	1610	1650	1810	2387	2900	2950
5	Neang Khon from Battambang	1349	1587	1674	1747	2289	2811	2900
	Category 3							
6	Neang Minh from Battambang	1230	1527	1620	1636	1954	2509	2699
7	Pka Knhei from Takeo	1283	1500	1620	1640	2050	2500	2650
8	Mixed from Moung Russey	1200	1467	1600	1612	2025	2400	2400
9	Brown rice from Kompong Speu	1185	1457	1500	1525	1887	2267	2450
	Category 4							
10	Banla Pdao	1080	1384	1500	1525	1832	2133	2200
11	Milled rice for porridge	970	1100	1200	1200	1487	1700	1700
	Type of milled rice	**Index (May 2007 = 100)**						
	Category 1	**May 07**	**Nov 07**	**Jan 08**	**Feb 08**	**Mar 08**	**Apr 08**	**May 08**
1	Somali or Pka Mlih from B'bang	100	109	110	120	155	176	190
2	Somali from Moung Russey	100	109	112	120	155	186	196

	Category 2							
3	Pka Knhei from Battambang	100	111	118	124	169	197	205
4	Pka Knhei from Moung Russey	100	111	114	125	165	201	204
5	Neang Khon from Battambang	100	118	124	130	170	208	215
	Category 3							
6	Neang Minh from Battambang	100	124	132	133	159	204	219
7	Pka Knhei from Takeo	100	117	126	128	160	195	207
8	Mixed from Moung Russey	100	122	133	134	169	200	200
9	Brown rice from Kompong Speu	100	123	127	129	159	191	207
	Category 4							
10	Banla Pdao	100	128	139	141	170	198	204
11	Milled rice for porridge	100	113	124	124	153	175	175

Source: Recompiled and calculated from MoC 2008

Table A2.2b: Prices of Milled Rice Purchased by Farmers, by Province and Month

	Nov 07	**Dec 07**	**Jan 08**	**Feb 08**	**Mar 08**	**April 08**	**May 08**	**June 08**
Banteay Meanchey	2000	1800	1800	2500	2600	2500	2800	2800
Battambang	1200	1550	1600	2000	2100	2400	2200	2000
Kompong Cham	1600		1600	2120	2400	2400	2500	2400
Kompong Chhnang	1800	1800	2000	2350	2200	2200	2300	2300
Kompong Speu	1000	2200	2500	2800	2450	2450	2500	2500
Kompong Thom	1750	1700	2000	2000	2250	2500	2300	2300
Kampot	2200	2000	2000	2200	2200	2300	2300	2500
Kandal	1500	1850	2100	2000	2500	2800	2800	2800
Koh Kong				2700	2700	2500	2600	2600
Kratie	2150	2500	2250	2500	1800	2500	2500	2650
Mondolkiri					2000	2500	2800	2800
Phnom Penh	1800	1800	2000	2500	2800	3100	3200	3000
Preah Vihear	1500	1750	1750	2000	2500	2000	2000	2350
Prey Veng	2200	2200		5660	2900	2900	2400	2200
Pursat			2000		2000	2000	2000	2000
Ratanakkiri	2500	2500	3500	3500	3250	3000	3500	2800
Siem Reap	1600	1600	2100	2350	2400	2500	2500	2500
Sihanoukville	1950	2100	2300	2250	2500	2800	2800	2700
Stung Traeng					2800	2500	2500	2500
Svay Rieng	2060			1800	2400	2000	2000	2000
Takeo			1500	1500	2300	1900	2365	2150
Oddar Meanchey	2200		3000	2250	2750	3000	2500	2500
Kep					2500	2400	2500	2500
Pailin			2500	1600	2500	2400	2500	2700
Cambodia	**2000**	**1900**	**2000**	**2200**	**2500**	**2600**	**2500**	**2600**

Source: National survey of 2235 households in June 2008

The steep increase in the price of rice prompted export bans in some countries aimed at containing domestic food prices. However, this limited the supply and thus further fuelled price increases, as indicated in Table 2.3. On average, the price of rice in the world market escalated by an unprecedented 180 percent from July 2007 to June 2008 (MoC 2008).

In Cambodia, a rice export ban was in effect between 23 March and 23 May 2008, which contained the increase or even reduced the price by about 10 percent immediately. The ban was short-lived because much of the dry-season harvest had nowhere to be stored in April and May, and Cambodia produced more than 2.5 million tonnes of paddy in surplus, having achieved 6.7 million tonnes in 2007/08 (MAFF 2008). Nevertheless, prices of rice have remained high, between 2000 and 3500 riels per kilo depending on variety.

Table 2.3: International Prices of Rice (US$/tonne)

Type of milled rice	Market	Jul 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08
10%	Argentina	395	455	473	524	594	660	1050	968
10%	Thailand	322	361	368	475	480	..	..	..
10%	Uruguay	400	460	480	529	598	665	1065	971
10%	Vietnam	296	..	373	460	528	..	..	..
100%	Thailand	337	377	399	488	573	906	1025	938
100%	Vietnam	304	..	370	465	552	850	1058	1100
15%	Argentina	385	445	450	515	..	..	..	..
15%	Thailand	314	357	364	472	478	875	..	..
15%	Uruguay	390	450	455	520	..	..	..	..
15%	Vietnam	292	..	368	456	522	..	..	..
25%	India	283	..	455	..	..	..	..	..
25%	Pakistan	286	350	357	438	489	575	767	800
25%	Thailand	296	352	360	465	..	..	..	..
25%	Vietnam	287	..	358	455	..	..	..	..
4-5%	Argentina	405	465	476	533	602	675	1085	981
4-5%	Uruguay	410	470	500	538	608	680	1085	981
4-5%	California	507	625	636	650	662	723	..	..
5%	Thailand	326	367	493	594			..	..
5%	Vietnam	304		475	543	634	817	850	

Source: Recompiled and calculated from MoC 2008

Wholesale prices of paddy rice collected by the Marketing Office of the Ministry of Agriculture, Forestry and Fisheries registered increases corresponding as those of milled rice but at a slightly lower rate, 75–100 percent, between May 2007 and May 2008 (Annex I, Table A2.1). The paddy price acceleration took place in all the provinces surveyed by MAFF. The average in May 2008 ranged between 1150 and 1500 riels per kg, compared with 500–900 riels per kg a year earlier. As discussed in detail in Section 5, if these prices stay the same after the next harvest, farmers will have 50–80 percent higher net margins, despite the higher costs they are incurring now.

One kilo of paddy rice is equal to 0.65 kilo of milled rice, so the price of paddy should be 65 percent of that of milled rice, without considering transportation and other costs. The price ratio of lower quality rice such the IR variety tends to be reasonable. However, the retail prices of higher end milled rice are more than double paddy (3500 riels/kg, compared with 1500 riels/kg). This indicates bigger margins between wholesale and retail prices for better off consumers, which partly reflect higher transportation costs between Phnom Penh and Battambang province, while the areas producing lower quality rice are closer to Phnom Penh.

Table 2.4: Reasons for Increased Prices of Milled Rice Provided by Group Interviews

		Trading factor	Input costs increased	Price of paddy rice increased	Rice demand increased	Increased cost of labour	More farm land sold	Migration, leaves rice farms idle	Other
Coastal	Rural	61.4	19.3	1.8	3.5	1.8	-	1.8	10.5
	Urban	22.2	33.3	11.1	11.1	-	11.1	-	11.1
Plains	Rural	36.8	51.5	-	2.9	2.9	-	-	5.9
	Urban	57.1	28.6	-	-	-	14.3	-	-
Plateau	Rural	35.7	19.6	14.3	8.9	1.8	-	-	19.6
	Urban	25.0	-	-	50.0	-	-	-	25.0
Tonle Sap	Rural	57.9	19.3	-	5.3	3.5	-	-	14.0
	Urban	41.7	33.3	8.3	-	-	-	-	16.7
P. Penh	Rural	100.0	-	-	-	-	-	-	-
	Urban	76.0	16.0	-	4.0	-	-	-	4.0
Cambodia	Rural	47.9	28.3	3.8	5.0	2.5	-	0.4	12.1
	Urban	54.4	22.8	3.5	7.0	-	3.5	-	8.8
	Total	49.2	27.3	3.7	5.4	2.0	0.7	0.3	11.4

Source: Village checklist analysed by Dr Paolo Santacroce, consultant for WFP

Village representatives or key informants were asked about the reasons prices of rice increased. As summarised in Table 2.4, most responses mentioned the trading factor, followed by rising costs of inputs. The focus group discussions found doubts whether prices would remain high when people sell their paddy in November–December 2008.

Table 2.5: Retail Prices of Other Food Items

Commodity	Unit	May 07	Nov 07	Feb 08	Mar 08	Apr 08	May 08
Retail price in Phnom Penh (Riels)							
Beef	Kg	18,864	20,000	20,000	20,200	21,200	21,963
Pork	Kg	11,286	16,000	18,000	17,510	19,400	19,025
Chicken	Kg	14,062	15,000	17,000	17,248	21,200	21,679
Fish, Trey Ros	Kg	11,294	14,000	15,000	13,195	13,100	13,017
Egg, chicken	10 eggs	2914	3556	3664	3690	3880	4039
Egg, duck	10 eggs	3979	4340	4500	4520	4720	4908
Morning glory	Kg	1567	2000	1966	2041	1980	1992
Tomato	Kg	2271	2560	2560	2560	1920	1993
Cabbage	Kg	1749	2200	2000	2000	1960	1990
Cucumber	Kg	1436	2000	2000	2000	1800	1724
Banana	hand	1898	2000	2000	2000	2000	1904
Pineapple	Unit	1384	1500	1630	1860	1900	1875
MSG	500 g	3378	3800	3928	3955	4900	4900
Sugar, Thai	Kg	2412	2300	2419	2397	2240	2263
Palm sugar	Kg	2000	2100	2100	2100	2120	2120
Salt	Kg	539	600	600	643	820	928
Commodity		**Index (May 2007 = 100)**					
		May 07	**Nov 07**	**Feb 08**	**Mar 08**	**Apr 08**	**May 08**
Beef	Kg	100	106	106	107	112	116
Pork	Kg	100	142	159	155	172	169
Chicken	Kg	100	107	121	123	151	154
Fish, Trey Ros	Kg	100	124	133	117	116	115
Egg, chicken	10 eggs	100	122	126	127	133	139
Egg, duck	10 eggs	100	109	113	114	119	123
Morning glory	Kg	100	128	125	130	126	127
Tomato	Kg	100	113	113	113	85	88
Cabbage	Kg	100	126	114	114	112	114
Cucumber	Kg	100	139	139	139	125	120
Banana	hand	100	105	105	105	105	100
Pineapple	Unit	100	108	118	134	137	135
MSG	500 g	100	112	116	117	145	145
Sugar, Thai	Kg	100	95	100	99	93	94
Palm sugar	Kg	100	105	105	105	106	106
Salt	Kg	100	111	111	119	152	172

Source: MoC 2008

Prices of other foods have increased less than rice. Over the past year, beef increased relatively modestly, 16 percent, selling at 21,963 riels (USD5.40) per kilo, although it is already out of reach of most of the poor. However, pork and chicken climbed by 69 percent and 54 percent, respectively (Table 2.5). Fish and eggs, which are widely consumed, recorded rises of 15 to 39 percent. Vegetables went up by 20 percent or less. Fruits such as bananas did not follow other commodities. Grocery items became much more expensive, but may not matter too much because of their small weight in household consumption.

Tables A2.4 and A2.5 in the annex present the wholesale prices of cash crops in several provinces. In general, wholesale prices of vegetables increased by around 30 percent, while those of other crops increased by about 50 percent with the exception of a few crops such as cashew nuts and mung beans.

Prices of fish and livestock followed the general upward trend in major food markets. World per capita annual consumption of fish and fish products and meat has risen steadily, from an average of 11.5 kg during 1970s to 12.8 kg in the 1980s to 14.8 kg in the 1990s and continuing to rise in the 21st century. Much of the expansion reflects developments in China,

where domestic consumption of fish and fish products has risen from less than 5 kg in the 1970s to 26 kg FAO (2008b).

In Cambodia, prices of freshwater fish are increasing more slowly than for other commodities. This may reflect that fish in Cambodia are not easy to trade due to lack of preservation. By contrast, smoked fish, which can be kept for months, is expensive and is generally exported, went up greatly in price (Table A2.6 in Annex I).

Prices of pork and beef reached their highest level, 20,000 riels per kg in April and May 2008, respectively, continuing the upward trend that began in June 2007. The main reasons for this were higher feed costs, the depreciating US dollar and the rising demand for meat fuelled by economic growth in developing countries, particularly in Asia. Because of black ear disease among pigs imported from Vietnam and Thailand, the Cambodian government banned pig imports from neighbouring countries in February. This accounted for the rise in pork prices in February, which have remained high since then (Table 2.6).

Table 2.6: Wholesale Prices of Livestock and Poultry

Commodity	UNIT	Jul 07	Nov 07	Feb 08	Mar 08	Apr 08	May 08	Jun 08
	Average price (riels per kg or head)							
Live Chicken	kg	10,292	11,849	14,414	14,834	15,657	14,404	14,312
Live Duck	head	7004	7405	8657	8915	9399	8388	8669
Live Pig	kg	5856	7394	9162	9413	9638	9542	9366
Pig Carcass	kg	8,054	10,492	13,851	13,521	13,426	13,069	12,731
	Index (July 2007 = 100)							
Live Chicken	kg	100	115	140	144	152	140	139
Live Duck	head	100	106	124	127	134	120	124
Live Pig	kg	100	126	156	161	165	163	160
Pig Carcass	kg	100	130	172	168	167	162	158

Source: Recompiled and calculated from MAFF 2008

2.2.2 Rising Prices in Producer Goods

The prices of consumer goods have been rising along with producer goods, and it is difficult to determine causality. In theory, rising costs of production inputs such as fuels and labour push up the prices of output. Also true is that rising consumption demand (including external demand) can pull up the prices of consumer goods, and then workers demand higher wages. When wages rise, production costs accelerate, raising inflation. Cambodia is purely a price taker in fuel. As fuels are inputs for agricultural production and transport, the rise in world fuel prices has directly affected production and marketing costs.

Table 2.7: Retail Prices of Fuels (Phnom Penh)

Type of fuel	Jan 07	May 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08
	(Riels per litre)							
Gasoline	3750	3813	4450	4450	4500	4676	5000	5500
Diesel	3050	3125	3800	3800	3900	4105	4550	5500
Kerosene	2950	3071	3700	3700	3800	3980	4300	4900
	Index (January 2007 = 100)							
Gasoline	100	102	119	119	120	125	133	147
Diesel	100	102	125	125	128	135	149	180
Kerosene	100	104	125	125	129	135	146	166

Source: MoC 2008

As can be seen in Table 2.7 above, the gasoline price in Phnom Penh increased by nearly 50 percent from May 2007 to May 2008. It increased even further, to 5800 riels, in July 2008. The price of diesel, which is more commonly used for agricultural machinery, rose 80 percent

in the same period. Tax rates on fuels have been constant for more than 10 years. Therefore, the increase in fuel prices has been solely due to international factors. Recently, many farmers have replaced draught animals with hand tractors or tractors, a sign of progress in mechanisation. This has caused them to suffer from the drastic increase in the price of diesel. It remains to be seen whether farmers will switch back to draught animals. Any change would involve some adjustment time and costs.

Many farmers are concerned about the steep increase of fertiliser prices, according to the focus group discussions and household surveys. Prices of fertiliser increased by about 1.5 times in the first half of the year. Wet-season rice farmers, who are yet to benefit from the better prices for paddy, are now facing a steep rise in fertiliser cost. There is concern that they may cut back the amount used and therefore harvest less. However, based on our study, farmers would rather take a cash loan or buy fertiliser on credit because they do not want to reduce their yield when the price of paddy is high. MAFF found a remarkable variation between provinces of prices of the same kinds of fertiliser in the same month. There were reports of fake fertiliser, which was sold much cheaper than the genuine item. The variation could also be due to a lack of reliability in data collection.

Nevertheless, based on the focus group discussions, prices of fertiliser have increased 100 to 150 percent since March 2008 (Table 2.8). During the 2007 wet rice cultivating season, in Prey Veng province, urea fertiliser was 62,000 to 68,000 riels per sack. In May 2008, it more than doubled to 150,000 riels or 160,000 riels per sack, which is consistent with the MAFF data.

Table 2.8: Prices of Fertiliser in Different Provincial Markets in Cambodia (thousand riels per sack of 50 kg)

Type of fertiliser	Jul 07	Mar 08	Apr 08	May 08	Jun 08	% Increase (Jul–Jun)
Chamkar Kor (Banteay Meanchey)						
15.15.15	70	83	127	156	165	137
16.20.0	62	81	121	140	159	158
18.46.0	86	131	223	267	268	211
46.00.00	74	83	108	138	160	118
Takhmao (Kandal)						
15.15.15	83	139	142	154	164	99
16.20.0	71	126	124	146	155	120
18.46.0	96	216	225	260	258	168
Urea	69	113	132	150	168	143
Bos Khnaor (Kompong Cham)						
15.15.15	84	141	143	152	164	95
16.20.0	80	120	120	148	148	84
18.46.0	95	179	176	240	253	166
46.00.00	74	117	118	115	118	58
Daun Kaev (Takeo)						
15.15.15	82	150	180	155	..	88
16.20.0	74	130	136	130	..	76
D.A.P	94	166	240	240	..	156
Urea	74	100	120	..	..	63
Average of different markets						
15.15.15	79	132	149	154	164	107
16.20.0	71	110	122	141	154	118
18.46.0	94	183	208	256	260	175
46.00.00	78	107	113	127	139	78
D.A.P	91	219	240	240	..	164
Urea	71	107	126	150	168	138

Source: Recompiled and calculated from MAFF 2008

All chemical fertilisers are imported. The costs of fertiliser and fuels are the major concerns of farmers. In the past, fertiliser was subsidised by the government. The subsidy did not last because it did not work well; farmers still ended up paying market prices. Any attempt to make the fertiliser subsidy work would be much welcomed by farmers. Anecdotally, there is room for improvement in the import of fertiliser. This business seems to be monopolised by a few traders.

Another crucial variable for farming is labour. Day wages are both income for workers, most of whom are poor, and a cost for farmers. Most of the poor rely on day labour for subsistence; it is said they "live from hand to mouth". Day wages increased by 35 to 67 percent over one year. While this has contributed to rising prices of products, it has been essential in compensating the poor. In May–June 2008, the median daily wage was 10,000–13,500 riels (Table 2.9). The annual increase was about USD1 per day or 45 percent on average, confirmed by the village checklist and focus group discussions. This is significant for maintaining the purchasing power of the poor.

Table 2.9: Median Wages for Day Labour (riels per person per day)

	2007	2008	2008	% increase
Task	Wet season (Jul–Dec)	Dry season (Jan–Apr)	May–June	Jul–Dec 2007 to May–June 2008
Transplanting	6000	9250	10,000	67
Harvesting	7500	9000	11,000	47
Weeding	7500	9000	11,000	47
Planting	8000	10,000	11,000	38
Clearing bushes or degraded forest	9000	12,500	13,000	44
Construction	10,000	11,000	13,500	35

Source: National survey of 2235 households in June 2008

Since milled rice prices increased by about 100 percent in one year, while wages increased by about 45 percent, most village labourers found themselves worse off in terms of rice, as indicated in Table 2.10. Fortunately, as mentioned, the prices of other food items did not rise as much as rice, and people do not have to spend all of their earnings on rice.

Table 2.10: Daily Wages in Rice

Area		June 2007 daily wage in rice (kg)*	June 2008 daily wage in rice (kg)*	Change (%)
Coastal	Rural	4.67	3.84	-17.78
	Urban	5.60	5.66	0.92
	Total	5.03	4.53	-9.80
Plains	Rural	5.75	4.77	-17.06
	Urban	4.85	3.30	-32.03
	Total	5.56	4.47	-19.73
Plateau/mountain	Rural	5.86	5.65	-3.72
	Urban	2.10	2.44	16.49
	Total	5.63	5.45	-3.25
Tonle Sap	Rural	4.43	3.99	-10.03
	Urban	5.75	3.68	-36.06
	Total	5.01	3.85	-23.08
Phnom Penh	Rural	6.49	5.94	-8.52
	Urban	5.38	4.59	-14.83
	Total	5.41	4.62	-14.64
Cambodia	Rural	5.09	4.43	-12.98
	Urban	5.43	4.51	-16.92
	Total	5.26	4.47	-15.04

Source: Village checklist analysed by Dr Paolo Santacruce
Data are weighted by population.

2.3 Implications of Rising Prices for the Economy

According to many sources, it is most unlikely that rising prices of food will be reversed, because the supply faces physical constraints while global demand keeps increasing due to rising income, especially in China and India (De La Torre 2008; ADB 2008). Rice prices kept rising for reasons including adverse weather, speculative demand, precautionary demand for food stocks, policy responses of exporting countries, rising energy prices, energy intensity of agriculture and diversion of cereal to bio-fuels (ADB 2008). Higher global fuel prices added to inflationary pressure, as did the weakening of the US dollar, which is widely used in Cambodia.

High food prices are undermining poverty reduction. As in other developing countries, food expenditures are a large share of total expenditure. The share is even larger for those who live near or below the poverty line. Food price inflation has seriously eroded their purchasing power, increasing the severity of food deprivation and malnutrition. These effects will worsen if the food price surge persists. Moreover, higher expenditures on food reduce expenditures on health and education and squeeze spending on agricultural inputs, such as fertilisers, that are needed to expand food production.

Fortunately, wages have been raised to compensate workers for having to pay more for the same amount of goods. The problem is that not everyone has equal access to employment or even day labour. The demand for labour is not being met in some areas where there are new opportunities for farm expansion or land clearing. On the other hand, some areas do not have these opportunities, and people are desperate for employment. This suggests a mismatch in labour markets and a need for better information and labour flow.

Higher food prices invite higher inflation. Since wages also have risen, inflation could spiral, causing inflationary expectations to become embedded. Higher food prices may dampen economic activity. Inflation will reduce real income, savings and investment, which may combine to slow aggregate demand. Should interest rates rise to contain inflation, aggregate demand may be further constrained. Much is determined by factors not under Cambodia's control.

III. Impact on Household Food Security[5]

The main focus of the current study is to assess the impact of the high prices on household food security. Given the limited resources and time for the study, it is not possible to measure direct food consumption in the way that the Socio-Economic Survey of Cambodia does. The assessment of food consumption is limited to the question of how frequently households consumed the identified essential food items and how they obtained them within the past seven days. Standard scores developed by WFP were then applied to determine whether households are food poor or not.

3.1 Food Consumption and Food Security Patterns

Diets in Cambodia are as diverse as the cultural beliefs and livelihood systems. Rice is the main staple food for Cambodian households. In order to examine the food consumption pattern, the sampled households were asked to determine how many days they consumed a series of food items in a week prior to data collection and the sources of foods consumed.

[5] It is important to note that this subsection, except 3.3, is provided by WFP with contribution of Dr Paolo Santacroce, WFP consultant, and Mr Khim Ratha of WFP. It is left as is for report back to WFP.

In the field of nutrition, different food items are divided into a number of food groups, of which a combination should be consumed on a daily basis to ensure a nutritionally adequate diet. The key food groups are cereals and tubers, pulses, meat and fish, vegetables, fruit, milk, sugar, oils and fats. Table 3.1 shows the average weekly food consumption pattern.

Table 3.1: Average Weekly Household Food Consumption by Ecological Zones (how many days during the last week each food item was taken)

Food Groups	Food Items	Plains		Tonle Sap		Plateau		Coastal		Cambodia			
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Phnom Penh	Urban	Rural	Cambodia
Cereal and Tubers	Rice	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
	Maize	0.3	0.2	0.3	0.1	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.2
	Bread	0.7	0.2	0.8	0.2	1.2	0.1	0.6	0.6	1.2	0.8	0.2	0.4
	Cassava/yam	0.1	0.1	0.2	0.1	0.1	0.5	0.0	0.4	0.3	0.1	0.2	0.2
	Sweet potato/potato	0.1	0.1	0.5	0.1	0.1	0.6	0.1	0.3	0.5	0.3	0.2	0.2
Pulses	Bean/groundnut/other pulses	0.4	0.4	0.2	0.2	0.8	0.5	0.2	0.4	0.6	0.3	0.3	0.4
Meat and Fish	Fish	4.2	4.6	4.2	3.5	2.7	3.1	4.6	4.8	3.6	4.2	4.1	4.1
	Other aquatic animals (frogs, crabs, etc)	0.2	1.0	0.4	1.1	0.5	2.0	0.7	1.6	0.4	0.3	1.2	1.0
	Meat (beef, pork, chicken)	2.7	1.6	3.1	1.4	2.2	1.2	2.7	1.8	3.5	2.9	1.5	1.8
	Wild meat	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.1	0.0	0.1	0.1
	Eggs	1.6	1.4	2.1	1.5	3.0	1.3	2.6	2.1	2.9	2.0	1.5	1.7
Vegetables	Vegetables	5.8	5.9	6.0	5.4	6.2	5.4	6.2	5.6	6.0	6.0	5.6	5.7
Fruits	Fruit	2.4	1.2	2.6	0.9	2.8	1.0	2.3	2.0	3.1	2.5	1.2	1.5
Sugar & Sweets	Sugar & sweets	2.2	2.8	2.6	1.4	2.6	1.6	2.2	2.4	1.9	2.4	2.2	2.2
Oils/fats	Vegetable oil or animal fat	4.9	4.2	4.5	3.6	5.0	3.6	5.6	5.2	3.9	4.8	4.0	4.1
Milk	Milk products	0.9	0.3	1.1	0.1	0.6	0.3	1.2	0.7	1.7	1.0	0.2	0.4
Condiment	Prohok	3.5	4.3	2.3	3.5	3.1	4.4	3.0	1.2	3.3	2.9	3.9	3.7
	Soy sause, fish sauce, etc.	5.8	5.7	2.6	3.6	5.4	4.1	6.6	6.5	5.5	4.4	4.9	4.9

**condiment consumption was not included in analysis.*
Source: National Survey of 2,235 households in June 2008

The above table shows that the rural households have - on average - a poorer food intake than the urban households. In general the primate position of Phnom Penh emerges but no big differences can be noted between the capital and the average of the other urban areas in the country. On the contrary the poorer conditions of rural areas is also characterised by significant differences between different ecological zones. The above differences are emphasised in Table 3.2[6], which compares the score of each ecological zone (divided in rural and rural) with the national average.

Table 3.2: Comparative Analysis of Food Consumption Score (FCS) by Ecological Zone

Description	Plains		Tonle Sap		Plateau		Coastal		Cambodia			
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Phnom Penh	Urban	Rural	Cambodia
Average FCS	55.6	51.8	57.3	46.9	55.7	49.4	58.0	55.3	61.7	58.6	50.3	51.9
Cambodia = 100	107.1	99.9	110.5	90.4	107.3	95.2	111.8	106.6	118.9	112.8	96.9	100.0
Rural = 100	110.6	103.1	114.1	93.3	110.7	98.3	115.4	110.1	122.8	116.5	100.0	103.3
Urban = 100	94.9	88.5	97.9	80.1	95.1	84.4	99.1	94.5	105.4	100.0	85.8	88.6

Source: National Survey of 2,235 households in June 2008

When compared with the national average, the average poorest food intake was found in Tonle Sap zone, followed by Plateau.

3.1.1 Cereals and Tubers

In this study, the cereals and tubers are grouped, including rice, maize, bread, cassava and sweet potato, potato and yam. Rice was found to be the most common cereal consumed 7

[6] derived by the scores using WFP standard weights, see paragraph 4 this chapter

days a week in all ecological zones. Other cereal and tuber items are consumed less than one day a week in all strata, except for Phnom Penh and Urban households in Plateau zone as they consume bread more than one day a week.

According to the survey, over the 7-day recall period, 10 percent of the households reported to have eaten maize at least once a week. Sixteen percent (16 percent) reported to have eaten bread; 9 percent reported to have eaten cassava, and 9 percent reported to have eaten sweet potato/potato/yam. It was observed that overall, the rural households have consumed less frequently cereal and tubers than urban households (Table 3.1).

3.1.2 Pulses

Pulses (beans, groundnut and other pulses) are consumed on average less frequently than one day a week in all ecological zones (Table 3.1). Only sixteen percent (16%) of households reported to have eaten beans over the 7-day recall period.

Table 3.3 shows the percentage of households who never ate pulses during the last 7-day. It was observed that the highest percentage of household who never ate pulses during the last 7-day was in urban (85%) and rural areas (84%).

The low weekly frequency of eating pulses, combined with the high percentages of households who never – during the last week – ate them, is an alarming signal of a very scarce recurrence to vegetal proteins. These facts can have serious implication particularly in zones with a relatively scarce access to animal proteins.

A more detailed analysis (by ecological zones) shows that the highest percentage of household who never ate pulses during the last 7-day in rural household is in Tonle Sap zone (90.4 percent)[7], followed by rural Coastal zone (85 percent).

Table 3.3 Percentage of Households Who Never Ate Pulse

Description	Plains		Tonle Sap		Plateau		Coastal		Cambodia			
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Phnom Penh	Urban	Rural	Cambodia
Never eat pulse	82.2	81.7	90.0	90.4	60.0	80.0	91.1	84.5	77.0	85.3	84.2	83.8
Cambodia = 100	98.1	97.5	107.4	107.9	71.6	95.4	108.7	100.9	91.8	101.7	100.5	100.0

Source: National Survey of 2,235 households in June 2008

3.1.3 Meat, Fish and Dairy product

Meat and fish sources are better: certainly more important due to their contents of animal protein. Access to animal meat and fish sources is of clear concern from a food security point of view. This study detects the frequency of consumption of animal protein and fat, which have not been studied in Cambodia before. The study used the following animal items such as wild meat, beef, pork, chicken, fish and other aquatic animals.

The study found that meat (beef, pork, and chicken) consumption is very rare for rural households: they consume it - on average - between one and two days a week, while Phnom Penh and urban households consumed on average every three days a week. The lowest frequency of meat consumption intake was found in rural Plateau, followed by rural Tonle

[7] As a confirmation of the concerns about the scarce use of vegetal proteins, Tonle Sap is also – see next paragraph - one of the ecological zones with the higher percentages of household who never ate animal proteins during the last week.

Sap. Plain and Coastal zones appear a bit better that the national average. Sixty three percent of households reported to have consumed meat over the 7-day recall period.

Table 3.4 shows the percentage of households who never ate meat during the last 7-day according to ecological zones and strata. The highest percentage of household who never ate meat during the last 7-day was observed in rural areas (43 percent), between them Plateau zone (55 percent), followed by rural Tonle Sap zone (44 percent).

Table 3.4 Percentage of Households Who Never Ate Meat

Description	Plains		Tonle Sap		Plateau		Coastal		Cambodia			
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Phnom Penh	Urban	Rural	Cambodia
Never eat meat	17.8	38.9	12.2	44.0	36.7	54.6	20.0	37.9	8.1	16.7	42.5	36.8
Cambodia = 100	48.3	105.6	33.2	119.6	99.6	148.3	54.4	102.9	21.9	45.4	115.6	100.0

Source: National Survey of 2,235 households in June 2008

Fish is a very important component of diets of rural households, particularly of the poor households as they can freely catch it from lakes, ponds or rice field. The price of fish is also much cheaper than of other animal products during the fishing season. The fish consumption seems to be high, as the survey was carried out during the fishing season. During the survey timeframe, fish is consumed on average 4 days a week. The study found that 87 percent of households reported to have eaten fish at least one time over the 7-day recall period.

Table 3.5 shows the percentage of households who never ate fish during the last 7-day. The highest percentage of household who never ate fish during the last 7-day was observed in rural areas (13 percent) rather similar to the Phnom Penh ones (14 percent). On the contrary an analysis by ecological zones shows a rather dichotomised pattern. Rural and urban household of Plateau zone show the highest percentage of household who never ate fish during the last 7-day (19 percent and 27 percent respectively), while Tonle Sap zone shows high level of no-access for its rural part (16 percent) but good condition for its urban one (only 6.7 percent). Rural Coastal and Plaints zones are better than the national rural average.

Table 3.5 Percentage of Households Who Never Ate Fish

Description	Plains		Tonle Sap		Plateau		Coastal		Cambodia			
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Phnom Penh	Urban	Rural	Cambodia
Never eat fish	11.1	9.2	6.7	16.3	26.7	18.5	7.8	13.1	14.7	9.7	12.9	12.6
Cambodia = 100	88.1	72.6	52.9	129.0	211.4	146.8	61.7	103.6	116.8	77.3	101.9	100.0

Source: National Survey of 2,235 households in June 2008

Aquatic animal (frogs, crab, etc.) is another very important component of diets of rural poor households as they can easily collect it from rice field.

Over the 7-day recall period, aquatic animal was consumed on average one day a week. In rural areas, they consumed on average one or two days a week. The highest frequency of aquatic animal intake was found in rural Coastal (one and two days a week). On average, 35 percent of households reported to have eaten aquatic animals over the 7-day recall period.

Wild meat was found to be consumed on average less than one day in Plateau/mountain (Table 1), while milk is still an urban life-style: it was only consumed by urban and Phnom Penh households on average for more than one day a week. Only 13 percent of sampled households reported to have consumed milk over the 7-day recall period.

3.1.4 Vegetable and Fruits

In the study, vegetables included green leafy vegetables, shoots/mushrooms, and other vegetables. Vegetables, apart from rice, are the more frequently consumed food groups. The vegetables are consumed on average 6 days a week. The study also found that 97 percent of households reported to have consumed vegetables at least one time over the 7-day recall period. On the contrary fruits are consumed on average only two days a week. This study found that only 52 percent of households reported to have eaten fruits at least one time over the 7-day recall period. Serious concerns should be expressed for the very scarce access to important sources of vitamins and micro-nutrients.

3.1.5 Oils, fats and sugar

Vegetable oil and animal fat are primarily used for cooking. Oils are consumed on average 4 days a week. The study also found that 90 percent of households reported to have consumed oil at least one time over the 7-day recall period. The use of sugar was found only two days a week. Sixty-four percent of household was found to consume sugar at least one time over the 7-day recall period.

3.1.6 Sources of Staple Food

Rice is the staple food of the Cambodian people. As Table 3.6 illustrates, most of sampled households have access to the rice through purchase. Fifty percent of households depends on their own production as the main source.

An analysis by ecological zones, the highest percentage of household whose rice come from their own production was found in rural Plateau (70.9 percent) and Tonle Sap zone (65.6 percent), while the lowest percentage of households whose rice come from their own production was found in Plain zone (49.8 percent).

Table 3.6 Percentage of Owned Production of Rice by Ecological Zone (weighted by households)

Ecological Zones		Plains			Tonle Sap			Plateau			Coastal			Cambodia			
		Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Phnom Penh	Cambodia
Main Source	# of HH	201	1	202	246	16	262	287	15	302	220	3	223	1,041	35	13	1,089
	%	49.8	2.2	45.0	65.6	17.8	56.3	70.9	50.0	69.4	58.8	3.3	48.0	59.3	13.3	8.1	49.8
Second Source	# of HH	10	0	10	14	2	16	10	0	10	14	1	15	53	3	2	58
	%	2.5	0.0	2.2	3.7	2.2	3.4	2.5	0.0	2.3	3.7	1.1	3.2	2.9	1.2	1.2	2.6
Both Sources	# of HH	211	1	212	260	18	278	297	15	312	234	4	238	1,093	38	15	1,147
	%	52.2	2.2	47.2	69.3	20.0	59.8	73.3	50.0	71.7	62.6	4.4	51.2	61.0	14.0	9.3	51.4

Source: National Survey of 2,235 households in June 2008

In addition, Table 3.7 shows sources of main food consumption in the last 7 days by urban and rural in different ecological zones. Almost all people access food either from purchasing and own production. In general, most people buy fish and vegetable for consumption although they live in the rural areas. The table also indicates that many people in the Plains, Tonle Sap, Plateau, Coastal areas can access vegetable from gathering from common pool resources.

The impacts of high food prices on food security are more likely to vary according to the geographical locations. The survey suggests a serious concern about food security for people who purchase milled rice for consumption. Only 50 percent of households consume rice from

their own production while the rest are more likely to suffer from the high food prices unless their income is sufficient. From 2,211 households who reported the sources of the rice they had consumed within a week prior to the date of data collection, most of the urban people (90 percent in Phnom Penh and in other urban areas) always purchased rice. Only 41 percent of the households residing in rural areas purchased rice for consumption within seven days prior to the date of the survey. Of those households, 56 percent had no agricultural land for cultivation. However, **31** percent of farming households also did not have enough and had to purchase rice for consumption in the last seven days prior to the date of data collection.

As discussed below, the impact of high food prices on the level of household food security will depend on the change in their earning ability to offset the increased rates of food and other commodity prices. In urban areas, it is not uncommon that households do not rely on food stock at home. It is purely a cash-based economy in urban areas. Market works very well and they can simply make purchases as long as they have income (section 3.4 for more detail of food availability and food stocks of different groups of people).

Table 3.7: Sources of main food consumption in the last 7 days prior to the survey (percent of respondent households)

	Phnom Penh	Plains			Tonle Sap			Plateau			Coastal		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Rice													
own production	8	2	52	**47**	18	66	**56**	50	71	70	3	59	**48**
purchase	**90**	**86**	**44**	**48**	**80**	**31**	**40**	**50**	**26**	**27**	**90**	**41**	**50**
traded goods or services	1	2	0	1							0		0
borrowed			0	0		0	0		0	0			
exchange of labor for food						1	0						
exchange of items for food		10	1	2		1	0		1	1	3		1
received as gift	1		2	1	2	1	2		2	1	3		1
food aid	1		0	0		1	0		0	0			
other			0	0		0	0				0	0	0
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Fish													
own production	1	2	5	5		2	2		2	2		3	2
fishing, hunting, gathering	1	2	10	9	3	26	21	8	30	29	4	10	9
purchase	**99**	**91**	**84**	**84**	**97**	**70**	**76**	**92**	**67**	**68**	**96**	**86**	**88**
traded goods or services	0		0	0		0	0		0	0	0	1	1
borrowed			0	0									
exchange of items for food	0	5	0	1									
received as gift			1	0		1	1		0	0			
food aid						0.2	0.2						
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Prahok (fermented fish)													
own production	6	5	22	20	9	24	22	23	5	6		3	2
fishing, hunting, gathering	1		2	2		2	2		14	13			
purchase	**93**	**92**	**74**	**76**	**90**	**72**	**75**	**69**	**80**	**79**	**100**	**94**	**96**
traded goods or services	0	3	0	0	1	0	0	8		0			
borrowed						0	0		0	0			
exchange of labor for food						0	0						
exchange of items for food			0	0		0	0		1	1			
received as gift			1	1		1	1					3	2
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Vegetables													
own production	1	8	15	14	8	14	13	24	13	13	3	8	7
fishing, hunting, gathering	2	2	18	17	11	23	21	12	43	41	0	12	9
purchase	**96**	**83**	**66**	**67**	**80**	**62**	**66**	**59**	**44**	**45**	**97**	**79**	**82**
traded goods or services	1	2	1	1	1	1	1	6	0	1		0	0
exchange of labor for food	0												
exchange of items for food		5	0	1							0		0
received as gift			0	0								1	1
Total	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: National Survey of 2,235 households in June 2008, adjusted with weights of ecological zone

As discussed below, the impact of food price rises on the level of household food security will depend on the change in their earning ability to offset the increased rates of food and other commodity prices. It is common for urban households not to stock food at home. It is purely a cash-based economy in urban areas. Market works very well and they can simply make purchases as long as they have income[8].

3.1.7 Dietary Diversity: Food Consumption Scoring, a methodological overview

Scientific research shows that there is a significant correlation between the diversity of a diet and nutrition adequacy, children's and women's anthropometry and socio-economic status[9]. WFP has built on previous work done on dietary diversity, customizing the tool in order to capture as much differentiation as possible among the households that have different consumption patterns in terms of both number of consumed food groups and their specific consumption frequency.

The frequency weighted diet diversity score or "Food consumption score" is a score calculated by the frequency of consumption (number of days per week) of different food groups consumed by a household during the 7 days before the survey.

Information on the different food items was reorganized into specific food groups. Consumption frequencies of food items belonging to the same group were summed and values above 7 were recoded as 7. The value obtained for each food group was multiplied by its weight. The food consumption score is the sum of the weighed food groups. The table below illustrates collected food items, food groups and their relative weights.

Table 3.8 Collected Food Items, Food Groups and Their Relative Weights

Food Items	Food Groups	Weight
Rice, bread & maize	Cereals and Tubers	2
Cassava, sweet potato/potato/yam		
Pulses (including beans, groundnuts, etc.)	Beans	3
Vegetables (including green, leafy vegetables, bamboo shoots and mushrooms, etc.)	Vegetables	1
Fruits	Fruit	1
Wild meat, fish and other aquatic animals, domestic meat (poultry, pork, chicken), eggs	Meat and fish	4
Milk / milk products	Milk	4
Sugar	Sugar	0.5
Oils, fats	Oil	0.5

Source: National Survey of 2,235 households in June 2008

Two **standard thresholds** have been identified **by WFP** to distinguish different food consumption level. A score of 21 was set as barely minimum: the value comes from an expected daily consumption of staple (frequency * weight, 7 * 2 = 14) and vegetables (7 * 1 = 7).

- **Scoring below 21**, a household is expected NOT to eat at least staple and vegetables on a daily base and therefore considered to have **"poor food consumption".**

[8] A more in-dept analysis, using a WFP Comprehensive Food Security and Vulnerablitiy Aanlaysis (CFSVA) approach is in progress and more detailed results are expected at the end of August 2008.
[9] Ruel M., 2003, Operationalizing dietary diversity: a review of measurement issues and research priorities. Journal of Nutrition 133:3922S-3926S

- The second threshold was set at 35, being composed by daily consumption of staple and vegetables complemented by a frequent (4 day/week) consumption of oil and pulses (staple*weight + vegetables*weight + oil*weight + pulses*weight = 7*2+7*1+4*0.5+4*3=35). **Between 21 and 35,** households can be assumed to have **"borderline food consumption".**

- Households that score **above 35** are estimated to have an **"acceptable food consumption"** -

3.1.8 Dietary Diversity: Food Consumption Scoring applied to Cambodia

By considering that in Cambodia the oil consumption happens almost 4-5 day a week, the scores have been artificially elevated.

To account for these facts, minimum cut-off points with high oil/fat are raised by 3.5 points ([7*weight of oil] = 7*0.5=3.5).

Table 3.9 Thresholds of Food Consumption Score (FSC)

Food Consumption Categories	Standard Cut-off Point	New Cut-off Point	Percent of HHs
Poor Food Consumption	0-21	0-24.5	4.3
Borderline Food Consumption	21.5-35	25- 38.5	7.4
Acceptable Food Consumption	> 35	> 38.5	88.3

Poor Food Consumption: Households belonging to the category of poor food consumption represent about 4.3 percent of the households. These households can be currently considered highly food insecure**.**

Households in this group rarely, if at all, consume any animal products and pulses that are the important sources of protein. Rice is consumed on daily basis. Vegetables are consumed two or three days a week. It is very likely household members, especially children, have problems with micronutrient deficiencies. If compared with national average, the highest prevalence of poor food consumption was found in rural areas. By ecological zone, the highest prevalence of poor food consumption was observed in urban Plains and rural Tonle Sap.

Table 3.10 "Poor Food Consumption" Households by Ecological Zone

FSC Categories	Plains		Tonle Sap		Plateau		Coastal		Cambodia			
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Phnom Penh	Urban	Rural	Cambodia
Poor Food Consumption	8.9	3.0	2.2	8.5	6.7	3.5	1.1	1.3	0.2	3.1	4.6	4.3
Cambodia = 100	207.6	69.4	51.9	199.3	155.7	80.7	25.9	31.1	5.5	71.9	106.9	100.0

Borderline Food Consumption: 7.4 percent of the households were found to have "borderline food consumption". The households belonging to this group can be defined as currently food insecure.

If compared with national average, the highest prevalence of borderline food consumption was found again in rural areas. By ecological zones, the highest prevalence of poor food consumption was observed in rural Plains, followed by rural Tonle Sap.

Table 3.11 "Borderline Food Consumption" Households by Ecological Zone

FSC Categories	Plains		Tonle Sap		Plateau		Coastal		Cambodia			
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Phnom Penh	Urban	Rural	Cambodia
Borderline Food Consumption	0.0	6.9	5.6	9.3	3.3	14.3	3.3	5.9	1.2	2.4	8.6	7.4
Cambodia = 100	0.0	93.8	75.2	126.3	45.1	193.8	45.1	79.4	16.1	32.8	116.5	100.0

Acceptable Food Consumption: Households with good food consumption were found around 89 percent of the sampled households. These households are considered to have an acceptable food consumption consisting of sufficient dietary diversity for a healthy life. The key difference from households with poor or borderline food consumption is animal protein intake, mostly meats, providing them with acceptable level of protein. If compared with national average, the better acceptable food consumption was found in Phnom Penh areas and urban areas.

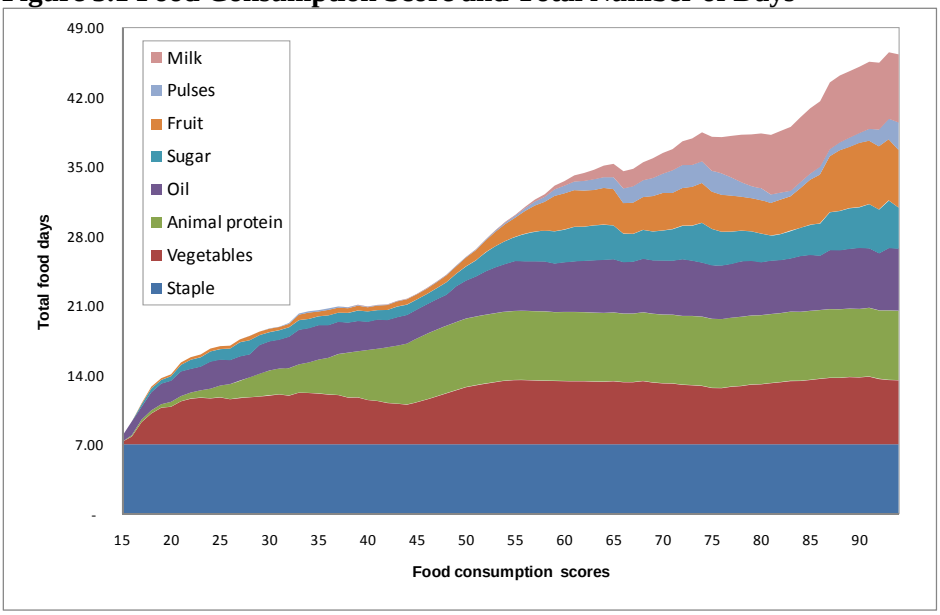
Table 3.12 "Acceptable Food Consumption" Households, by Ecological Zone

FSC Categories	Plains		Tonle Sap		Plateau		Coastal		Cambodia			
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Phnom Penh	Urban	Rural	Cambodia
Acceptable Food Consumption	91.1	90.1	92.2	82.1	90.0	82.2	95.6	92.8	98.6	94.5	86.8	88.3
Cambodia = 100	103.2	102.0	104.4	93.0	101.9	93.1	108.2	105.1	111.6	107.0	98.3	100.0

In summary, the proportion of HHs and population which has poor, or critically low, food consumption is around 4 percent. About 7 percent has borderline, or low, food consumption[10].

[10] The figure 3.1 shows the need for interventions that can increase animal protein consumption. In addition, promotion of a high intake of fruits would be highly desirable. It appears that addressing low consumption of staples (rice) and also vegetable is less urgent than animal protein and fruits. Vitamin and micro-nutrient intake are also needed to be enhanced.

Figure 3.1 Food Consumption Score and Total Number of Days



3.2 Food (In)Security Profiles: *How many, who and where Are the Food Insecure?*

The purpose of this section is to describe the food insecure households and also to pinpoint particular groups with higher food insecurity rates. Cross tabulation of main food characteristics with the food consumption categories ("poor food consumption" and "borderline food consumption" is used for these purposes. In this section, **food insecure households are defined as households who had "poor or borderline food consumption"** based on the food consumption score.

3.2.1 Current Food Insecurity Status (end of May - early June 2008)

The result of food consumption data provides only a seasonal snapshot of the food consumption pattern at the time of the survey (end of May - early of June 2008).

It is likely that the proportion of "food insecure" people could increase significantly during the peak of the lean season (August-November) and the end of the "fishing period" (see section: 3.3.2 Food Insecurity Status during Lean Season (August-November).

In short, the seasonal findings from the survey do not necessarily represent the household food consumption throughout the year. In addition, as fishing, other aquatic animals and hunting are rather opportunistic activities, the proportion of households with borderline or acceptable food consumption is likely to fluctuate more with the upcoming lean season.The lower threshold for poor food consumption, however, is likely to be less volatile.

How many are food insecure?

Table 3.13 shows that more than **300,000 households** with poor and borderline food consumption **(equaling about 1.7 million individuals)** are classified as food insecure.

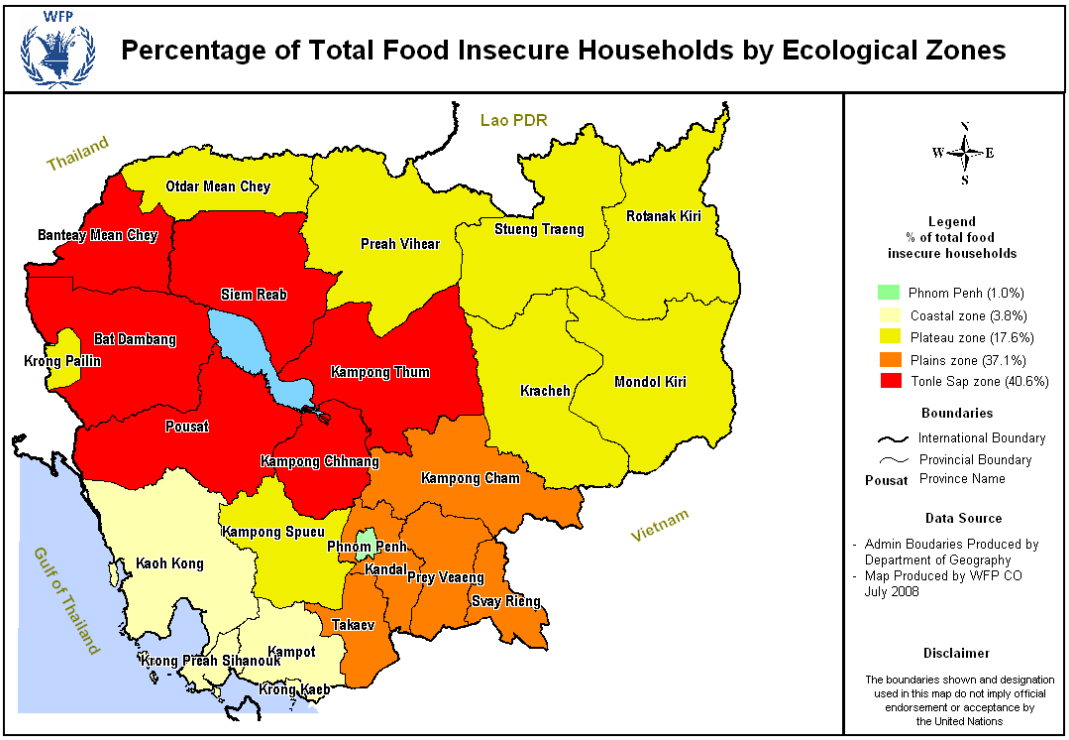
Table 3.13 Number of Current Food Insecure Households by Ecological Zone*

Ecological Zones		Plains			Tonle Sap			Plateau			Coastal			Cambodia			
		Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Phnom Penh	Rural	Urban	Cambodia
Poor Food Consumption	% of HH	32.0	66.5	36.6	55.3	21.5	50.5	10.6	9.5	10.4	2.0	2.5	2.1	0.4	85.8	13.8	100.0
	# of HHs	33,965	11,322	45,287	58,678	3,667	62,346	11,272	1,610	12,883	2,121	424	2,545	509	106,037	17,024	123,570
	# of people	169,826	56,609	226,435	293,392	18,337	311,729	56,362	8,052	64,414	10,604	2,121	12,725	2,546	530,185	85,118	617,849
Borderline Food Consumption	% of HH	39.7	0.0	37.2	32.2	81.5	34.4	23.4	7.2	22.3	4.7	11.3	5.0	1.2	93.5	5.3	100.0
	# of HHs	79,029	0	79,029	63,999	9,143	73,141	46,568	803	47,371	9,306	1,269	10,575	2,539	198,902	11,215	212,655
	# of people	395,146	0	395,146	319,993	45,713	365,707	232,841	4,015	236,856	46,528	6,345	52,873	12,694	994,508	56,073	1,063,275
Total Food Insecure HH		112,994	11,322	124,316	122,677	12,810	135,487	57,841	2,413	60,254	11,426	1,693	13,120	3,048	304,939	28,238	336,225
Total Food Insecure People		564,972	56,609	621,581	613,385	64,050	677,436	289,203	12,066	301,269	57,132	8,466	65,598	15,240	1,524,693	141,191	1,681,124

**NIS population projection 2008 was used to estimate # of food insecure households.*

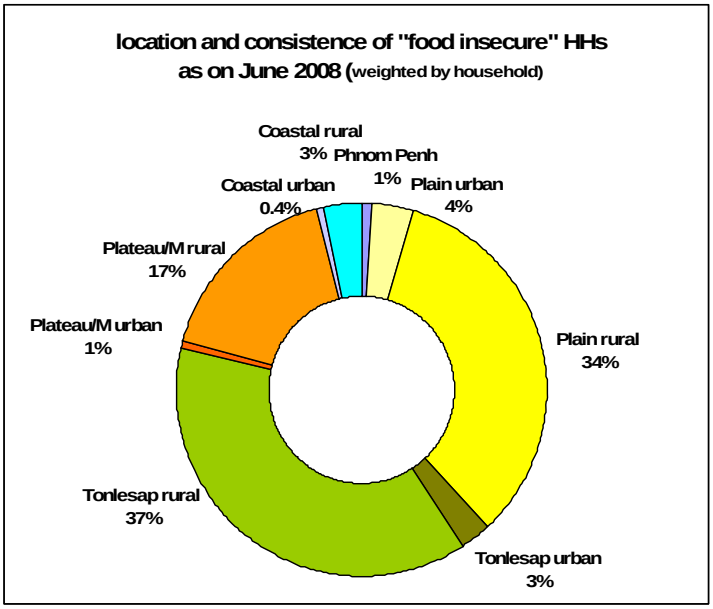
The highest number of food insecure households was observed in Tonle Sap zone[11], followed by Plain zone[12], Plateau zone[13] and Coastal zone[14].

[11] Tonle Sap zone: Siem Reap, Kampong Thom, Pursat, Kampong Chhnang, Banteay Meanchey and Battabang
[12] Plain zone: Kampong Cham, Prey Veng, Svay Rieng, Kandal and Takeo
[13] Plateau zone: Kampong Speu, Otdar Mean Chey, Preah Vihear, Stueng Treng, Kratie, Mondol Kiri, Ratanak Kiri and Pailin
[14] Coastal zone: Kampot, Kok Kong, Krong Kep and Krong Preah Sihanouk



As food insecurity in Cambodia is mainly a rural problem, more than 1.5 million of the rural and more than 150,000 of the urban population[15] are food insecure. The figure 3.2 shows the same information disaggregated by rural and urban areas of each ecological zone. In order to assist the decision makers to prioritize their intervention according to their scarce resources, the "chronically food insecure" group who are least prepared to cope with the high food prices requires particular attention. The people in this category are the most at risk of entering in a "de-possession circle" bringing to social marginalization and serious food insecurity.

Figure 3.2: Location of "Food Insecure" Households



[15] Including Phnom Penh

3.2.2. Location and Patterns of Current[16] "Poor Food Consumption" population.

According to the survey results, 4.3 percent[17] of the Cambodian households have been currently (June 2008) classified as the "chronically food insecure" or "Poor Food Composition". They are, at this date, suffering the most due to lack of adequate diet, in term of frequency and types of weekly food intakes.

How many are they?
The above category, in term of affected population, corresponds to more than half a million people (617,849)[18] living in more than 120,000 households.

Where are they?
Map 1 shows that the higher number of households with "poor food consumption" was detected in Tonle Sap zone, followed by Plains zone.

[16] June 2008

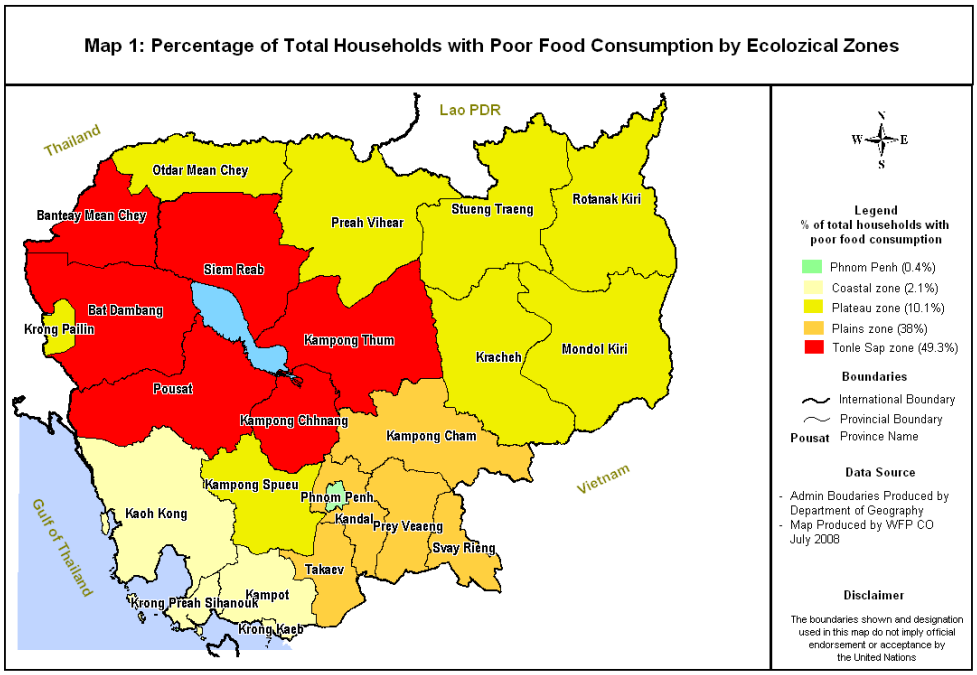
[17] When using a cut-off point = 24.5. In term of surveyed households this percentage corresponds to 3.1 percent; the figure 4.1 percent was obtained by weighting the observations using deflators by ecological zones. In the following pages, if not specifically stated: "percentage of the surveyed households" the figures make reference to the deflated values (frequently specified as: "weighted by household " or "weighted by population", due to obvious difference of the surveyed household size). The deflators are as follows:

Ecological Zones	HH WEIGHTS
1 - Phnom Penh	0.394104768
2 - Plain	2.190665271
3 - Tonle Sap	1.419221173
4 - Plateau/Mountain	0.623173573
5 - Coastal	0.328297367

From the above table it is evident that the non-weighted figures risk to underestimate the outcomes of the most populated ecological zones (with the exception of Phnom Penh).

As the deflators are higher (and more than 1) for the more populated ecological zones, the deflated outcomes can be sometimes rather different from those provided simply using the not-deflated records.

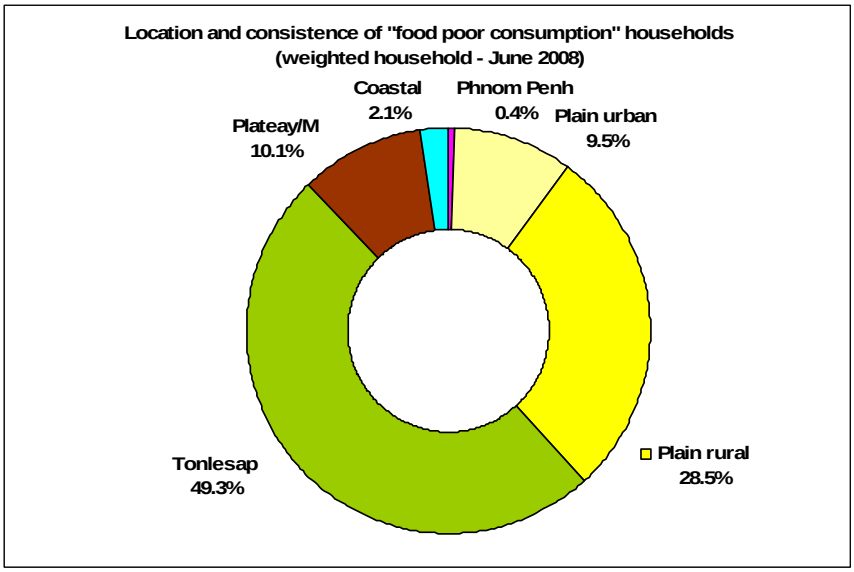
[18] The above figure has been obtained using the average household size as estimated by the survey.



Most of the "Poor Food Consumption" households (90.1 percent) are living in rural areas, and concentrated mainly in the above two most populated ecological zones: Tonle Sap and Plains zones (Figure 3.3).

Nearly 50 percent of the "Poor Food Consumption" is located in rural Tonle Sap, followed by Plain (38 percent). The Plain ecological zone is the only one (if Phnom Penh is excluded) where Food Poor Consumption households are present in urban areas (1/4 of them).

Figure 3.3: Location of "Poor Food Consumption" Households (weighted by HH)



3.2.3. Main characteristic of the "Poor Food Consumption" population

A1. Most of them are landless.

Considering only the Cambodian rural landless household, the survey found that the prevalence of landless household is significantly higher among the "Food Poor Consumption" households than the overall rural households.

Figure 3.4: Percentage of "landless households between rural poor food consumption and overall rural households (weighted by HH)

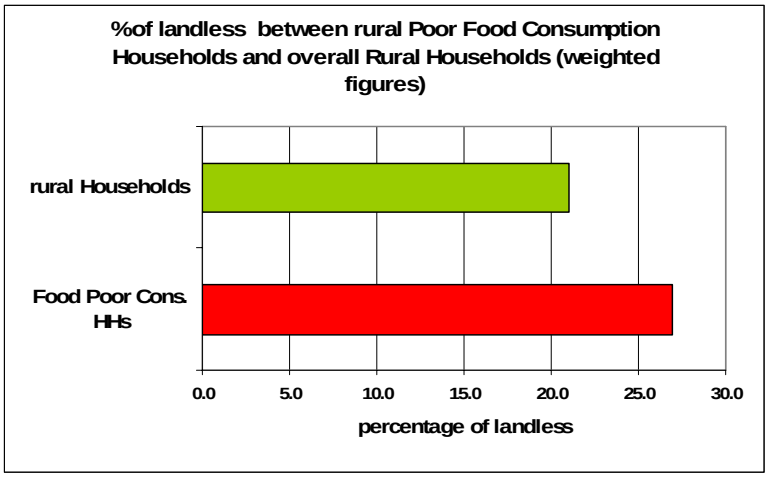
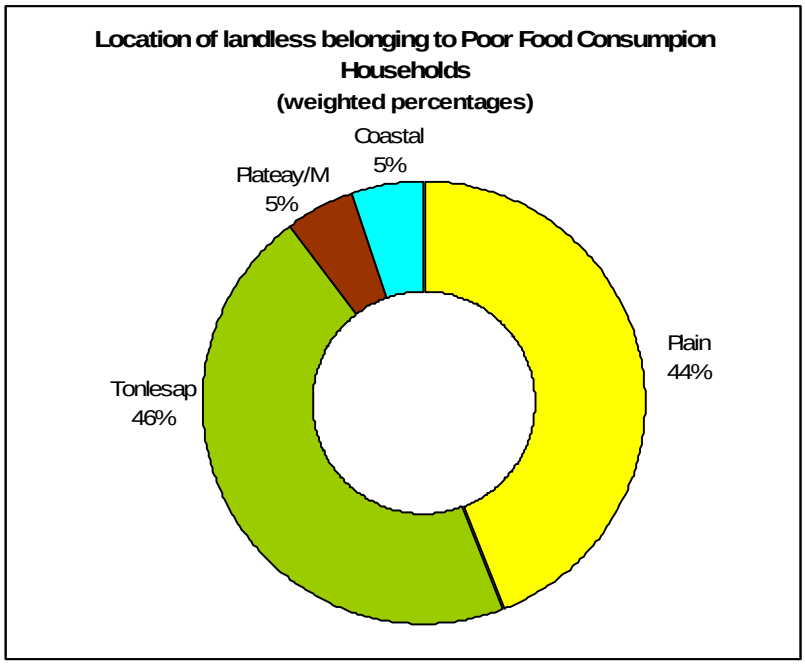


Figure 3.5 shows that the poor food consumption households who are landless are even more located in Tonle Sap and Plain zones.

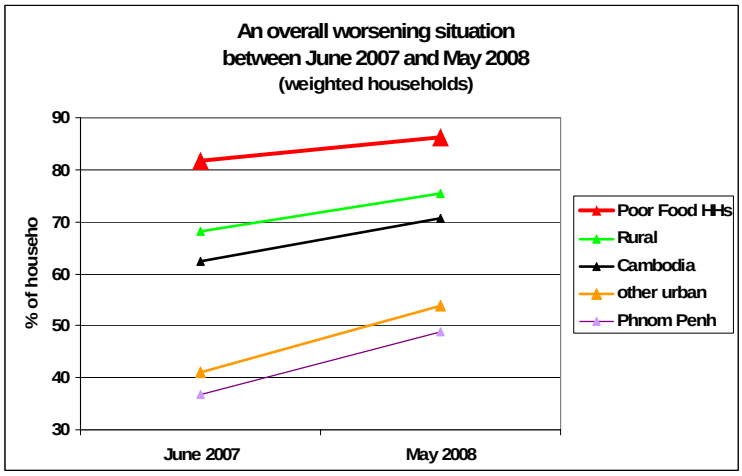
Figure 3.5: Percentage of rural poor food consumption households who are landless (weighted by HH)



A2. The "Poor Food Consumption" households are the most affected by the current situation.

While 69 percent of the survey HH responded that they did not have enough money to buy food or cover essential expenditures, the problem is much more consistent and severe amongst the poor food household. Figure 3.6 shows that about 85 percent of the poor food households are the most affected by current situation in rural areas than households in the urban and Phonm Penh areas that are less than 50 percent.

Figure 3.6: The overall worsening situation between June 2007 and May 2008 (weighted by HH)



A3. They are affected by a heavier demographic burden.

Figure 3.7 emphasises the demographic shapes of the different strata (by age cohorts). When compared with the national average the "food poor consumption" households have more children and more elderly to be nourished. The higher number of dependents is observed in the rural areas. The other urban areas and particularly Phnom Penh enjoy a more favourable situation with less dependents to feed.

Figure 3.7: Poor food consumption and Strata households by age cohorts

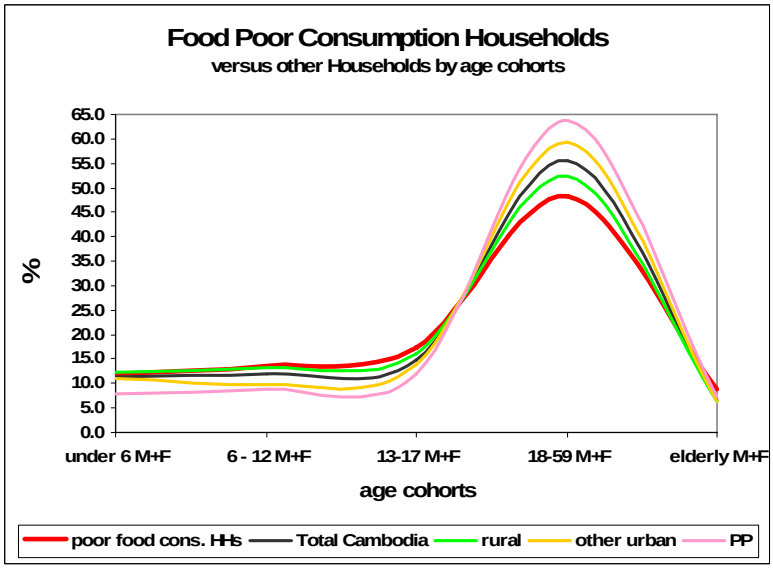
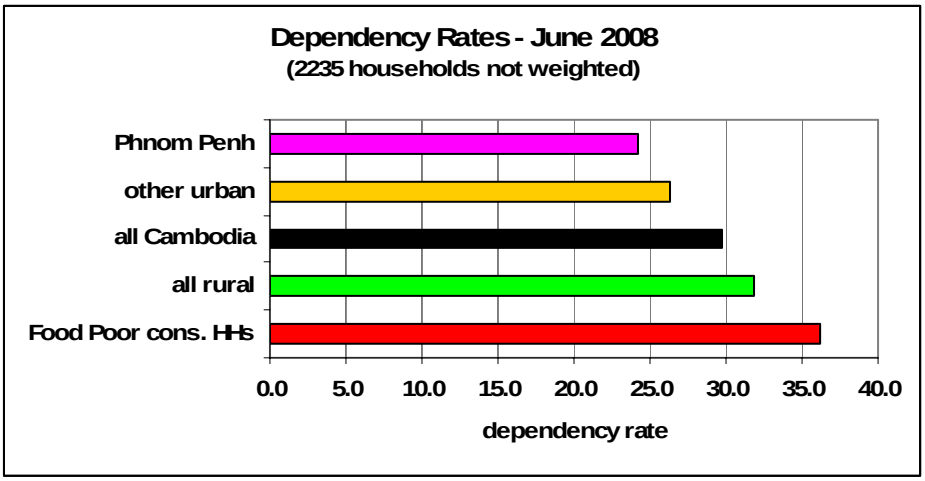


Figure 3.8 synthesises the dependency rates, a comparison with the national average is possible[19]. With the comparison with the overall rural areas, the "poor food consumption" households are much more affected by the heavier demographic burden.

Figure 3.8: Poor food consumption and Strata households by dependency rates



A4. Their expenses and debts are increasing more than strata averages

The impact of high food prices on simply those related to cereals is significantly more serious for the "poor food consumption" household.

Figure 3.9 shows that 92 percent of the surveyed household declared that their expenditure increased since December 2007. The highest proportion of expenditure increase and newly incurred debts were found amongst the "poor food" households. The consequence can become dramatic, as this social category is the most affected by debts. Perhaps even more worryingly – they have incurred since a few months ago (March 2007), much more debts than the overall strata (Figure 3.9).

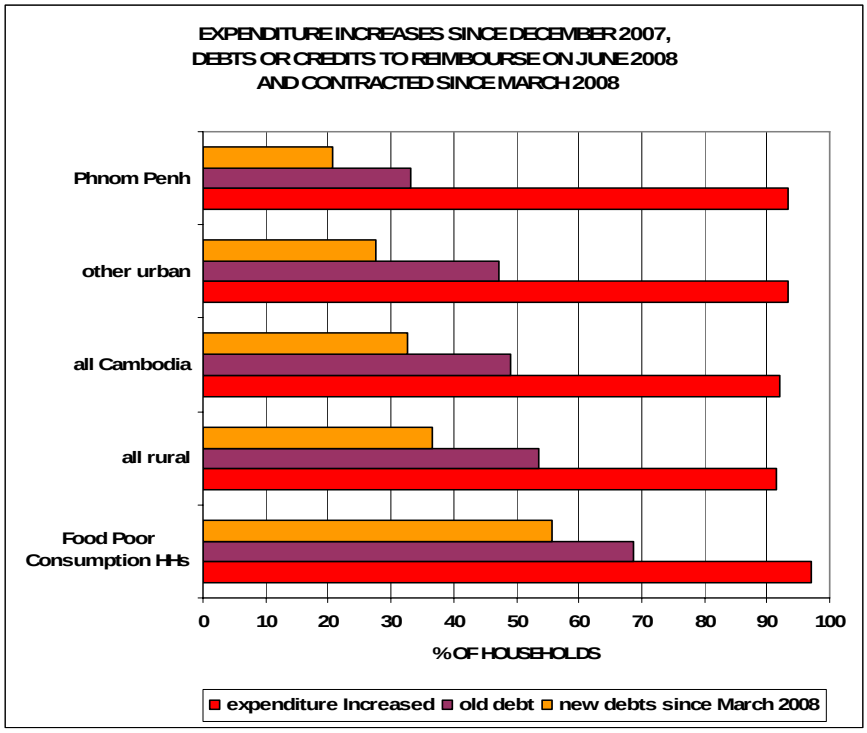
It is worth noting that a dichotomised society had been disaggregated not simply in terms of "rural versus urban", but also within the "rural" category. The percentage of "poor food consumption" household[20] who contracted new debt is more than 50 percent which is higher than the overall rural society.

As usual, any disaster (either natural or man-made, or due to the two combined causes) provokes significant changes in the social structure. The social impact of the new phenomenon of the food price increase is not different from those of the other disasters.

[19] Due to lack of availability of standard age cohorts the dependency rate has been computed in a rough way using the survey cohorts, i,e,: (under 6 + 6-12 + elderly)/13-59)*100 = dependency rate. It means that the rates a bit underestimate the dependency and are not strictly comparable with the international standard. However in this report they are used simply for a comparison between different areas in Cambodia and under the above limitation are correct.

[20] Figures not weighted

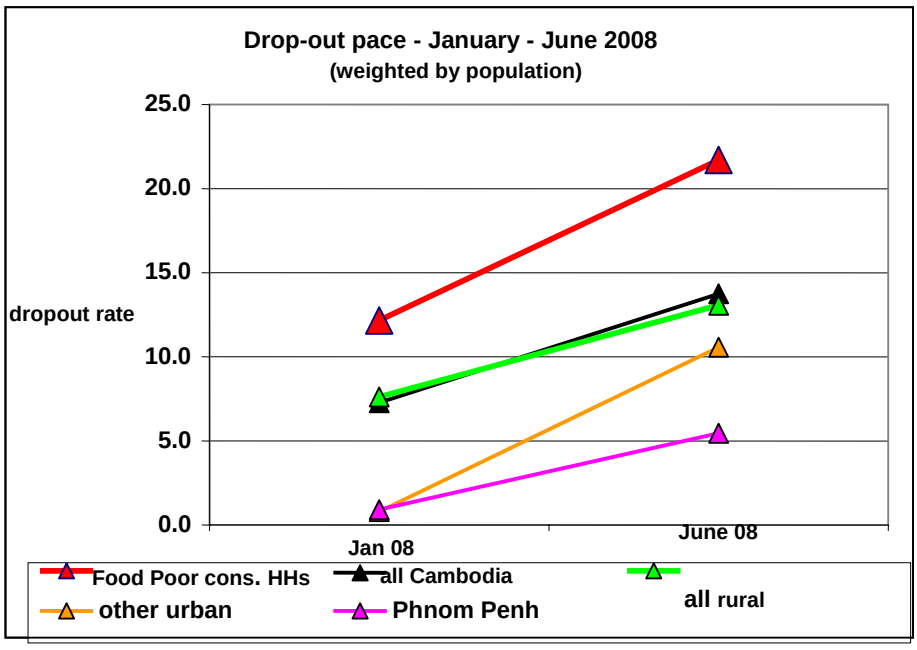
Figure 3.9: Poor food consumption and Strata households by expenditure increase, old and new debts



A5 . Higher primary school drop out rates

The drop-out rates of primary school children were found the highest among the "Poor Food Consumption" Households. Between January and June 2008 the drop-out rate almost doubled, affecting more than 1/5 of the total children in primary school. However, there is no direct evidence that these increase (at least for this subcategory of the "food insecure") is due to price increases.

Figure 3.10: Poor food consumption and Strata households by drop-out rates



A6. How are they coping with difficulties?

The huge amount of information provided by the surveyed households about the type and the frequency of their coping mechanisms adopted during the previous 30 days offer a very good and useful contribution for better understanding the impact of price rising and the seriousness of their provisional or long term effects. The most frequent measures used by households for coping with difficulties are related to access to food. Chapter 4 contains the percentages of different frequencies[21] by each separate coping mechanism. However a more detailed analysis will be necessary, particularly crossing frequencies with social structure.

Table 3.15 shows that the "food poor consumption" households are those who more frequently (score 2.4 = between often and sometimes)[22] rely on "less preferred and less expense food", "incurs debts for purchasing food" and "reduce food eaten in a day" than the three overall strata (i.e. the overall rural areas, the other urban areas and Phnom Penh).

Many of the coping mechanism can not be compared between all the strata. For instance, the comparison between the decrease of fertilisers between rural and urban areas cannot be made; the same for selling animals, plant new crops and so on. However, inside the rural areas a comparison can provide some significant results. The so called "destitution processes" (selling land, fixed assets, animals) apparently did not show the differences between the "poor food consumption" household and the overall rural areas; however it should be considered that the majority of the "poor food" households are landless: this fact can affect the result and more fine-tune analysis will be necessary.

Table 3.14 Household coping strategies (Lower figures means more frequent)
Most relevant "average* coping frequencies, Lower figures means more frequent, rank from 1 to 5) sorted by "poor food consumption" households frequencies.

type of coping	Poor Food HHs	RURAL	CAMBODIA	OTHER URBAN	PHNOM PENH
Rely on less preferred and less expense food	2.6	3.3	3.4	3.8	3.8
Purchase food on credit, incur debts	3.5	3.8	3.9	4.2	4.2
Reduce food eaten in a day	3.6	4.0	4.0	4.2	3.8
Restrict consumption by adults in order for small children to eat	3.8	4.1	4.1	4.4	3.9
Mothers and/ elder sisters eat less than other h.h. members	3.8	4.1	4.2	4.4	4.5
Borrow food, or rely on help from friends or relatives	4.2	4.4	4.5	4.7	4.7
Seek alternative or additional jobs	4.2	4.5	4.6	4.8	5.0
Mothers and/ elder sisters skip more meals than other h.h. members	4.3	4.4	4.4	4.5	4.4
Decrease expenditures for health care	4.4	4.3	4.5	4.9	5.0
Decrease expenditures for fertiliser, pesticide, fodder, animal feed, vet care...	4.5	4.7	4.7	4.9	5.0
Increase the number of members out-migrating for work or food	4.6	4.8	4.8	4.9	4.9
Sell more animals than usual	4.7	4.8	4.9	5.0	5.0
Sell jewellery	4.7	4.8	4.8	5.0	5.0
Take children out of school	4.8	4.8	4.9	4.9	4.9
Consume seed stocks held for the next season	4.9	5.0	5.0	4.9	4.9
Sell productive assets	4.9	5.0	5.0	5.0	5.0
Sell land	5.0	4.9	5.0	5.0	5.0

* not yet weighed by households

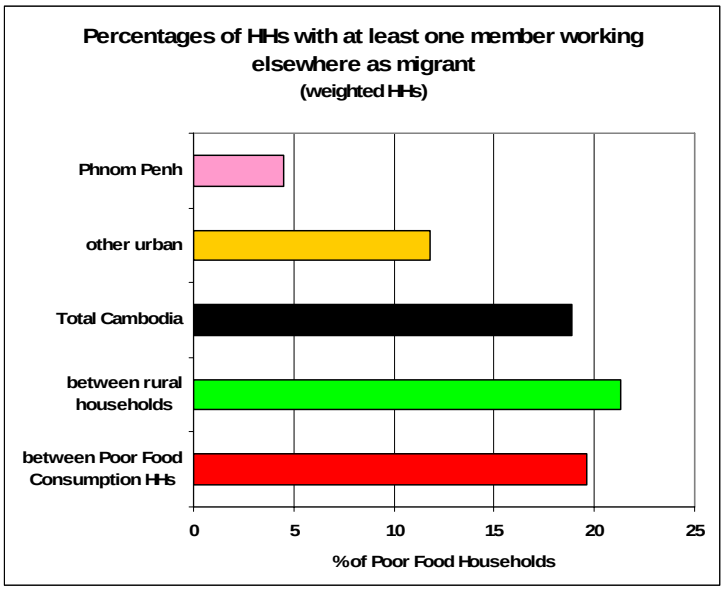
[21] Notably the codes used by the survey are: " everyday, often, sometimes, once a while, never" coded as: 1, 2, up to 5.

[22] The rank runs from 1 (everybody everyday : = 1; nobody never = 5); it means that "higher the points → lower the frequency). This provisional criteria is considered acceptable as all the 2235 households provided a frequency answer for all the 20 suggested answers.

A7. Migration

The migration information was collected by household survey. About 18 percent of household reported that they have their household member working elsewhere as migrant (Figure 3.11). The highest percentage of migration was observed in rural areas and among the poor food consumption households.

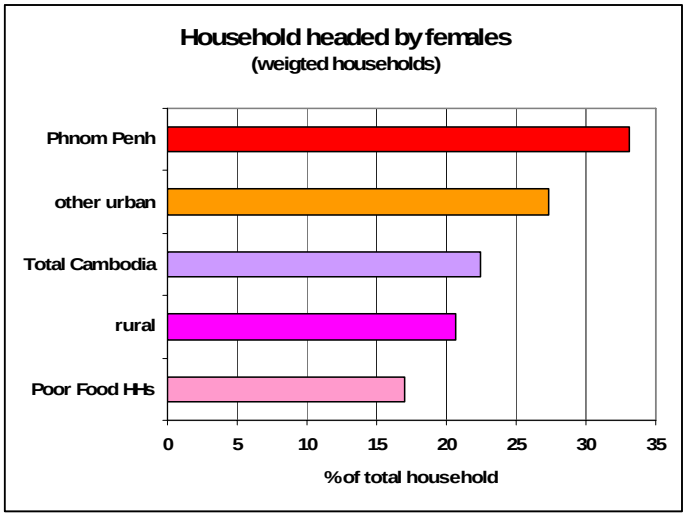
Figure 3.11: Percentage of HHs at least one member working as migrant



A8. Households headed by females

Of the surveyed households, about 23 percent of household were headed by female. Around 18 percent of female-headed households are chronically food insecure (Figure 3.12). The highest percentage of female-headed household was observed in Phnom Penh and urban areas.

Figure 3.12: Percentage of female-headed households



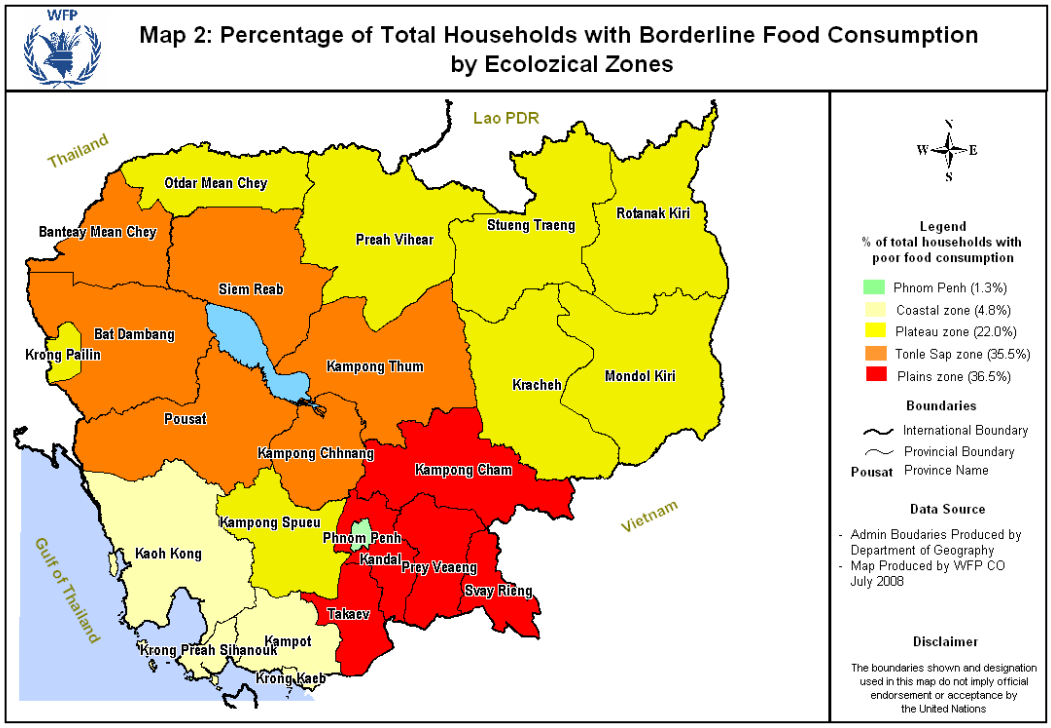
3.2.4. Location and Patterns of Current "Borderline Consumption" population.[23]

The following pages identify and describe the main patterns of the so called **"borderline consumption" households,** i.e. those households to be considered **"vulnerable to becoming food insecure should a small decrease in their access to food occur".**

It is evident that this category should be attentively monitored during the next months, as they are highly sensitive even to small changes in prices.

How many are they?
This category, in terms of affected population, currently (June 2008) corresponds to more than a million people (1,063,275)[24] living in more than 200,000 households.

Where are they?
Map 2 indicates the spatial distribution of households with borderline food consumption.

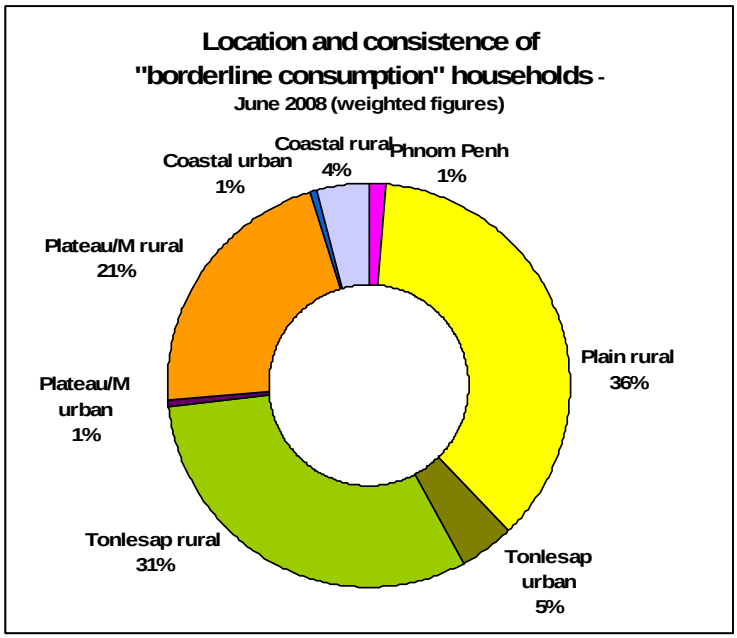


The "borderline consumption" households are more scattered through the country than the "Poor Food consumption" households.

Figure 3.13 shows that more than 90 percent of the borderline household is living in rural areas. Small proportion of the borderline households emerges in urban Tonle Sap and very small fringes have been detected in urban Coastal and Plateau/Mountain zones too.

[23] When using a cut-off point = 38.5.. In term of surveyed households this percentage corresponds to 6.67 percent; the figure 6.98 percent was obtained weighting the observations using deflators by ecological zones. In terms of population the figures are 6.51 percent and 6.87 respectively.
[24] The above figure has been obtained using the average household size as estimated by the survey.

Figure 3.13: Location of borderline consumption households



3.2.5. Probable Food Insecurity Status during next Lean Period

As already says at paragraph 3.2.7, it is likely that the proportion of "food insecure" people could increases significantly during the peak of the lean season (August-November) and the end of the "fishing period".

As of June 2008 the fish consumption was observed almost 4-5 days a week. Due to the fact that data collection was carried out during the fishing season, the scores for "the non-fishing season" should be artificially elevated.

To account for these seasonal components, it is suggested to rise the minimum cut-off points by 10 points, so that the new cut-off point for "Poor food consumption" will become 31 ([7*weight Cereals and tubers (7*2=14)] + [7*weight of vegetables (7*1=7))] + [2 *weight of fish (2*4=8)] + [4 *weight of oil (4*0.5=2)]).

According to the above expected scenarios the expected outcomes are as shown in Table 3.15 here below.

Table 3.15 Thresholds of Food Consumption Score (FSC) (weighted by household)

Food Consumption Categories	Standard Cut-off Point	New Cut-off Point	Percent*
Poor Food Consumption	0-21	0-31	7.0
Borderline Food Consumption	21.5-35	31.5-45	12.1
Acceptable Food Consumption	> 35	> 45	80.9

There is a high probability that during the "lean season", the percentage of households with "poor food consumption" could rise up to 7 percent. Twelve percent of households could be considered as "borderline food consumption", and 81 percent probably are with "acceptable food consumption".

Table 3.16 shows some provisional results of an attempt to produce a scenario for the next lean season: probably more than half a million households will be "food insecure", i.e. belonging to the "Poor food consumption" and "borderline consumption" groups. It terms of affected population there will be about **2.8 million individuals.**

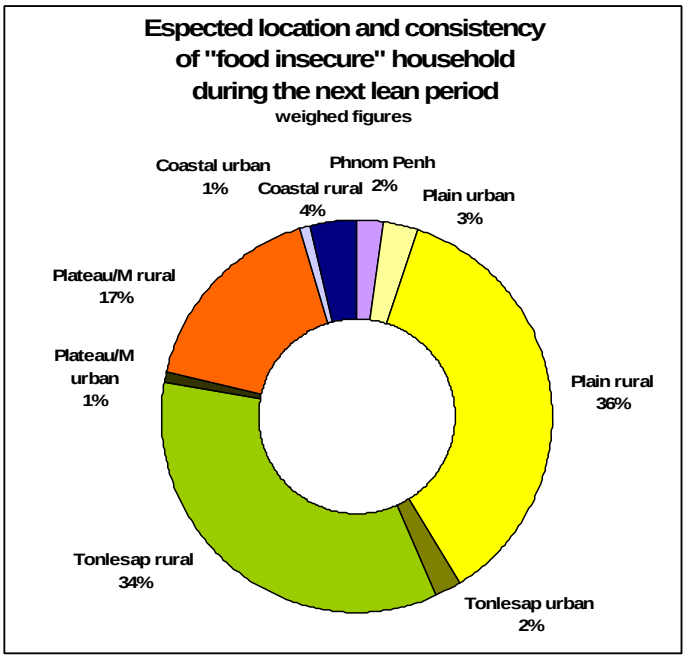
Table 3.16: Estimated # of Food Insecure Households during Lean Season by Ecological Zone* (weighted by HH)

Ecological Zones		Plains			Tonle Sap			Plateau			Coastal			Cambodia			
		Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Phnom Penh	Rural	Urban	Cambodia
Poor Food Consumption	% of HH	37.7	56.4	39.3	45.8	27.4	43.6	13.4	12.0	13.2	3.1	4.2	3.2	0.8	89.3	10.0	100.0
	# of HHs	67,738	11,290	79,028	82,283	5,486	87,769	24,087	2,409	26,495	5,499	846	6,345	1,523	179,607	20,030	201,160
	# of people	338,692	56,449	395,141	411,415	27,428	438,843	120,434	12,043	132,477	27,493	4,230	31,723	7,616	898,035	100,150	1,005,801
Borderline Food Consumption	% of HH	40.2	18.6	38.0	34.0	48.2	33.5	21.1	5.3	19.8	29.6	27.9	5.6	3.2	92.5	4.3	100.0
	# of HHs	129,651	2,819	132,470	109,558	7,304	116,862	68,151	802	68,953	95,579	4,224	19,430	11,155	322,566	15,148	348,869
	# of people	648,256	14,093	662,349	547,790	36,519	584,309	340,754	4,009	344,763	477,897	21,119	97,149	55,776	1,612,830	75,740	1,744,346
Total Food Insecure HH		197,390	14,108	211,498	191,841	12,789	204,630	92,238	3,210	95,448	101,078	5,070	25,774	12,678	502,173	35,178	550,029
Total Food Insecure People		986,948	70,541	1,057,490	959,205	63,947	1,023,152	461,188	16,052	477,240	505,390	25,349	128,872	63,392	2,510,864	175,890	2,750,146

**NIS population projection 2008 was used to estimate # of food insecure households.*
Source: National Survey of 2,235 households in June 2008

Figure 3.14 shows that more than 90 percent of the total food insecure households are in rural areas. The high number of food insecure population is observed in Tonle Sap and Plain zones.

Figure 3.14: Location of food insecure household during the next lean period



Box 1: Rural Poor Households Hard Hit by High Food Prices

Mrs Chan Khat, 68 years old, a widow with eight dependants, lives in a deteriorating hut in Sambuor village, Popok commune, Stoung district, Kompong Thom province. The household is one of the poorest in the village; it can not afford durables, agricultural tools or draught animals.

The household depends on the wage labour of two adult members. Although the household has readily available labour, there is no continuing demand for it in the village or in nearby villages. Seasonal work in rice fields, clearing bush and harvesting crops such as cashews sporadically employ them over the year. In 2007 the wage per person-day for wet-season rice transplanting or harvesting was only 5000 riels and for harvesting cashews 4000 riels.

The household cultivated wet-season rice on 6000m² of inherited agricultural land, which yielded 500 kilograms of paddy rice. Besides household labour, 170,000 riels were spent on land preparation, transplanting and harvesting. Because the family did not have any savings, they borrowed from a village moneylender to pay for the inputs. The paddy rice was sold immediately after the harvest to pay off the debt. She complained that rice farming was not profitable, so she planned to lease her land to other people in the next rice season.

After the paddy was sold, only 50 kilograms of rice seed remained. Therefore the household was forced to buy milled rice from a merchant. They could not afford to stock rice for consumption. On the interview day, they had only 2 kg of milled rice left, which could feed the household only one day. Food shortages became an issue when prices started to soar in December 2007. In response, they were forced to buy less preferred food and reduce their intake. Khat said that there was no work for her sons, so the family did not have money to buy food. She bought rice on credit, and all household members ate fermented fish paste and wild vegetables six times a week; they can afford to buy pork only once a week.

The household was in debt because she was sick. She borrowed money from a relative to pay for her medical treatment. She worried about not being able to repay.

Box 2: Urban Poor Also Hard Hit

Ly Yuthheang and his wife Him Siengoeun with two children under 6 years old, live in a tin-roofed hut in an urban slum in Phnom Penh.

Yuthkheang is the only person working, selling his labour while his wife stays home taking care of the children. As a casual labourer, he makes 5000 to 10,000 riels per day. This money is spent on food and cooking fuel and water. The household cannot afford electricity. He said that last year his wife spent 5000 riels a day on food and snacks for the children and 2000 riels on water and firewood. Now she maintains the expense of 5000 riels for food, but water and firewood have increased to 3000 riels a day. Five thousand riels is just enough for a kilogram of poor quality rice and one bowl of soup for a meal. Spending on the children's snacks has been cut, but he buys fruits or cakes for them when he makes extra money.

Yuthkheang said that when he is sick and cannot work, the whole family is forced to reduce food intake substantially. Most of the time, his wife would eat very little so that he and the children can have more. The couple live without any relatives nearby. Food on credit is not possible. Yuthkheang said that high food prices have pushed his family into deeper poverty.

(Damnak Thom Sahakum Aphiwat Meanchey village, Sangkat Stung Meanchey, Khan Meanchey, Phnom Penh)

A Moto Taxi Driver in Phnom Penh

Yoeun Sang, aged 43, his wife and three children—one in high school, another in junior high school and a toddler—live in a tin-roofed house in Damnak Thom Sahakum Aphiwat Meanchey village, Sangkat Stung Meanchey, Khan Meanchey, Phnom Penh. He is a moto taxi driver, and his wife is a snack seller. He reported that his revenue and his wife's revenue have increased, but the profit from both has been steady since late 2007. He makes approximately 9000 riels per day, while his wife makes 8000.

In late 2007, one litre of gasoline cost 3800–4000 riels and a moto taxi from Stung Meanchey to Central Market was 2500–3000 riels. Now a litre of gasoline costs 5600 riels and the fee is 3500–4000 riels. The average daily revenue was 17,500 riels in late 2007 and 23,000 riels now. To run the service he has to spend on gasoline, his breakfast, coffee, cigarettes and snacks. The total expense of these items, other than gasoline, averaged 5000 riels per day in late 2007 and 8000 riels now. In one day he uses two litres of gasoline. Although the higher gasoline cost is recovered from the increased fee, the profit remains stable. This places a great burden on the household budget because of high food and commodity prices. He said that spending on the children's education cannot be compromised. However, his wife has to re-budget household consumption. The household now spends the same amount of money, 8000 to 9000 riels per day, on food as in late 2007. The quantity and quality of their food have been compromised. Moreover, he says that in 2007 the household could allocate 150,000 riels per month for saving for emergencies or medical treatment; but now they cannot save. Thus, if anyone in the family gets sick, household debt is inevitable.

3.3: Sources and Changes of Cash Income

Income is both in kind and in cash. In rural areas, in kind income such as own rice production and water and forest product collection can be prominent in livelihoods. However, it is generally very difficult or not reliable to survey such income. First and foremost, respondents may not tell how much they have earned. Second, it involves recall of varying periods. Third, in-kind income entails imputation, which requires market prices that do not exist. Due to the limited time, the survey did not attempt to capture income in general but just an indication of sources of cash income and whether cash incomes have increased, decreased or remained the same compared to six months earlier. This kind of question runs a high risk of biased answers. If respondents are in a complaining mood, they tend to say their income has decreased or remained the same, even if it has really increased. Moreover, cash income is quite seasonal. Earning less in June than in January may be normal. Hence, the analysis of income, which is a crucial variable, is rather limited, and should be taken with caution.

Nonetheless, the survey provides useful information about *cash* incomes of households that can be grouped into five categories: (1) selling agricultural products, (2) wage labour, (3), government and NGO salaries, (4) self-employment, (5) CPR and (6) other. A large majority of households have one (47 percent) or two (44 percent) cash incomes in 2008. These figures have not changed compared to December 2007, indicating that prices have not significantly affected cash income sources in the aggregate.

The proportion of all cash income groups that lacked money to buy food and cover other essential expenses was high in May 2008, ranging from 44 percent of government and NGO staff to 90 percent of the households that sell CPR (essentially forest products and fish) (Table 3.18). The number of groups lacking money consistently increased from a year earlier.

This suggests that more people are not able to meet basic household needs. Details of income groups are provided in Tables A3.1 and A3.2 in the Annex.

Table 3.17: Households Citing Lack of Food or Money from Main Source(s) of Income (%)

Cash Income Source	May 2007	May 2008	Change between May 07 and May08
1. Selling agricultural produces	65	72	6
2. Wage labour	71	81	10
3. Government and NGO salaries	40	44	4
4. Self-employment	55	62	7
5. Common property resources	79	90	12
6. Other	64	84	20
Total	62	71	8

Source: National survey of 2235 households in June 2008

As can be seen in Table 3.18, fewer than one-third of respondents reported increased income in the six months prior to the survey or between June 2007 and June 2008. Therefore, high food and other commodity prices must have affected people in the survey villages. The groups dependent on wage labour, self-employment and CPR had a higher proportion of people with decreased income. However, this should not be taken overly seriously. Some people tend to complain that their income has declined or not increased when that is not accurate. Table 3.20 provides breakdowns by region.

Table 3.18: Reported Changes in Income

Source	Change in previous 6 months (%)				
	Number	No Change	Decrease	Increase	Total
Selling agricultural produce	504	29	37	34	100
Wage labour	620	26	48	26	100
Government and NGO salary	165	48	33	19	100
Self-employment	710	31	43	25	100
CPR	140	24	45	31	100
Other	95	38	38	24	100
Total	2234	30	42	27	100
	Change between June 2007 and June 2008 (%)				
	Number	No Change	Decrease	Increase	Total
Selling agricultural produce	503	28	34	38	100
Wage labour	619	24	46	30	100
Government and NGO salary	164	46	28	26	100
Self-employment	709	30	41	30	100
CPR	140	26	44	31	100
Other	94	40	36	23	100
Total	2229	29	40	31	100

Source: National survey of 2235 households in June 2008

The survey indicates that a large number of people have been hit, and their food security is threatened by rising prices. More than 90 percent of households report increase household expenditure in the last six months. The proportion of respondents who reported price rises was 93 percent for food, 41 percent for education, 35 percent for cooking fuel, 68 percent for electricity, 72 percent for health care, 57 percent for clothing and 77 percent for transportation. Details are provided in the Annex.

Table 3.19: Reported Changes in Cash Income, by Region

		No Change	Decrease	Increase
		Change over the previous 6 months (%)		
Phnom Penh	Urban	44.8	44.2	10.9
Plains	Urban	24.5	46.9	28.6
	Rural	25.5	41.3	33.2
	Total	25.4	41.9	32.7
Tonle Sap	Urban	39.1	34.4	26.6
	Rural	28.8	47.0	24.2
	Total	30.8	44.5	24.7
Plateau	Urban	38.9	22.2	38.9
	Rural	36.1	36.5	27.4
	Total	36.2	35.4	28.4
Coastal	Urban	40.0	46.7	13.3
	Rural	31.5	46.0	22.6
	Total	33.3	46.4	20.3
		Change over a year earlier (%)		
Phnom Penh	Urban	46.1	40.6	13.3
Plains	Urban	26.5	44.9	28.6
	Rural	23.1	39.1	37.9
	Total	23.4	39.6	37.0
Tonle Sap	Urban	36.7	29.7	33.6
	Rural	32.4	44.1	23.5
	Total	33.3	41.3	25.4
Plateau	Urban	44.4	16.7	38.9
	Rural	32.1	34.9	32.9
	Total	32.8	33.9	33.2
Coastal	Urban	41.4	37.9	20.7
	Rural	23.6	40.7	35.8
	Total	27.0	40.1	32.9

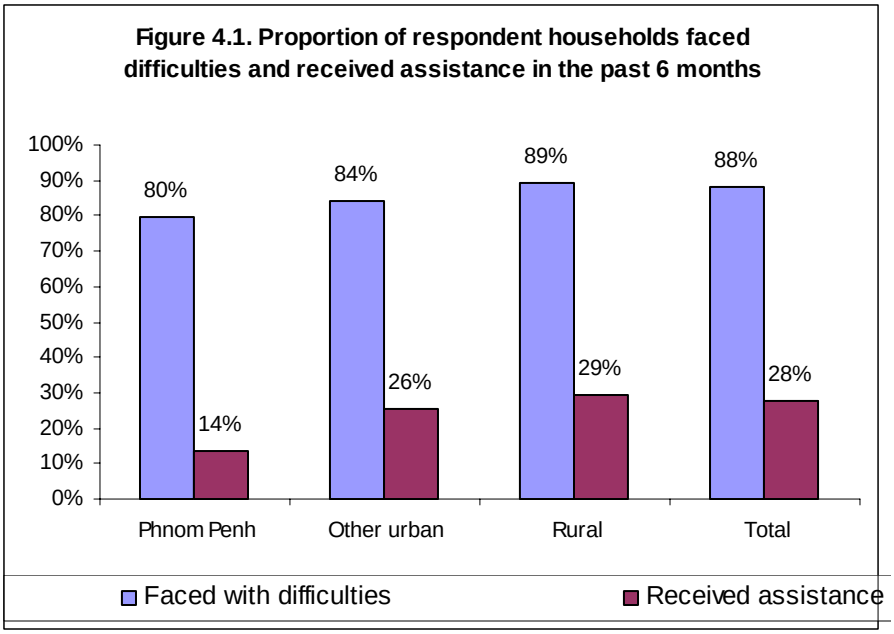
Source: National survey of 2235 households in June 2008

IV. Household Coping Strategies

4.1 Difficulties Faced by Households and Measures Used to Cope

About 88 percent of households reported that they had faced difficulty in May 2008. However, 76 percent claimed they did so in May 2007, implying that high food prices might have affected only 11 percentage points. Again, answers to this kind of question should be taken with a grain of salt. People tend to say they faced difficulty, but the degree of difficulty may be different.

The major difficulties reported in May 2008 included the high prices of food (53 percent of responses) followed by sickness or health expenditures (27 percent), high fuel prices or transportation costs (25 percent) and repaying outstanding loans (19 percent). The proportion of households that reported lack of money to buy food and cover essential expenses increased more rapidly in Phnom Penh and other urban areas—from 37 to 79 percent and 46 to 91 percent, respectively, between May 2007 and May 2008.



Households have adopted various ways to cope with difficulties (Table 4.1a and Table 4.1b). Many people first buy cheaper food or reduce the amount of food consumed, especially for female adults and elderly members. Many purchase food on credit or rely on help or loans from friends and relatives. Many households in rural areas increase exploitation of natural resources.

Table 4.1a Measures Used to Cope with Difficulties (% of households)

	Every Day	Often	Sometimes	Once in a While	Never	Total
Rely on less preferred and less expensive food	6	29	32	4	29	100
Purchase food on credit, incur debts	1	14	39	6	41	100
Reduce food eaten	2	15	29	7	48	100
Restrict consumption by adults in order for small children to eat	1	11	25	6	57	100
Mothers and elder sisters eat less than others	1	10	24	6	59	100
Increase exploitation of common property resources	3	9	9	1	79	100
Borrow food, or rely on help from friends or relatives	1	8	27	8	57	100
Seek alternative or additional jobs	3	11	12	2	73	100
Mothers and elder sisters skip more meals	1	4	14	3	78	100
Plant more or new crops	3	7	8	2	80	100
Decrease expenditures for health care	1	7	22	5	66	100
Decrease expenditures for fertiliser, pesticide, fodder, animal feed, veterinary care	1	3	10	2	85	100
Increase migration for work or food	1	2	6	2	90	100
Sell more animals than usual	0	1	6	2	92	100
Sell jewellery	0	1	5	1	93	100
Take children out of school	1	1	4	2	92	100
Consume seed stocks	0	1	5	1	93	100
Sell domestic assets	0	0	1	1	97	100
Sell productive assets	0	0	1	1	98	100
Sell land	0	0	1	1	98	100

Source: National survey of 2235 households in June 2008

In the 14 target villages, 62 percent of villagers reported that they did not have enough money to buy food or cover essential expenses in June 2007, and by June 2008, this number rose to 69 percent. The change is quite significant among fishing and land abundant villages, with the former increasing from 66 percent in 2007 to 98 percent in 2008 and the latter from 64 percent to 88 percent. Villages with the least number of people with inadequate money are cash-crop growing villages, about 49 percent.

Asked how often they rely on less preferred and less expensive food, about 37 percent of villagers responded that they never do while 24 percent replied that they often do and another 24 percent that they sometimes do. The percentage of reliance on less preferred and less expensive food is highest among fishing communities.

About 26 percent would sometimes borrow food or rely on help from friends or relatives, while some 60 percent had never used this strategy. Another strategy would be to purchase food on credit or incur debts to cover expenses; about 38.5 percent sometimes do this while 42.5 percent have never done so.

About 34 percent of them would often or sometimes reduce the amount of food consumed. This phenomenon was considerably more common in fishing villages than in others, as about 29 percent would do this every day. In 23 percent of target households, adults had sometimes restricted the amount food they consumed in order for small children to eat in response to high food prices.

In 21 percent, mothers and/or elder sisters had to eat less than other household members. More fishing and poor villagers used this strategy. In the worst cases, mothers and/or elder sisters had to skip meals, and around 8 percent of them had skipped more than one meal. About 12 percent of households had sometimes decreased expenditure for health care and 12 percent had sought alternative or additional jobs. Thirteen percent would sometimes or often increase exploitation of common property resources. Land-abundant villages did this least, while fishing villagers did it most, 42 percent of households there having done so from often to every day.

Overall, about 12 percent of villagers sometimes plant more or new crops to cope with high food prices, about 10 percent do so quite often. Among the villages studied, cash-crop villages planted new or more crops more often, while fishing and land-abundant villages did so least. About 15.5 percent of the target households had members who are working elsewhere as migrants; the percentage of males is a bit higher than of females. About 7.5 percent of these workers work in urban areas and another 5 percent in rural areas in Cambodia; the remainder work in Thailand. The main reasons for work migration are to find income and to cope with high food prices. Other reasons include seasonal migration.

During the previous six months, about 90 percent of the target households had faced difficulties, the main ones being high food prices 28 percent, sickness or health expenditures 17 percent, debt payments 11.5 percent and high fuel or transportation prices 11 percent.

Around 48 percent of the villagers had received assistance, 40 percent in the forms of free health care from NGOs, micro-credit and cash transfers from social programmes. However, villagers' responses were that they would most prefer free health care and drugs from NGOs, cash transfers from social assistance and free food. Rice growing villages also prefer seeds and fertiliser; cash crop villages prefer agricultural tools; fishing villages prefer food for schoolchildren; and the poor prefer free food for the household.

Table 4.1b: Household Coping Strategies in 14 Target Villages

Table 8: Household Coping Strategies

		rice	cash crop	fishing	poor	land abundant	Total
less food expense	everyday	6.0	2.4	39.0	15.6	5.3	9.9
	often	26.7	17.8	13.6	35.8	8.6	23.9
	sometimes	29.5	32.7	11.9	19.1	16.6	24.1
	once in a while	6.0	4.3		0.7	13.2	4.8
get help from friends	everyday	2.1		1.7	1.4		1.1
	often	5.3	3.8	10.2	8.7	2.0	5.8
	sometimes	21.8	19.2	18.6	38.5	21.9	25.9
	once in a while	9.1	11.1	3.4	3.1	5.3	6.9
food on credit	everyday	0.7		3.4	1.4		0.8
	often	16.5	6.3	18.6	16.7	14.6	14.2
	sometimes	36.8	29.3	45.8	42.0	45.0	38.5
	once in a while	3.5	8.7		1.7	4.0	3.9
reduced eaten food	everyday	1.4		28.8	4.9		3.5
	often	14.4	4.3	8.5	15.3	0.7	10.1
	sometimes	25.3	29.3	20.3	28.5	7.3	24.0
	once in a while	4.9	13.9		5.2	4.0	6.5
restrict adult consumption	everyday	0.7		10.2	2.8	0.7	1.7
	often	6.7	1.0	11.9	20.1	1.3	8.9
	sometimes	17.5	16.8	30.5	37.2	11.9	23.0
	once in a while	4.9	5.8		2.8	2.6	3.8
restrict female consumption	everyday			11.9	2.8		1.5
	often	6.7	0.5	8.5	13.9	1.3	6.8
	sometimes	20.4	6.7	28.8	31.6	17.9	20.9
	once in a while	3.5	4.3		2.8	1.3	2.9
skip female consumption	everyday	0.4			6.6		2.0
	often	1.8		5.1	4.2	0.7	2.1
	sometimes	5.6	3.4	16.9	10.4	11.9	8.2
	once in a while	3.9	1.0	6.8	1.7	0.7	2.3
children drop school	everyday	0.4			1.7		0.6
	often	0.7	0.5	1.7		1.3	0.6
	sometimes	1.1	1.0	1.7	2.4	2.0	1.6
	once in a while	0.7	3.8		2.1		1.6
alternative jobs	everyday	4.2	6.7	6.8	11.8	1.3	6.7
	often	5.3	16.8	3.4	13.9	1.3	9.5
	sometimes	12.6	11.5		16.7	9.3	12.3
	once in a while	2.5	3.4		0.3	0.7	1.6
increase exploitation on CPR	everyday	2.5		15.3	4.5		2.9
	often	6.0	11.1	27.1	6.9		7.7
	sometimes	7.7	7.2	6.8	3.8	0.7	5.3
	once in a while	1.1	1.9		2.1		1.3
plant more crops	everyday	1.1	0.5	1.7	8.0	2.0	3.1
	often	4.2	17.8	1.7	5.2	2.0	6.9
	sometimes	12.6	18.8		11.5	7.9	12.1
	once in a while	2.1	0.5		1.4	1.3	1.3

4.1.1 Selling Land and Other Assets

Table 4.2 shows that many households have been forced to sell their livestock when they need cash.

Table 4.2: Reasons for Selling Animals by Households Facing Difficulties

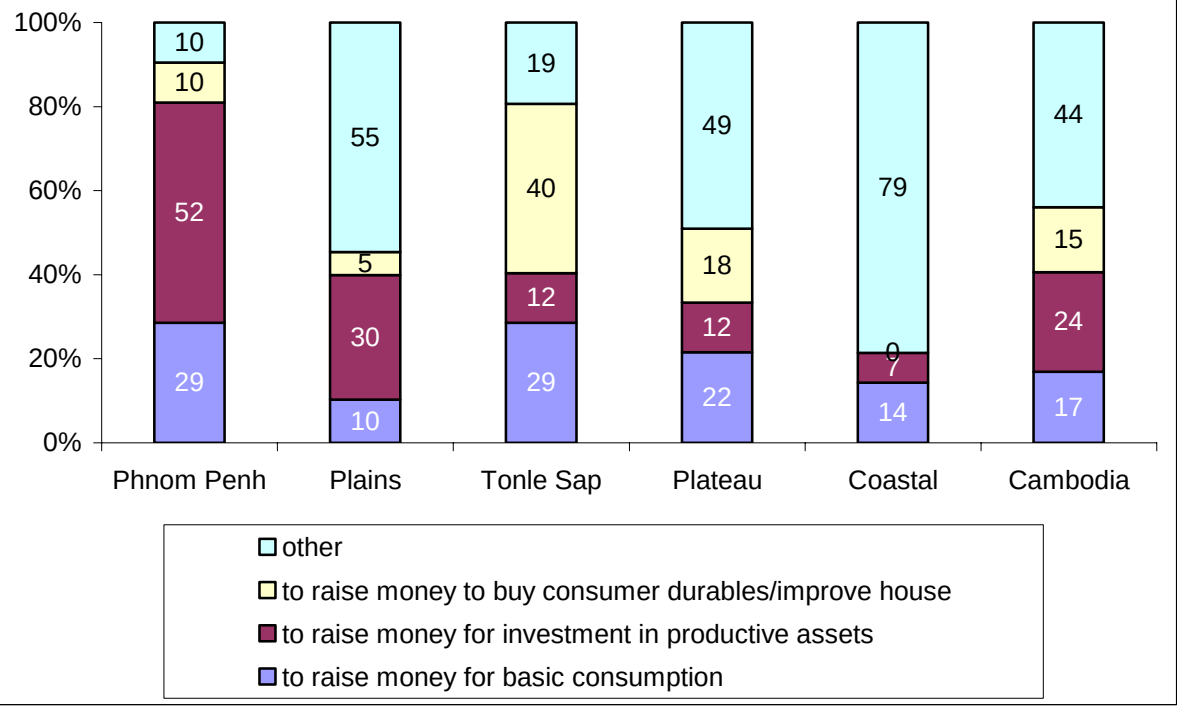
	Cows/buffaloes		Pigs		Poultry	
	No. of HH	% of HH	No. of HH	% of HH	No. of HH	% of HH
It was normal time to sell them			70	41	98	28
Need for money	122	70	84	49	234	66
Old age/sickness	25	14				
Infertility	4	2				
Lack of fodder/animal feed/pasture	3	2	10	6	11	3
Other reason	21	12	8	5	9	3
Total	175	100	172	100	352	100

The households with difficulties reporting sales of cows or buffaloes were 48 percent in the coastal zone, 30 percent in the plateau, 38 percent in the Tonle Sap and 37 percent in the plains. The proportion of households selling pigs showed a similar trend, being highest (59 percent) in the coastal zone, followed by the Tonle Sap, the other zones being not more than 35 percent.

Selling livestock and productive assets, however, is not the solution for the households to recover from the recent family shock or crisis. Not all households possess such assets, and according to the responses summarised in Table 4.1a, very few households reported selling animals to cope with difficulties.

Many of households may run out of assets and savings to cope with shocks, especially if the food prices continue to rise further. As can be seen in Table 4.2b, a large proportion of households had to purchase food on credit and very often reduced food consumption, especially for adult female and elderly family members. The impacts of high food prices, according to the responses by affected households in Table 4.1b, will be further natural resources depletion and increased migration, indicated by the considerable number of households that were looking for alternative and additional jobs. Children will then be taken care of by the elderly or more burden put on females, who tend to be already in poor food consumption. Within just a few months of high food prices, already more of the food insecure households withdrew their children from school, probably to help in earning or because they could not afford to pay for their schooling. It is difficult to draw conclusions from these very few responses, but the survey does suggest that more female than male children are withdrawn from school to help their parents cope.

Figure 4.2. Reasons for Households Facing Difficulties and Planning to Sell Some Agriculturral Land in the Next Season



The survey also reveals the number of households planning to sell their land in the next season if they cannot cope with their difficulties. Although very few households have decided to sell some land (Table 4.1a), 478 households plan to sell some of their agricultural land in the next season. The number was highest in the plains area (274 households), 14 households in the coastal zone and 119 in Tonle Sap.

Box 3: Fishing Households Hard Hit by High Food Prices

Pon Chantha and Sum Nhanh, a couple with two children under 6 years old and an elderly mother, live in Kompong Preah village, Chhnok Tru commune, Baribour district, Kompong Chhnang province. The family lives in a floating tin-roofed house, with barely any facility but a lamp. The household owns a motor boat and fishing net.

Fishing is the only source of income. The household, like others in the village, does not own any agricultural land. Hence, they have to buy milled rice from the merchant every day because they cannot afford to buy larger stocks. On the interview day, the household had only 2 kg of milled rice, enough for two meals. Expenditure for food mainly goes for rice and groceries. The family mainly supplement their calorie intake from fish they catch and vegetables they collect from fields and the river. Meat such as pork, beef and chicken and fruits are considered a luxury that the family can enjoy only on special occasions or when they catch lots of fish.

Chantha complains that the fish catch is declining day by day. This is due to the increasing number of fishers and sophisticated gear used in commercial fishing. To go fishing, the household needs two litres of gasoline for the motorboat. The fish catch fluctuates over the month and the year. In one month, there are only about 10 days on which they can catch a reasonable amount of fish, 5–10 kg, which can be sold to cover the cost of gasoline and to buy food. The other days, they catch only

enough to eat. The most difficult period of the year is July to September, when the water is really deep and the water quality is poor. During this time, they catch no fish. The household is forced to increase the exploitation of common property resources such as collecting morning glory, cutting grass for cattle feed and collecting shells and snails. This gives them approximately 5000 riels per day. During this difficult time, the household eats only fermented fish preserved during the high catch season and vegetables collected from the field.

The household has no savings. If the fishing net wears out or is stolen, they have to borrow money from moneylenders. Early this year, they borrowed money from Prasac to buy fishing gear. Likewise, if a family member gets sick, a loan is unavoidable.

He expects that the price of fish and other food will increase further. However, the smaller fish catch will put his family into a food crisis because their income is lower while the prices of food and gasoline are rising.

4.1.2 Loans as a Way of Coping

Fifty-three percent households reported that they had debts to repay at the time of the national survey, and 32 percent of the total had incurred debts in the past 6 months (Table 4.3). This is quite alarming and requires thorough analysis.

Table 4.3: Household Loans

Phnom Penh	Plains	Tonle Sap	Plateau	Coastal	Total
Percentage of households having debt					
33	52	63	44	50	53
Percentage of households contracting new debts in past 6 months					
20	23	49	34	29	32

Source: National survey of 2235 households in June 2008

Of the households facing difficulties, 57 percent reported having outstanding loans as of June 2008. Among these, 35 percent took new loans between March and June 2008. Reasons for taking loans are presented in Figures 4.2a and 4.2b.

Figure 4.2a: First Reason for Taking Loans since March 2008 (reported by 716 households that faced difficulties in previous 6 months)

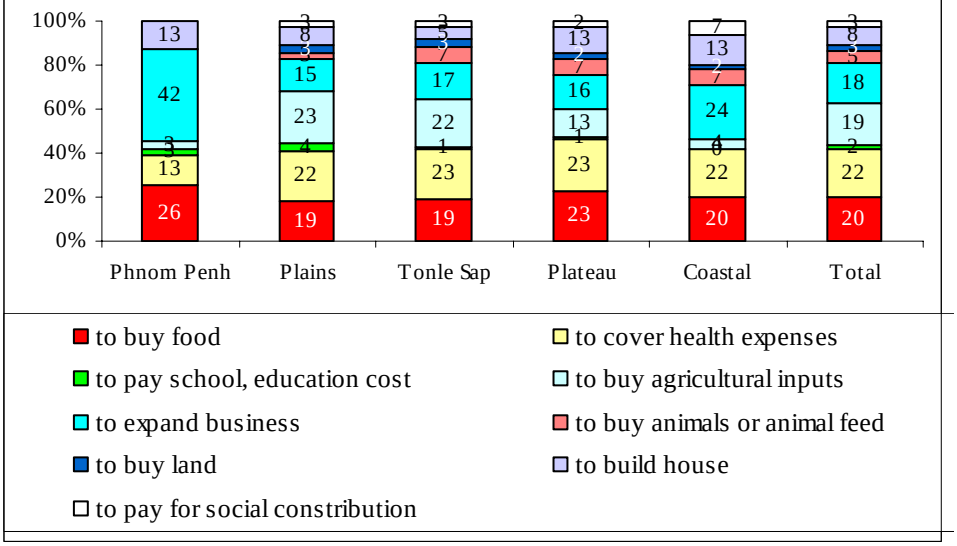
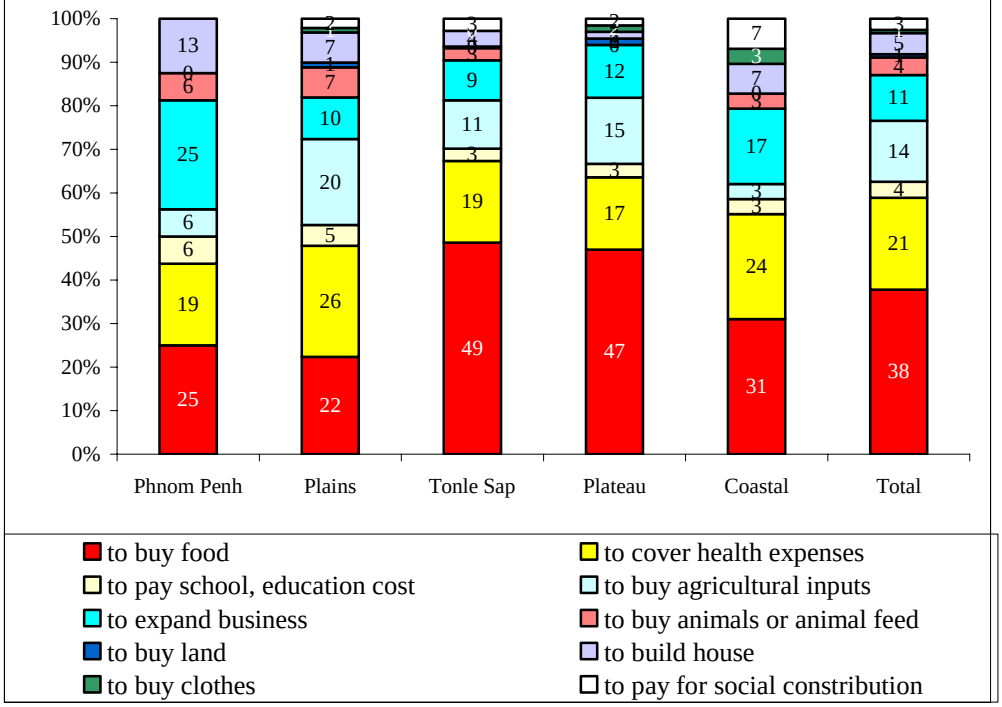


Figure 4.2b: Second Reason for Taking Loan since March 2008 (%) (reported by 550 households that faced with difficulties in previous 6 months)



A large number of households (42 percent) in Phnom Penh took loans for business expansion. By contrast, a majority of the households in the four ecological zones used loans for non-productive purposes. Given the high percentage of responses naming a second reason for loans and the difficulties described in Section 3.2.3 due largely to increasing food prices and health expenditures, more people have been pushed to take new loans to buy food in Tonle Sap (49 percent), plateau (47 percent) and costal zones (31 percent).

Although the hardships reflected in borrowing are not all due to high food and commodity prices, almost half of the new borrowers lacked cash to cover health expenditures and food. Rising food prices to some extent also created opportunities; 18 percent of households took loans to enlarge their businesses. However, there was no question about the types and returns of businesses.

Use of Loans by Region

Of the 2235 households covered in the national survey, 53.5 percent reported obtaining loans and 33.8 percent of them during the past six months. According to CSES 2004 dataset, the number of households seeking loans is around 42 percent. Tonle Sap had the highest percentage of households seeking loans, followed by plains and coastal zones. In the targeted villages, the number of borrowing households was even higher: 61.8 percent, with 42.1 percent of loans being recent.

Table 4.4 gives an overview of how loans were used according to geographical zone. The percentage of loans used to cover health care was lowest in Phnom Penh. Health shock is a critical issue in Cambodia, especially in rural areas. Death or serious illness of a household member can cause a family to become landless or drive it into poverty or deeper poverty.

Phnom Penh had the highest percentage of households seeking loans to offset food shortages. Thus high food prices may have a slightly more adverse impact on the poor in Phnom Penh than in other regions.

Loans used to purchase agricultural inputs, which include seeds, fertiliser and pesticide, were more frequent in Tonle Sap, plains and plateau, where most people rely on rice culture. Many households may have obtained loans for this purpose because of inflation, which affected agricultural inputs. However, the survey also found that the amount of harvest was highly correlated with expenditure on inputs. Thus the high percentage of debt for agricultural inputs may not be negative since it will expand farmers' productivity and hence increase their food security.

The pattern of loan use was slightly different in the target villages, which had a higher percentage of loans for productive purposes. The proportion of loans used for health expenses or to buy food was much lower than in the national sample.

Table 4.4: Loan Use by Region (%)

	P.Penh	Plains	T. Sap	Plateau	Coastal	Cambodia	Total Village
having debts	33.3	53.2	63.9	43.5	49.7	53.5	61.8
new debts	20.6	24.5	51.4	34.7	30.5	33.8	42.1
First Reason for New Debt							
buy food	24.1	21.0	18.4	23.1	18.8	20.1	15.3
cover health expenses	13.9	21.8	22.2	22.6	22.6	21.8	16.4
pay school, education cost	3.6	3.6	0.8	0.5	0.5	1.8	1.4
buy agricultural inputs	2.2	21.8	22.2	12.0	4.3	18.8	32.4
expand business	42.3	14.5	17.2	17.3	26.3	18.1	21.3
buy animals or animal feed	1.5	3.6	7.1	6.6	7.0	5.7	4.6
buy land		2.7	3.3	2.7	2.7	2.8	1.6
build house	12.4	7.3	5.8	12.5	11.8	7.8	6.0

pay social contribution		3.6	2.9	2.7	5.9	3.2	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Second Reason for New Debt							
buy food	20.9	21.8	49.8	46.8	31.7	38.1	47.8
cover health expenses	19.4	25.3	18.4	17.7	25.0	21.1	17.9
pay school, education cost	7.5	4.6	2.8	2.5	4.2	3.6	0.8
buy agricultural inputs	4.5	19.5	10.6	14.9	4.2	13.7	11.6
expand business	25.4	9.2	9.0	12.4	15.0	10.3	15.9
buy animals or animal feed	4.5	6.9	2.8		3.3	3.9	1.6
buy land		1.2	0.6	0.7		0.8	0.4
build house	11.9	8.0	3.3	1.8	5.8	5.1	2.0
buy clothes	3.0	1.2		0.7	3.3	0.8	0.8
pay social contribution	3.0	2.4	2.8	2.5	7.5	2.8	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: National survey of 2235 households in June 2008; targeted village survey

Use of Loan by Main Occupation

Of the total number of loans covered in the national survey, 25.4 percent were taken by people who are self-employed, 14 percent by people who depend on selling paddy and 10.6 percent by construction workers. In the target village sample, the pattern was slightly different. There 21.1 percent of loans were taken by paddy-sellers, 19.5 percent by the self-employed and 15.3 percent by agricultural wage labourers.

Regardless of borrower's occupation, a fairly high percentage of loans are used to pay health costs. All of those who mainly relied on remittances from abroad used their loans for this purpose, followed by forest product sellers, miscellaneous workers for others and construction workers. The hardship of these jobs, which may cause frequent illness, together with their low payment, may explain why these groups need to borrow for health care.

Agricultural workers were the highest percentage of households seeking loans to buy food, followed by fishers and forest product sellers and miscellaneous workers. This suggests that high food prices may hit these groups harder than other groups.

Use of Loan by Landholding Size

The survey indicated that the percentage of borrowers decreases as the size of land increases (Table 4.5). The pattern was the same for the targeted village sample.

Most loans were used to offset food shortages, for health care and to buy agricultural inputs. There was no pattern between loan use for health care and landholding size, suggesting that small and large landowners alike face difficulty when they encounter health problems.

The less land owned, the higher was the percentage of borrowing to buy food. Thus high food prices may have more profound impacts on the landless and land poor. Across land groups, the percentage of loans for purchasing agricultural inputs was fairly high. Those owning farmland of 1–3 ha borrowed the most for this purpose, followed by those who owned 0.5–1 hectare and those owning less than 0.5 ha. Inflation seems to have profound impacts on these farmers by increasing the cost of agricultural inputs.

Table 4.5: Loan Use by Occupation and Landholding Size

		food	health	school	agricultural input	business	animal	land	house	social	Cambodia	Special village
Main Occupation	sale of paddy	14.7	22.2	2.1	42.6	6.4	2.4	2.6	3.5	3.5	14.0	21.1
	sale of vegetables or fruits	0.9	28.2		36.4	6.4	1.8	17.3	9.1		3.6	2.8
	sale of other agricultural produce	9.0	23.0		22.1	17.2	20.5	6.6	1.6		4.0	10.2
	agricultural wage labour	46.7	23.1		13.5	4.4	2.6		4.8	4.8	7.6	15.3
	work in garment factory	12.5	22.9	6.3	16.0	6.9	7.6	9.7	8.3	9.7	4.8	2.1
	work in construction	19.4	28.8	2.8	19.4	7.5	10.0		9.4	2.8	10.6	3.9
	self-employed	18.3	13.8	2.6	11.2	37.5	4.6	2.3	8.6	1.0	25.4	19.5
	other work for others	26.3	36.0	2.5	13.1	5.9	0.4	0.8	12.3	2.5	7.8	6.7
	government, NGO, company	8.2	7.5	1.4	13.6	35.4	4.1	4.1	18.4	7.5	4.9	1.9
	sale of handicrafts				5.7	60.0	17.1			17.1	1.2	0.5
	sale of animals/animal products	7.1	25.5	1.0	20.4	13.3	20.4	1.0	4.1	7.1	3.2	0.7
	remittances from overseas		100.0								0.2	
	remittances in country		22.2		66.7				11.1		0.3	
	income from forests	26.6	40.6		2.8	15.4	7.7		6.3	0.7	4.7	4.9
	income from fishery	33.6	13.6		22.4	16.8	4.8	5.6		3.2	4.1	8.6
	other	42.3	16.3		5.8	14.4			19.2	1.9	3.4	1.6
	Total	20.1	21.8	1.9	18.8	18.0	5.7	2.9	7.8	3.1	100.0	100.0
Land Size	landless	22.6	21.9	2.1	15.5	19.7	5.4	2.7	7.3	2.9	70.4	70.5
	< 0.5 ha	16.2	22.6	1.5	21.9	13.2	7.2	1.7	10.2	5.5	15.6	10.1
	0.5 - 1 ha	15.8	20.9	1.2	27.3	14.6	5.1	5.1	6.7	3.2	8.4	8.6
	1 - 3 ha	7.3	17.9	0.7	42.4	11.9	6.0	3.3	9.9	0.7	5.0	6.4
	> 3 ha		25.0		10.0	45.0		15.0	5.0		0.7	4.3
	Total	20.1	21.7	1.8	18.8	18.0	5.7	2.9	7.8	3.2	100.0	100.0

Source: National survey of 2235 households in June 2008, adjusted with the weights of ecological zones

4.1.3 Migration as Way of Coping

Of the total survey, about 19 percent of households reported having migrant members working elsewhere. The percentage of households with migrant members was much higher in rural than in urban areas. The survey found that households in the urban plateau have the highest percentage of migrants, followed by rural plains and rural Tonle Sap families.

The percentage of men leaving villages in search of employment is higher than that of women. Table 4.6 shows that 67 percent of migrant members in urban areas are men. In rural areas, the percentage of male migrants is 54 percent. Interestingly, in the urban plateau, the percentage of female migrants is higher.

The majority of migrants went to work in urban areas in Cambodia, regardless of where they were from. The study revealed that 47 percent of urban migrants and 58 percent of rural migrants went to work in urban areas in Cambodia. The second main destination is rural Cambodia. The third destination for migrants is Thailand. The percentage of urban migrants working in Thailand is much higher than that of rural migrants, suggesting there is a big gap between those two groups in access to employment in Thailand.

The survey found that most migrants, urban and rural, left to earn money for their households (Table 4.6). The urban plateau had the highest percentage of migrants in this category. The second major reason for migrant work was to cope with high food prices. The urban plain was where most people cited high food prices as the factor that pushed them to migrate.

Table 4.6 Migration (%)

	PPenh	Plains		Tonle Sap		Plateau		Coastal		Cambodia	
	U	U	R	U	R	U	R	U	R	U	R
Households having members working elsewhere as migrants											
	5	9	25	12	22	27	11	10	17	9	21
Gender											
male	60	76	54	78	53	33	58	75	55	67	54
female	40	24	46	22	47	67	42	25	45	33	46
Where they work											
rural Cambodia	22	39	26	6	26	60	42		29	27	27
urban Cambodia	22	61	69	39	33	40	50	100	62	47	58
rural Thailand	11		1	50	24		5		3	17	8
urban Thailand	22		2	6	16				3	5	6
other countries	22		2				3		3	3	2
total	100	100	100	100	100	100	100	100	100	100	100
Main reason											
seasonal migration	10	12	6	5	36	10	26		9	8	16
to cope with high food prices	20	53	35	32	25		45	20	26	30	33
time to migrate and find income	30	24	43	47	23	80	11	80	50	46	36
other	40	12	15	16	16	10	18		15	16	16
total	100	100	100	100	100	100	100	100	100	100	100

Source: National survey of 2235 households in June 2008, adjusted with the weights of ecological zones

4.2. Assistance Preferred by Households

Table 4.7 shows responses of 481 out of 1894 households who answered the questions about assistance received in the previous six months. Assistance from friends or relatives and of free health care or drugs from an NGO were most significant, followed by cash transfers from social assistance programmes.

Table 4.7 Type of Assistance that 481 Households in Difficulty Received in Previous 6 Months

Type	%
From friend or relatives	36
Free health care/drugs from an NGO programme	36
Cash transfers from social assistance programme	23
Micro-credit	14
Free food ration for the household	12
Food for school children	9
Food for work	6
Seeds, fertiliser	5
Veterinary services	5
Fodder, animal feed	4
Agricultural tools	3
Food for young/malnourished children or for pregnant/lactating women	3

Source: National survey of 2235 households in June 2008

Table 4.8 summarises the preferred assistance to cope with increasing food prices. People preferred short-term humanitarian assistance. Fewer mentioned longer term aid such as micro-credit, agricultural tools or veterinary services. People have to deal with urgent problems first. Although rising food and commodity prices have affected the majority of people in the survey villages, they are short-sighted about long term coping strategies.

Table 4.8: Most Preferred Assistance

Type of assistance		Phnom Penh	Other urban	Rural	Total
	HH	%			
Free food rations	359	25	23	17	19
Free health care/drugs, from an NGO programme	352	29	19	16	19
Cash transfers from social assistance programme	234	11	15	12	12
Fodder, animal feed	229	0	8	16	12
Seeds, fertiliser	186	2	2	13	10
Micro-credit	95	10	10	3	5
Agricultural tools	82	1	0	6	4
Food for work	76	9	2	3	4
Food for school children	73	6	1	4	4
Food for young/malnourished children or for pregnant	54	3	4	3	3
Veterinary services	15	0	0	1	1
Other assistance	140	5	16	6	7
Total	1895	100	100	100	100

Source: National survey of 2235 households in June 2008

V. Potential and Constraints to Increase Food Supply

5.1 Agricultural Land Characteristics

A large number of target households in rural strata own at least one plot of agricultural land (Table5.1). About 21 percent of them also do not hold any land under their possession. Those in Plain areas constitute most of those who do not own. Of these owned plots, about 69 percent is used for wet season rice growing and around 15 percent for dry season rice and 12 percent for *Chamkar* or other crop land beside rice land.

Some 43 percent of the respondents received their land through inheritance or in the form of gifts from relatives while the remaining of them either acquired their land through allocation by authority or through purchase or forest clearance. Around 39 percent of them however do not have any legal documents declaring their official ownership of the land. Some have application receipt and some hold some documents. Those in Plain and Coastal areas constitute more of those with application receipt or land title while much more of those with no documents are from Tonle Sap and Plateau. Though documentation still seems a shortage, almost all of the respondents did not report any serious land conflicts going on around their possession of land and its usages.

While around 43 percent reported a decrease in their production, those in Plain, Tonle Sap and Plateau regions are not suffering from this phenomenon as much as those in Coastal as all of their respondents claimed that they suffered from production decrease. Despite such issue a majority of them do not plan to sell their land within the next 6 months. Of all respondents, only about 2 percent of them do plan to sell their land within the next 6 months. The percentage is lowest in the Plateau. This is not a surprise since land market is not very active in those rural areas.

During the last season, about 91 percent of the land was used for cultivation. On top of this, quite a number of those in Plains and Tonle Sap regions also used their land for sharecropping with someone else, or left it idle or for someone else to cultivate for free. As for next season, there is a small increase in the number of those who plan to use their land for cultivation while some of those in Plains and Tonle Sap also plan to rent it out. Although the change is quite small, it demonstrates some changes of attitude in response to increased prices of agricultural commodities.

Table 5.1: Agricultural Land and Plot Characteristics (percent households or percent plots)

		Plains	T. Sap	Plateau	Coastal	Cambodia
# plot	landless	25	19	11	23	21
	1	36	40	52	40	40
	2	25	28	24	22	25
	3	9	9	10	10	9
	4 & above	5	4	3	6	5
type	wet season	54	84	75	90	69
	dry season	25	8	5		15
	both wet & dry season	5	2	0	0	3
	chamkar	17	5	13	7	12
	perrenial crops			3	1	0
	raising livestock				0	0
	other	0	0	3	3	1
acquisition mode	allocated by authority	37	21	10	29	28
	clear the forest	8	2	18	4	7
	bought	28	17	14	14	22
	inherited/gifted	27	61	57	53	43
documentation	application receipt	24	25	10	20	22
	land title (slap morn)	12	9	6	8	10
	land title (new type)	5	6	3	33	7
	some documents	32	12	19	4	22
	no document	27	48	62	34	39
land conflict	no	98	99	97	98	98
	yes	2	1	3	2	2
production down	no	63	64	64	33	61
	yes	38	36	36	67	39
to sell in 6 months	no	97	98	99	98	98
	yes	3	2	1	2	2
use last season	cultivate	90	91	92	92	91
	let others cultivate	2	0	2	3	1
	left idle	3	5	5	2	4
	sharecrop	5	4	1	3	4
use next season	cultivate it	92	94	94	94	93
	rent it out	5	3	1	1	3
	sharecrop	1		0	2	1
	let others cultivate	1		1	1	0
	will leave idle	1	3	4	2	2
cultivate idle land	no	62	83	85	87	74
	yes	38	17	15	13	26
extra harvest	hh consumption	39	61	47	53	45
	sell	14	10	7	6	12
	both	47	29	45	41	43
	other			1		0
ability to cultivate	no	58	24	47	28	49
	yes	42	76	53	72	51

Source: National Survey of 2,235 households in June 2008, adjusted with the weights of ecological zones

5.2 Production of Main Staple Crops by Region

5.2.1 Wet Season Rice Production

Of the total agricultural plots 69 percent of them were used to cultivate wet season rice during the last season. Wet season rice farmers, on average, owned 0.9 hectare of land, which could produce 1068 kg of paddy rice, which in turn earned them $278. Money needed to spend on inputs prior to the harvest of the crop. The current study revealed that an average farmer spent a total of $86 as production cost where a large share of them was spent on seed purchase, land preparation, seedling transplant and others. Subtracting all the cost away, they could get a net profit of $193 from growing wet season rice during the survey period.

In special village, average farmer own 1.9 hectare of land and could produce about 4 tons of paddy rice. Farmers in those villages put a relatively large amount of money into the production. A total amount of $358 is needed to cover the cost of seed, to ploughing, transplanting, harvesting, and so on. At the end of the season they could earn around $417 as net profit. The farmers in special village sample earned more than those in national sample simply because they had larger agricultural land.

Table 5.2a: Wet Season Rice Production by Ecological Zone

	Plains		Tonle Sap		Plateau		Coastal		Cambodia		Target Village *	
	n	mean	n	mean	n	mean	n	mean	n	mean	N	Mean
plot size (ha)	600	0.6	603	1.2	268	1.0	147	0.5	1,618	0.9	114	1.9
harvest (kg)	561	918	561	1,259	257	1,124	143	810	1,521	1,068	91	4,003
yield per ha	561	2,448	561	1,461	256	1,636	143	1,942	1,521	1,899		2,107
seed (moeun riel)	364	1.6	187	5.6	93	0.4	82	0.7	726	2	2	40
plowing (moeun riel)	443	5.1	332	10.8	133	8.1	86	3.2	994	7	75	34
transplanting (moeun riel)	462	6.6	214	7.9	132	4.8	88	5.5	896	7	24	30
pumping (moeun riel)	418	4.1	203	3.3	102	1.7	80	1.1	803	3	27	20
harvesting (moeun riel)	436	6.2	297	12.0	131	5.1	84	4.9	948	8	65	57
threshing (moeun riel)	482	2.8	429	4.9	130	3.8	81	1.8	1,121	4	71	14
transporting (moeun riel)	405	1.6	243	2.6	104	1.4	79	0.6	831	2	68	19
other (moeun riel)	495	7.7	316	9.7	137	5.2	101	7.7	1,050	8	62	40
Total cost (moeun riel)	552	29.2	542	35.6	205	19.4	124	21.8	1,423	30	92	143
total cost/ plot ($)		73		89		49		55		74		358
revenue/ plot ($)		206		283		253		182		240		775
net profit/ plot ($)		134		194		204		128		166		417
total cost/ hectare ($)		**130**		**76**		**47**		**103**		**86**		**193**
revenue/ hectare ($)		**367**		**242**		**247**		**344**		**278**		**418**
net profit/ hectare ($)		**237**		**166**		**200**		**241**		**193**		**224**

Source: National Survey of 2,235 households in June 2008, adjusted with the weights of ecological zones

* Source: Survey of 991 households in June 2008 in 14 Target Villages

Disaggregate production according to land holding size also yields an interesting result (Table 5.2b). On average, those who hold larger land to grow wet season rice could get better

harvest and higher net profit. However, in spite of this, large-land holders tended to use agricultural land less productively as compared to small-land holders. As can be seen from table 5.2b the yield per hectare decreases considerably as the size of land increases.

Table 5.2b: Wet Season Rice Production by Landholding Size

	< 0.5		0.5 - 1		1 - 3		> 3		Cambodia	
	n	mean	n	mean	n	mean	n	mean	n	mean
plot size (ha)	948	0.3	415	0.9	220	2.1	35	8.3	1,618	0.9
harvest (kg)	900	587	384	1,208	204	2,307	33	4,923	1,521	1,068
yield per ha	900	2,322	384	1,383	204	1,185	33	789	1,521	1,899
seed (moeun riel)	451	1.2	191	2.7	73	4.7	10	31.9	726	2
plowing (moeun riel)	567	3.2	258	8.6	144	17.7	25	25.0	994	7
transplanting (moeun riel)	559	3.7	229	7.6	91	15.6	17	37.5	896	7
pumping (moeun riel)	520	2.6	193	2.5	79	5.2	11	33.9	803	3
harvesting (moeun riel)	535	3.2	266	7.6	126	19.2	21	57.6	948	8
threshing (moeun riel)	629	2.1	298	4.1	170	6.9	25	15.1	1,121	4
transporting (moeun riel)	489	1.2	217	1.5	106	4.0	19	7.0	831	2
other (moeun riel)	667	5.7	245	7.2	119	19.3	19	26.6	1,050	8
Total cost (moeun riel)	833	16.5	359	31.6	202	61.5	29	156.2	1,423	30
total cost/ plot ($)		41		79		154		390		74
revenue/ plot ($)		132		272		519		1,108		240
net profit/ plot ($)		91		193		365		717		166
total cost/ hectare ($)		**141**		**88**		**74**		**47**		**86**
revenue/ hectare ($)		**453**		**303**		**250**		**133**		**278**
net profit/ hectare ($)		**311**		**215**		**176**		**86**		**193**

Source: National Survey of 2,235 households in June 2008, adjusted with the weights of ecological zones

According to the current survey, about 58.6 percent of wet season rice producers may face rice shortage until next harvest comes[25]. Plateau has the highest proportion of food shortage households followed by Tonle Sap and Coastal areas. The percentage of those households in each area is 67.6 percent, 63.3 percent, and 58.4 percent respectively.

Box 4: Wet Season Rice Village

Sam Kimhourn and his wife Ten Saroeung with three children live in a tin-roofed house in Nikum Krao village, Chroy Sdao Commune, Thmar Kaul district, Battambang province. The household is considered as one of the better off families. They own a VCD player, a television, a bike and a koyun.

The household depends mainly on the income from rice cultivation to support their living. They have two agricultural plots, one plot of 2.18 ha is cultivating both dry and wet-season rice and another plot

25 Rice shortage households here refer households that have amount of milled and paddy rice less than the estimated amount of rice needed for household consumption till the next harvest. A new variable is constructed to capture rice shortage using the following formula. ricesufficiency = amount of milled rice + 0.6 * amount of paddy rice – number of months till next harvest * amount of rice needed per month. Those households that have negative ricesufficiency are considered to may encounter food shortage

of 1.12 ha has been used for only wet-season rice production. On these two plots of land, the household could produce 7,500 kilograms of dry-season rice and 10,500 kilogram of wet-season rice. For the 2007 wet-season rice cultivation, they spent 2,050,000 riels on the inputs. The household also spent 1,575,000 riels on the inputs for dry-season rice production. The household hired a plot of 3 ha from a villager to cultivate wet-season rice. The household had to pay 3,000 kilogram of paddy rice the land owner, and 1,900,000 riels was allocated to the supply of inputs. The rented plot yielded 11,270 kilogram of paddy rice. In total the household produced 29 tons of rice. The household reserved 2 tons of rice for domestic consumption and sold 23 tons of rice periodically from November 2007 to April 2008 at the price ranges between 850 to 1,270 riels per kilogram. The household total revenue from the wet-season rice and dry-season production was 22,281,600 riels. The net profit from rice production was 16,756,600 riels which is equal to US$4,189.50.

Kimhourn claimed that even though they cannot generate high saving, they manage to enjoy a decent living standard for the household and good education for their children. Food security is not their major concern, but the rising prices of agricultural inputs especially diesel and fertilizer. He is worried that the rising input costs will affect the net profit that negatively affects the household living standard if the price of rice is not in line with input costs.

(Nikum Krao village, Chroy Sdao Commune, Thmar Kaul district, Battambang province)

5.2.2 Dry Season Rice Production

Dry season rice production took up about 15 percent of the total agricultural land plots. Households who engaged in dry season rice production activity have about 1 hectare of agricultural land. During the current survey season, they were able to collect 3145 kg of paddy rice, which is equivalent to $708 in cash. Dry season rice, however, is relatively much more costly to produce compared to wet season rice because it required more money to pump water into a paddy field and to purchase fertilizer. The total production cost amounted to $334 during the last season. Hence, an average farmer could get approximately $374 from it as net profit.

For farmers in special village they possessed 0.5 hectare and produced 2213 kg of paddy rice or around $458 per plot in monetary term. After taking all production cost into account, on average, a farmer household who grow dry season rice could earn about 271 from it. It may be interesting to examine production of dry season rice by the size of agricultural land farmers hold.

Table 5.3a: Dry Season Rice Production by Ecological Zone

	Plains		Tonle Sap		Plateau		Coastal		Cambodia		Target Village *	
	n	mean	n	mean	n	mean	n	mean	n	mean	N	Mean
plot size (ha)	326	0.9	68	1.2	19	1.1	1	0.9	414	1.0	170	0.5
harvest (kg)	320	3,373	68	2,521	18	1,584	1	900	407	3,145	157	2,213
yield per ha	320	4,044	68	2,561	18	1,681	1	1,184	407	3,684		4,426
seed (moeun riel)	204	23.6	40	21.8	9	8.8	1	0.0	253	23	33	23
plowing (moeun riel)	261	12.4	51	11.2	11	13.2	1	11.7	324	12	116	8
transplanting (moeun riel)	204	12.5	26	5.2	14	19.1	1	31.7	244	12	98	8
pumping (moeun riel)	302	34.5	34	20.3	16	26.5	1	3.3	353	33	105	13
harvesting (moeun riel)	285	22.8	41	21.5	14	21.6	1	13.3	341	23	126	8
threshing (moeun riel)	300	13.9	54	8.4	15	8.3	1	6.7	370	13	101	13
transporting (moeun riel)	245	7.6	45	6.1	11	3.2	1	3.3	303	7	105	8

other (moeun riel)	265	47.1	40	5.9	4	0.0	1	0.7	310	41	153	31
Total cost (moeun riel)	313	149.3	68	73.4	16	84.8	1	70.7	399	133	157	75
total cost/ plot ($)		373		184		212		177		334		187
revenue/ plot ($)		759		567		356		203		708		458
net profit/ plot ($)		386		384		144		26		374		271
total cost/ hectare ($)		**397**		**155**		**191**		**196**		**338**		**358**
revenue/ hectare ($)		**807**		**478**		**321**		**225**		**716**		**878**
net profit/ hectare ($)		**410**		**323**		**130**		**29**		**378**		**520**

Source: National Survey of 2,235 households in June 2008, adjusted with the weights of ecological zones

* Source: Survey of 991 households in June 2008 in 14 Target Villages

Table 5.3b provides the production cost and profit according to land holding size. Consistent with findings of wet season rice production, large land farmers are found to be able to generate higher net profit per plot but they tended to use land less effectively compared to small-land holders. Given the same size of land, smaller land-holders could produce more amount of paddy compared to larger land-holders.

In general, dry season rice producers are those who have highest percentage in term of rice sufficiency. The current survey showed that 57.4 percent of them have paddy rice and milled rice in the stock which is sufficient for home consumption until the next harvest. However, another 42.6 percent will have to face food shortage. The highest percentage is found in Tonle Sap region.

Table 5.3b: Dry Season Rice Production

	< 0.5		0.5 - 1		1 - 3		> 3		Cambodia	
	n	mean	n	mean	n	mean	n	mean	n	mean
plot size (ha)	199	0.3	124	0.9	77	1.9	14	7.1	414	1.0
harvest (kg)	192	1,261	124	2,945	77	5,764	14	16,414	407	3,145
yield per ha	192	4,186	124	3,469	77	3,023	14	2,350	407	3,684
seed (moeun riel)	106	7.3	84	16.1	50	29.2	12	174.4	253	23
plowing (moeun riel)	159	6.5	97	13.3	55	19.1	12	46.6	324	12
transplanting (moeun riel)	108	5.2	77	11.5	48	20.8	11	49.0	244	12
pumping (moeun riel)	165	13.7	106	27.8	69	52.7	12	217.7	353	33
harvesting (moeun riel)	159	6.7	99	16.2	70	37.8	12	190.8	341	23
threshing (moeun riel)	177	5.1	108	11.1	73	17.6	12	112.3	370	13
transporting (moeun riel)	155	4.0	86	5.5	49	6.1	12	63.9	303	7
other (moeun riel)	144	9.5	99	32.0	56	117.6	11	148.8	310	41
Total cost (moeun riel)	188	45.9	122	111.6	75	241.1	14	931.4	399	133
total cost/ plot ($)		115		279		603		2,328		334
revenue/ plot ($)		284		663		1,297		3,693		708
net profit/ plot ($)		169		384		694		1,365		374
total cost/ hectare ($)		**366**		**328**		**324**		**329**		**338**
revenue/ hectare ($)		**906**		**779**		**697**		**522**		**716**
net profit/ hectare ($)		**540**		**451**		**373**		**193**		**378**

Source: National Survey of 2,235 households in June 2008, adjusted with the weights of ecological zones

Box 5: Dry Season Rice Surplus

A widower Chan Hor aged 44 years old live in Ponley Choeung village, Ponley commune, Angkor Borey district, Takeo province. He has 5 dependents - four children: two children aged between 6 and 12 years old and the other one aged between 13 to 17 years old and the oldest one aged over 18 years old, and an elderly person. They live in the private house made by durable material like brick with tile roof. His household assets are radio, television, motor bike, bike cycle, hand tractor, water pump and some saving money.

The main source of income for household is from dry-season rice production. The income is also supplemented by the animal husbandry, they raise five cattle, two pigs, four chicken and two ducks. The household owns 1.92 ha of dry-season rice field which produced 6,500 kilograms of paddy rice. Total expenditure for his dry season rice was 2,000,000 riels. In June 2008, he just sold 4,500 kilograms of paddy rice at 1,100 riels per kilogram to a local trader. He has never bought paddy from others, since he has enough rice to support his family and surplus some for selling. He still has 600 kilogram paddy rice and 20 kilograms of milled rice in the household stock. The six members consume 75 kilogram paddy rice per month (about 410 gr/caput/day), so the rest amount could support his household for the next 5 months.

Although there is no threat on the household food security, Hor is worried about the constraints in the rice production in the coming cultivating season because the household now spends more on food, the saving is significantly reduced; thus they will not have enough money to buy the inputs. However, he is committed to produce rice in the coming season because of the remarkable increase in rice price, especially since the early 2008.

(Ponley Choeung village, Ponley commune, Angkor Borey district, Takeo province)

5.2.3 Maize Production

About 1.6 percent of agricultural plots were reported to use for maize production purpose. The average plot size is 0.8 hectare which could produce 1051 kg of maize during the last season. Maize provided higher profit compared to the wet season rice and the production cost is also reasonable. The total cost required is estimated was $46 per plot and it consisted largely of expenditure on seed, land preparation and seedling transplant. During the last season, a maize producer could generate profit about $191 per plot after accounting for production cost in the last season.

The result of the studied village showed that an average farmer could produce around 17 tons of maize with their five-hectare land and earned as much as $2500 from it. Needless to say, they also had to invest both money and effort. A total amount of $1300 is needed to spend for the production cost. Hence after subtracting all those cost a maize farmer could generate as much as $1200 as net profit.

In term of rice sufficiency the study revealed that about 34.6 percent of maize producers have enough rice in the stock which is enough for household consumption till the next harvest season. Around 65.4 percent of them will short of rice and about 89 percent of them perceived that having no rice in the stock is a threat, the highest percentage among all groups.

Table 5.4: Maize Production

	Tonle Sap		Plateau		Coastal		Cambodia		Target Village*	
	n	mean	n	mean	n	mean	n	mean	N	Mean
plot size (ha)	10	1.0	15	0.7	1	0.4	26	0.8	109	5.3
harvest (kg)	4	207	14	1,339	1	525	19	1,051	99	17,033
yield per ha	4	478	14	633	1	5,563	19	771		3,214
seed (moeun riel)	10	2.4	13	6.4	1	3.3	24	5	54	216
plowing (moeun riel)	6	4.0	6	17.7	1	4.0	13	11	81	178
transplanting (moeun riel)	6	0.0	6	10.3	1	2.7	12	5	34	106
pumping (moeun riel)	6	0.0	6	0.0	1	0.0	12	0	3	59
harvesting (moeun riel)	6	3.8	6	17.3	1	3.3	12	10	78	114
threshing (moeun riel)	6	0.0	6	0.7	1	0.0	12	0	65	59
transporting (moeun riel)	6	0.0	6	0.0	1	0.0	12	0	55	52
other (moeun riel)	6	0.0	6	5.1	1	0.0	12	2	54	73
Total cost (moeun riel)	10	6.8	14	27.1	1	10.0	26	18	100	537
total cost/ plot ($)		17		68		25		46		1,342
revenue/ plot ($)		47		301		118		236		2,555
net profit/ plot ($)		29		233		93		191		1,213
total cost/ hectare ($)		**18**		**95**		**58**		**58**		**254**
revenue/ hectare ($)		**48**		**424**		**273**		**298**		**484**
net profit/ hectare ($)		**31**		**328**		**215**		**240**		**230**

Source: National Survey of 2,235 households in June 2008, adjusted with the weights of ecological zones
* Source: Survey of 991 households in June 2008 in 14 Target Villages

Box 6: Maize Production

Mr Nhem Hok and Mrs Chhin Ly live in Kbal Tomnop village, Ou Sampor commune, Malai district, Banteay Mean Chey province. There are seven household members in their charge. The household can afford to own a television, a hand phones, a stereo player, a motorbike, a bicycle and a hand tractor.

They own big agricultural land, 2.88 ha of paddy land and 5.76 ha of maize land. The production of the two crops is the main source of income for the household. For rice cultivation in 2007 wet-rice season 4,211,000 riels was spent on the inputs, in which the most expenditure falls on ploughing (2,540,000 riels) in order to harvest 7,200 kilograms of paddy rice. To supplement this inputs they had to borrow money from micro credit association and they expected to return the money back after the harvesting. Soon after the harvesting, November 2007, they sold 6,000 kilograms of paddy rice at the 550 riels per kilogram, and other 1,200 kilograms was retained for household consumption. The rice production by that time incurred a loss, but Hok claimed that at lease he could produce enough rice for household consumption and sold the surplus for the production of maize.

They also invested 8,255,000 riels and mainly in land preparation and harvesting. They could get 34,500 kilograms maize from this plantation. They sold maize in the price of 650 riels per kilogram to Cambodian trader outside the village. The total revenue from maize was 22,425,000 riels. This brought 14,170,000 of net profit for the household.

The household consumes 75 kilograms of milled rice per month; thus, they have never bought rice from market. There is 1,000 kilograms of paddy rice and 50 kilograms of milled rice in the household stock. The higher commodity prices have pushed the household expenditure in food, clothes, and transportation up. However, the household has not negatively affected by the rising food price because the family has produced their own rice for consumption and they greatly benefited from maize production which could help stabilize the negative effects. It should be noted that five members exclusively contribute their labor in the farm and they have no intention to sell their land including residential plot. Even though they don't know whether the price of agricultural products will be rising or not, they are so enthusiastic to keep producing rice and maize.

(Kbal Tomnop village, Ou Sampor commune, Malai district, Banteay Mean Chey province)

5.2.4 Cassava Production in Target Village

Cassava cultivation seems to attract more attention from Cambodia farmers. Of the surveyed sample 2.5 percent of households reported to be in this business. In general, a cassava farmer possesses two plots with the average size of 1.6 hectare, which has the estimated value of around $4700 per plot. So far land for cassava production seems to have the highest value compared to any other types of land.

The average harvest of cassava during the last season was 4,378 kg per plot or $550 in monetary term.A total cost of around $130 is required for ploughing, harvesting, processing, transporting and others. Cassava is relatively easier to plant and take care of compared to the two previous crops. Yet it also provided a handsome amount of profit around $537 per season.

Despite of this relatively higher earning, the majority of cassava growers perceived a threat for having no paddy in the stock. This may reflect the fact that compared to other groups cassava growers have less amount of paddy rice or milled rice in the stock till the next harvest or they may be the net buyers of rice. Thus as the price of paddy or milled rice increased, they will have to spend a lot more of there income on food.

Table 5.5: Cassava Production in Target Villages

	N	Mean
plot size (hectare)	62	1.3
plot value (USD)		
havest (kg)	54	4,378
yield/ha		
price (riel/kg)		650
revenue (moeun riel)		285
seed (moeun riel)	1	3
ploughing (moeun riel)	18	24
transplanting (moeun riel)	10	34
pumping (moeun riel)	3	11
harvesting (moeun riel)	12	15
threshing (moeun riel)	12	13
transporting(moeun riel)	5	15

other (moeun riel)	9	27
total cost (moeun riel)	35	70
total cost/ plot (USD)		174
revenue/ plot (USD)		711
net profit/ plot (USD)		537
total cost/ ha (USD)		**136**
revenue/ ha (USD)		**555**
net profit/ ha (USD)		**419**

Source: Survey of 991 households in June 2008, in 14 Target Villages

Box 7: Cassava Production

Ly Menghour and Khin Sreymoch, a couple, with two children live in the tile-roofed house in Spean village, Dar commune, Memot district, Kompong Cham province. Their household can afford some durables and luxuries such as motorcycle, bicyle, television, mobile phone, VCD player and some saving.

The household owns an upland plot, sized 3 ha which has been used for cassava production for the last two years. The land can produce 50 tons of fresh cassava which was sold at 250 riels per kilogram. He, however, articulated that the price of dry cassava was higher but he did not undertake this semi-process because of the lack of supporting labor in his family and the labor in the village due to the highly demanding period during harvesting, and the complication in the process. The irregularity of rain and insufficient heat in the drying process could spoil the cassava which leads to a great loss. The total revenue from cassava production was 12,500,000 riels while 1,700,000 riels was the production cost. The net profit of the production was 10,800,000 riels.

The household depends mainly on the purchased food stuff except some basic vegetables that were grown around the residential plot. Kimhourn raised his concern that although his family can afford sufficient and nutritional food at the mean time, they will face food deficit because the profit from cassava production was not only reserved for household food but also for the next cultivation. If the price of food keeps rising, the family members will be forced to less of their preferred and expensive food, claimed Kimhourn.

In the future, they neither want to sell their agricultural land nor to hire to others and they predict that the price of cassava will be rising because there are more local and Vietnam buyers.

(Spean village, Dar commune, Memot district, Kompong Cham province)

5.2.5 Soya Bean Production in Special Village

Soya beans are grown in very few areas in Cambodia. Only 18 households of the surveyed sample in the special village reported to engage in this activity. In general, compared to farmers of other crops, soya bean farmers own larger agricultural land, which has the estimated value of around $4000 per hectare.

Soya bean growers who possess 4.4 ha of land could get the average harvest of soya bean was around 5 tonnes per plot which is equivalent to $2360 in monetary term during the last season. A total cost of around $952 is required for plowing, harvesting, processing,

transporting and others. Subtracting all the cost, they could earn around 1400 USDas net profit.

Despite of this relatively higher earning, a vast majority of soya bean growers needed to purchase paddy as they have no or only little paddy in the stock until the next harvest. This may be the good reason why most of them feel insecure or threaten by high food price. The current survey indicated that only 16.7 percent of them have paddy or milled rice sufficient of household consumption while 11.1 percent will face shortage from one to three months, 66.7 percent from three to six months and 5.6 percent more than six months. The survey also showed that 66.7 percent of them perceived having no paddy in stock as a threat to food security.

Table 5.6: Soya Bean Production in Target Villages

	N	Mean
plot size (ha)	34	4.4
harvest (kg)	34	5,554
yield per ha		1,262
seed (moeun riel)	19	101
plowing (moeun riel)	24	80
transplanting (moeun riel)	10	138
pumping (moeun riel)	2	57
harvesting (moeun riel)	22	66
threshing (moeun riel)	18	78
transporting (moeun riel)	12	23
other (moeun riel)	10	60
Total cost (moeun riel)	34	381
total cost/ plot ($)		952
revenue/ plot ($)		2,360
net profit/ plot ($)		1,408
total cost/ hectare ($)		216
revenue/ hectare ($)		536
net profit/ hectare ($)		320

Source: Survey of 991 households in June 2008, in 14 Target Villages

5.3 Potential and Constraints to Increase Production

Table 5.7 summarizes constraints facing farmers during the last season. It seems that shortage of capital and labor needed for the investment of relevance inputs and the lack of proper irrigation system are main constraints that keep villagers a distance from being able to increase production. The three major constraints reported among respondents are lack of money for fertilizers, irrigation issues, and lack of household labor and/or draft animals. Some other main constraints villagers face include inability to hire labor or ploughing capital-wise, not enough machinery, flood or drought and inadequacy of relevance knowledge or training to use current inputs and technology at a more optimal and productive level.

Therefore policies to remove those constraints may result in an increase in production which in turn helps reduce poverty and vulnerability of farmers.

Productivity can be marginally increased through land conflict solving. Of the surveyed sample, about 2 percent of plots were reported to be in conflict (Table 5.1). Land conflicts are seen as an issue because farmers cannot fully use the land to its maximum potential. The current study showed that about 44 percent of conflicted plots were associated with decline productivity.

It is worth noting that the percentage of farmers who would grow crops on their idle farmland during the coming season remains small and the percentage of farmers who would grow for business purpose is still low. Only 10.6 percent of households would solely increase production for sale purpose against 47 percent of these would use extra harvest for consumption within households. This indicated not many farmers are able to see high food prices as opportunity yet. Thus they as rice producers still cannot reap the benefit from it.

Table 5.7: Constraints to Increase Production by Types of Crop

	w.s. rice	d.s. rice	maize	cassava	others	total
not enough h.h labour/draft animal	10.4	6.5	10.3	15.8	13.4	10.2
not enough machinery	5.9	6.8	1.1	21.6	6.9	6.5
no time/have other job	0.5	0.2	2.3	2.2	1.6	0.6
not possible to irrigate	15.6	7.6	19.5	2.2	11.2	14.1
not enough money for seed	3.8	7.4	8.0	2.9	4.4	4.4
not enough money for fertiliser	25.1	26.4	18.4	13.7	18.4	24.2
not enough money for pesticides	9.2	16.7	4.6	5.8	7.8	9.8
not enough money to hire labour	5.7	6.3	9.2	18.7	5.3	6.3
not enough money for irrigation	2.7	8.0	5.7	1.4	2.5	3.3
cannot obtain credit	0.4	0.3	1.1	2.2	1.2	0.5
high interest rate	1.2	0.9	1.1	1.4	1.9	1.2
lack of transport	2.4	2.3	2.3	2.9	3.1	2.5
lack of accessibility to market	0.4	0.2	1.1	0.0	1.9	0.5
do not have knowledge/training	4.0	1.7	8.0	5.8	10.3	4.2
land conflict/fear of land conflict	0.1	0.0	0.0	0.0	0.3	0.1
flood/drought	9.3	3.1	5.7	1.4	5.3	7.9
other	3.4	5.6	1.1	2.2	4.7	3.8
total	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Survey of 2,235 households in June 2008, adjusted with the weights of ecological zones

VI. Analysis and Recommendations

Analysis Summary

Many attribute the causes of high food prices in the world to higher demand for food and fuels in China, India and other countries, while sizable proportions of land have been allocated for crop production that is converted to bio-fuels. Cambodia is an open and small economy that produces surpluses in a few major crops such as rice, soybean, maize, cassava, cashew, sesame seeds, and rubber. Higher prices of these crops mean Cambodia earns more export receipts. The survey found dry season farmers and cassava farmers have benefited from the increase in prices, while wet season rice farmers and other farmers that will harvest their crops in November-December 2008 will also stand to benefit more if prices remain high (Table 5.1). In general, production costs in 2008 are about 50 percent higher than those in 2007 but farm gate prices increases by 40 percent – 113 percent, resulting in gross margins to accelerate by 38 percent - 176 percent. Thus, producers stand to benefit from the price rises. If prices of agricultural commodities remain as high as the present level, poverty reduction will be much faster than before. It goes without saying that those with more farm land and/cultivable land will potentially derive more gains.

Table 5.1 Impact of Price Rises on Profitability of Crop Production (Per hectare per season)

Commodity/item	Dry Season			Wet Season		
	2007	2008	% change	2007	2008	% change
RICE						
Yield (ton)	3.7	3.7	0%	1.9	1.9	0%
Price at farm gate ($/ton)	180	250	39%	225	320	42%
Gross Revenue ($)	663	921	39%	427	608	42%
Total Production Cost ($)	233	350	50%	150	225	50%
Gross Margins ($)	**430**	**571**	**33%**	**277**	**383**	**38%**
MAIZE						
Yield (ton)				4.0	4.0	0%
Price at farm gate ($/ton)				150	250	67%
Gross Revenue ($)				600	1,000	67%
Total Production Cost ($)				205	280	37%
Gross Margins ($)				**395**	**720**	**82%**
SOYBEAN						
Yield (ton)				1.5	1.5	0%
Price at farm gate ($/ton)				400	580	45%
Gross Revenue ($)				600	870	45%
Total Production Cost ($)				260	375	44%
Gross Margins ($)				**340**	**495**	**46%**
CASSAVA						
Yield (ton)				8.0	8.0	0%
Price at farm gate ($/ton)				75	160	113%
Gross Revenue ($)				600	1,280	113%
Total Production Cost ($)				288	420	46%
Gross Margins ($)				**312**	**860**	**176%**

Source: Households surveys for rice, and focused group discussions for other crops

However, net food consumers in the process are losers, unless they have access to jobs with rising wages to compensate for high inflation. For the very poor, both in urban and rural areas, obtaining sufficient food is a matter of daily struggle. Sharing 20 percent of the population, these people live virtually “from hand to mouth” as they use their $2 - $3 income per day to buy rice and other essential food within the same day. Given the limited resource and time for the study, it is not possible to measure food poverty in the way the Socio-Economic Survey of Cambodia does. Using WFP’s definition, the survey found that 12 percent of the households, equaling about 1.7 million individuals, were food insecure and most affected by the high food prices at the time of survey. Food assistance based social safety nets should be introduced in order to avoid an increase in malnutrition and other negative coping strategies used by food insecure households, as they have already experienced low food consumption pattern and about 98 percent of them have contracted new debts in addition to the old ones since March 2007 in order to cope with current shock. About 50% of the households reported cutting back food consumption as a way of coping with the high food prices. This threatens their nutritional status and worsens their health, which might result in lasting adverse impact. The largest proportion of food insecure people was found in Tonle Sap zone, Plain zone and Plateau zone. During the lean season, the proportion of food insecure people could increase significantly to about 2.8 million individuals.

Fortunately, wages from day labour, which is the main source of the landless and land poor groups, increased by about 50 percent in the past one year. This market based wage adjustment has kept many in the status quo and not falling into severe poverty as some would expect. Nevertheless, sections of Cambodian households have been unable to generate higher income due to the lack of employment in the locality and are therefore hit hardest by the high food prices. These people tend to locate in the poorest areas where there is little potential in agricultural production and income generation.

Of particular concern, the fishing communities are among those most severely affected. With the doubled rice prices, the fisher households were pushed into deeper poverty. Their average daily income has been deteriorating while the daily expenditure has to increase. Although the price of their produce has been rising, but it is only by about 20 percent to be accompanied by rising costs of inputs, while their fish catch has been lower due to a downward trend in catches by households.

Recommendations

Higher prices of rice have encouraged production. At least three percentage points more households reported that they would cultivate their land in the coming season rather than leaving it idle or renting it out, as they had done last year. However, there are long-standing constraints on the expansion and intensification of agriculture. Many farmers reported the sharp rise of fertiliser as a constraint. The others most cited were the lack of family labour or draught animals and absence of irrigation. Table 5 indicates constraints for the major crops studied.

There should be a way to reduce the price of fertiliser, which increased two- or three-fold over the past year. All chemical fertilisers are imported, reportedly through highly inefficient channels that rely heavily and informally on Vietnamese and Thai traders. Importing

fertilisers in bulk directly might cut costs considerably. The government and development partners may consider address this largest constraint cited by farmers.

Lack of water or irrigation is a fundamental problem, although there has been a significant increase in public provision of and commitment to irrigation. A controlled water supply, which is now available for only 20 percent of rice fields, provides stability and certainty to crop production. It is a critical prerequisite for farmers to apply other inputs such as fertiliser and higher yielding seeds. A reliable water supply enables crop intensification and reduces the costs of production. Without irrigation, production in many areas is impossible or too risky to apply good inputs.

Many farmers did not have the capital to start or expand production. Some could obtain loans, mostly at high interest rates, to maintain production. This plus borrowing for consumption put about half the households in debt, which is a worrying sign. Farmers need to borrow more money to meet rising production costs, essentially fertiliser, pesticide, machinery and labour. It is imperative for government and development partners to inject funds to creditors and earmark them for agriculture. This would need an effective monitoring system to ensure that funds reach the right farmers and the right activities.

Technical support through extension services should be also expanded. Increased availability of vaccines for livestock would also be a great contribution to increasing the supply of food and bringing down prices. Local and international agricultural market information should be more widely available to traders and farmers so that they receive the right market signals. With improved conditions, agricultural producers will be able to seize the opportunity of rising agricultural prices by increasing production for export.

A long-term strategy should include a better land allocation and management policy. A current goal of maintaining forest coverage at 60 percent of the country area is perhaps desirable but not realistic when demographic and economic pressures are paramount. Because of this goal, new agricultural lands have an unclear legal status, which tends to favour those with the financial means, power or backing to take them.

As for the poor and very poor hard hit by rising prices, immediate interventions by government, development partners and civil society organisations are needed. Food aid and/or food for work should be the best solutions to meet their short-term needs. This requires enhanced cooperation among government agencies, development partners and civil society. These kinds of assistance are much preferred by needy populations and have been implemented before in times of flood and drought.

REFERENCES

ADB (2008) "Food Prices and Inflation in Developing Asia: *Is Poverty Reduction Coming to an End?* Special Report, (Asian Development Bank: April 2008)

CDRI (2007) *Annual Development Review 2006-07*, Cambodia Development Resource Institute, Phnom Penh

De La Torre, 2008, "Bio-fuels and Food Prices: Policy Challenges from a Latin American Perspective" Office of the Chief Economist of the World Bank; London June 10, 2008

FAO (2008a) Food Outlook, Global Market Analysis, http://www.fao.org/docrep/010/ah876e/ah876e00.HTM

FAO (2008b) Agricultural Outlook 2007-2016, http://www.fao.org/newsroom/en/news/2007/1000620/index.html

Hang Chuon Naron (2008) "Three Essays on Macroeconomic Management of Cambodia" (Phnom Penh: April 2008)

Johansson, Sten and Bäcklund, Sten (2005) A new set of poverty estimates for Cambodia 2004 based on the CSES 2004 diary data, Statistics Sweden (Phnom Penh: December 2005), Unpublished report

MAFF (2008) Wholesale Price Data at Marketing Office (Ministry of Agriculture, Forestry and Fisheries: Phnom Penh)

Mark Cackler, Mona Sur (2008) *2nd World Bank- CSO Roundtable on the Global Food Crisis: Analysis and Response*, July 15, 2008, Agriculture & Rural Development Department, The World Bank

MoC (2008) Weekly Business Roundup, various issues in 2007 and 2008 (Ministry of Commerce: Phnom Penh)

NIS (2008a) Consumer Price Index Bulletin, January and August 2008 (National Institute of Statistics: Phnom Penh)

NIS (2008b) National Account of Cambodia 1993-2007 (National Institute of Statistics: Phnom Penh)

Polaski, Sandra (2008) "Rising Food Prices, Poverty and the Doha Round" Policy Outlook, Carnegie Endowment for International Peace

Schmidhuber, Josef (2008) Price trends of agricultural and energy commodities: links and impacts on developing countries (FAO: 17 June 2008)

World Bank (2006) *Cambodia: Halving Poverty by 2015?* Poverty Assessment 2006 (Phnom Penh: February 2006)

World Bank (2008) World Development Report 2008: Agriculture for Development

WFP Cambodia (2004) "Commune-level Agricultural Production and Food Security in Cambodia" Unpublished report based on survey of agricultural production by MAFF in 2004

ANNEXES

ANNEX I. Additional Tables

Table A2.1 Wholesale Prices of Different Kinds of Paddy Rice in Various Provinces

Type of paddy in different provinces	Jul. 07	No. 07	Jan. 08	Mar. 08	Apr. 08	May. 08	Jun. 08
Rice Mill O'Ambil (Banteay Meanchey)							
Mixed	520	590	730	800	1,050	1,717	
Neang Minh	553	600	840	1,070	1,070	1,070	
Phkar Knhei	640	730	890	1,200	1,200	1,200	
Somali	790	790	980	1,300	1,300	1,300	
Rice Mill in Town (Battambang)							
Mixed	550	565	590				
Neang Minh	612	610	663				
Phkar Knhei	650	675	683				
Rice Mill Prek Reusey (Kandal)							
IR	720	897	860	1,429	1,471	1,440	1,400
Phkar Knhei	832	967	816	1,278	1,279	1,325	1,300
Srov Sar	785	960	1,396	2,300	2,228	2,400	2,300
Rice Mill Phnom Pros (Kompong Cham)							
Kngork Pong	885	894	920	1,400	1,600	1,700	1,700
Mixed	749	820	815	1,127	1,049	1,305	1,298
Rice Mill (Kompong Chhnang)							
Kang Soy	911	897	858	1,250	1,225	1,475	1,575
Mixed	679	790	756	1,057	863	1,050	1,088
Samaki Market (Kampot)							
Kra Horm	804	933	808	1,169	1,150	1,408	1,362
Mixed	804	933	808	1,169	1,150	1,408	1,362
Rice Mill Nak Loeung (Prey Veng)							
Banla Pdaov	753	842	848	1,185	1,277	1,296	
IR	677	790	836	933	1,158	1,192	
Mixed	753	842	848	1,185	1,280	1,296	
Phsar Leu Market (Sihanouk Ville)							
Mixed	663	759	802	926	997	1,230	1,230
Neang Minh	700	789	822	984	1,100		
Somali	900	901	960	1,322	1,367	1,480	1,480
Rice Mill Donkeo (Takeo)							
IR	710	775	758	935	1,225		
Mixed	756	870	845	1,143	1,100	1,325	
AVERAGE							
Mixed	654	736	762	1,022	1,058	1,324	1,159
IR	702	821	818	1,099	1,285	1,316	1,400
Neang Minh	621	666	775	1,027	1,085	1,070	
Phkar Knhei	707	791	797	1,239	1,239	1,263	1,300
Somali	845	846	970	1,311	1,333	1,390	1,480
Index							
Mixed	100	113	117	156	162	203	177
IR	100	117	116	156	183	187	199
Neang Minh	100	107	125	165	175	172	
Phkar Knhei	100	112	113	175	175	179	184
Somali	100	100	115	155	158	165	175

Source: Recompiled and calculated from Ministry of Agriculture, Forestry and Fisheries, Marketing Office

Table A2.2 Paddy price received by farmers who sold their paddy, by province and month

Province	nov 07	dec 07	jan 08	feb 08	mar 08	april 08	may 08	june 08
Banteay Mean Chey	600	630	620	650	1000	975	1000	
Bat Dambang	731	857	800	800	800	1000	1200	1120
Kompong Cham	700	795	800	800	979	900	1225	1200
Kompong Chhnang	1200	1000		830	925	950	1000	750
Kompong Speu	800	800	775	800	1000	1100	1200	1350
Kompong Thum	800	800	850	1100	1150	1200	1100	
Kampot	800	850	900	900	1000	1200	1200	1350
Kandal		2000	875	950		1000	1200	
Kaoh Kong		500		1000			1500	
Kratie		800	800	2500				
Mondul Kiri		1500						
Phnom Penh		1000	1000	1700	900	1700	1300	1300
Preah Vihear	700	675	700	1250	1300	2000	2000	
Prey Veaeng	650	650	860	900	905	900	1000	1100
Pousat	700	700	600	700				
Siem Reab	1000	650	925	900	700	950	1000	1050
Krong Preah Sihanouk			800	1000	1100		1175	
Stueng Traeng			800					
Svay Rieng	600	600	700	800	1000	800	1100	
Takaev	1100	885	800	900	900	990	1000	
Oudor Mean Chey	525	769	700	800	715	800	1000	780
Krong Kaeb		900						
Cambodia	**750**	**800**	**800**	**900**	**950**	**1000**	**1100**	**1175**

Source: National Survey of 2235 households in June 2008
*Note: Types of paddy rice was not controlled for so these prices do not strictly represent real increases.

Table A2.3 Prices of milled rice purchased by farmers, by province and month

	nov 07	dec 07	jan 08	feb 08	mar 08	april 08	may 08	june 08
Banteay Mean Chey	2,000	1,800	1,800	2,500	2,600	2,500	2,800	2,800
Bat Dambang	1,200	1,550	1,600	2,000	2,100	2,400	2,200	2,000
Kompong Cham	1,600		1,600	2,120	2,400	2,400	2,500	2,400
Kompong Chhnang	1,800	1,800	2,000	2,350	2,200	2,200	2,300	2,300
Kompong Speu	1,000	2,200	2,500	2,800	2,450	2,450	2,500	2,500
Kompong Thum	1,750	1,700	2,000	2,000	2,250	2,500	2,300	2,300
Kampot	2,200	2,000	2,000	2,200	2,200	2,300	2,300	2,500
Kandal	1,500	1,850	2,100	2,000	2,500	2,800	2,800	2,800
Kaoh Kong				2,700	2,700	2,500	2,600	2,600
Kratie	2,150	2,500	2,250	2,500	1,800	2,500	2,500	2,650
Mondul Kiri					2,000	2,500	2,800	2,800
Phnom Penh	1,800	1,800	2,000	2,500	2,800	3,100	3,200	3,000
Preah Vihear	1,500	1,750	1,750	2,000	2,500	2,000	2,000	2,350
Prey Veaeng	2,200	2,200		5,660	2,900	2,900	2,400	2,200
Pousat			2,000		2,000	2,000	2,000	2,000
Rattanak Kiri	2,500	2,500	3,500	3,500	3,250	3,000	3,500	2,800
Siem Reab	1,600	1,600	2,100	2,350	2,400	2,500	2,500	2,500
Krong Preah Sihanouk	1,950	2,100	2,300	2,250	2,500	2,800	2,800	2,700
Stueng Traeng					2,800	2,500	2,500	2,500
Svay Rieng	2,060			1,800	2,400	2,000	2,000	2,000
Takaev			1,500	1,500	2,300	1,900	2,365	2,150
Oudor Mean Chey	2,200		3,000	2,250	2,750	3,000	2,500	2,500
Krong Kaeb					2,500	2,400	2,500	2,500
Krong Pailin			2,500	1,600	2,500	2,400	2,500	2,700
Cambodia	**2,000**	**1,900**	**2,000**	**2,200**	**2,500**	**2,600**	**2,500**	**2,600**

Source: National Survey of 2235 households in June 2008
* Note: Types of milled rice were not controlled for so these prices do not strictly represent real increases of the same types. Some households opted for lower quality rice in the process when prices were rising remarkably.

Table A2.4 Wholesale Prices of Cash Crops in Several Provinces

Commodity	Unit	Jul. 07	Nov. 07	Jan. 08	Feb. 08	Mar. 08	Apr. 08	May. 08	Jun. 08
		Average price per unit							
Banana	BUN	951	923	955	1,078	1,103	1,162	1,109	1,084
Orange	Dozen	3,769	3,568	4,705	5,672	5,445	6,790	7,987	7,589
Pineapple	Dozen	8,489	9,775	9,678	10,390	10,918	11,319	11,400	11,408
Sugar Cane	BUN	4,988	5,164	5,132	4,946	4,656	4,875	5,488	6,694
Beet	Kg	946	849	849	1,043	968	1,117	1,309	1,317
Bitter Gourd	Kg	1,463	1,471	1,360	1,383	1,360	1,350	1,888	1,650
Cabbage	Kg	1,276	2,145	1,279	1,216	1,319	1,744	2,241	2,359
Chinese Kale	Kg	3,377	2,555	2,027	2,500	2,486	2,347	2,666	3,357
Cucumber	Kg	937	1,133	1,074	906	1,024	1,286	1,568	1,141
Gourd	Dozen	7,150	5,043	6,000	6,614	6,700	6,825	7,275	8,313
Lettuce	Kg	3,286	1,837	1,985	1,846	1,540	2,364	4,505	3,943
Sweet Potato	Kg	702	606	667	775	835	904	1,025	950
Tomato	Kg	1,739	2,124	1,730	1,387	1,281	1,510	1,906	2,315
		Index (July 2007 = 100)							
Banana	BUN	100	97	100	113	116	122	117	114
Orange	Dozen	100	95	125	151	144	180	212	201
Pineapple	Dozen	100	115	114	122	129	133	134	134
Sugar Cane	BUN	100	104	103	99	93	98	110	134
Beet	Kg	100	90	90	110	102	118	138	139
Bitter Gourd	Kg	100	101	93	95	93	92	129	113
Cabbage	Kg	100	168	100	95	103	137	176	185
Chinese Kale	Kg	100	76	60	74	74	70	79	99
Cucumber	Kg	100	121	115	97	109	137	167	122
Gourd	Dozen	100	71	84	93	94	95	102	116
Lettuce	Kg	100	56	60	56	47	72	137	120
Sweet Potato	Kg	100	86	95	110	119	129	146	135
Tomato	Kg	100	122	100	80	74	87	110	133

Source: Recompiled and calculated from Ministry of Agriculture, Forestry and Fisheries, Marketing Office

Table A2.5 Wholesale Prices of Cash Crops in Several Provinces

Commodity	Jul. 07	Nov. 07	Jan. 08	2008-03	Apr. 08	May. 08	Jun. 08
	Average Price (Riels per kg)						
Soybean	2,058	2,148	2,647	3,033	3,157	3,408	3,427
Mung Bean	3,274	3,106	3,315	3,457	3,480	3,354	3,558
Ground Nut	4,185	5,160	5,989	6,071	5,870	6,020	6,400
Maize (Yellow)	799	945	965	1,012	1,039	1,148	1,308
Sesame (White)	3,297	4,242	4,705	5,514	5,811	6,416	7,188
Cashew Nut (in shell)	2,650		3,600	3,142	3,050	3,433	..
Cashew Nut processed	26,750	27,727	27,000	28,400	29,292	29,262	28,979
Lotus Nut	2,800	3,045	3,200	3,420	4,408	4,381	4,275
	Index (July 2007 = 100)						
Soybean	100	104	129	147	153	166	166
Mung Bean	100	95	101	106	106	102	109
Ground Nut	100	123	143	145	140	144	153
Maize (Yellow)	100	118	121	127	130	144	164
Sesame (White)	100	129	143	167	176	195	218
Cashew Nut (in shell)	100		136	119	115	130	..
Cashew Nut processed	100	104	101	106	110	109	108
Lotus Nut	100	109	114	122	157	156	153

Source: Recompiled and calculated from Ministry of Agriculture, Forestry and Fisheries, Marketing Office

Table A2.6 Wholesale Prices of Fish, Average Cambodia

Type	Jul. 07	Nov. 07	Jan. 08	Feb. 08	Mar. 08	Apr. 08	May. 08	Jun. 08
	Average price (riels per kg)							
Live Fish (Chhdor)	16,090	17,633	15,848	17,118	18,335	17,859	17,220	16,725
Live Fish (Deap)	12,936	15,278	14,250	15,388	15,294	15,060	16,630	16,682
Live Fish (Mud)	8,547	8,095	8,820	8,767	8,460	9,050	7,877	8,783
Dried Fish (Chhdor)	23,989	24,083	23,334	24,963	25,162	26,472	26,138	24,604
Dried Fish (Deap)	21,298	22,252	20,765	22,230	22,500	22,815	24,823	24,243
smoked Fish (chror vamol)	6,500	7,000	7,000	8,389	11,100	12,792	12,524	12,958
Smoked Fish (Kes)	85,000	90,000	130,000	130,000	130,000	130,083	130,286	130,479
Smoked Fish (Real)	11,000	13,300	14,182	15,556	18,200	20,813	21,048	21,375
Bronze Featherback (No.2)	6,933	7,350	6,867	6,850	7,400	7,500	6,838	6,450
Butter Catfish (No.1)	5,900	5,550	5,000	6,150	7,100	8,450	9,250	10,000
Eel (No.1)	13,000	11,750	10,125	12,600	13,433	12,400	13,300	14,000
Featherback (No.1)	6,767	8,850	7,567	7,600	8,500	7,125	8,775	9,900
Great White Shealfish (No.1)	8,300	8,600	8,000	8,000				
Micronema (No.1)	14,000	14,750	20,000	25,000	24,333	25,000	25,000	25,000
Small Scale Croker (No.1)	9,333	9,900	9,800	9,950	10,500	12,250	12,500	12,500
Tire traek Eel (No.1)	11,333	9,350	9,833	9,600	10,500	13,125	13,000	13,000
Frozen Fish (Chhdor)	7,250	10,240	8,975	9,033	9,380	8,900	9,160	9,500
Frozen Fish (Deap)	5,600	9,120	7,475	8,033	7,000	7,950	8,260	8,600
Crab (Ses)	14,558	16,139	16,413	17,267	16,803	19,838	18,167	21,117
Kamong Fish	2,731	2,994	2,705	2,786	2,921	1,890	2,917	3,458
Prawn (No.1)	40,346	40,114	40,800	41,455	40,797	38,904	32,333	32,508
Prawn (No.2)	21,115	24,049	26,538	27,818	26,051	24,117	22,417	22,938
prawn (No.3)	13,865	15,694	18,096	18,211	16,484	15,271	14,750	14,938
	Index (July 2007 = 100)							
	Jul. 07	Nov. 07	Jan. 08	Feb. 08	Mar. 08	Apr. 08	May. 08	Jun. 08
Live Fish (Chhdor)	100	110	98	106	114	111	107	104
Live Fish (Deap)	100	118	110	119	118	116	129	129
Live Fish (Mud)	100	95	103	103	99	106	92	103
Dried Fish (Chhdor)	100	100	97	104	105	110	109	103
Dried Fish (Deap)	100	104	98	104	106	107	117	114
Smoked Fish (chror vamol)	100	108	108	129	171	197	193	199
Smoked Fish (Kes)	100	106	153	153	153	153	153	154
Smoked Fish (Real)	100	121	129	141	165	189	191	194
Bronze Featherback (No.2)	100	106	99	99	107	108	99	93
Butter Catfish (No.1)	100	94	85	104	120	143	157	169
Eel (No.1)	100	90	78	97	103	95	102	108
Featherback (No.1)	100	131	112	112	126	105	130	146
Great White Shealfish (No.1)	100	104	96	96				
Micronema (No.1)	100	105	143	179	174	179	179	179
Small Scale Croker (No.1)	100	106	105	107	113	131	134	134
Tire traek Eel (No.1)	100	83	87	85	93	116	115	115
Frozen Fish (Chhdor)	100	141	124	125	129	123	126	131
Frozen Fish (Deap)	100	163	133	143	125	142	148	154
Crab (Ses)	100	111	113	119	115	136	125	145
Kamong Fish	100	110	99	102	107	69	107	127
Prawn (No.1)	100	99	101	103	101	96	80	81
Prawn (No.2)	100	114	126	132	123	114	106	109
Prawn (No.3)	100	113	131	131	119	110	106	108

Source: Recompiled and calculated from Ministry of Agriculture, Forestry and Fisheries, Marketing Office

Table A3.1 Reported change in cash income in the past 6 months by types of cash income groups

Source of cash income	change income in the past 6 month			total share
	no change	decreased	increased	
sale of paddy	32.5%	37.8%	29.7%	9.0
sale of vegetables and/or fruits	30.7%	34.7%	34.7%	3.0
sale of other agric.produce	21.4%	34.8%	43.8%	3.8
agricultural wage labour	18.8%	56.3%	25.0%	6.3
work in garment factory	30.9%	46.8%	22.3%	4.1
work in construction	24.4%	43.6%	32.0%	5.8
self-employed	31.5%	43.9%	24.6%	34.1
other work for other	31.9%	44.4%	23.8%	7.0
government, NGO, company	47.9%	33.3%	18.8%	10.4
sale of handicrafts	29.6%	29.6%	40.7%	1.0
sale of animal/animal products	27.5%	39.1%	33.3%	3.1
pension/allowances	100.0%			0.0
remittances from overseas			100.0%	0.1
remittances in country	44.4%	55.6%	.0%	0.6
income from forests	30.3%	30.3%	39.5%	5.0
income from fishery	15.4%	61.5%	23.1%	3.7
commission from land trade	25.0%	25.0%	50.0%	0.2
other	34.7%	41.7%	23.6%	2.8
Total	30.1%	42.4%	27.4%	100.0
Source of cash income	income decline by strata			total share
	Phnom Penh	other urban	rural	
sale of paddy	1.4	2.8	95.8	9.0
sale of vegetables and/or fruits	8.0	8.0	84.0	3.0
sale of other agric.produce	3.4	10.3	86.2	3.8
agricultural wage labour	3.8	2.5	93.7	6.3
work in garment factory	34.9	11.6	53.5	4.1
work in construction	9.1	14.5	76.4	5.8
self-employed	31.9	14.5	53.6	34.1
other work for other	5.6	11.1	83.3	7.0
government, NGO, company	55.6	15.3	29.2	10.4
sale of handicrafts			100.0	1.0
sale of animal/animal products	3.3	6.7	90.0	3.1
remittances in country	16.7	16.7	66.7	0.6
income from forests			100.0	5.0
income from fishery		9.6	90.4	3.7
commission from land trade	50.0	50.0		0.2
other	7.4	3.7	88.9	2.8
Total	19.6	10.6	69.8	100.0

Table A3.2 Reported change in cash income compared one year ago by types of cash income groups

Source of cash income	change income in the past 1 Year			total share
	no change	decreased	increased	
sale of paddy	33.3%	29.7%	36.9%	9.0
sale of vegetables and/or fruits	27.0%	37.8%	35.1%	3.0
sale of other agric.produce	18.8%	34.8%	46.4%	3.8
agricultural wage labour	16.7%	52.1%	31.3%	6.3
work in garment factory	34.0%	45.7%	20.2%	4.1
work in construction	22.2%	42.1%	35.7%	5.8
self-employed	29.8%	41.1%	29.2%	34.1
other work for other	29.8%	41.6%	28.6%	7.0
government, NGO, company	46.3%	28.0%	25.6%	10.4
sale of handicrafts	34.6%	26.9%	38.5%	1.0
sale of animal/animal products	25.4%	43.3%	31.3%	3.1
pension/allowances		100.0%		0.0
remittances from overseas	50.0%		50.0%	0.1
remittances in country	77.8%	11.1%	11.1%	0.6
income from forests	28.9%	32.9%	38.2%	5.0
income from fishery	21.5%	56.9%	21.5%	3.7
commission from land trade	33.3%	.0%	66.7%	0.2
other	33.8%	42.3%	23.9%	2.8
Total	29.2%	39.6%	31.2%	100.0
Source of cash income	income decline by strata			total share
	Phnom Penh	other urban	rural	
sale of paddy	2	2	97	9.0
sale of vegetables and/or fruits	8	8	85	3.0
sale of other agric.produce		8	92	3.8
agricultural wage labour	4	3	93	6.3
work in garment factory	34	10	56	4.1
work in construction	7	11	82	5.8
self-employed	34	13	54	34.1
other work for other	4	12	84	7.0
government, NGO, company	53	23	24	10.4
sale of handicrafts			100	1.0
sale of animal/animal products	3	6	90	3.1
remittances in country	33		67	0.6
income from forests			100	5.0
income from fishery		7	93	3.7
commission from land trade		100		0.2
other	8	4	88	2.8
Total	20	10	71	100.0

Table A5.2a: Reported Change in Expenditure in Wet Season Rice Production in Plain

Region	no change	decreased	increased	Total
	Food			
Phnom Penh	1	1	98	100
Plains	3	8	89	100
Tonle Sap	4	0	96	100
Plateau	4	2	95	100
Coastal	2	1	96	100
Total	3	4	93	100

	Education			
Phnom Penh	44	1	55	100
Plains	55	0	45	100
Tonle Sap	60		40	100
Plateau	79	0	20	100
Coastal	52	2	46	100
Total	58	0	41	100
	.Fuel for cooking			
Phnom Penh	21	1	77	100
Plains	71	0	29	100
Tonle Sap	60	0	40	100
Plateau	86	1	14	100
Coastal	51	1	49	100
Total	64	0	35	100
	Electricity or battery for lighting			
Phnom Penh	63	2	35	100
Plains	34	2	64	100
Tonle Sap	15	3	82	100
Plateau	29	2	69	100
Coastal	23	1	76	100
Total	29	2	68	100
	Health treatment (disease treatment)			
Phnom Penh	58	3	39	100
Plains	17	5	78	100
Tonle Sap	24	0	75	100
Plateau	38	2	61	100
Coastal	21	1	79	100
Total	25	3	72	100
	Clothing			
Phnom Penh	70	8	23	100
Plains	44	2	54	100
Tonle Sap	27	0	73	100
Plateau	48	2	50	100
Coastal	35	3	62	100
Total	41	2	57	100
	Transportation (not for business)			
Phnom Penh	38	13	49	100
Plains	23	3	74	100
Tonle Sap	13	0	87	100
Plateau	18	1	82	100
Coastal	19	1	79	100
Total	20	2	77	100

Table A5.2b: Wet Season Rice Production in Plain Region

	< 0.5		0.5 - 1		1 - 3		> 3		Total	
	n	mean	n	mean	n	mean	n	mean	n	mean
plot size (ha)	464	0.3	107	0.9	22	1.7	7	13.0	600	0.6
harvest (kg)	436	614	99	1,327	20	3,079	7	8,433	561	918
yield per ha	436	2,682	99	1,589	20	2,086	7	900	561	2,448
seed (moeun riel)	265	0.3	85	1.9	9	0.0	4	75.0	364	2
plowing (moeun riel)	335	3.7	90	9.4	13	11.0	4	11.5	443	5
transplanting (moeun riel)	346	4.2	96	10.0	15	22.4	4	60.0	462	7
pumping (moeun riel)	311	3.0	90	2.6	13	13.7	4	86.5	418	4
harvesting (moeun riel)	315	3.6	101	8.2	15	25.1	4	80.0	436	6
threshing (moeun riel)	359	2.1	101	4.2	18	6.9	4	19.0	482	3
transporting (moeun riel)	296	1.5	92	1.4	13	4.7	4	7.5	405	2
other (moeun riel)	381	6.1	94	9.1	15	37.3	4	17.5	495	8
Total cost (moeun riel)	429	19.4	101	43.9	18	103.1	4	353.0	552	29
total cost/ plot (USD)		49		110		258		883		73
revenue/ plot (USD)		138		299		693		1,898		206
net profit/ plot (USD)		90		189		435		1,015		134
total cost/ hectare (USD)		184		126		154		68		130
revenue/ hectare (USD)		523		344		415		146		367
net profit/ hectare (USD)		340		217		260		78		237

Table A5.2c: Wet Season Rice Production in Tonle Sap Region

	< 0.5		0.5 - 1		1 - 3		> 3		Total	
	n	mean	n	mean	n	mean	n	mean	n	mean
plot size (ha)	258	0.3	192	0.9	133	2.1	20	7.7	603	1.2
harvest (kg)	247	576	173	1,140	121	2,278	20	4,600	561	1,259
yield per ha	247	1,844	173	1,232	121	1,104	20	842	561	1,461
seed (moeun riel)	94	4	55	6	35	10	3	0	187	6
plowing (moeun riel)	122	2	106	9	88	22	16	31	332	11
transplanting (moeun riel)	101	3	67	5	38	19	9	31	214	8
pumping (moeun riel)	114	3	51	3	34	5	4	2	203	3
harvesting (moeun riel)	111	2	104	9	70	24	13	60	297	12
threshing (moeun riel)	172	3	138	4	105	8	14	17	429	5
transporting (moeun riel)	102	1	72	2	57	5	11	8	243	3
other (moeun riel)	149	5	91	8	67	19	10	35	316	10
Total cost (moeun riel)	224	15	175	29	125	67	18	140	542	36
total cost/ plot (USD)		36		73		167		349		89
revenue/ plot (USD)		130		257		512		1,035		283
net profit/ plot (USD)		93		183		346		686		194
total cost/ hectare (USD)		107		79		78		45		76
revenue/ hectare (USD)		380		275		238		134		242
net profit/ hectare (USD)		273		197		161		89		166

Table A5.2d: Wet Season Rice Production in Plateau Area

	< 0.5		0.5 - 1		1 - 3		> 3		Total	
	n	mean	n	mean	n	mean	n	mean	n	mean
plot size (ha)	115	0.3	93	0.9	53	2.1	7	6.5	268	1.0
harvest (kg)	110	609	89	1,217	52	1,964	5	2,163	257	1,124
yield per ha	110	2,168	89	1,448	52	938	5	453	256	1,636
seed (moeun riel)	35	0	36	0	21	0	2	0	93	0
plowing (moeun riel)	50	3	45	8	34	13	4	22	133	8
transplanting (moeun riel)	52	3	50	5	28	7	2	9	132	5
pumping (moeun riel)	41	2	37	1	22	2	2	0	102	2
harvesting (moeun riel)	52	3	45	4	32	9	2	9	131	5
threshing (moeun riel)	42	2	44	4	39	6	4	8	130	4
transporting (moeun riel)	37	1	37	1	27	3	2	5	104	1
other (moeun riel)	64	5	43	3	27	8	3	10	137	5
Total cost (moeun riel)	89	11	62	20	49	32	5	41	205	19
total cost/ plot (USD)		28		49		79		103		49
revenue/ plot (USD)		137		274		442		487		253
net profit/ plot (USD)		109		225		363		384		204
total cost/ hectare (USD)		88		56		38		16		47
revenue/ hectare (USD)		422		315		210		75		247
net profit/ hectare (USD)		335		259		172		59		200

Table A5.2e: Wet Season Rice Production in Coastal Region

	< 0.5		0.5 - 1		1 - 3		> 3		Total	
	n	mean	n	mean	n	mean	n	mean	n	mean
plot size (ha)	110	0.3	23	0.8	12	1.8	2	4.7	147	0.5
harvest (kg)	107	478	23	1,179	11	2,830	2	3,160	143	810
yield per ha	107	2,117	23	1,386	11	1,596	2	718	143	1,942
seed (moeun riel)	57	1	15	1	9	0	1	3	82	1
plowing (moeun riel)	60	2	16	4	9	5	2	16	86	3
transplanting (moeun riel)	61	2	16	8	9	15	2	56	88	5
pumping (moeun riel)	55	1	15	2	9	1	1	2	80	1
harvesting (moeun riel)	57	2	16	7	9	11	2	52	84	5
threshing (moeun riel)	55	1	16	2	9	6	2	10	81	2
transporting (moeun riel)	54	0	15	1	9	2	1	0	79	1
other (moeun riel)	73	5	17	5	10	26	2	30	101	8
Total cost (moeun riel)	90	13	22	27	11	68	2	168	124	22
total cost/ plot (USD)		31		68		170		419		55
revenue/ plot (USD)		108		265		637		711		182
net profit/ plot (USD)		76		197		467		292		128
total cost/ hectare (USD)		122		80		93		90		103
revenue/ hectare (USD)		417		313		350		152		344
net profit/ hectare (USD)		296		233		256		62		241

Table A5.3a: Dry Season Rice Production in Plain Region

	< 0.5		0.5 - 1		1 - 3		> 3		Total	
	n	mean	n	mean	n	mean	n	mean	n	mean
plot size (ha)	166	0.3	94	0.8	55	1.9	11	6.7	326	0.9
harvest (kg)	160	1,295	94	3,220	55	6,967	11	17,040	320	3,373
yield per ha	160	4,453	94	3,822	55	3,530	11	2,541	320	4,044
seed (moeun riel)	90	7	66	16	37	28	11	194	204	24
plowing (moeun riel)	138	6	72	13	39	22	11	50	261	12
transplanting (moeun riel)	99	5	61	12	33	23	11	49	204	13
pumping (moeun riel)	151	14	88	30	53	59	11	244	302	35
harvesting (moeun riel)	142	6	79	15	53	41	11	208	285	23
threshing (moeun riel)	151	5	85	12	53	20	11	123	300	14
transporting (moeun riel)	136	4	68	6	31	7	11	67	245	8
other (moeun riel)	129	10	81	38	44	148	11	149	265	47
Total cost (moeun riel)	158	47	92	127	53	299	11	1,084	313	149
total cost/ plot (USD)		118		318		748		2,710		373
revenue/ plot (USD)		291		725		1,568		3,834		759
net profit/ plot (USD)		173		407		820		1,124		386
total cost/ hectare (USD)		401		379		388		404		397
revenue/ hectare (USD)		987		865		814		572		807
net profit/ hectare (USD)		586		486		426		168		410

Table A5.3b: Dry Season Rice Production in Tonle Sap Region

	< 0.5		0.5 - 1		1 - 3		> 3		Total	
	n	mean	n	mean	n	mean	n	mean	n	mean
plot size (ha)	27	0.4	24	0.9	14	1.6	3	8.5	68	1.2
harvest (kg)	27	1,147	24	2,386	14	3,065	3	14,000	68	2,521
yield per ha	27	2,843	24	2,688	14	2,000	3	1,611	68	2,561
seed (moeun riel)	16	12	14	20	9	43	1	20	40	22
plowing (moeun riel)	20	8	20	15	10	9	1	20	51	11
transplanting (moeun riel)	7	8	11	7	7	0	0	.	26	5
pumping (moeun riel)	11	15	13	15	9	37	1	15	34	20
harvesting (moeun riel)	14	12	16	22	10	29	1	60	41	21
threshing (moeun riel)	23	5	17	9	13	11	1	30	54	8
transporting (moeun riel)	18	4	14	6	11	6	1	40	45	6
other (moeun riel)	14	5	16	6	10	8	0	.	40	6
Total cost (moeun riel)	27	38	24	63	14	104	3	343	68	73
total cost/ plot (USD)		96		157		261		856		184
revenue/ plot (USD)		258		537		690		3,150		567
net profit/ plot (USD)		163		380		429		2,294		384
total cost/ hectare (USD)		224		173		159		101		155
revenue/ hectare (USD)		605		592		421		371		478
net profit/ hectare (USD)		381		418		261		270		323

Table A5.3c: Dry Season Rice Production in Plateau Region

	< 0.5		0.5 - 1		1 - 3		Total	
	n	mean	n	mean	n	mean	n	mean
plot size (ha)	5	0.3	6	0.8	8	1.8	19	1.1
harvest (kg)	4	754	6	883	8	2,515	18	1,584
yield per ha	4	2,857	6	1,081	8	1,463	18	1,681
seed (moeun riel)	1	2	4	8	4	11	9	9
plowing (moeun riel)	1	2	5	13	6	15	11	13
transplanting (moeun riel)	2	5	4	13	7	27	14	19
pumping (moeun riel)	2	18	6	25	7	31	16	27
harvesting (moeun riel)	2	10	4	18	7	27	14	22
threshing (moeun riel)	2	4	5	6	7	11	15	8
transporting (moeun riel)	1	2	4	2	7	4	11	3
other (moeun riel)	0	.	2	0	2	0	4	0
Total cost (moeun riel)	2	39	6	69	8	110	16	85
total cost/ plot (USD)		98		173		275		212
revenue/ plot (USD)		170		199		566		356
net profit/ plot (USD)		72		26		291		144
total cost/ hectare (USD)		326		210		152		191
revenue/ hectare (USD)		566		242		313		321
net profit/ hectare (USD)		240		32		161		130

ANNEX II: Household Survey Questionnaire

CONSENT:
We are conducting a survey of the effects of high food price of families in Cambodia. We would like to ask you some questions about your family. The interview usually takes 30 minutes to complete. Any information that you provide will be kept strictly confidential and will not be shown to other people. This is voluntary and you can choose not to answer any or all of the questions if you want. However, we hope that you will participate since your views are important. Do you have any questions? May we begin now?

1. Questionnaire number in village……..(Numbered by team leader prior to the interview)
2. Name of province: Code: |__|__| Name:……..
3. District: Code: |__|__| Name:……..
4. Commune: Code: |__|__| Name:……..
5. Village: Code: |__|__| Name:……..
6. Sex of Interviewee: 1= Male 2= Female |__| Name of the interviewee: …….
7. Age of interviewee: |__|__| years
8. Relationship of interviewee to household head: (Code below) |__|

   1= head of household, 2= spouse, 3= child, 4=parent, 5= other……
9. Attitude of interviewee: 1= Cooperative/pleasant 2= Uncooperative/unpleasant 3= too busy 4= Very slow |__|
10. Condition of interview: 1= Very good 2= Very disturbed by other people, 3= Raining and difficult |__|
11. Date: |__|__| May/June 2008
12. Duration: |__|__| minutes (started at…… finished at……)
13. Name of interviewer: Code: |__|__| Name:……..
14. Name of the team leader: Code: |__|__| Name:……..

Note for the questionnaire

……

I – HOUSEHOLD COMPOSITION, ENROLMENT AT SCHOOL AND HOUSING

1.0. Name of household head: …… Name of spouse: …….. (for possible future resurvey)
1.1. Is the head of household male or female? 1= male 2 = female |___|

How many people are currently living in the household? Exclude those who have never visited house in the past 6 months. *(enter number of people)*	Male	Female
1.2. Total		
1.3. Adolescents 13 – 17 years		
1.4. Adults 18-59 years		
1.5. Elderly 60+ years		
1.6. Children under 6 years		
1.7. Children aged 6 to 12 years (primary school age)		
1.8. Children aged 6 to 12 years not attending school now		
1.9. Children aged 6 to 12 years not attending school 6 months ago (if no skip to 1.12)		
1.10. What is the 1st most important reason why are they not attending school now? *(Enter one appropriate code below)*		
1.11. What is the 2nd most important reason why are they not attending school now? *(Enter one appropriate code below)*		

Codes for 1.10 and 1.11	
1= don't want to / not interested	8= cannot afford transport
2= not good at school	9= must help with household chores
3=disability/illness	10= must help earn households income
4=school too far away/safety concern	11= lack of food/weakness of the child
5= no teacher / no supply / poor quality teaching	12 = no more school meals
6= poor school facilities (poor buildings, no toilets etc.)	13=other reason (specify) ……..
7= cannot afford school fees, uniforms, books etc.	14=don't know / can't say

1.12. Observe and note the type of dwelling	1= private house mostly in durable material (brick, cement, wooden house with tile roof) 2= Private house with tin roof 3= Private house/hut mostly in non-durable material (wood, herbs) 4= flat in multi-storey building 5= room(s) in a shared house or shared flat 6= room(s) in a collective centre 7= plastic sheeting 8= other (specify) ……..	|__|

II – Livestock

2.1. Do you raise any cows or buffaloes? 1 = No *(go to 2.3)* 2 = Yes 2.1 |__|

2.2. How many cows or buffaloes do you currently own? 2.2 |__|

2.3. Have you sold any cows or buffaloes in the past 6 months? 1 = No *(go to 2.6)* 2= Yes 2.3 |__|

2.4 What was the main reason for selling cow or buffalo? 2.5 |__|
1= Need for money 2= Old age/sickness 3= Infertility
4= Lack of water 5= Lack of fodder/animal feed/pasture 6= Other reason (*specify ……)*

2.5. Has your selling price changed this year compared to last year at this season? 2.4 |__|
1= No change 2= Decreased 3= Increased

2.6. Do you want to raise more cows or buffaloes? 1 = No *(go to 2.9)* 2 = Yes 2.6 |__|

2.7. Do you think you will be able to do it within this year? 1 = No 2 = Yes *(go to 2.9)* 2.7 |__|

2.8. If you will not be able to do it within this year, what is the main reason? 2.8 |__|
1= Not enough grazing ground 2= Not enough money to buy more cows/buffaloes
3= No labour to look after them 4= No security to keep them
5= Other (specify……)

2.9. Do you raise pigs? 1 = No *(go to 2.11)* 2 = Yes 2.9 |__|

2.10. How many pigs do you currently own? 2.10 |__|

2.11. Have you sold any pigs in the past 6 months? 1 = No *(go to 2.14)* 2 = Yes 2.11 |__|

2.12. What was the main reason for selling them? 2.13 |__|
1= It was time to sell them as normal 2= Need for money
3= Lack of fodder/animal feed/pasture 4= Other reason (*specify ……)*

2.13. Has your selling price changed this year compared to last year at this season? 2.12 |__|
1= No change 2= Decreased 3= Increased

2.14. Do you want to raise more pigs? 1 = No *(go to 2.17)* 2 = Yes 2.14 |__|

2.15. Do you think you will be able to do it within this year? 1 = No 2 = Yes *(go to 2.17)* 2.15 |__|

2.16. If you will not be able to do it within this year, what is the main reason? 2.16 |__|
1= Not enough money to invest 2= No family labour to help
3= Difficult to collect animal feed 4= Other (specify……)

2.17. Do you raise poultry? 1 = No *(go to 2.19)* 2 = Yes 2.17 |__|

2.18. How many poultry do you currently own? 2.18 |__|

2.19. Have you sold any poultry in the past 6 months? 1 = No *(go to 2.22)* 2 = Yes 2.19 |__|

2.20. What was the main reason for selling them? 2.21 |__|
1= It was time to sell them as normal 2= Need for money
3= Lack of fodder/animal feed/pasture 4= Other reason (*specify ……)*

2.21. Has your selling price changed this year compared to last year at this season? 2.20 |__|
1= No change 2= Decreased 3= Increased

2.22. Do you want to raise more poultry? 1 = No *(go to 2.25)* 2 = Yes 2.22 |__|

2.23. Do you think you will be able to do it within this year? 1 = No 2 = Yes *(go to 2.25)* 2.23 |__|

2.24. If you will not be able to do it within this year, what is the main reason? 2.24 |__|
1= Not enough money to invest 2= No family labour to help 3= Difficult to collect animal feed 4= Other *(specify……)*

2.25. Do you raise fish? 1 = No *(go to 2.27)* 2 = Yes 2.25 |__|

2.26. Have you sold any fish in the past 6 months? 1 = No *(go to 2.28)* 2 = Yes 2.26 |__|

2.27. Has your selling price changed this year compared to last year at this season? 2.27 |__|
1= No change 2= Decreased 3= Increased

2.28. Do you want to raise more fish? 1 = No *(go to 3.1)* 2 = Yes 2.28 |__|

2.29. Do you think you will be able to do it within this year? 1 = No 2 = Yes *(go to 3.1)* 2.29 |__|

2.30. If you will not be able to do it within this year, what is the main reason? 2.30 |__|
1= Not enough money to invest 2= No family labour to help
3= Difficult to collect fish feed 4= Other *(specify……)*

III – INCOME SOURCES, KINSHIP SUPPORT AND ASSETS

	Currently	December 2007
3.1. How many household members earn an income in cash?	|__|	|__|
3.2. How many sources of cash income do you have to sustain your family?	|__|	|__|

		First source	Second source
3.3. What are your two main sources of cash income in past month?	1= Sale of paddy; 2= Sale of vegetables and/or fruits; 3= Sale of other agric. produce; 4= Agricultural wage labour; 5= Work in garment factory; 6= Work in construction; 7= Self-employed; 8= Other work for other; 9= Government, NGO, company; 10= Sale of handicrafts; 11= Sale of animal/ animal products; 12= Pension, allowances; 13 = Remittances in country; 14= Remittances from overseas; 15 = Income from forests; 16= Income from fishery; 17 = Commission from land trade; 18= Other (specify) ……	|__|	|__|

3.4	Has your income changed in the past 6 months?	1= No change 2= Decreased 3= Increased	|__|
3.5	How do you compare your income this month to that a year ago (May 2007)?	1= No change 2= Decreased 3= Increased	|__|
3.6	When you need food or cash, can you ask for support from relatives living within Cambodia?	1= No 2= Yes	|__|
3.7	When you need food or cash, can you ask for support from relatives living outside the country?	1= No 2= Yes	|__|
3.8.	Have you received such support since December 2007?	1= No 2= Yes	|__|
3.9	Yourself, are you supporting relatives with food or cash at the moment?	1= No 2= Yes	|__|

If your household have worked for others in the past one year, what were the daily wage rates earned? (If not relevant, go to 3.16)

	Wet-season 2007 (July-December)	Dry-season 2008 (Jan-April)	May-June 2008
3.10. Transplanting rice	..... riels/day	..... riels/day	..... riels/day
3.11. Harvesting rice	..... riels/day	..... riels/day	..... riels/day
3.12. Weeding	..... riels/day	..... riels/day	..... riels/day
3.13. Transplanting other crops (corn, beans, cashew, rubber, banana)	..... riels/day	..... riels/day	..... riels/day
3.14. Clearing bushes, trees…. for land possession	..... riels/day	..... riels/day	..... riels/day
3.15. Construction	..... riels/day	..... riels/day	..... riels/day

If you have hired others to work on your farm or land, what were the daily wage rates given? (If not relevant, go to 3.22)

	Wet-season 2007 (July-December)	Dry-season 2008 (Jan-April)	May-June 2008
3.16. Transplanting rice	..... riels/day	..... riels/day	..... riels/day
3.17. Harvesting rice	..... riels/day	..... riels/day	..... riels/day
3.18. Weeding	..... riels/day	..... riels/day	..... riels/day
3.19. Transplanting other crops (corn, beans, cashew, rubber, banana)	..... riels/day	..... riels/day	..... riels/day
3.20. Clearing bushes, trees…. for land possession	..... riels/day	..... riels/day	..... riels/day
3.21. Construction	..... riels/day	..... riels/day	..... riels/day

3.22-3.53. Household Assets

Ask row by row

Codes for questions 3.22 - 3.51:
1 = No
2 = Yes

	Do you have currently:		Did you buy this in the past 6 months?	
Radio	3.22	|__|	3.23	|__|
Television	3.24	|__|	3.25	|__|
Cell phone	3.26	|__|	3.27	|__|
Bicycle	3.28	|__|	3.29	|__|
Motorbike	3.30	|__|	3.31	|__|
Car, taxi	3.32	|__|	3.33	|__|
Sewing machine	3.34	|__|	3.35	|__|
Battery for lighting	3.36	|__|	3.37	|__|
Cart	3.38	|__|	3.39	|__|
Plough	3.40	|__|	3.41	|__|
Hand tractor *(kou yon)*	3.42	|__|	3.43	|__|
Tractor	3.44	|__|	3.45	|__|
Thresher	3.46	|__|	3.47	|__|
Rice mill	3.40	|__|	3.49	|__|
Water pump	3.50	|__|	3.51	|__|
Cash or other savings (e.g. jewellery)	3.52	|__|	3.53	|__|

IV – EXPENDITURES AND DEBTS

4.1	Have your expenditures changed since December 2007?	1= No change / 2= Decreased 3= Increased			|__| ***If 1, go to 4.8***
Which types of expenditures have changed?		1= No change / 2= Decreased / 3= Increased			
4.2	Food (overall)	|__|	4.3	Education (school fees, other costs)	|__|
4.4	Fuel for cooking (gas, firewood, charcoal…)	|__|	4.5	Health care (vaccine…)	|__|
4.6	Electricity or battery for lighting	|__|	4.7	Health treatment (disease treatment)	|__|
4.8	Clothing	|__|	4.9	Transportation (not for business)	|__|
4.10	Do you have any debt or credit to reimburse at the moment?	1= No 2= Yes			|___| → ***If No, go to 5.1***
4.11	Have you have contracted new debts or credit since March 2008?				|___| → ***If No, go to 5.1***
4.12	What was the 1st main reason for new debts or credit?	1= To buy food 3= To pay school, education costs 5= To expand business 7= To land 9= To buy clothes		2= To cover health expenses 4= To buy agricultural inputs (seed, tools...) 6= To buy animals or animal feed 8= To build house 10= To pay for social contributions (wedding….)	|__|
4.13	What was the 2nd main reason for new debts or credit? (Use code above)				|__|
4,14	In which amount of time do you think you will be able to reimburse your old debts or credit? (Don't know (enter 0)			months	|__|__|
4.15	In which amount of time do you think you will be able to reimburse your new debts or credit? (Don't know (enter 0)			months	|__|__|

V– FOOD CONSUMPTION [THIS SECTION IS VERY IMPORTANT]

Could you please tell me how many times/days in the Past Week (counting from yesterday backwards) your household has eaten the following foods and what the source was ***(write 0 for items not eaten over the last 7 days).***

Essential food item	Number of days eaten last 7 days	Food Source 1= Own production 2= Fishing, hunting, gathering 3= Purchase 4= Traded goods or services 5= Borrowed 6= Exchange of labor for food 7= Exchange of items for food 8= Received as gift 9= Food aid 10= Other (specify)_____	
		Main Source	Second Source
	(a)	(b)	(c)
5.1. Rice	|___|	|___|	|___|
5.2. Maize	|___|	|___|	|___|
5.3. Bread	|___|	|___|	|___|
5.4. Cassava and yam	|___|	|___|	|___|
5.5. Sweet potato and potato	|___|	|___|	|___|
5.6. Beans/Groundnut/other pulses	|___|	|___|	|___|
5.7. Fish	|___|	|___|	|___|
5.8. Other aquatic animals (frogs, crabs, snails, shrimps, etc)	|___|	|___|	|___|
5.9. Meat (beef, pork, chicken)	|___|	|___|	|___|
5.10 Wild meat	|___|	|___|	|___|
5.11. Eggs	|___|	|___|	|___|
5.12. Vegetable (including leafy)	|___|	|___|	|___|
5.13. Fruits	|___|	|___|	|___|
5.14. Sugar and sweets	|___|	|___|	|___|
5.15. Vegetable oil/animal fat	|___|	|___|	|___|
5.16. milk products	|___|	|___|	|___|
5.17. Prahok	|___|	|___|	|___|
5.18. condiments (Soya sauce, fish sauce etc.)	|___|	|___|	|___|

VI. FOOD AND CROP STOCK [THIS SECTION IS VERY IMPORTANT]

Stocks of Paddy and Milled Rice and Other Crops (if no, skip to 6.11)

What is the amount of crop in storage in household?	Quantity	Unit (sack, basket, kg,...)	Kg/unit	kg
	a	b	c	d = a x c
6.1. Paddy rice	.....	.....	..... kg	..... kg
6.2. Milled rice	.....	.....	..... kg	..... Kg
6.3. Soybean	.....	.....	..... kg	..... Kg
6.4. Mung bean	.....	.....	..... kg	..... Kg
6.5. Sesame seeds	.....	.....	..... kg	..... Kg
6.6. Peanuts	.....	.....	..... kg	..... Kg
6.7. Maize	.....	.....	..... kg	..... Kg
6.8. Cashew	.....	.....	..... kg	..... Kg
6.9. Cassava	.....	.....	..... kg	..... Kg
6.9. Sweet potato	.....	.....	..... kg	..... Kg
6.10. Other crop do you have in stock now? (Specify.....)	.....	.....	..... kg	..... kg

6.11. How many months more before your next paddy harvest takes place? ..... months

6.12. How many days more can your household rely on the paddy and/milled rice in storage for own rice consumption? ..... days

6.13. If you don't have enough paddy or milled rice in stock until the next harvest, is it a threat to you household food security? 1 = No 2 = Yes |__|

VII – COPING STRATEGIES AND ASSISTANCE [THIS IS VERY IMPORTANT.]

COPING STRATEGIES

7.1. DURING THE PAST MONTH, HAVE THERE BEEN TIMES WHEN YOU DID NOT HAVE ENOUGH MONEY TO BUY FOOD OR COVER OTHER ESSENTIAL EXPENDITURES (HEALTH, COOKING FUEL, SCHOOL ETC.)? 1 = No 2 = Yes |__|

7.2. DURING MAY 2007, WERE THERE TIMES WHEN YOU DID NOT HAVE ENOUGH MONEY TO BUY FOOD OR COVER OTHER ESSENTIAL EXPENDITURES (HEALTH, COOKING FUEL, SCHOOL ETC.)? 1 = No 2 = Yes |__|

HAS ANYONE IN YOUR HOUSEHOLD DONE ANY OF THESE THINGS: ***Ask column by column***	During the PAST 30 DAYS 1 = every day; 2 = pretty often; 3 = once a while; 4 = hardly at all; 5 = never;	
RELY ON LESS PREFERRED AND LESS EXPENSIVE FOOD	7.3	|__|
BORROW FOOD, OR RELY ON HELP FROM FRIENDS OR RELATIVES	7.4	|__|
PURCHASE FOOD ON CREDIT, INCUR DEBTS	7.5	|__|
REDUCE FOOD EATEN IN A DAY	7.6	|__|
RESTRICT CONSUMPTION BY ADULTS IN ORDER FOR SMALL CHILDREN TO EAT	7.7	|__|
MOTHERS AND / OR ELDER SISTERS EAT LESS THAN OTHER H.H. MEMBERS	7.8	|__|
MOTHERS AND / OR ELDER SISTERS SKIP MORE MEALS THAN OTHER H.H. MEMBERS	7.9	|__|
CONSUME SEED STOCKS HELD FOR THE NEXT SEASON	7.10	|__|
DECREASE EXPENDITURES FOR FERTILIZER, PESTICIDE, FODDER, ANIMAL FEED, VET. CARE....	7.11	|__|
SELL DOMESTIC ASSETS (RADIO, FURNITURE, CARPET...)	7.12	|__|
SELL PRODUCTIVE ASSETS (FARM IMPLEMENTS, SEWING MACHINE, MOTORBIKE...)	7.13	|__|
SELL LAND	7.14	|__|
SELL JEWELLERY	7.15	|__|
SELL MORE ANIMALS THAN USUAL	7.16	|__|
DECREASE EXPENDITURES FOR HEALTH CARE	7.17	|__|
TAKE CHILDREN OUT OF SCHOOL	7.18	|__|
SEEK ALTERNATIVE OR ADDITIONAL JOBS	7.19	|__|
INCREASE THE NUMBER OF MEMBERS OUT-MIGRATING FOR WORK AND/OR FOOD	7.20	|__|
INCREASE EXPLOITATION OF COMMON PROPERTY RESOURCES (FISHING, FORAGING...)	7.21	|__|
PLANT MORE/NEW CROPS TO COPE WITH HIGH FOOD PRICES	7.22	|__|

7.23. At present, are there any household members working elsewhere as migrants? 1= N0 (Go to 7.29) 2= Yes |__|
If there are household members migrating for work, ask for details as follows:

	Male or female (1=male, 2=female)	How old are they?	Where did they do? 1= Rural area in Cambodia 2= Urban area in Cambodia 3= Rural area in Thailand 4= Urban area in Thailand 5= Other country ……	What was the main reason? 1= Seasonal migration 2= To cope with high food prices 3= It is time to migrate and find income 4= Other reason……
	(a)	(b)	(c)	(d)
7.24. Household member 1	|__|	…… years	|__|	|__|
7.25. Household member 2	|__|	…… Years	|__|	|__|
7.26. Household member 3	|__|	…… Years	|__|	|__|
7.27. Household member 4	|__|	…… years	|__|	|__|
7.28. Household member 5	|__|	…… years	|__|	|__|

SHOCK DEFINITION

7.29 IN THE PAST 6 MOTHS, HAS YOUR HOUSEHOLD FACED ANY MAIN DIFFICULTIES? 1 = NO (GO TO 7.33) 2 = YES |__|

7.30 - 7.32 WHAT HAVE BEEN YOUR MAIN DIFFICULTIES IN THE PAST 6 MONTHS? DO NOT LIST, LEAVE THE HOUSEHOLD ANSWER SPONTANEOUSLY. ONCE DONE, ASK THE HOUSEHOLD TO RANK THE 3 MOST IMPORTANT ONES	1=Loss employment/reduced salary 2= Sickness/health expenditures 3= Death household member/funerals 4= High food prices 5= High fuel/transportation prices 6= Payment house rental 7= Debt to reimburse 8= Irregular/unsafe drinking water 9= Electricity/gas cuts *10*= ***INSECURITY/THEFTS*** 11= Bad climate (poor garden/harvest) 12= Other shock	*1ST DIFFICULTY*		2nd difficulty		3rd difficulty	
		7.30	|__|	***7.31***	|__|	7.32	|__|

ASSISTANCE

7.33. Has your household received any assistance in the past three months? 0= No (Go to 7.35) 1= Yes
|__|

7.34. If yes, what kind of assistance? (Enter 1 or 2 in the table below.)

Specifically ask for each assistance below		1= No / 2= Yes
1	Food for school children (eaten at school or take-home)	|__|
2	Food for young/malnourished children or for pregnant/lactating women	|__|
3	Free food ration for the household	|__|
4	Food-for-work	|__|
5	Cash transfers from social assistance programme (government, private, NGO)	|__|
6	Free health care/drugs, from an NGO programme	|__|
7	Micro-credit (NGO or other agency programme)	|__|
8	Seeds, fertilizer	|__|
9	Agricultural tools	|__|
10	Fodder, animal feed	|__|
11	Veterinary services	|__|
12	Other assistance (*specify*) _____	|__|

If you were to receive any of the above assistance to cope better with the increasing food prices this year, ...

7.35. which is the 1st most preferred one? (enter code 1-12 above) |__|
7.36. which is the 2nd most preferred one? (enter code 1-12 above) |__|
7.37 which is the 3rd most preferred one? (enter code 1-12 above) |__|

VIII. Agricultural land of the household (to assess potential of increasing food production)

8.1. How many plots of agricultural land does your household possess? ……plots ***If zero, go to 8.118***

Item	Plot 1
8.2. Area of each plot *(record in units given rai, ha, etc. then convert it to "ares"*	.....are
8.3 What kind of land is it by its main use? 1= Wet season 2= Dry season 3= Both wet and dry season 4=Chamkar 5= Farm land under perrenial crops (cashew, mango) 6= Land for raising livestock 7= Other (specify……)	|__|
8.4. How did you obtain the plot? 1= allocated by the authority 2=clear the forest 3= bought 4= inherited / gift from relative	|__|
8.5. What kind of document do you have for this plot? 1= Application receipt 2= Land title (Slab morn type) 3= Land tile (new type) 4= Other documents…….. 5= No document	|__|
8.6. Is the plot in conflict currently? 1 = No (Go to 8.9) 2=Yes	|__|
8.7. If the plot is in conflict, who is in conflict with you? 1= Relatives 2= Authorities in commune 3= Authorities from provincial town or Phnom Penh 4= Business 5= Other……	|__|
8.8. If in conflict, does it reduce production? 1= No 2= Yes	|__|
8.9. If you sold it now, how much would you get? (4000 Riel/US$)	……US$
8.10 Do you plan to sell this plot in the next 6 months? 1 = No 2=Yes	|__|
8.11 Last season, did you cultivate this plot yourself? 1 = Cultivate 2 = Let someone else cultivate for free *(go to next plot)* 3 = Left idle *(go to next plot)* 4 = Rent out / sharecrop to someone else	|__|
8.12 If you rent it out last season or last year, how much did you get? (meoun riel)	……meoun riel
8.13 What did you grow on this plot in the last season? 1 = Rice, wet season; 2 = Rice, dry season; 3 = Maize; 4 = Cassava; 5 = Vegetable (specify) 6 = Permanent crops eg mango, cashew (specify); 7 = don't know / can't say; 8 = nothing (left uncultivated); 9 = Grazing livestock; 10 = other (specify)	|__|
8.14 How much did you harvest? *Record in units given (kg, tang, tau...) then convert to kg.*	……kg
8.15 Expenditure on seeds	……meoun riel
8.16 Expenditure on land preparation	……meoun riel
8.17 Expenditure on transplanting	……meoun riel
8.18 Expenditure on pumping	……meoun riel
8.19 Expenditure on harvesting	……meoun riel
8.20 Expenditure on threshing	……meoun riel
8.21 Expenditure on transporting to house or storehouse	……meoun riel
8.22 Expenditure on others	……meoun riel
8.23 Total expenditures in the last season (add up from items all above or write down the lumpsum expenditure if s/he donot remember detailed expenditures)	……meoun riel
8.25 What is the 1st constraint for you to increase production on this plot? (Enter one of the codes below)	|__|
8.26 What is the 2nd constraint for you to increase production on this plot? (Enter one of the codes below)	|__|
8.27 What is the 3rd constraint for you to increase production on this plot? (Enter one of the codes below)	|__|

Codes for 8.17-8.19

1 = Not enough household labour / draft animals
2 = Not enough machinery
3 = Not enough time / have other more profitable occupation
4 = Not possible to irrigate
5 = Not enough money for seeds
6 = Not enough money for fertiliser
7 = Not enough money for pesticides
8 = Not enough money to hire labour / ploughing
9 = Not enough money for irrigation
10 = Cannot obtain credit (e.g. no collateral)
11 = Can only obtain collateral at high interest rates / high risk
12 = Lack of transport
13 = Lack of accessibility to market
14 = Do not have knowledge / training
15 = Land conflict / fear of land conflict

8.28 Next season, what will you do with the plot? 1 = Cultivate it 2 = Rent it out 3 = Sharecrop to someone else (specify rent received: $ *OR note unit eg kg, tang)*) 4 = Let someone else cultivate for free 5 = Will leave idle because land is too poor 6 = Will leave idle because of other reasons	☐ If will rent, specify rent : ……
8.29 If you rent it out, how much will you get?	……meoun riel
8.30 What do you plan to grow on this plot next season? 1= Rice, wet season 2= Rice, dry season 3= Maize 4=Cassava 5 = Vegetable (specify 6= Permanent crops eg mango, cashew 7= don't know / can't say 8=nothing (left uncultivated) 9= Grazing livestock 10 = other (specify)	|__|

PLOT2

Item	Plot 2
8.31. Area of each plot *(record in units given rai, ha, etc. then convert it to "ares"*	.....are
8.32 What kind of land is it by its main use? 1= Wet season 2= Dry season 3= Both wet and dry season 4=Chamkar 5= Farm land under perrenial crops (cashew, mango) 6= Land for raising livestock 7= Other (specify……)	|__|
8.33. How did you obtain the plot? 1= allocated by the authority 2=clear the forest 3= bought 4= inherited / gift from relative	|__|
8.34. What kind of document do you have for this plot? 1= Application receipt 2= Land title (Slab morn type) 3= Land tile (new type) 4= Other documents…….. 5= No document	|__|
8.35. Is the plot in conflict currently? 1 = No (Go to 8.38) 2=Yes	|__|
8.36. If the plot is in conflict, who is in conflict with you? 1= Relatives 2= Authorities in commune 3= Authorities from provincial town or Phnom Penh 4= Business 5= Other……	|__|
8.37. If in conflict, does it reduce production? 1= No 2= Yes	|__|
8.38. If you sold it now, how much would you get? (4000 Riel/US$)	……US$
8.39 Do you plan to sell this plot in the next 6 months? 1 = No 2=Yes	|__|
8.40 Last season, did you cultivate this plot yourself? 1 = Cultivate 2 = Let someone else cultivate for free *(go to next plot)* 3 = Left idle *(go to next plot)* 4 = Rent out / sharecrop to someone else	|__|
8.41 If you rent it out last season or last year, how much did you get? (meoun riel)	……meoun riel
8.42 What did you grow on this plot in the last season? 1 = Rice, wet season 2 = Rice, dry season 3 = Maize 4 = Cassava 5 = Vegetable (specify) 6 = Permanent crops eg mango, cashew (specify) 7 = don't know / can't say 8 = nothing (left uncultivated) 9 = Grazing livestock 10 = other (specify)	|__|
8.43 How much did you harvest? *Record in units given (kg, tang, tau...) then convert to kg.*	……kg
8.44 Expenditure on seeds	……meoun riel
8.45 Expenditure on land preparation	……meoun riel
8.46 Expenditure on transplanting	……meoun riel
8.47 Expenditure on pumping	……meoun riel
8.48 Expenditure on harvesting	……meoun riel
8.49 Expenditure on threshing	……meoun riel
8.50 Expenditure on transporting to house or storehouse	……meoun riel
8.51 Expenditure on others	……meoun riel

8.52 Total expenditures in the last season (add up from items all above or write down the lumpsum expenditure if s/he donot remember detailed expenditures)	……meoun riel
8.54 What is the 1st constraint for you to increase production on this plot? (Enter one of the codes below)	|__|
8.55 What is the 2nd constraint for you to increase production on this plot? (Enter one of the codes below)	|__|
8.56 What is the 3rd constraint for you to increase production on this plot? (Enter one of the codes below)	|__|

Codes for 8.54-8.56

1 = Not enough household labour / draft animals	8 = Not enough money to hire labour / ploughing
2 = Not enough machinery	9 = Not enough money for irrigation
3 = Not enough time / have other more profitable occupation	10 = Cannot obtain credit (e.g. no collateral)
4 = Not possible to irrigate	11 = Can only obtain collateral at high interest rates / high risk
5 = Not enough money for seeds	12 = Lack of transport
6 = Not enough money for fertiliser	13 = Lack of accessibility to market
7 = Not enough money for pesticides	14 = Do not have knowledge / training
	15 = Land conflict / fear of land conflict

8.57 Next season, what will you do with the plot? 1 = Cultivate it 2 = Rent it out 3 = Sharecrop to someone else (specify rent received: *$ OR note unit eg kg, tang)*) 4 = Let someone else cultivate for free 5 = Will leave idle because land is too poor 6 = Will leave idle because of other reasons	|__|
8.58 If you rent it out, how much will you get?	……meoun riel
8.59 What do you plan to grow on this plot next season? 1= Rice, wet season 2= Rice, dry season 3= Maize 4=Cassava 5 = Vegetable (specify 6= Permanent crops eg mango, cashew 7= don't know / can't say 8=nothing (left uncultivated) 9= Grazing livestock 10 = other (specify)	|__|

PLOT3

Item	Plot 3
8.60. Area of each plot *(record in units given rai, ha, etc. then convert it to "ares"*	.....are
8.61 What kind of land is it by its main use? 1= Wet season 2= Dry season 3= Both wet and dry season 4=Chamkar 5= Farm land under perrenial crops (cashew, mango) 6= Land for raising livestock 7= Other (specify……)	|__|
8.62. How did you obtain the plot? 1= allocated by the authority 2=clear the forest 3= bought 4= inherited / gift from relative	|__|
8.63. What kind of document do you have for this plot? 1= Application receipt 2= Land title (Slab morn type) 3= Land tile (new type) 4= Other documents…….. 5= No document	|__|
8.64. Is the plot in conflict currently? 1 = No (Go to 8.67) 2=Yes	|__|
8.65. If the plot is in conflict, who is in conflict with you? 1= Relatives 2= Authorities in commune 3= Authorities from provincial town or Phnom Penh 4= Business 5= Other……	|__|
8.66. If in conflict, does it reduce production? 1= No 2= Yes	|__|
8.67. If you sold it now, how much would you get? (4000 Riel/US$)	……US$
8.68 Do you plan to sell this plot in the next 6 months? 1 = No 2=Yes	|__|
8.69 Last season, did you cultivate this plot yourself? 1 = Cultivate 2 = Let someone else cultivate for free *(go to next plot)* 3 = Left idle *(go to next plot)* 4 = Rent out / sharecrop to someone else	|__|
8.70 If you rent it out last season or last year, how much did you get? (meoun riel)	……meoun riel
8.71 What did you grow on this plot in the last season?	

1 = Rice, wet season 2 = Rice, dry season 3 = Maize 4 = Cassava 5 = 5 = Vegetable (specify)	6 = Permanent crops eg mango, cashew (specify) 7 = don't know / can't say 8 = nothing (left uncultivated) 9 = Grazing livestock 10 = 10 = other (specify)	|__|
8.72 How much did you harvest? *Record in units given (kg, tang, tau...) then convert to kg.*		.....kg
8.73 Expenditure on seeds		.....meoun riel
8.74 Expenditure on land preparation		.....meoun riel
8.75 Expenditure on transplanting		.....meoun riel
8.76 Expenditure on pumping		.....meoun riel
8.77 Expenditure on harvesting		.....meoun riel
8.78 Expenditure on threshing		.....meoun riel
8.79 Expenditure on transporting to house or storehouse		.....meoun riel
8.80 Expenditure on others		.....meoun riel
8.81 Total expenditures in the last season (add up from items all above or write down the lumpsum expenditure if s/he donot remember detailed expenditures)		.....meoun riel
8.82 What is the 1st constraint for you to increase production on this plot? (Enter one of the codes below)		|__|
8.83 What is the 2nd constraint for you to increase production on this plot? (Enter one of the codes below)		|__|
8.84 What is the 3rd constraint for you to increase production on this plot? (Enter one of the codes below)		|__|

Codes for 8.83-8.85 1 = Not enough household labour / draft animals 2 = Not enough machinery 3 = Not enough time / have other more profitable occupation 4 = Not possible to irrigate 5 = Not enough money for seeds 6 = Not enough money for fertiliser 7 = Not enough money for pesticides	8 = Not enough money to hire labour / ploughing 9 = Not enough money for irrigation 10 = Cannot obtain credit (e.g. no collateral) 11 = Can only obtain collateral at high interest rates / high risk 12 = Lack of transport 13 = Lack of accessibility to market 14 = Do not have knowledge / training 15 = Land conflict / fear of land conflict

8.86 Next season, what will you do with the plot? 1 = Cultivate it 2 = Rent it out 3 = Sharecrop to someone else (specify rent received: *$ OR note unit eg kg, tang*) 4 = Let someone else cultivate for free 5 = Will leave idle because land is too poor 6 = Will leave idle because of other reasons	|__|
8.87 If you rent it out, how much will you get?	.....meoun riel
8.88 What do you plan to grow on this plot next season? 1= Rice, wet season 2= Rice, dry season 3= Maize 4=Cassava 5 = Vegetable (specify 6= Permanent crops eg mango, cashew 7= don't know / can't say 8=nothing (left uncultivated) 9= Grazing livestock 10 = other (specify)	|__|

PLOT4

Item	Plot 4
8.89. Area of each plot *(record in units given rai, ha, etc. then convert it to "ares"*	.....are
8.90 What kind of land is it by its main use? 1= Wet season 2= Dry season 3= Both wet and dry season 4=Chamkar 5= Farm land under perrenial crops (cashew, mango) 6= Land for raising livestock 7= Other (specify……)	|__|
8.91. How did you obtain the plot? 1= allocated by the authority 2=clear the forest 3= bought 4= inherited / gift from relative	|__|
8.92. What kind of document do you have for this plot? 1= Application receipt 2= Land title (Slab morn type) 3= Land tile (new type) 4= Other documents…….. 5= No document	|__|
8.93. Is the plot in conflict currently? 1 = No (Go to 8.96) 2=Yes	|__|
8.94. If the plot is in conflict, who is in conflict with you? 1= Relatives 2= Authorities in commune	|__|

3= Authorities from provincial town or Phnom Penh 4= Business 5= Other……	
8.95. If in conflict, does it reduce production? 1= No 2= Yes	|__|
8.96. If you sold it now, how much would you get? (4000 Riel/US$)	……US$
8.97 Do you plan to sell this plot in the next 6 months? 1 = No 2=Yes	|__|
8.98 Last season, did you cultivate this plot yourself? 1 = Cultivate 2 = Let someone else cultivate for free *(go to next plot)* 3 = Left idle *(go to next plot)* 4 = Rent out / sharecrop to someone else	|__|
8.99 If you rent it out last season or last year, how much did you get? (meoun riel)	……meoun riel
8.100 What did you grow on this plot in the last season? 1 = Rice, wet season 2 = Rice, dry season 3 = Maize 4 = Cassava 5 = 5 = Vegetable (specify) 6 = Permanent crops eg mango, cashew (specify) 7 = don't know / can't say 8 = nothing (left uncultivated) 9 = Grazing livestock 10 = 10 = other (specify)	|__|
8.101 How much did you harvest? *Record in units given (kg, tang, tau...) then convert to kg.*	……kg
8.102 Expenditure on seeds	……meoun riel
8.103 Expenditure on land preparation	……meoun riel
8.104 Expenditure on transplanting	……meoun riel
8.105 Expenditure on pumping	……meoun riel
8.106 Expenditure on harvesting	……meoun riel
8.107 Expenditure on threshing	……meoun riel
8.108 Expenditure on transporting to house or storehouse	……meoun riel
8.109 Expenditure on others	……meoun riel
8.110 Total expenditures in the last season (add up from items all above or write down the lumpsum expenditure if s/he donot remember detailed expenditures)	……meoun riel
8.112 What is the 1st constraint for you to increase production on this plot? (Enter one of the codes below)	|__|
8.113 What is the 2nd constraint for you to increase production on this plot? (Enter one of the codes below)	|__|
8.114 What is the 3rd constraint for you to increase production on this plot? (Enter one of the codes below)	|__|

Codes for 8.101-8.114	
1 = Not enough household labour / draft animals	8 = Not enough money to hire labour / ploughing
2 = Not enough machinery	9 = Not enough money for irrigation
3 = Not enough time / have other more profitable occupation	10 = Cannot obtain credit (e.g. no collateral)
4 = Not possible to irrigate	11 = Can only obtain collateral at high interest rates / high risk
5 = Not enough money for seeds	12 = Lack of transport
6 = Not enough money for fertiliser	13 = Lack of accessibility to market
7 = Not enough money for pesticides	14 = Do not have knowledge / training
	15 = Land conflict / fear of land conflict

8.115 Next season, what will you do with the plot? 1 = Cultivate it 2 = Rent it out 3 = Sharecrop to someone else (specify rent received: *$ OR note unit eg kg, tang)* 4 = Let someone else cultivate for free 5 = Will leave idle because land is too poor 6 = Will leave idle because of other reasons	|__|
8.116 If you rent it out, how much will you get?	……meoun riel
8.117 What do you plan to grow on this plot next season? 1= Rice, wet season 2= Rice, dry season 3= Maize 4=Cassava 5 = Vegetable (specify 6= Permanent crops eg mango, cashew 7= don't know / can't say 8=nothing (left uncultivated) 9= Grazing livestock 10 = other (specify)	|__|

8.118. If you have idle land from the last season do you intend to grow any crop on it in the next season? 1 = No (skip to 9.1) 2=Yes \|__\|
8.119. If yes, what for? 1 = Own consumption 2=Sales 3=Both 4=other…… \|__\|
8.120. If you want to grow any crop do you think you will be able to do it nex season? 1 = No (skip to 9.1) 2=Yes \|__\|
If not why not?

Codes for 8.121-8.123 1. Not enough household labour / draft animals 2. Not enough machinery 3. Not enough time / have other more profitable occupation 4. Not possible to irrigate 5. Not enough money for seeds 6. Not enough money for fertiliser Not enough money for pesticides	7. Not enough money to hire labour / ploughing 8. Not enough money for irrigation 9. Cannot obtain credit (e.g. no collateral) 10. Can only obtain collateral at high interest rates / high risk 11. Lack of transport 12. Lack of accessibility to market 13. Do not have knowledge / training 14. Land conflict / fear of land conflict 15. Flood/draught 16. Others	8.121 Reaon 1 (Most important) |__| 8.122 Reason 2 |__| 8.123 Reason 3 |__|

8.124-8.125 If yes, what are the main factors that you think you can harvest on this idle land in the next season?

Codes for 8.125-8.126 1= credit to buy agricultural inputs 2= credit to clear land	3 = household labour 4 = farming techniques 5 = other (specify……..)	8.125 Reaon 1 (Most important) |__| 8.126 Reason 2 |__|

8.127 Do you grow any crop around your house? 1=no 2=mostly for own consumption 3=mostly for sales

9. Cropping on leased land

9.1 Last season, did you cultivate any crops on land belonging to someone else (i.e. rent in / sharecrop / cultivate for free)? ……plots

Item	Plot 1	Plot 2	Plot 3	Plot 4
9.2. Area of each plot *(record in units given (arr, rai, ha....); NOTE THE UNIT)*	….are	….are	….are	….are
9.3 How much did you pay the owner? *($ OR note unit eg kg, tang)*	……meoun riel	……. meoun riel	…. meoun riel	…. meoun riel
9.4 What did you grow on this plot in the last season? 1 = Rice, wet season; 2 = Rice, dry season; 3 = Maize; 4 = Cassava; 5 = Vegetable (specify); 6 = Permanent crops eg mango, cashew (specify); 7 = don't know / can't say; 8 = nothing (left uncultivated); 9 = Grazing livestock; 10 = other (specify)	|__|	|__|	|__|	|__|
9.5 Did you use irrigation on this plot last season? 1= No; 2= Yes, dry season; 3=Yes, wet season; 4=Yes, both seasons	|__|	|__|	|__|	|__|
9.6 How much did you pay in cultivation costs for this plot last season?	*NB. Convert to US$ assuming $1 = 4,000 riels; 1 chi = $100; 1 domlong = $1,000*			
include Seed, fertiliser, Irrigation (charges; rent pump; petrol for pump), pesticides, ploughing and labour costs, other)	……. meoun riel	……..... meoun riel	….. meoun riel	…. meoun riel
9.7 How much did you harvest? *(Record in units given (kg, tang, tau...) then convert to kg*	……kg	……..kg	……..kg	……..kg

9.8 Do you intend to buy or rent in any more land next season? 1 = No *(go to 9.10)* 2 = Buy 3 = Rent in \|__\|

9.9 If intend to buy or rent in, why? 1 = to grow more food for household consumption \|__\|
2 = to grow more for sale and cash income
3 = both
4 = other (specify)……..

9.10 Why do you intend to sell any land next season? \|__\|
1 = to raise money for basic consumption (food, healthcare, shoes, clothes)
2 = to raise money for investment in productive assets
3 = to raise money to buy consumer durables / improve house
4 = other (specify)……..

X. Crop sales and purchases

Crop Sales (For household who have harvested since October 2007)

10.1 How many times have you sold paddy rice since your harvest in November 2007? …….. times

	Amount sold each time (kg)	Price received (riels / kg)	When? 11 = Nov. 07 12 = Dec. 07 1 = Jan. 08 2 = Feb. 08 3 = Mar. 08 4 = April. 08 5 = May 08 6 = June 08	To whom? 1 = Cambodian traders in commune 2 = Cambodian traders outside commune 3 = Vietnamese traders 4 = Other ……..
	(a)	(b)	(c)	(d)
1st time sale	kg	riels/kg	|___|	|__|
2nd time	kg	riels/kg	|___|	|__|
3rd time	kg	riels/kg	|___|	|__|
4th time	kg	riels/kg	|___|	|__|
5th time	kg	riels/kg	|___|	|__|
6th time	kg	riels/kg	|___|	|__|
7th time	kg	riels/kg	|___|	|__|
8th time	kg	riels/kg	|___|	|__|
9th time	kg	riels/kg	|___|	|__|

10.2 Have you sold other crops since November 2007? ……..Times

Crop *(enter code)* 1 = Maize 2 = Cassava 3 = Vegetable (specify) 4 = Fruit or nuts (specify) 5 = other (specify)	Amount sold each time (kg)	Price received (riels / kg)	When? 11 = Nov. 07 12 = Dec. 07 1 = Jan. 08 2 = Feb. 08 3 = Mar. 08 4 = April. 08 5 = May 08 6= June 08	To whom? 5 = Cambodian traders in commune 6 = Cambodian traders outside commune 7 = Vietnamese traders 8 = Other ……..
(a)	(b)	(c)	(d)	(e)
	kg	riels/kg	|___|	|__|
	kg	riels/kg	|___|	|__|
	kg	riels/kg	|___|	|__|
	kg	riels/kg	|___|	|__|

Rice Purchases (for households who purchase rice for consumption)

10.3 How much milled rice do you need for one month consumption (including own rice)? …….. kg

10.4. How often do you purchase rice for household consumption? \|__\|

1 = Every day
2 = At least once a week
3 = At least once a month
4 = Less frequently

10.5. How many times have you bought paddy rice since November 2007?.....times

10.7. Please provide details of the last three purchases

	Paddy or milled rice? 1 = paddy 2 = milled rice	Amount purchased each time (kg)	Price paid (riels/kg)	When? 11 = Nov. 07 12 = Dec. 07 1 = Jan. 08 2 = Feb. 08 3 = Mar. 08 4 = April. 08 5 = May 08 6= June 08	From whom? 1 = sellers from village 2 = mobile sellers from outside village 3 = nearest market 4 = Other ……..
	(a)	(b)	(c)	(d)	(e)
1 (most recent purchase)	|__|	…….. kg	…… riels/kg	|___|	|___|
2	|__|	…….. kg	…… riels/kg	|___|	|___|
3	|__|	…….. kg	…… riels/kg	|___|	|___|

10.8. Do you expect prices of rice to increase, decrease or stay the same next year ?
0= the same 1= Increase 2= Decrease \|___\|

10.9. Do you expect prices of other crops to increase, decrease or stay the same next year ?
0= the same 1= Increase 2= Decrease \|___\|

ANNEX III: Village Checklist

VILLAGE CHECKLIST

ATTENTION: This is a checklist to facilitate information gathering, IT IS NOT A QUESTIONNAIRE !

	Village name (in words)		
1	**village name (code)**		**THIS COLUMS IS**
2	**compiled by**		**EXTREMELY IMPORTANT**
3	**on**		
			comments by the interviewer
	GENERAL INFORMATION		
	Interviewed persons (specify institutional role)		comments by the interviewer
	suggested list	enter codes here	
4	1 - village head		
5	2 - women representative		
6	3 -local merchant		
7	4 - teacher		
8	5 - nurse		
9	6 - shopper		
10	if other: specify ……..		
11	if other: specify ……..		

12	Estimated number of HHs (now) June 2008		write here your comments
13	Estimated total population (now) June 2008		write here your comments
14	Approximate average size of households		write here your comments
15	Is it a recent Village? 1 = Yes , 2 = No		write here your comments
	If recent: when established (year)		write here your comments
16	During the last five years the number of HH …..		write here your comments
	INCREASED: 5 = much , 4 = a few, 3 = NO change DECREASED: 2 = a few , 1 = much		write here your comments
17	Estimated % of landless HHs in the village		write here your comments
18	Is the number of landless HHs increasing? 1 =YES, 2 =NO		write here your comments

	ACCESSIBILITY		
19	Access to the village by car all year long: 1 = YES, 2 = NO		write here your comments
	If NO: list of months of not accessibility		write here your comments
20	Location of the market		write here your comments
	1 = same village, 2 = outside (but near), 3 = outside but far away		
	Main constraints for accessing to market (for selling), (specify in words, up to 6 if necessary)		
21	constraint 1		write here your comments
22	constraint 2		write here your comments
23	constraint 3		write here your comments
24	constraint 4		write here your comments
25	constraint 5		write here your comments
26	constraint 6		write here your comments
27	Location of the main merchant (buyers)		write here your comments
	1 = same village, 2 = outside (but near), 3 = outside but far away, 4 = outside Cambodia		write here your comments

28	Location of the rice mill		write here your comments
	1 = same village, 2 = outside (but near), 3 = outside but far away		write here your comments

29	local stock for rice? 1 = Yes , 2 = No		write here your comments
30	estimated current quantities (specify unit)		write here your comments
31	(specify quantities)		write here your comments

	PRICES AND WAGES/SALARIES		
32	Market prices of PADDY RICE (**June 2008**) (currency)		
33	(specify unit)		write here your comments
34	(specify quantities)		write here your comments
35	Market prices of PADDY RICE (**June 2007**) (currency)		
36	(specify unit)		write here your comments
37	(specify quantities)		write here your comments
	Reason for increase/decrease/no change previous year		
38	reason1		write here your comments
39	reason 2		write here your comments
40	reason 3		write here your comments
41	Market prices of MILLED RICE (**June 2008**) (currency)		
42	(specify unit)		write here your comments
43	(specify quantities)		write here your comments
44	Market prices of MILLED RICE (**June 2007**) (currency)		
45	(specify unit)		write here your comments
46	(specify quantities)		write here your comments
	Reason for increase/decrease/no change previous year		
47	reason1		write here your comments
46	reason 2		write here your comments
49	reason 3		write here your comments

SEASONAL CHANGES OF PRICES - PADDY AND MILLED RICE

	PADDY RICE price	**MILLED RICE price**	
	1 = Very Low, 2 = Low, 3 = Average, 4 = High, 5 = very High V		
50-51	sept	sept	comments by the interviewer
52-53	oct	oct	
54-55	nov	nov	
56-57	dec	dec	
58-59	jan	jan	
60-61	feb	feb	
62-63	march	march	
64-65	april	april	
66-67	may	may	
68-69	jun	jun	
70-71	july	july	
72-73	aug	aug	

74	Daily earning of an agric labourer (**June 2008**) (currency)		write here your comments
75	(amount)		write here your comments
76	Daily earning of an agric labourer (**June 2007)** (currency)		write here your comments
77	(amount)		write here your comments
	Reason for increase/decrease or no change this year		
78	reason1		write here your comments
79	reason2		write here your comments

	LABOUR AND MIGRATION		
80	Job opportunities in village as temporary labour 1=Y, 2=N		write here your comments
81	Job opportunities in village as casual labour 1=YES,2=NO		write here your comments
	Specify non agricultural activities in the village		
82	activity 1		write here your comments
83	activity 2		write here your comments
84	activity 3		write here your comments

85	Seasonal out-migration existing ? 1= YES, 2= NO		write here your comments
	(if YES) describe seasonal fluctuations:		
	1 = Very Low, 2 = Low, 3 = Average, 4 = High, 5 = very High V		
86		sept	comments by the interviewer
87		oct	
88		nov	
89		dec	
90		jan	
91		feb	
92		march	
93		april	
94		may	
95		jun	
96		july	
97		aug	

	FOOD SECURITY		
	% HH food autosufficient for: (use piling)		
98	<4 months %		comments by the interviewer
99	4-6 months %		
100	nearly one year %		
101	% HH could save a part of their crops for the next year		

	Inter-HH and community strategies during shortage of food (in words and in order of priorities)	
102	strategy 1	comments by the interviewer
103	strategy 2	comments by the interviewer
104	strategy 3	comments by the interviewer
105	strategy 4	comments by the interviewer

	What people do in case of shortage of food (coping strategies) in words and order of priority	
108	coping 1	comments by the interviewer
109	coping 2	comments by the interviewer
110	coping 3	comments by the interviewer
111	coping 4	comments by the interviewer

112	If during food shortages some wild food is collected, specify the type (in words)		comments by the interviewer
113	Are there problems in accessing wild food? 1=Y, 2=N		comments by the interviewer

	AGRICULTURE		
	Main crops (in order of priorities)	sowing month(S)	harvesting months
114	crop 1 (in words)……..		
115	crop 2 (in words) ……..		
121	crop 3 (in words) ……..		
122	crop 4 (in words)……..		
	write here your comments		
123	Cropping systems changed during last years? 1=Y, 2=N		write here your comments
124	if YES: who did them ? Specify 1		write here your comments
125	Specify 2		write here your comments
126	If YES: What are the NEW CROPS ? Crop 1		write here your comments
127	Crop 2		write here your comments
128	If YES: Which are the ABANDONED CROPS ? Crop 1		write here your comments
129	Crop 2		write here your comments
130	If YES: Specify main reasons for changing? reason 1		write here your comments
131	reason 2		write here your comments

	Land use practices 3= frequent, 2= seldom, 1 = never		
132	slash and burn		write here your comments
133	fallow practices		write here your comments
134	intercropping		write here your comments
135	use of organic fertiliser		write here your comments
136	use of inorganic fertiliser		write here your comments

	Problems limiting crop performances 1=YES, 2=NO		
137	climate		write here your comments
138	land accessibility		write here your comments
139	lack of resources		write here your comments
140	no technical assistance		write here your comments

141	Post-harvesting looses are important 1 = YES, 2 = NO		write here your comments

142	Local nutritional taboos related to local traditions, believes and any religious constraints 1=YES, 2=NO		write here your comments
143	Taboo 1 (in word)		write here your comments
144	Taboo 2 (in word)		write here your comments

	PRIMARY EDUCATION - additional questions to be adessed to the teacher		
145	DROP-OUT exists? 1 = YES, 2 = NO		write here your comments
146	if Yes 1 = Boys, 2 = Girls, 3 = Boys&Girls		write here your comments
147	in which month started for BOYS this year ?		write here your comments
148	in which month started for GIRLS this year ?		write here your comments