CDRI - Cambodia's Leading Independent Development Policy Research Institute


# Impact of High Food Prices in Cambodia

## Survey Report

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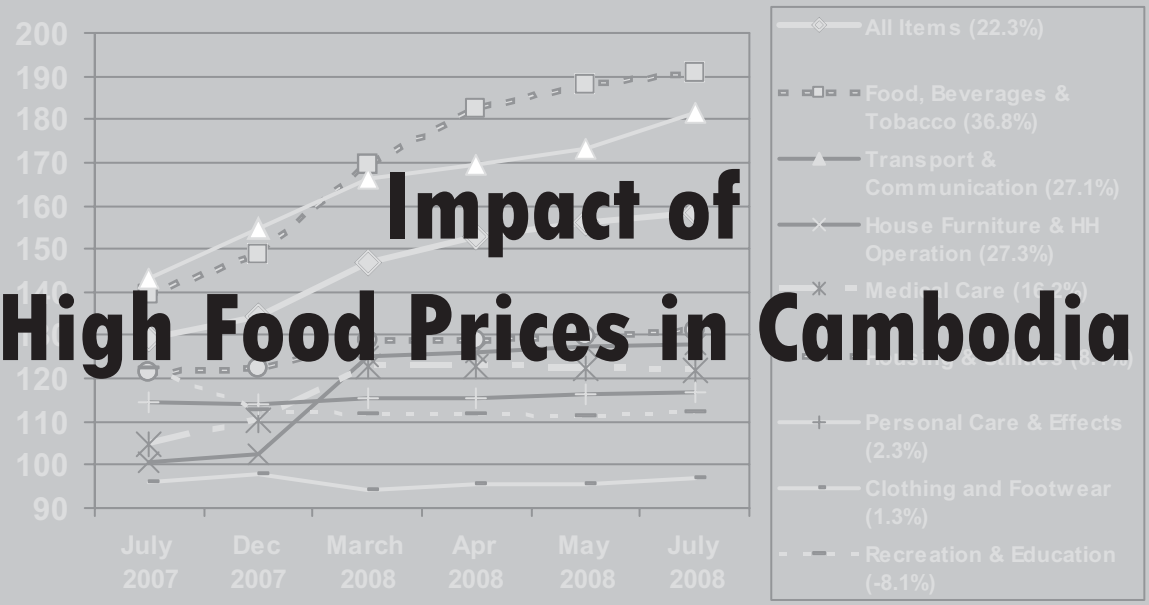


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**Phnom Penh, November 2008**

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# Table of Contents

**List of Boxes**



**List of Maps**



**List of Figures**

**List of Tables**

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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 between July 2007 and July 2008. 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 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 for sale. 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). 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 is 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 12 percent of the households, about 1.7 million individuals, were food insecure and most affected by high food prices at the time of the survey. 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 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 and fishing gear.

7. 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 assuming yield and prices are constant. 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. There will be a substantial loss for wet-season rice farmers if rainfall continues to be erratic till November 2008. Rather than reducing inputs such as fertiliser, whose price doubled or tripled, farmers are seeking loans or purchasing inputs expensively on credit.

8. 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 a lack of family labour or draught animals and absence of irrigation.

9. 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. Directly importing fertilisers in bulk might cut costs considerably. The government and development partners may consider addressing this constraint.

10. 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.

11. 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, pesticides, 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.

12. 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.

13. 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.

14. 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.

15. 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, which already have low food consumption and about 98 percent of which have contracted new debts since March 2007 in order to cope with the current shock. About 50 percent of the households reported cutting back food consumption as a way of coping with high food prices. This threatens their nutritional status and worsens their health, which might result in lasting adverse impacts. The largest proportion of food-insecure people was found in the Tonle Sap zone, plains zone and plateau zone. During the lean season, the proportion of food-insecure people could increase to about 2.8 million individuals.

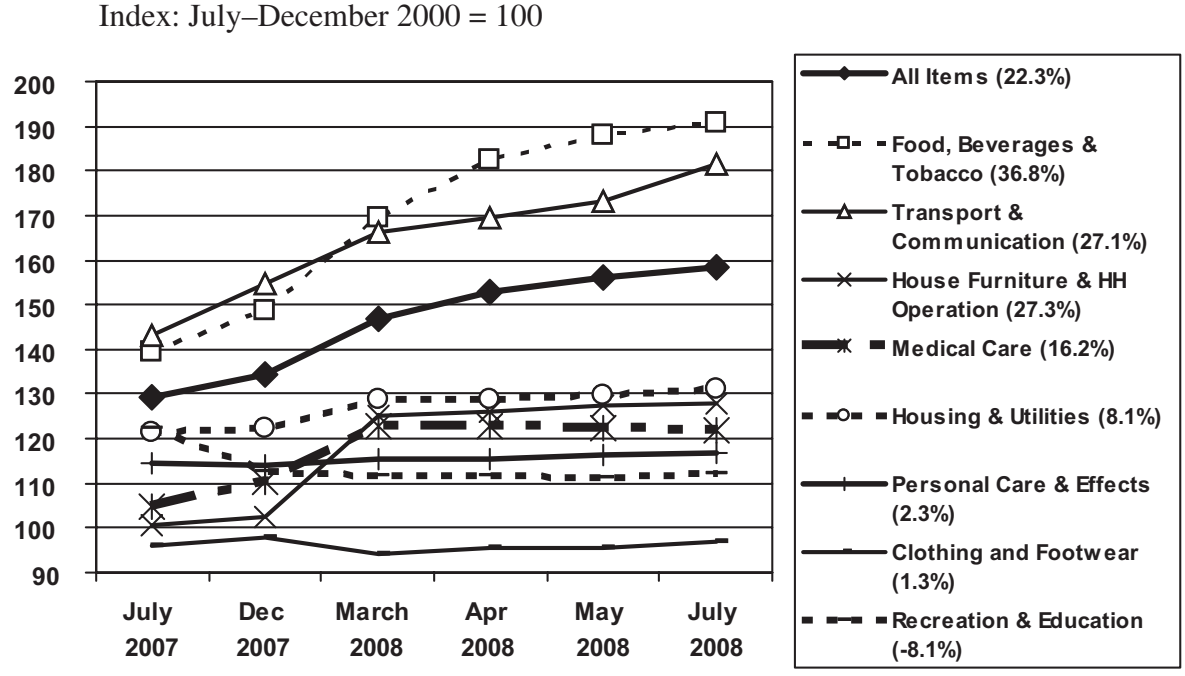
# 1

# Introduction

## 1.1. Rationale

Like many countries, Cambodia has been experiencing rising prices of essential goods, mainly oil and food. The year-on-year Consumer Price Index increase rose to 18.7 percent in January 2008, according to the National Institute of Statistics (NIS). Prices continued to rise rapidly till July 2008 (See Figure 1.1).[1] Food, beverages and tobacco rose most rapidly, by 36.8 percent between July 2007 and July 2008. In particular, the price of rice, which is the most commonly consumed staple, approximately doubled between May 2007 and May 2008, shortly before the survey took place. This was clearly linked to the international market, where rice prices were 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 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)***




*Source: NIS, Ministry of Planning*

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

A chief concern is how this aggravates the food security status of the Cambodian poor, who still account for about 30 percent of the population or 4 million people in 2008.[2] Food consumption for the poorest first and second quintiles takes 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 (20 percent landless and 45 percent land poor). "Land poor" refers to households owning one hectare or less. One hectare of rice land produces a bare minimum of rice sufficient for 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 had not yet increased significantly.

Cambodia is not alone in experiencing this unusually high inflation. In the latest reports of the International Food Policy Research Institute (von Braun 2007), World Bank (2008) and FAO (2008b), a strong concern is expressed about the impact of high commodity prices on developing countries, especially on the net food importers, mostly located in sub-Saharan Africa, and on the poorest sectors of the population, characterised by a higher percentage of basic food expenditure in 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, favouring rural development and supporting sustainable rural livelihoods. Whether this is actually happening, and under what conditions this would 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 to 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 inflation and proposes immediate and long-term interventions.

Following the introduction of the rationale and methodology of the study, Section 2 presents the context of macroeconomic performance and rising prices, based on various data sources. Section 3 then assesses the impact on household food security before Section 4 discusses the responses households adopted to cope with rising prices. It is important to state that Section 3 is provided by WFP and CDRI does not take responsibility for the content. Section 5 addresses the potentials and constraints on increasing food production in order to increase farmers' income.

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[2] The poverty rate in 2004 was 34.7 percent according to the World Bank (2006). No other figures on poverty have been produced since then. Assuming poverty reduction at 1.2 percent per annum as found in the World Bank report, the poverty rate in 2008 would be 30-32 percent.

[3] One hectare of rice land produces 2.5 tonnes of paddy rice on average. Production costs account for 50 percent, thus leaving 1.25 tonnes 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 sufficient even for one year's consumption, and then buy back milled rice in the period leading up to the next harvest.

## 1.2. Methodology

The current report draws on both primary and secondary data. A brief overview of macroeconomic performance relies on the most recent national accounts data produced by the National Institute of Statistics. Analysis of price trends is based on systemic price collection in Phnom Penh and the provinces by the ministries of Commerce and of Agriculture. The latter ministry provides wholesale prices of agricultural commodities and major inputs collected in various provinces. Two types of household survey were conducted for different objectives. In addition, focus group discussions were carried out to complement the household surveys. Details of each data generation method are summarised below.

### Nationally Representative Sample Survey

The nationally representative survey selected 2235 households on a random, probability proportional to size, method. With weights applied, the results are nationally representative 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 used to assess how high food prices affected the households in different locations and what coping strategies were being employed by adversely affected households. It also attempts to capture the dynamic picture of the agricultural situation in the aftermath of rising costs and prices.

***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 | | | |
| | Kratie | 5 | 0 | 5 | | | |
| | Mondolkiri | 1 | 0 | 1 | | | |
| | Oddar Meanchey | 3 | 0 | 3 | | | |
| | Pailin | 1 | 0 | 1 | | | |
| | Preah Vihear | 3 | 0 | 3 | | | |
| | Ratanakkiri | 2 | 0 | 2 | | | |
| | Stung Treng | 1 | 0 | 1 | | | |
| **Coastal** | Kep | 1 | 0 | 1 | **25** | **6** | **31** |
| | Koh Kong | 3 | 2 | 5 | | | |
| | Kampot | 18 | 0 | 18 | | | |
| | Sihanoukville | 3 | 4 | 7 | | | |
| **Total** | | **106** | **43** | **149** | **106** | **43** | **149** |

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

In each selected village, a checklist with pre-coded and open-ended questions was used to register the context and useful information such as village population and estimation of landlessness, 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 leader of each survey team was responsible for collecting the information from the village chief and/or other key informants. Where most appropriate, data from the checklist were used to cross-check with other sources.

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

**Purposive Sampling Survey and Focus Group Discussions**

Because the minimum sample of the nationally representative survey cannot provide robust statistics for many disaggregated variables, a purposive sampling survey was conducted to counter 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, wet-season rice farmers, dry-season farmers, fishing communities and other cash crop producers, which theoretically have been affected differently by high prices. In each site or village, about 70 households were randomly chosen for interviews. This is a large enough sample (about 30 percent of the households) to represent the village. Table 1.2 lists the and criteria for each.

***Table 1.2: Sites for Purposive Sample Survey and Focus Group Discussions****

| | Criteria | Site (Village) | Province |
|---|---|---|---|
| 1. | Urban poor | Damnak Thom village, sangkat Stung Meanchey, khan Meanchey | Phnom Penh |
| 2. | Urban poor | Village 14, sangkat Tonle Basak, khan Chamkar Mon | Phnom Penh |
| 3. | Poorest areas in poorest provinces | Anhaseh village, Toap Mean commune, Thpong district | Kompong Speu |
| 4. | Poorest areas in poorest provinces | Sambuor village, Popok commune, Stoung district | Kompong Thom |
| 5. | Wet-season rice surplus | Nikom Krau village, Chroy Sdau commune, Thma Koul district | Battambang |
| 6. | Wet-season rice surplus | Ta Ngak Srae village, Pnov Ti Pir commune, Sithor Kandal district | Prey Veng |
| 7. | Dry season rice surplus | Ponley Cheung village, Ponley commune, Angkor Borei district | Takeo |
| 8. | Dry season rice surplus | Ponley village, Ba Baong commune, Peam Ro district | Prey Veng |
| 9. | Maize production | Kbal Tumnup village, Ou Sampor commune, Malai district | Banteay Meanchey |
| 10. | Cassava production | Spean village, Dar commune, Memut district | Kompong Cham |
| 11. | Soybean production | Sampoar village, Ta Ong commune, Chamkar Leu district | Kompong Cham |
| 12. | Fishing | Kompong Preah village, Chhnok Tru commune, Baribour district | Kompong Chhnang |
| 13. | Land abundant and potential to increase production | Tumnup Trakuon village, Kdol Ta Haen commune, Bavel district | Battambang |
| 14. | Land abundant and potential to increase production | Kang Meas village, Tnaot Chum commune, Baray district | Kompong Thom |

** The criteria were based on WFP Cambodia (2004).*

A qualitative component was added to the surveys to improve the reliability of findings. 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 and regional interpretation. Based on this comprehensive data set, interventions by government and development partners will be called for to prevent people from falling into serious or extreme poverty, particularly around the lean period of August–October 2008 and beyond.

The results of the purposive sample survey, coupled with the focus group discussions, 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 terms.

**Survey Limitations**

The survey was prepared in May 2008 and conducted within a short time. 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 presented in a comprehensive food security and vulnerability analysis report. Fifty-five enumerators were employed to carry out the survey, which took place from 1 to 14 June. The main aim was to generate results in a timely manner as 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 asked only for the change of cash income and its sources. Likewise, it could not ask for the actual amount and value of food and other expenditures by the households. It could collect only the frequency of consumption of a number of essential food items. Hence, the data regarding consumption and income, which are crucially important for analysis of changes in livelihood, are not highly robust. The answers to the questions whether income, expenditure and consumption have increased and whether households have faced any difficulties or shortages of money are generally hard to evaluate. Moreover, the surveys relied heavily on recall of the situation six months or one year earlier in order to assess changes caused by high prices or seasonal factors. As always, recall is subject to memory deficiencies, among other things.

2

# Recent Macroeconomic Performance and Rising Prices

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's, determinants of prices extend 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.

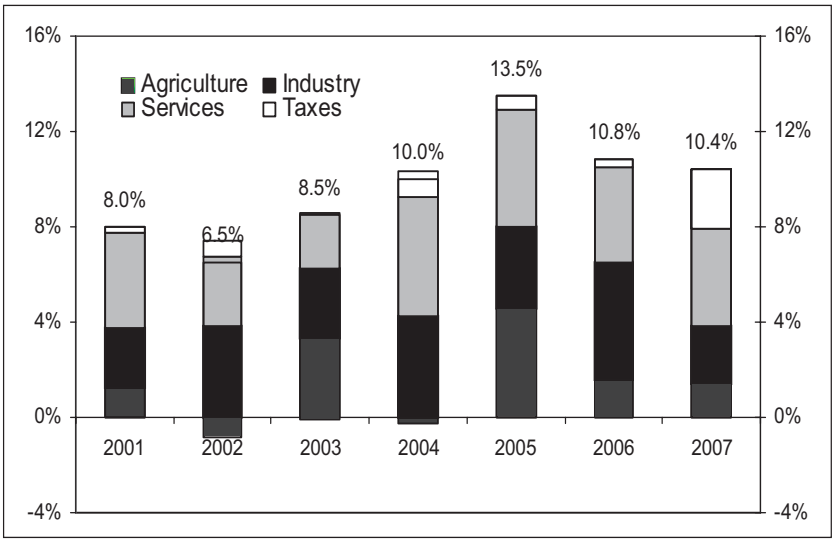
## 2.1. Recent Macroeconomic Performance

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 2008). 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.

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.

*Figure 2.1: Real GDP Growth, 2001–2007*




*Source: NIS 2008*

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 USD2 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.[1] Although no more issues of the monthly "Consumer Price Index Bulletin" of NIS have been published since January 2008, other sources indicate 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 tend 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 is June 2008 and July 2008. Prices before May 2007 did not increase significantly.

[1] 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.

### *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.

***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 among 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 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 Phka 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 | Phka Knhei from Battambang | 1491 | 1652 | 1759 | 1851 | 2523 | 2939 | 3058 |
| 4 | Phka 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 | Phka 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 Phka 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 | Phka Knhei from Battambang | 100 | 111 | 118 | 124 | 169 | 197 | 205 |
| 4 | Phka 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 | Phka 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 2.2b: Prices of Milled Rice, 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 Treng | | | | | 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).

*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*

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 in April and May had nowhere to be stored,

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.

Wholesale prices of paddy rice collected by the Marketing Office of the Ministry of Agriculture, Forestry and Fisheries registered increases slightly lower than those of milled rice, 75–100 percent, between May 2007 and May 2008 (Annex 1, Table A2.1). The paddy price acceleration took place in all the provinces surveyed by the Ministry of Agriculture. The average in May 2008 ranged between 1150 and 1500 riels per kilogram, compared with 500–900 riels 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 kilogram of paddy rice is equal to 0.65 kilogram of milled rice, so the price of paddy should be 65 percent of that of milled rice, without considering transport 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 transport 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***

| | | Trade | 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 the reasons that rice prices increased. As summarised in Table 2.4, most responses mentioned trade factors, 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.

Other foods have increased in price 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.

*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*

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 of 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 1).

Prices of pork and beef reached their highest level, 20,000 riels per kg in April and May 2008, 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 | 8054 | 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 of 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, 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. The Ministry of Agriculture 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 150,000–160,000 riels per sack, which is consistent with the Ministry of Agriculture 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 |
| DAP | 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 |
| DAP | 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 | July–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 bush 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 |

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

## 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.

# 3

# Impact on Household Food Security[1]

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.

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.

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,[2] which compares the score of each ecological zone (divided into rural and rural) with the national average.

[1] This section, except subsection 3.3, is provided by WFP with contributions from Dr Paolo Santacroce, WFP consultant, and Mr Khim Ratha. It is left as is for the report to WFP.

[2] Derived by the scores using WFP standard weights.

*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 the analysis. Source: National survey of 2235 households in June 2008*

***Table 3.2: Comparative Analysis of Food Consumption Score by Ecological Zone***

| Description | Plains | | Tonle Sap | | Plateau | | Coastal | | Cambodia | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | P. Penh | Urban | Rural | Cam. |
| 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 2235 households in June 2008*

When compared with the national average, the average poorest food intake was found in the Tonle Sap zone, followed by the 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 seven 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 the plateau zone, which consume bread more than one day a week.

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

### *3.1.2. Pulses*

Pulses (beans, groundnuts and others) are consumed on average less frequently than one day a week in all ecological zones (Table 3.1). Only sixteen percent of households reported having eaten beans over the seven-day recall period.

Table 3.3 shows the percentage of households that never ate pulses during the previous seven days. It was observed that the highest percentage of such households were in rural and urban areas outside Phnom Penh.

The low frequency of eating pulses, combined with the high percentages of households is an alarming signal of a very scarce recurrence to vegetable 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 rural households that did not eat pulses during the previous seven days was in the Tonle Sap zone (90.4 percent),[3] followed by the coastal zone (85 percent).

***Table 3.3: Percentage of Households That Did Not Eat Pulses***

| Description | Plains | | Tonle Sap | | Plateau | | Coastal | | Cambodia | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | P. Penh | Urban | Rural | Cam. |
| 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 2235 households in June 2008*

[3] As a confirmation of the concerns about the scarce use of vegetable proteins, Tonle Sap is also—see next paragraph—one of the ecological zones with the higher percentages of households that never ate animal proteins during the previous week.

### *3.1.3. Meat, Fish and Dairy Products*

Meat and fish are more important due to their animal protein. Access to meat and fish 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 looked at wild meat, beef, pork, chicken, fish and other aquatic animals.

The study found that meat (beef, pork and chicken) consumption is very rare in rural households: they consume it on average between once and twice a week, while Phnom Penh and urban households consumed it on average three days a week. The lowest frequency of meat consumption was found in the rural plateau, followed by rural Tonle Sap. The plain and coastal zones appear a bit better than the national average. Sixty-three percent of households reported having consumed meat over the seven-day recall period.

Table 3.4 shows the percentage of households that did not eat meat during the previous seven days, by ecological zones and strata. The highest percentage was observed in rural areas (43 percent), among them the plateau zone (55 percent), followed by rural Tonle Sap (44 percent).

***Table 3.4: Percentage of Households That Did Not Eat Meat***

| Description | Plains | | Tonle Sap | | Plateau | | Coastal | | Cambodia | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | P. Penh | Urban | Rural | Cam. |
| 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 2235 households in June 2008*

Fish is a very important component of diets of rural households, particularly of poor households, because they can freely catch fish from lakes, ponds or rice fields. 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 did not eat fish during the previous seven days. The highest percentage was observed in rural areas (13 percent), rather similar to Phnom Penh (15 percent). On the other hand, an analysis by ecological zones shows a dichotomised pattern. Rural and urban households of the plateau zone show the highest percentage that did not eat fish during the previous seven day (19 percent and 27 percent respectively), while the Tonle Sap zone shows a high level of no fish for rural areas (16 percent) but good urban conditions (only 6.7 percent). Rural coastal and plains zones are better than the national rural average.

***Table 3.5: Percentage of Households That Did Not Eat Fish***

| Description | Plains | | Tonle Sap | | Plateau | | Coastal | | Cambodia | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | P. Penh | Urban | Rural | Cam. |
| 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 2235 households in June 2008*

Aquatic animals (frogs, crabs etc) is another very important component of diets of rural poor households because they can easily be collected from rice fields.

Over the seven-day recall period, aquatic animals were consumed on average one day a week. In rural areas, they were consumed one or two days a week. The highest frequency of aquatic

animal consumption was found in the rural coastal zone (one and two days a week). On average, 35 percent of households reported having eaten aquatic animals over the recall period.

Wild meat was found to be consumed on average less than one day a week in the plateau, while milk is still an urban item: it was consumed only by urban and Phnom Penh households more than one day a week. Only 13 percent of sampled households reported having consumed milk over the recall period.

### *3.1.4. Vegetables and Fruits*

In the study, vegetables included green leafy vegetables, shoots/mushrooms, and other vegetables. Vegetables, apart from rice, are the most frequently consumed food group. Vegetables are consumed on average six days a week. The study also found that 97 percent of households reported having consumed vegetables at least once over the seven-day recall period. Fruits were consumed on average only two days a week. Only 52 percent of households reported having eaten fruit at least once over the recall period. Serious concerns should be expressed for the very rare access to important sources of vitamins and micronutrients.

### *3.1.5. Oils, Fats and Sugar*

Vegetable oil and animal fat are primarily used for cooking. Oils are consumed on average four days a week. The study also found that 90 percent of households reported having consumed oil at least once over the recall period. The use of sugar was found only two days a week. Sixty-four percent of households consumed sugar at least once over the recall period.

### *3.1.6. Sources of Staple Foods*

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

The highest percentage of rural households whose rice comes from their own production was found in plateau (70.9 percent) and Tonle Sap zones (65.6 percent), while the lowest percentage was in the plain zone (49.8 percent).

***Table 3.6: Percentage of Own Production of Rice by Ecological Zone***

| Description | | Plains | | | Tonle Sap | | | Plateau | | | Coastal | | | Cambodia | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Urban | Rural | Total | Urban | Rural | Total | Urban | Rural | Total | Urban | Rural | Total | P. Penh | Urban | Rural | Cam. |
| 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 |
| 2nd 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 source | # 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 2235 households in June 2008*

In addition, Table 3.7 shows the main sources of food consumed in the previous seven days. Almost all people accessed food either from purchase or own production. In general, most people buy fish and vegetable even when they live in rural areas. The table also indicates that many people in the plains, Tonle Sap, plateau and coastal areas can obtain vegetables by gathering from common resources.

***Table 3.7: Main Sources of Food in the Seven Days Prior to the Survey (% 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 labour 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 labour 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 labour 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 2235 households in June 2008, adjusted for weights of ecological zones*

The impacts of high food prices on food security are more likely to vary with geographical location. The survey suggests a serious concern about food security for people who purchase

milled rice. 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. Of 2211 households that reported the sources of the rice they had consumed in the week prior to data collection, most of the urban people (90 percent in Phnom Penh and other urban areas) always purchased rice. Only 41 percent of households in rural areas purchased rice for consumption within seven days prior to the survey. Of those households, 56 percent had no agricultural land. However, 31 percent of farming households also did not have enough and had to purchase rice in the seven days prior to the data collection.

As discussed below, the impact of high food prices on household food security will depend on the change in their earning ability to offset the increased food and other commodity prices. In urban areas, it is not uncommon that households do not rely on home food stocks. It is purely a cash-based economy in urban areas. Markets work very well, and people can make purchases as long as they have income.[4]

### *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 nutritional adequacy, children's and women's anthropometry and socio-economic status (Ruel 2003). WFP has built on previous work on dietary diversity, customising an existing tool in order to capture as much differentiation as possible among the households that have different consumption patterns in number of consumed food groups and their specific consumption frequency.

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

Information on the different food items was reorganised into specific food groups. Consumption frequencies of food items belonging to the same group were summed, and values above 7 were recorded as 7. The value 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 food items, food groups and their relative weights.

***Table 3.8: 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 (beans, groundnuts etc.) | Beans | 3 |
| Vegetables (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 or milk products | Milk | 4 |
| Sugar | Sugar | 0.5 |
| Oils, fats | Oil | 0.5 |

*Source: National survey of 2235 households in June 2008*

[4] A more in-depth analysis, using a WFP comprehensive food security and vulnerability analysis, is in progress, and more detailed results are expected at the end of August 2008.

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

- Scoring below 21, a household is expected not to eat at least a staple and vegetables on a daily base and is therefore considered to have "poor food consumption".
- The second threshold was set at 35, being composed of daily consumption of a staple and vegetables complemented by a frequent (four days/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 "acceptable food consumption".

### *3.1.8. Dietary Diversity: Food Consumption Scoring applied to Cambodia*

Considering that in Cambodia oil consumption happens four or five days a week, the scores have been artificially elevated.

To account for this, the cut-off points are raised by 3.5 points (7 * weight of oil = 7 * 0.5 = 3.5).

***Table 3.9: Thresholds of Food Consumption Score***

| Food Consumption Categories | Standard Range | New Range | 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 total. These households can be considered highly food insecure.

Households in this group rarely, if at all, consume any animal products or pulses that are important sources of protein. Rice is consumed daily. Vegetables are consumed two or three days a week. It is very likely that household members, especially children, have micronutrient deficiencies. 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 households were found to have borderline food consumption. These households can be defined as food insecure.

The highest prevalence of borderline food consumption was found 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 around 89 percent of the sampled households. These households are considered to have an acceptable food consumption of sufficient diversity for a healthy life. The key difference from households with poor or borderline food consumption is animal protein, mostly meats, providing them with an acceptable level of protein. The most acceptable food consumption was found in Phnom Penh 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 households that have poor, or critically low, food consumption is around 4 percent. About 7 percent have borderline, or low, food consumption.[5]

[5] 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 vegetable is less urgent than animal protein and fruits. Vitamins and micronutrient intake also needs to be enhanced.

***Figure 3.1: Food Consumption Score and Total Number of Days of Consumption***

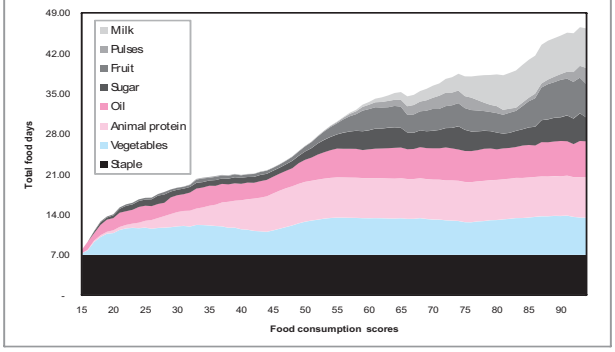


***Table 3.13: Number of Food Insecure Households, by Ecological Zone****

| 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 |

**The NIS population projection for 2008 was used to estimate the number of households.*

### 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 is used for these purposes. In this section, food insecure households are defined as households that had poor or borderline food consumption based on the food consumption score.

#### *3.2.1. Current Food Insecurity Status*

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

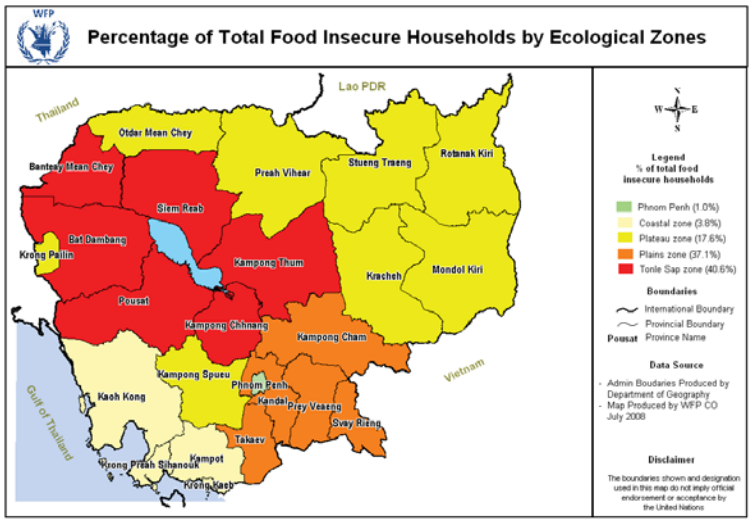
It is likely that the proportion of food-insecure people could increase significantly during the peak of the lean season (August–November) and the end of the "fishing period" (see section 3.3.2 Food Insecurity Status during Lean Season (August-November) {This section does not exist}).

In short, the seasonal findings from the survey do not necessarily represent household food consumption throughout the year. In addition, because fishing, collection of other aquatic animals and hunting are opportunistic activities, the proportion of households with borderline or acceptable food consumption is likely to fluctuate more in 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 (equalling about 1.7 million individuals) are classified as food insecure.

The highest number of food insecure households was observed in the Tonle Sap zone,[6] followed by plains zone,[7] plateau zone[8] and coastal zone.[9]




6 Tonle Sap zone: Siem Reap, Kompong Thom, Pursat, Kompong Chhnang, Banteay Meanchey and Battambang.

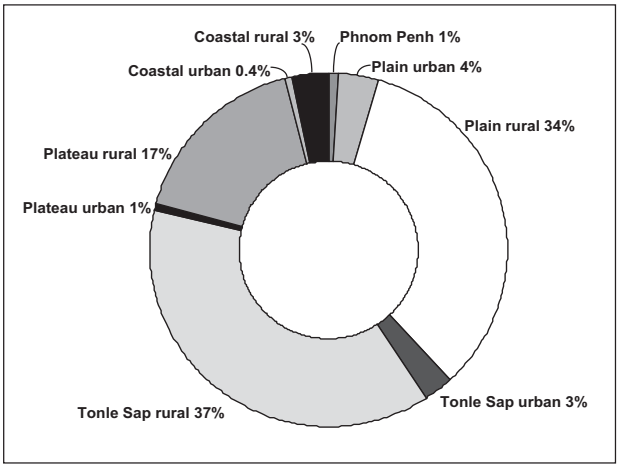
7 Plain zone: Kompong Cham, Prey Veng, Svay Rieng, Kandal and Takeo.

8 Plateau zone: Kompong Speu, Oddar Meanchey, Preah Vihear, Stung Treng, Kratie, Mondolkiri, Ratanakkiri and Pailin.

9 Coastal zone: Kampot, Koh Kong, Kep and Sihanoukville.

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[10] are food insecure. 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 (June 2008)***




### *3.2.2. Location and Patterns of Poor Food Consumption Population[11]*

According to the survey, 4.3 percent[12] of Cambodian households are currently (June 2008) chronically food-insecure or poor food consumption households. In term of the affected population, this corresponds to more than half a million people (617,849)[13] living in more than 120,000 households. Map 1 shows that the highest number of households with poor food consumption was detected in the Tonle Sap zone, followed by the plains zone.

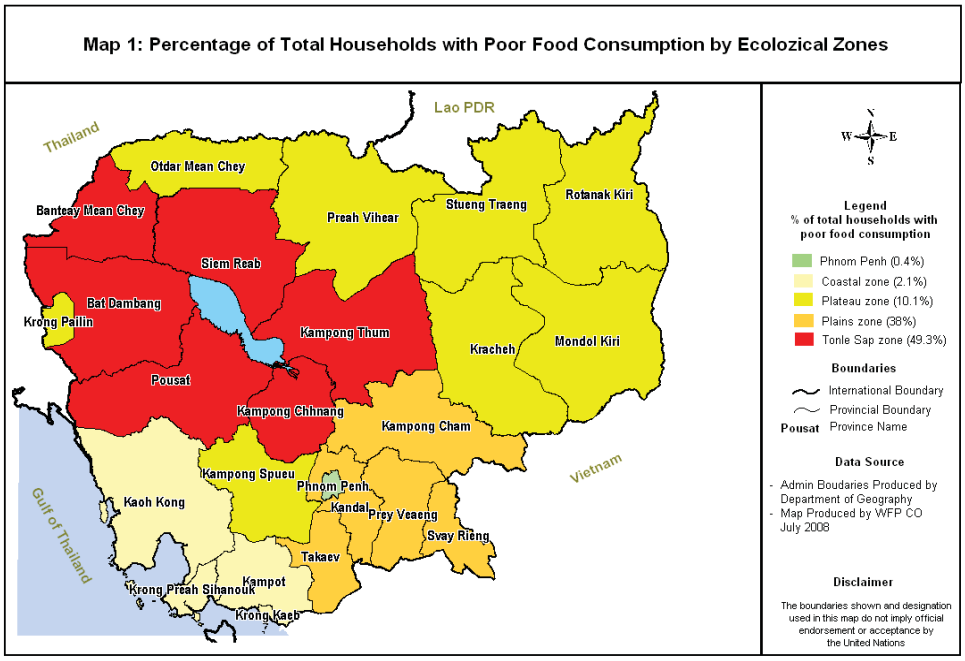
[10] Including Phnom Penh.

[11] As of June 2008.

[12] 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" refers to the deflated values (frequently specified as: "weighted by household " or "weighted by population"), which are needed due to the different proportions of the national population represented by the surveyed households in each zone. The deflators are as follows:

| Ecological Zones | Deflator |
|---|---|
| 1 - Phnom Penh | 0.394104768 |
| 2 - Plain | 2.190665271 |
| 3 - Tonle Sap | 1.419221173 |
| 4 - Plateau | 0.623173573 |
| 5 - Coastal | 0.328297367 |

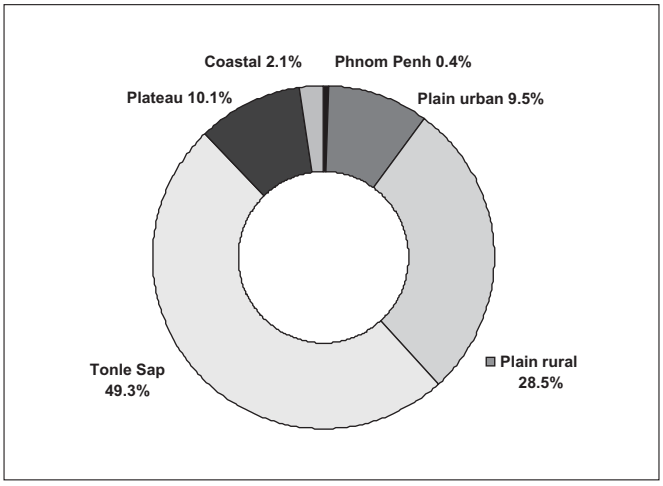
[13] The above figure has been obtained using the average household size as estimated by the survey.




Most of the poor food consumption households (90.1 percent) are in rural areas, concentrated mainly in the two most populated zones: Tonle Sap and plains (Figure 3.3).

Nearly 50 percent of the poor food consumption is located in rural Tonle Sap, followed by plains (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 Characteristics of the Food-Poor Population*

**A1. Most of them are landless.**

Among rural households, the survey found that landlessness is significantly higher among food poor households than in the overall rural population.

***Figure 3.4: Percentage of Landless Households (weighted)***

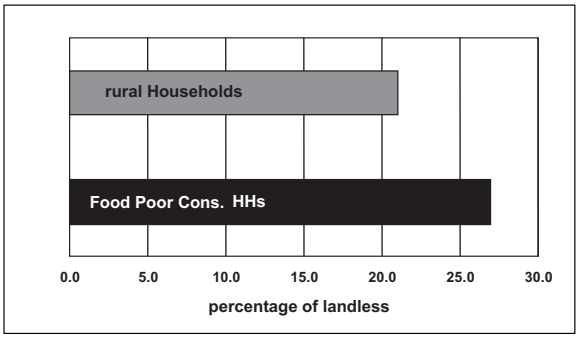
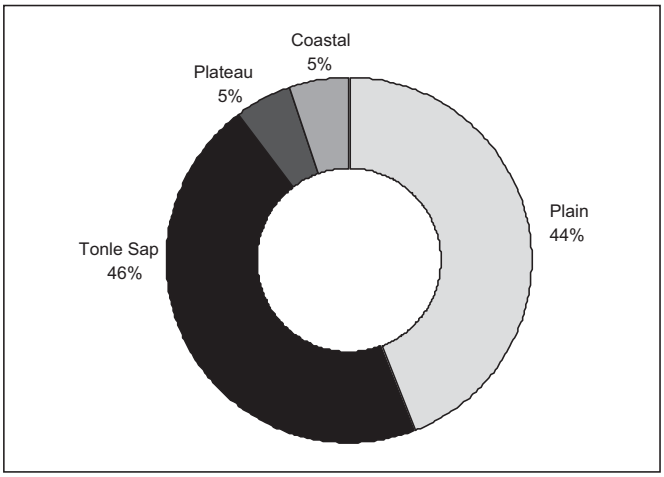



Figure 3.5 shows that the landless food-poor households are located mostly in the Tonle Sap and plains zones.

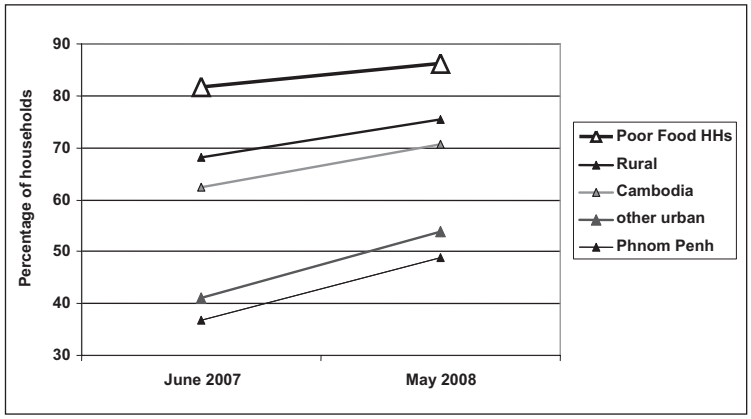
***Figure 3.5: Location of Landless Belonging to Food-Poor Households (weighted percentages)***




**A2. The poor food consumption households are the most affected by the current situation.**

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

*Figure 3.6: The Overall Worsening Situation between June 2007 and May 2008 (weighted)*




**A3. They are affected by a heavier demographic burden.**

Figure 3.7 emphasises the demographic shapes of the different strata (by age cohorts). The food-poor households have more children and more elderly to be cared for. The higher number of dependants is observed in the rural areas. The other urban areas and particularly Phnom Penh enjoy a more favourable situation of fewer dependents to feed.

*Figure 3.7: Poor Food Consumption and Strata Households, by Age Cohorts*

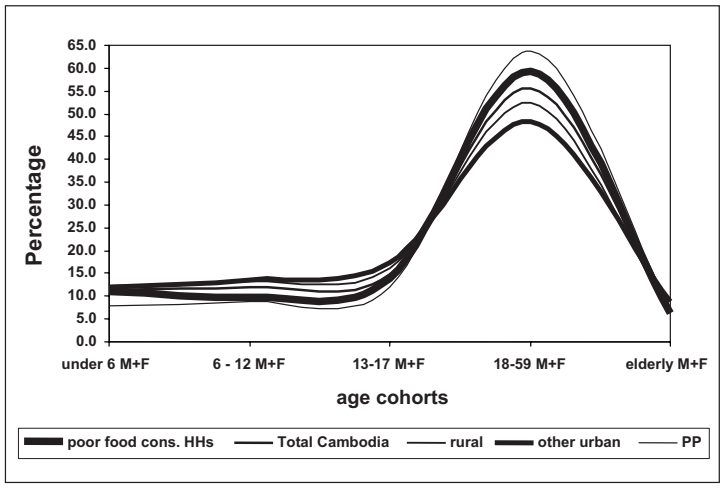
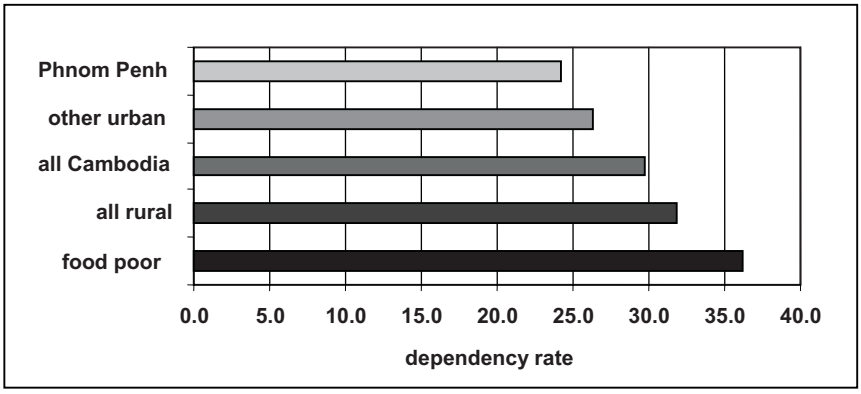



Figure 3.8 synthesises the dependency rates, making possible a comparison with the national average.[14] In comparison with overall rural areas, the poor food consumption households are more affected by a demographic burden.

[14] 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. This means that the rates slightly underestimate dependency and are not strictly comparable with the international standard. However, in this report they are used simply for a comparison between different areas of Cambodia and under the above limitation are correct.

***Figure 3.8: Poor Food Consumption and Strata Households' Dependency Rates (June 2008, not weighted)***




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

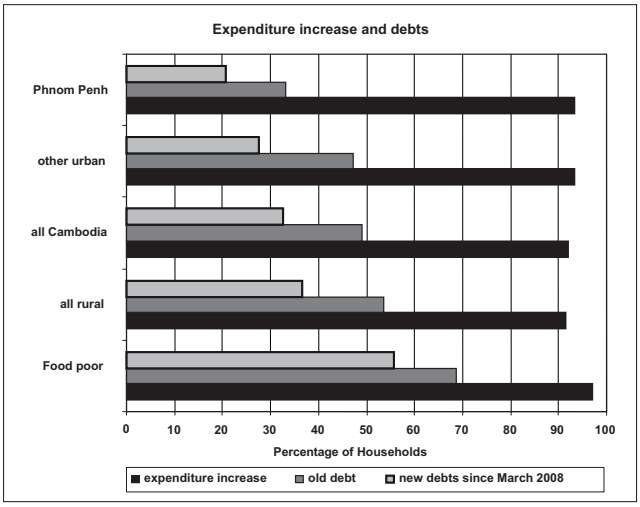
The impact of high food prices on simply those related to cereals is significantly more serious for the "poor food consumption" household.

Figure 3.9 shows that 92 percent of the surveyed household declared that their expenditure had increased since December 2007. The highest proportion of expenditure increase and newly incurred debts were found amongst the food-poor households. The consequences can be dramatic, because this social category is the most affected by debts. Perhaps even more worryingly, they have incurred in the last few months (since March 2007 {2008?}) many 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 proportion of poor food consumption households[15] that 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.

***Figure 3.9: Food Poor and Strata Households' Expenditure Increase and Old and New Debts***

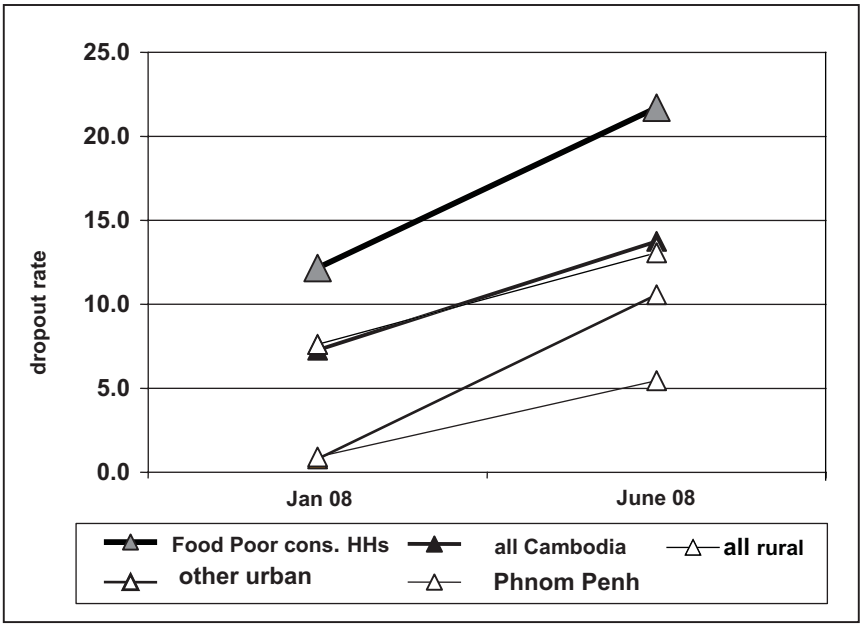



[15] Figures not weighted

### A5. Higher primary school drop-out rates

The drop-out rates of primary schoolchildren were highest among the food-poor households. Between January and June 2008 their drop-out rate almost doubled, affecting more than one-fifth of the food-poor children in primary school. However, there is no direct evidence that this increase (at least for this subcategory of the food insecure) is due to price increases.

***Figure 3.10: Food-Poor and Strata Households' Drop-Out Rates (%)***




### A6. How are they coping with difficulties?

The huge amount of information provided by surveyed households about the type and frequency of their coping mechanisms during the previous 30 days offers a very useful contribution for better understanding the impact of rising prices and the seriousness of their immediate or long-term effects. The most frequent measures for coping with difficulties are related to access to food. Chapter 4 reports the different frequencies[16] for each separate coping mechanism. However, a more detailed analysis will be necessary, particularly comparing 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)[17] rely on "less preferred and less expensive food", "incur debt to purchase food" and "reduce food eaten" than the three overall strata.

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

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

[17] The rank runs from 1 (everybody every day = 1; nobody never = 5), meaning that the higher the points the lower the frequency). This criterion is considered acceptable because all 2235 households provided a frequency answer for all 20 suggested answers.

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: Frequency of Household Coping Strategies****

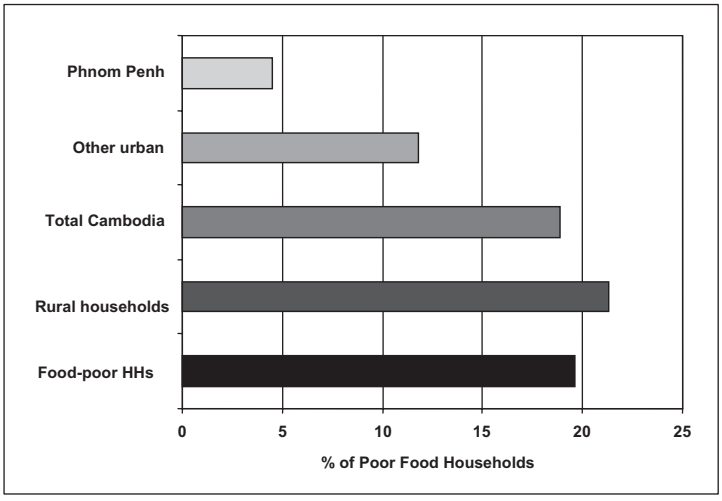
| | Food-Poor | Rural | Cambodia | Other Urban | Phnom Penh |
|---|---|---|---|---|---|
| Rely on less preferred and less expensive food | 2.6 | 3.3 | 3.4 | 3.8 | 3.8 |
| Purchase food on credit, incur debts | 3.5 | 3.8 | 3.9 | 4.2 | 4.2 |
| Reduce food eaten | 3.6 | 4.0 | 4.0 | 4.2 | 3.8 |
| Restrict 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 HH 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 HH 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 emigrating 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.*

## A7. Migration

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

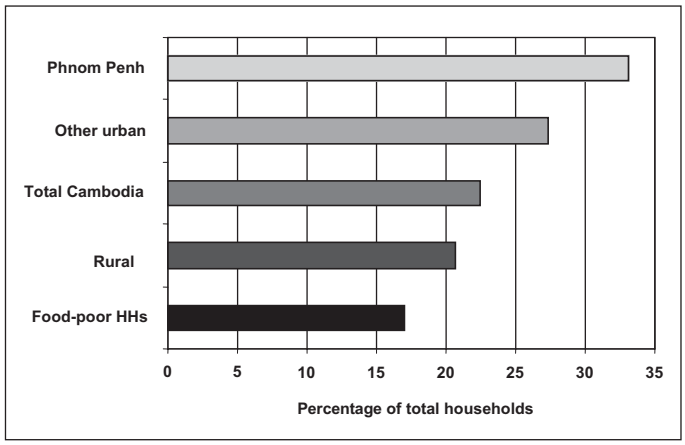
***Figure 3.11: Percentage of HHs with at Least One Member Working as Migrant***



## A8. Households headed by females

Of the surveyed households, about 23 percent were headed by females. 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: Female-Headed Households***

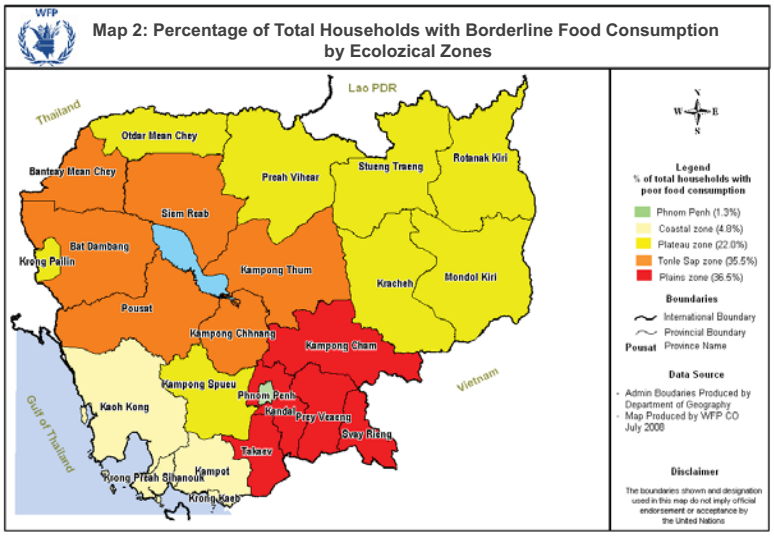



### *3.2.4. Location and Patterns of Borderline Consumption Population*[18]

The following pages identify and describe the main patterns of the borderline consumption households, i.e. those 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.

This category currently (June 2008) corresponds to more than a million people (1,063,275)[19] living in more than 200,000 households. Map 2 indicates the spatial distribution of households with borderline food consumption.

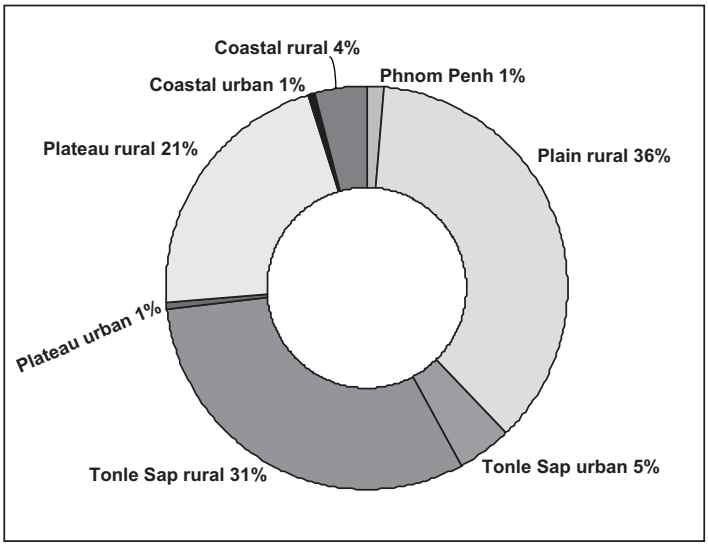



[18] When using a cut-off point of 38.5. This corresponds to 6.67 percent of surveyed households; the figure 6.98 percent was obtained weighting the observations using deflators for ecological zones. In terms of population the figures are 6.51 percent and 6.87 respectively.

[19] The figure was obtained using the average household size as estimated by the survey.

The borderline consumption households are more scattered through the country than the poor consumption households. Figure 3.13 shows that more than 90 percent of the borderline households live in rural areas. A small number of borderline households emerges in urban Tonle Sap and very small fringes have been detected in urban coastal and plateau zones.

***Figure 3.13: Location of Borderline Consumption Households (June 2008)***




### *3.2.5. Probable Food Insecurity Status during Next Lean Period*

As already noted above, 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.

In June 2008 fish consumption was observed four or five days a week. Due to the fact that data collection was carried out during the fishing season, the border lines for the non-fishing season should be artificially elevated.

To account for these seasonal components, it is suggested to raise the 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***

| Food Consumption Categories | Standard Range | New Range | 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 to 7 percent. Twelve percent of households could be considered as borderline and 81 percent as having acceptable food consumption.

***Table 3.16: Food Insecure Households during Lean Season, 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 | 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 |

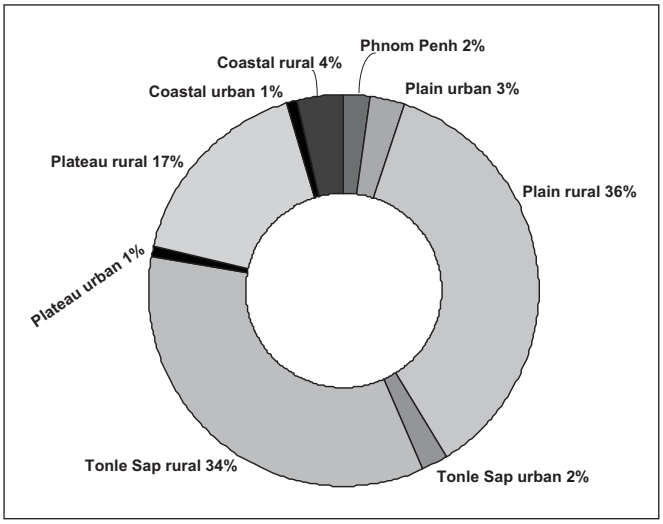
**NIS population projection 2008 was used to estimate number of food insecure households.*

*Source: National survey of 2235 households in June 2008*

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 food-poor and borderline groups. The affected population will be about 2.8 million individuals.

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

***Figure 3.14: Location of Food Insecure Households during 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 six categories: (1) selling agricultural products, (2) wage labour, (3), government and NGO salaries, (4) self-employment, (5) common property resources and (6) other. A large majority of households had 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 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 3.17). The numbers 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 from May 07 to May 08 |
|---|---|---|---|
| 1. Selling agricultural produce | 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 3.19 provides breakdowns by region.

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 reported increased 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 3.18: 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*

***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*

4

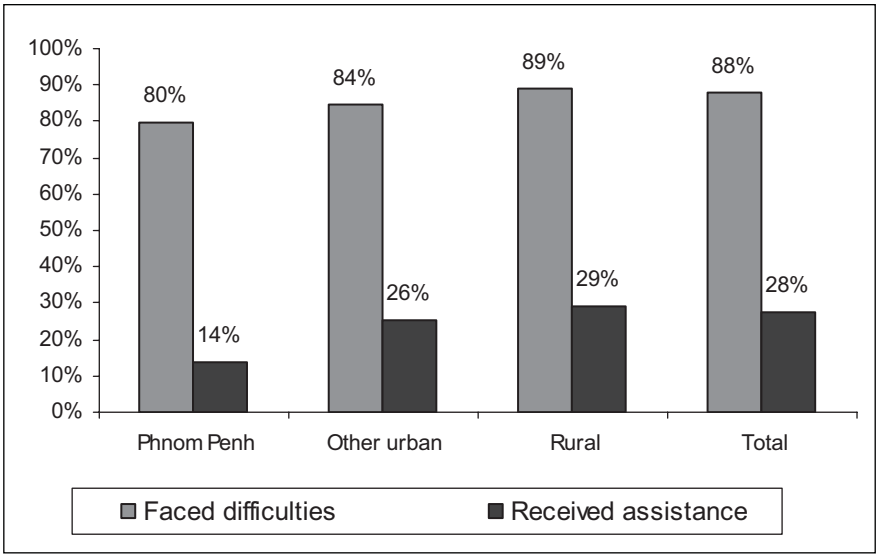
# Household Coping Strategies

## 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 12 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.

***Figure 4.1: Proportion of Respondent Households Facing Difficulties and Receiving Assistance in Previous 6 Months***




Households have adopted various ways to cope with difficulties (Tables 4.1a and 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 their 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 in 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 were 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*

| | | 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***

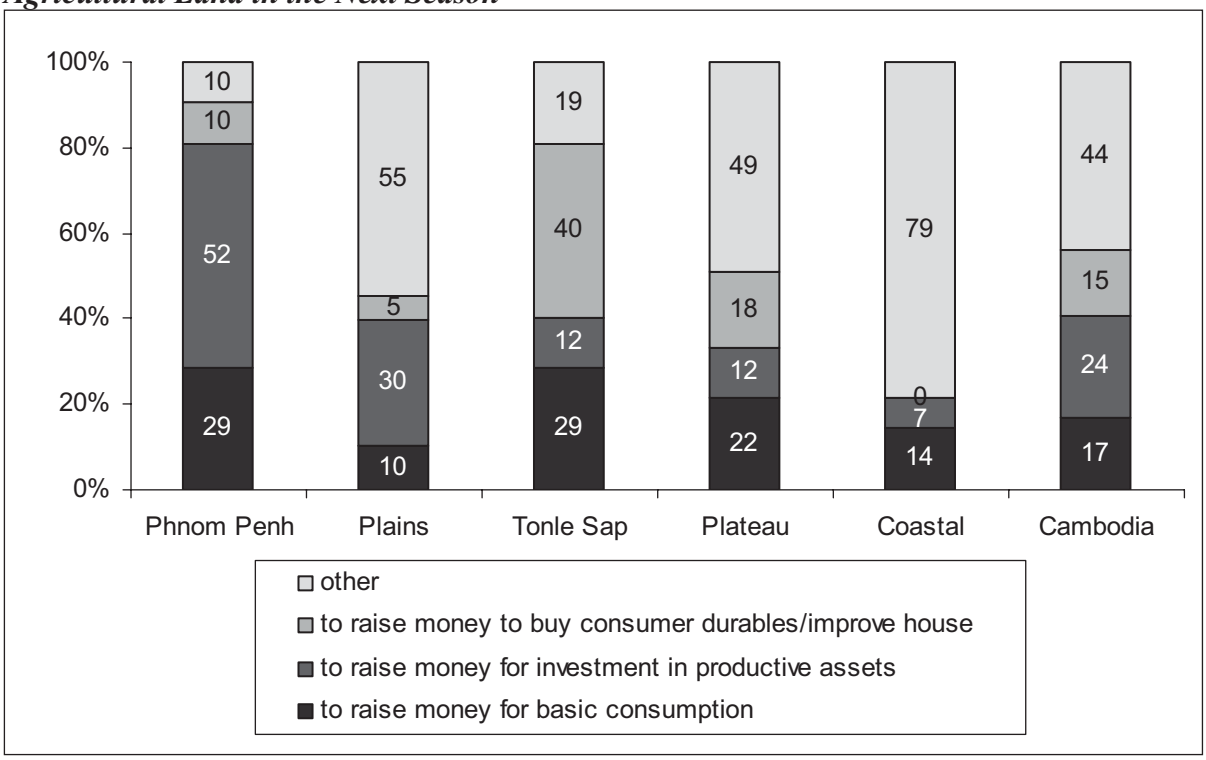
| | Cows/buffaloes | | Pigs | | Poultry | |
|---|---|---|---|---|---|---|
| | No. of HH | % of HH | No. of HH | % of HH | No. of HH | % of HH |
| It was normal time to sell them | | | 70 | 41 | 98 | 28 |
| Need for money | 122 | 70 | 84 | 49 | 234 | 66 |
| Old age/sickness | 25 | 14 | | | | |
| Infertility | 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 households to recover from 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 households may run out of assets and savings to cope with shocks, especially if food prices continue to rise further. As can be seen in Table 4.1b, 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, will be further natural resource depletion and increased migration, indicated by the considerable number of households that were looking for alternative or 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 Agricultural 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 sold land (Table 4.1a), 478 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 luxuries that the family can enjoy only on special occasions or when they catch lots of fish.

Chantha complains that the 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 at the time of the national survey, and 32 percent of the total had incurred debts in the past six months (Table 4.3). This is quite alarming and requires thorough analysis.

***Table 4.3: Household Loans***

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

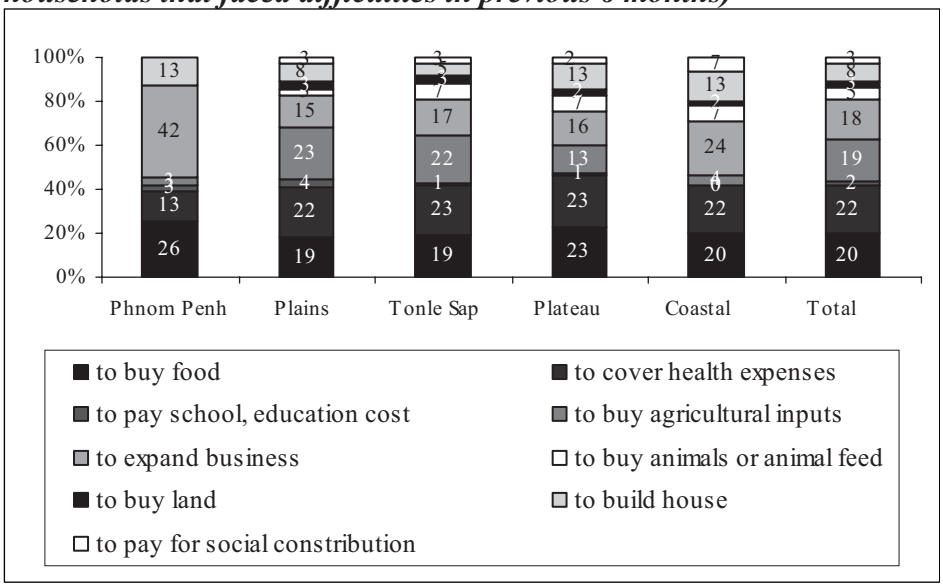
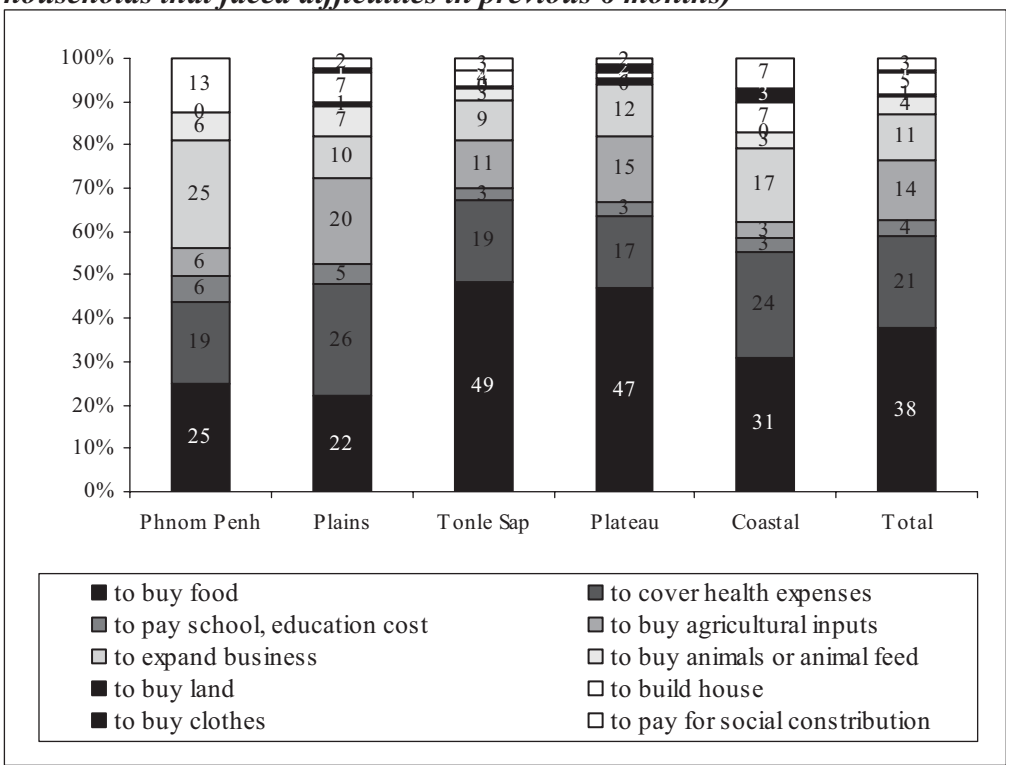



***Figure 4.2b: Second Reason for Taking Loans since March 2008 (%) (reported by 550 households that faced difficulties in previous 6 months)***




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 households covered in the national survey, 53.5 percent reported obtaining loans and 33.8 percent of them reported doing so during the past six months. According to the Cambodia Socio-Economic Survey 2004 data set, around 42 percent of households sought loans. 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 by 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.

***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*

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.

## Use of Loan by Main Occupation

Of the 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 the 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 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. 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 (%)***

| | P. Penh | 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 that 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 Six 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 schoolchildren | 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 schoolchildren | 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*

# 5

# Potential and Constraints of Increased Food Supply

## 5.1. Agricultural Land Characteristics

A large number of target households in rural strata own at least one plot of agricultural land (Table 5.1). About 21 percent of them do not hold any land. Those in plains areas constitute most of those who do not own land. Of owned plots, about 69 percent are used for wet season rice, around 15 percent for dry season rice and 12 percent for *chamkar* or other crops besides rice.

Some 43 percent of landowning respondents received their land through inheritance or as gifts from relatives, while the remainder acquired their land either through allocation by authorities or through purchase or forest clearance. Around 39 percent of them do not have any legal documents declaring their official ownership of the land. Some have application receipts and some hold other documents. Those in plain and coastal areas are more likely to have application receipts or land titles, while more of those with no documents are from Tonle Sap and the plateau. Although documentation is scarce, almost no respondents reported any serious conflict going over their possession or use of land.

While around 43 percent reported a decrease in their production, those in plain, Tonle Sap and plateau regions did not suffer this as much as coastal areas, where all respondents claimed a production decrease. Despite this, only about 2 percent plan to sell their land within the next six months. The percentage is lowest in the plateau. This is not surprising since the land market is not very active in those rural areas.

During the last season, about 91 percent of the land was cultivated. On top of this, quite a number of those in plains and Tonle Sap regions also used their land for sharecropping or left it idle or for someone else to cultivate for free. In the next season, there is a small increase in the number of those who plan to cultivate their land, while some of those in plains and Tonle Sap also plan to let 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 (% households or % plots)***

| | | Plains | T. Sap | Plateau | Coastal | Cambodia |
|---|---|---|---|---|---|---|
| Number of plots | 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 |
| | perennial crops | | | 3 | 1 | 0 |
| | raising livestock | | | | 0 | 0 |
| | other | 0 | 0 | 3 | 3 | 1 |
| Acquisition mode | allocated by authorities | 37 | 21 | 10 | 29 | 28 |
| | clearing forest | 8 | 2 | 18 | 4 | 7 |
| | bought | 28 | 17 | 14 | 14 | 22 |
| | inherited/given | 27 | 61 | 57 | 53 | 43 |
| Documentation | application receipt | 24 | 25 | 10 | 20 | 22 |
| | land title (old type) | 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 |
| Can cultivate it? | no | 58 | 24 | 47 | 28 | 49 |
| | yes | 42 | 76 | 53 | 72 | 51 |

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

## 5.2. Main Staple Crops by Region

### *5.2.1 Wet Season Rice*

Of the total of agricultural plots, 69 percent were used to cultivate wet season rice during the past season. Wet season rice farmers, on average, owned 0.9 hectares, which produced 1068 kg of paddy rice, valuing $278. Money had to be spent on inputs prior to the harvest. The study found that an average farmer spent a total of $86 on production costs, a large part of that on seed, land preparation, and seedling transplant. Subtracting the costs, they had a net profit of $192 from growing wet season rice during the survey period.

In the target villages surveyed, the average farmer owns 1.9 hectare and produces about four tonnes of paddy rice. Farmers in those villages put a relatively large amount of money into production: a total of $358 to cover the cost of seed, ploughing, transplanting, harvesting and so on. At the end of the season, they earn a net profit of around $417. The farmers in the special village sample earned more than those in the national sample simply because they had more farm land.

***Table 5.2a: Wet Season Rice Production, by Ecological Zone***

| | Plains | | Tonle Sap | | Plateau | | Coastal | | Cambodia | | Target Villages* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 1618 | 0.9 | 114 | 1.9 |
| harvest (kg) | 561 | 918 | 561 | 1259 | 257 | 1124 | 143 | 810 | 1521 | 1068 | 91 | 4003 |
| yield per ha | 561 | 2448 | 561 | 1461 | 256 | 1636 | 143 | 1942 | 1521 | 1899 | | 2107 |
| | | | | | | | | | | | | |
| seed (meun riel) | 364 | 1.6 | 187 | 5.6 | 93 | 0.4 | 82 | 0.7 | 726 | 2 | 2 | 40 |
| ploughing (meun riel) | 443 | 5.1 | 332 | 10.8 | 133 | 8.1 | 86 | 3.2 | 994 | 7 | 75 | 34 |
| transplanting (meun riel) | 462 | 6.6 | 214 | 7.9 | 132 | 4.8 | 88 | 5.5 | 896 | 7 | 24 | 30 |
| pumping (meun riel) | 418 | 4.1 | 203 | 3.3 | 102 | 1.7 | 80 | 1.1 | 803 | 3 | 27 | 20 |
| harvesting (meun riel) | 436 | 6.2 | 297 | 12.0 | 131 | 5.1 | 84 | 4.9 | 948 | 8 | 65 | 57 |
| threshing (meun riel) | 482 | 2.8 | 429 | 4.9 | 130 | 3.8 | 81 | 1.8 | | 4 | 71 | 14 |
| transporting (meun riel) | 405 | 1.6 | 243 | 2.6 | 104 | 1.4 | 79 | 0.6 | 831 | 2 | 68 | 19 |
| other (meun riel) | 495 | 7.7 | 316 | 9.7 | 137 | 5.2 | 101 | 7.7 | | 8 | 62 | 40 |
| Total cost (meun riel) | 552 | 29.2 | 542 | 35.6 | 205 | 19.4 | 124 | 21.8 | | 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** |

*Note: n stands for number of cases in the survey.*
*Source: National survey of 2235 households in June 2008, adjusted with the weights of ecological zones*
** Source: Survey of 991 households in 14 target villages in June 2008*

Disaggregation of production according to land size also yields an interesting result (Table 5.2b). On average, those who have more land to grow wet season rice had better harvests and higher net profit. However, in spite of this, large landholders tended to use land less productively than small landholders. 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 | 1618 | 0.9 |
| harvest (kg) | 900 | 587 | 384 | 1208 | 204 | 2307 | 33 | 4923 | 1521 | 1068 |
| yield per ha | 900 | 2322 | 384 | 1383 | 204 | 1185 | 33 | 789 | 1521 | 1899 |
| | | | | | | | | | | |
| seed (meun riel) | 451 | 1.2 | 191 | 2.7 | 73 | 4.7 | 10 | 31.9 | 726 | 2 |
| ploughing (meun riel) | 567 | 3.2 | 258 | 8.6 | 144 | 17.7 | 25 | 25.0 | 994 | 7 |
| transplanting (meun riel) | 559 | 3.7 | 229 | 7.6 | 91 | 15.6 | 17 | 37.5 | 896 | 7 |
| pumping (meun riel) | 520 | 2.6 | 193 | 2.5 | 79 | 5.2 | 11 | 33.9 | 803 | 3 |
| harvesting (meun riel) | 535 | 3.2 | 266 | 7.6 | 126 | 19.2 | 21 | 57.6 | 948 | 8 |
| threshing (meun riel) | 629 | 2.1 | 298 | 4.1 | 170 | 6.9 | 25 | 15.1 | 1,121 | 4 |
| transporting (meun riel) | 489 | 1.2 | 217 | 1.5 | 106 | 4.0 | 19 | 7.0 | 831 | 2 |
| other (meun riel) | 667 | 5.7 | 245 | 7.2 | 119 | 19.3 | 19 | 26.6 | 1,050 | 8 |
| Total cost (meun 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 2235 households in June 2008, adjusted with the weights of ecological zones*

According to the survey, 58.6 percent of wet season rice producers may face rice shortages before the next harvest.[1] The plateau has the highest proportion of rice shortage households, 67.6 percent, followed by Tonle Sap (63.3 percent) and coastal (58.4 percent).

1 Rice shortage here refers to households that have less milled and paddy rice than the estimated amount needed for household consumption till the next harvest. A new variable is constructed to capture rice shortage using the following formula: rice sufficiency = 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 rice sufficiency are considered at risk of food shortage

***Box 4: Wet Season Rice Village***

Sam Kimhourn, his wife Ten Saroeung and their three children live in a tin-roofed house in Nikom Krao village, Chroy Sdau commune, Thma Koul district, Battambang province. They are considered one of the better off families. They own a VCD player, a television, a bicycle and a *kouyon*.

The household depends mainly on the income from rice cultivation. They have two agricultural plots; one of 2.18 ha is cultivated for both dry and wet season rice and the other, of 1.12 ha, is used only for wet season rice. On these two plots, the household can produce 7500 kg of dry season rice and 10,500 kg of wet season rice. For the 2007 wet season rice, they spent 2,050,000 riels on inputs. The household also spent 1,575,000 riels on inputs for dry season rice. The household rented a plot of 3 ha from a villager to cultivate wet season rice, paying 3000 kg of paddy to the landowner and spending 1,900,000 riels on inputs. The rented plot yielded 11,270 kg of paddy. In total the household produced 29 tonnes of rice. They reserved 2 tonnes for their consumption and sold 23 tonnes between November 2007 and April 2008 at prices ranging between 850 and 1270 riels per kilogram. The total household revenue from rice production was 22,281,600 riels. The net profit was 16,756,600 riels, which is equal to US$4189.50.

Kimhourn said that even though they cannot generate high savings, they enjoy a decent living standard and good education for their children. Food security is not a major concern, but the rising prices of agricultural inputs, especially diesel and fertiliser, are. He is worried that rising input costs will reduce the net profit and negatively affect the household's living standards.

### *5.2.2. Dry Season Rice*

Dry season rice production took up about 15 percent of agricultural plots. Households that engage in dry season rice production average about one hectare of agricultural land. During the survey season, they were able to collect 3145 kg of paddy rice, which is equivalent to USD708 in cash. Dry season rice, however, is much more costly to produce than wet season rice because of the need to pump water and purchase fertiliser. The total production cost averaged USD334 during the last season. Hence, an average farmer could get approximately USD374 profit.

Farmers in the target villages possessed 0.5 hectare and produced 2213 kg of paddy rice or around USD458 per plot. After taking all production costs into account, on average a farm household growing dry season rice earned about USD271. 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 Villages * | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 3373 | 68 | 2521 | 18 | 1584 | 1 | 900 | 407 | 3145 | 157 | 2213 |
| yield per ha | 320 | 4044 | 68 | 2561 | 18 | 1681 | 1 | 1184 | 407 | 3684 | | 4426 |
| | | | | | | | | | | | | |
| seed (meun riel) | 204 | 23.6 | 40 | 21.8 | 9 | 8.8 | 1 | 0.0 | 253 | 23 | 33 | 23 |
| ploughing (meun riel) | 261 | 12.4 | 51 | 11.2 | 11 | 13.2 | 1 | 11.7 | 324 | 12 | 116 | 8 |
| transplanting (meun riel) | 204 | 12.5 | 26 | 5.2 | 14 | 19.1 | 1 | 31.7 | 244 | 12 | 98 | 8 |
| pumping (meun riel) | 302 | 34.5 | 34 | 20.3 | 16 | 26.5 | 1 | 3.3 | 353 | 33 | 105 | 13 |
| harvesting (meun riel) | 285 | 22.8 | 41 | 21.5 | 14 | 21.6 | 1 | 13.3 | 341 | 23 | 126 | 8 |
| threshing (meun riel) | 300 | 13.9 | 54 | 8.4 | 15 | 8.3 | 1 | 6.7 | 370 | 13 | 101 | 13 |
| transporting (meun riel) | 245 | 7.6 | 45 | 6.1 | 11 | 3.2 | 1 | 3.3 | 303 | 7 | 105 | 8 |
| other (meun riel) | 265 | 47.1 | 40 | 5.9 | 4 | 0.0 | 1 | 0.7 | 310 | 41 | 153 | 31 |
| Total cost (meun 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 2235 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 costs and profit according to landholdings. Consistent with findings on wet season rice production, farmers with more land were found to generate higher net profit per plot but tended to use land less effectively than small landholders. Given the same size of land, smaller landholders could produce more paddy than larger landholders.

In general, dry season rice producers have the highest degree of rice sufficiency. The survey showed that 57.4 percent have sufficient paddy rice and milled rice in stock for home consumption until the next harvest. The highest percentage was 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 (meun riel) | 106 | 7.3 | 84 | 16.1 | 50 | 29.2 | 12 | 174.4 | 253 | 23 |
| ploughing (meun riel) | 159 | 6.5 | 97 | 13.3 | 55 | 19.1 | 12 | 46.6 | 324 | 12 |
| transplanting (meun riel) | 108 | 5.2 | 77 | 11.5 | 48 | 20.8 | 11 | 49.0 | 244 | 12 |
| pumping (meun riel) | 165 | 13.7 | 106 | 27.8 | 69 | 52.7 | 12 | 217.7 | 353 | 33 |
| harvesting (meun riel) | 159 | 6.7 | 99 | 16.2 | 70 | 37.8 | 12 | 190.8 | 341 | 23 |
| threshing (meun riel) | 177 | 5.1 | 108 | 11.1 | 73 | 17.6 | 12 | 112.3 | 370 | 13 |
| transporting (meun riel) | 155 | 4.0 | 86 | 5.5 | 49 | 6.1 | 12 | 63.9 | 303 | 7 |
| other (meun riel) | 144 | 9.5 | 99 | 32.0 | 56 | 117.6 | 11 | 148.8 | 310 | 41 |
| Total cost (meun 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 2235 households in June 2008, adjusted with the weights of ecological zones*

***Box 5: Dry Season Rice Surplus***

A widower, Chan Hor, aged 44, lives in Ponley Cheung village, Ponley commune, Angkor Borei district, Takeo province. He has five dependents: an elderly person and four children, two aged between 6 and 12 years, one between 13 and 17 years and one over 18 years. They live in a private house made of brick, with a tile roof. His household assets are a radio, television, motorbike, bicycle, hand tractor, water pump and some savings.

The main source of household income is dry season rice production. The income is supplemented by animal husbandry; they raise five cattle, two pigs, four chickens and two ducks. The household owns 1.92 ha of dry season rice field which produced 6500 kg of paddy rice. Total expenditure for the dry season rice was 2 million riels. In June 2008, he sold 4500 kg of paddy at 1100 riels per kg to a local trader. He has never needed to paddy from others. He still has 600 kg of paddy and 20 kg of milled rice in stock. The six members consume 75 kg of paddy rice per month (about 410 grams/person/day), so the remaining rice could support his household for the next five months.

Although there is no threat to household food security, Hor is worried about the constraints on rice cultivation in the coming season. Because the household now spends more on food, its savings are significantly reduced, so they may 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 price since early 2008.

### *5.2.3. Maize*

About 1.6 percent of agricultural plots were reported to be use for maize production. The average plot size was 0.8 hectare, which produced 1051 kg of maize during the last season. Maize provided a higher profit than wet season rice, and its production cost is reasonable. The total cost was estimated as USD46 per plot, consisting largely of seed, land preparation

and transplanting seedlings. During the last season, maize producers generated profits of about USD191 per plot.

In the studied villages, an average farmer produced around 17 tonnes of maize from five hectares and earned as much as USD2500 from it. Production costs totalled USD1300, leaving USD1200 as profit.

The study found that 34.6 percent of maize producers had enough rice in stock for household consumption until the next harvest. Thus 65.4 percent of them will be short of rice, and about 89 percent perceived having no rice in stock as a threat, the highest percentage among all groups.

***Table 5.4: Maize Production***

| | Tonle Sap | | Plateau | | Coastal | | Cambodia | | Target Villages* | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 1339 | 1 | 525 | 19 | 1051 | 99 | 17,033 |
| yield per ha | 4 | 478 | 14 | 633 | 1 | 5563 | 19 | 771 | | 3214 |
| | | | | | | | | | | |
| seed (meun riel) | 10 | 2.4 | 13 | 6.4 | 1 | 3.3 | 24 | 5 | 54 | 216 |
| ploughing (meun riel) | 6 | 4.0 | 6 | 17.7 | 1 | 4.0 | 13 | 11 | 81 | 178 |
| transplanting (meun riel) | 6 | 0.0 | 6 | 10.3 | 1 | 2.7 | 12 | 5 | 34 | 106 |
| pumping (meun riel) | 6 | 0.0 | 6 | 0.0 | 1 | 0.0 | 12 | 0 | 3 | 59 |
| harvesting (meun riel) | 6 | 3.8 | 6 | 17.3 | 1 | 3.3 | 12 | 10 | 78 | 114 |
| threshing (meun riel) | 6 | 0.0 | 6 | 0.7 | 1 | 0.0 | 12 | 0 | 65 | 59 |
| transporting (meun riel) | 6 | 0.0 | 6 | 0.0 | 1 | 0.0 | 12 | 0 | 55 | 52 |
| other (meun riel) | 6 | 0.0 | 6 | 5.1 | 1 | 0.0 | 12 | 2 | 54 | 73 |
| Total cost (meun 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 2235 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 Tumnup village, Ou Sampor commune, Malai district, Banteay Meanchey province. There are seven household members in their charge. The household owns a television, a hand phones, a stereo player, a motorbike, a bicycle and a hand tractor.

They own 2.88 ha of rice land and 5.76 ha of maize land. The production of the two crops is the main source of household income. For wet rice cultivation in 2007, they spent 4,211,000 riels on inputs, the largest expenditure being for ploughing (2,540,000 riels), in order to harvest 7200 kg of paddy. To pay for inputs, they had to borrow money from a micro-credit association, and they expected to repay the money after the harvest. Soon after the harvest, in November 2007, they sold 6000 kg of paddy at 550 riels per kg, and retained the other 1200 kg for household consumption. The rice production incurred a loss, but Hok claimed that at least he could produce enough rice for household consumption and sold the surplus for maize production.

They also invested 8,255,000 riels in maize, mainly in land preparation and harvesting. They got 34,500 kg of maize, which they sold maize for 650 riels per kg to a trader outside the village. The total revenue from maize was 22,425,000 riels, bringing 14,170,000 of net profit.

The household consumes 75 kilograms of milled rice per month; they have never bought rice from the market. There are 1000 kg of paddy and 50 kg of milled rice in the household stock. The higher commodity prices have pushed up the household expenditure for food, clothes and transportation. However, the household has not been negatively affected by rising food prices because they produce their own rice for consumption and benefited from maize production. Five members contribute their labour exclusively to the farm, and they have no intention of selling their land, including the residential plot. Even though they don't know whether the price of agricultural products will rise, they are enthusiastic to keep producing rice and maize.

### *5.2.4. Cassava Production in Target Villages*

Cassava cultivation seems to be attracting more attention from Cambodian farmers. Of the household sample, 2.5 percent reported being in this business. An average cassava farmer possesses two plots of 1.6 ha in total, which have an estimated value of around USD4700 per plot or $2938 per ha. Land for cassava seems to have a higher value than any other type of agricultural land.

The average harvest of cassava during the last season was 4378 kg per plot, worth USD550. A total of around USD130 is required for ploughing, harvesting, processing, transporting and other costs. Cassava is easier to plant and care for than the two previous crops. Yet it also provided a handsome profit of around USD537.

Despite this higher earning, the majority of cassava growers perceived a threat of having no paddy in stock. This may reflect the fact that cassava growers have less paddy or milled rice in stock or they may be net buyers of rice. Thus as the price of rice increases, they will have to spend a lot more of their income on food.

***Table 5.5: Cassava Production in Target Villages***

| | n | mean |
|---|---|---|
| plot size (hectare) | 62 | 1.3 |
| | | |
| harvest (kg) | 54 | 4,378 |
| yield/ha | | |
| price (riel/kg) | | 650 |
| revenue (meun riel) | | 285 |
| | | |
| seed (meun riel) | 1 | 3 |
| ploughing (meun riel) | 18 | 24 |
| transplanting (meun riel) | 10 | 34 |
| pumping (meun riel) | 3 | 11 |
| harvesting (meun riel) | 12 | 15 |
| threshing (meun riel) | 12 | 13 |
| transporting(meun riel) | 5 | 15 |
| other (meun riel) | 9 | 27 |
| total cost (meun 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 14 target villages in June 2008*

***Box 7: Cassava Production***

Ly Menghour and Khin Sreymoch, a couple with two children live in a tile-roof house in Spean village, Dar commune, Memut district, Kompong Cham province. Their household has some durables and luxuries—motorcycle, bicycle, television, mobile phone, VCD player—and some savings.

The household owns an upland plot of 3 ha that has been used for cassava production for the last two years. The land produces 50 tonnes of fresh cassava, which was sold at 250 riels per kilogram. However, he said that the price of dry cassava was higher but he did not undertake drying because of the lack of supporting labour in his family and the village and the complications in the process. The irregularity of rain and insufficient heat in the drying process could spoil the cassava, causing a great loss. Their total revenue from cassava production was 12,500,000 riels, while 1,700,000 riels was the production cost, leaving a profit of 10,800,000 riels.

The household depends mainly on purchased foodstuff aside from some basic vegetables grown around the residential plot. Kimhourn raised his concern that although his family can afford sufficient nutritional food now, they will face a food deficit because the profit from cassava production was not reserved only for household food but also for the next cultivation. If the price of food keeps rising, the family members will be forced to eat less preferred and less expensive food, he said.

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

### *5.2.5. Soya Bean Production in Special Villages*

Soya beans are grown in very few areas of Cambodia. Only 18 households of the surveyed sample in the special villages reported engaging in this activity. In general, compared to farmers of other crops, soya bean farmers own more agricultural land, which has an estimated value of around USD4000 per hectare.

Soya bean growers with an average 4.4 ha of land harvested around 5 tonnes per plot, which sold for USD2360 in the last season. A total of around USD952 was required for costs such as ploughing, harvesting, processing, and transporting, leaving around USD1400 as profit.

Despite this higher earning, a large majority of soya bean growers needed to purchase paddy, having little or none in stock. This may be a good reason for most of them feel insecure or threatened by high food prices. The survey indicated that only 16.7 percent of soya growers have sufficient paddy or milled rice for household consumption, while 11.1 percent will face shortages of one to three months, 66.7 percent of three to six months and 5.6 percent of more than six months. The survey also found that 66.7 percent 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 | 5554 |
| yield per ha | | 1262 |
| | | |
| seed (meun riel) | 19 | 101 |
| ploughing (meun riel) | 24 | 80 |
| transplanting (meun riel) | 10 | 138 |
| pumping (meun riel) | 2 | 57 |
| harvesting (meun riel) | 22 | 66 |
| threshing (meun riel) | 18 | 78 |
| transporting (meun riel) | 12 | 23 |
| other (meun riel) | 10 | 60 |
| Total cost (meun riel) | 34 | 381 |
| | | |
| total cost/ plot ($) | | 952 |
| revenue/ plot ($) | | 2360 |
| net profit/ plot ($) | | 1408 |
| | | |
| total cost/ hectare ($) | | 216 |
| revenue/ hectare ($) | | 536 |
| net profit/ hectare ($) | | 320 |

*Source: Survey of 991 households in 14 target villages in June 2008*

## 5.3. Constraints on Increased Production

Table 5.7 summarises constraints facing farmers during the last season. It seems that shortages of capital and labour and the lack of proper irrigation are the main constraints that keep villagers from being able to increase production. The three major constraints reported among respondents are lack of money for fertilisers, irrigation issues and lack of household labour and/or draught animals. Some other main constraints include insufficient capital to hire labour or ploughing, not enough machinery, flood or drought and inadequacy of knowledge or training to use current

inputs and technology more optimally and productively. Policies to remove these constraints may result in an increase in production and help reduce the poverty and vulnerability of farmers.

Productivity can be marginally increased by resolving land conflicts. In the survey, about 2 percent of plots were reported to be in conflict (Table 5.1). Land conflicts are an issue because farmers cannot use the land to its maximum potential. The current study showed that about 44 percent of conflicted plots were associated with declines in productivity.

The percentage of farmers who would grow crops on their idle farmland during the coming season was small and the percentage of farmers who would grow for business purposes was still low. Only 10.6 percent of households would increase production solely for sale purposes, against 47 percent that would use extra harvest for household consumption. This indicated that not many farmers saw high food prices as an opportunity yet.

***Table 5.7: Most Important Constraints on Increasing Production, by Crop (%)***

| | w.s. rice | d.s. rice | maize | cassava | others | total |
|---|---|---|---|---|---|---|
| not enough HH labour/draught animals | 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 access 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 | 100 | 100 | 100 | 100 | 100 |

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

Many attribute high world food prices to greater demand for food and fuels in China, India and other countries, while sizeable portions of land have been allocated to bio-fuels. Cambodia is an open and small economy that produces surpluses of a few major crops such as rice, soybeans, maize, cassava, cashews, sesame and rubber. Higher prices of these crops mean Cambodia earns more from exports. The survey found that dry season rice farmers and cassava farmers have benefited from the increase in prices, while wet season rice farmers and others that will harvest their crops in November–December 2008 will also stand to benefit if prices remain high (Table 5.8). In general, production costs in 2008 are about 50 percent higher than in 2007 but farm gate prices increased by 40–113 percent, resulting in gross margins rising by 38–176 percent. Thus, producers stand to benefit from the price rises. If prices of agricultural commodities remain at the present level, poverty reduction will occur much faster than before. It goes without saying that those with more farm land will derive more gains.

***Table 5.8: 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 (tonnes) | 3.7 | 3.7 | 0 | 1.9 | 1.9 | 0 |
| Price at farm gate ($/tonne) | 180 | 250 | 39 | 225 | 320 | 42 |
| Gross Revenue ($) | 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 (tonnes) | | | | 4.0 | 4.0 | 0 |
| Price at farm gate ($/tonne) | | | | 150 | 250 | 67 |
| Gross Revenue ($) | | | | 600 | 1,000 | 67 |
| Total Production Cost ($) | | | | 205 | 280 | 37 |
| **Gross Margins ($)** | | | | **395** | **720** | **82** |
| **SOYBEAN** | | | | | | |
| Yield (tonnes) | | | | 1.5 | 1.5 | 0 |
| Price at farm gate ($/tonne) | | | | 400 | 580 | 45 |
| Gross Revenue ($) | | | | 600 | 870 | 45 |
| Total Production Cost ($) | | | | 260 | 375 | 44 |
| **Gross Margins ($)** | | | | **340** | **495** | **46** |
| **CASSAVA** | | | | | | |
| Yield (tonnes) | | | | 8.0 | 8.0 | 0 |
| Price at farm gate ($/tonne) | | | | 75 | 160 | 113 |
| Gross Revenue ($) | | | | 600 | 1,280 | 113 |
| Total Production Cost ($) | | | | 288 | 420 | 46 |
| **Gross Margins ($)** | | | | **312** | **860** | **176** |

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

## References


ADB (2008) "Food prices and inflation in developing Asia: is poverty reduction coming to an end?", http://www.developmentgateway.com.au/jahia/Jahia/pid/6989

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

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, accessed

Johansson, Sten & Sten Bäcklund (2005), "A new set of poverty estimates for Cambodia 2004 based on the CSES 2004 diary data", unpublished report for Statistics Sweden (Phnom Penh)

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

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

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

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

Ruel, M. (2003), "Operationalizing dietary diversity: a review of measurement issues and research priorities", *Journal of Nutrition,* 133, pp. 3922S–3926S

von Braun, Joachim (2007), *The World Food Situation: New Driving Forces and Required Actions,* Food Policy Report No. 18 (International Food Policy Research Institute)

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* (World Bank)

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

# Annexes

## Annex 1: Additional Tables

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

| Type of paddy in different provinces | Jul. 07 | Nov. 07 | Jan. 08 | Mar. 08 | Apr. 08 | May. 08 | Jun. 08 |
|---|---|---|---|---|---|---|---|
| **Rice Mill Ou Ambel (Banteay Meanchey)** | | | | | | | |
| Mixed | 520 | 590 | 730 | 800 | 1,050 | 1,717 | |
| Neang Minh | 553 | 600 | 840 | 1,070 | 1,070 | 1,070 | |
| Phka 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 | | | | |
| Phka Knhei | 650 | 675 | 683 | | | | |
| **Rice Mill Prek Russey (Kandal)** | | | | | | | |
| IR | 720 | 897 | 860 | 1,429 | 1,471 | 1,440 | 1,400 |
| Phka 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 Neak Loeang (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 (Sihanoukville)** | | | | | | | |
| 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 in 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 | |
| Phka 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 | |
| Phka Knhei | 100 | 112 | 113 | 175 | 175 | 179 | 184 |
| Somali | 100 | 100 | 115 | 155 | 158 | 165 | 175 |

*Source: Ministry of Agriculture, Forestry and Fisheries, Marketing Office (recalculated by CDRI)*

***Table A2.2: Paddy Price Received by Farmers, by Province and Month (Riels per kg)***

| Province | Nov 07 | Dec 07 | Jan 08 | Feb 08 | Mar 08 | April 08 | May 08 | June 08 |
|---|---|---|---|---|---|---|---|---|
| Banteay Meanchey | 600 | 630 | 620 | 650 | 1000 | 975 | 1000 | |
| Battambang | 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 Thom | 800 | 800 | 850 | 1100 | 1150 | 1200 | 1100 | |
| Kampot | 800 | 850 | 900 | 900 | 1000 | 1200 | 1200 | 1350 |
| Kandal | | 2000 | 875 | 950 | | 1000 | 1200 | |
| Koh Kong | | 500 | | 1000 | | | 1500 | |
| Kratie | | 800 | 800 | 2500 | | | | |
| Mondolkiri | | 1500 | | | | | | |
| Phnom Penh | | 1000 | 1000 | 1700 | 900 | 1700 | 1300 | 1300 |
| Preah Vihear | 700 | 675 | 700 | 1250 | 1300 | 2000 | 2000 | |
| Prey Veng | 650 | 650 | 860 | 900 | 905 | 900 | 1000 | 1100 |
| Pursat | 700 | 700 | 600 | 700 | | | | |
| Siem Reap | 1000 | 650 | 925 | 900 | 700 | 950 | 1000 | 1050 |
| Sihanoukville | | | 800 | 1000 | 1100 | | 1175 | |
| Stung Treng | | | 800 | | | | | |
| Svay Rieng | 600 | 600 | 700 | 800 | 1000 | 800 | 1100 | |
| Takeo | 1100 | 885 | 800 | 900 | 900 | 990 | 1000 | |
| Oddar Meanchey | 525 | 769 | 700 | 800 | 715 | 800 | 1000 | 780 |
| Kep | | 900 | | | | | | |
| **Cambodia** | **750** | **800** | **800** | **900** | **950** | **1000** | **1100** | **1175** |

*Note: Types of paddy rice were not controlled for so these prices do not strictly represent real increases.*

*Source: National survey of 2235 households in June 2008*

***Table A2.3: Prices of Milled Rice Purchased by Survey Respondents, by Province and Month (Riels per kg)***

| | 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 Treng | | | | | 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** |

*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 when prices were rising remarkably.*
*Source: National survey of 2235 households in June 2008*

***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 (Riels per kg) | | | | | | | |
| Banana | Bunch | 951 | 923 | 955 | 1078 | 1103 | 1162 | 1109 | 1084 |
| Orange | Dozen | 3769 | 3568 | 4705 | 5672 | 5445 | 6790 | 7987 | 7589 |
| Pineapple | Dozen | 8489 | 9775 | 9678 | 10390 | 10918 | 11319 | 11400 | 11408 |
| Sugar Cane | Bunch | 4988 | 5164 | 5132 | 4946 | 4656 | 4875 | 5488 | 6694 |
| Beet | Kg | 946 | 849 | 849 | 1043 | 968 | 1117 | 1309 | 1317 |
| Bitter Gourd | Kg | 1463 | 1471 | 1360 | 1383 | 1360 | 1350 | 1888 | 1650 |
| Cabbage | Kg | 1276 | 2145 | 1279 | 1216 | 1319 | 1744 | 2241 | 2359 |
| Chinese Kale | Kg | 3377 | 2555 | 2027 | 2500 | 2486 | 2347 | 2666 | 3357 |
| Cucumber | Kg | 937 | 1133 | 1074 | 906 | 1024 | 1286 | 1568 | 1141 |
| Gourd | Dozen | 7150 | 5043 | 6000 | 6614 | 6700 | 6825 | 7275 | 8313 |
| Lettuce | Kg | 3286 | 1837 | 1985 | 1846 | 1540 | 2364 | 4505 | 3943 |
| Sweet Potato | Kg | 702 | 606 | 667 | 775 | 835 | 904 | 1025 | 950 |
| Tomato | Kg | 1739 | 2124 | 1730 | 1387 | 1281 | 1510 | 1906 | 2315 |
| | | Index (July 2007 = 100) | | | | | | | |
| Banana | Bunch | 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 | Bunch | 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: 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 | 2058 | 2148 | 2647 | 3033 | 3157 | 3408 | 3427 |
| Mung Bean | 3274 | 3106 | 3315 | 3457 | 3480 | 3354 | 3558 |
| Ground Nut | 4185 | 5160 | 5989 | 6071 | 5870 | 6020 | 6400 |
| Maize (Yellow) | 799 | 945 | 965 | 1012 | 1039 | 1148 | 1308 |
| Sesame (White) | 3297 | 4242 | 4705 | 5514 | 5811 | 6416 | 7188 |
| Cashew Nut (in shell) | 2650 | | 3600 | 3142 | 3050 | 3433 | .. |
| Cashew Nut processed | 26,750 | 27,727 | 27,000 | 28,400 | 29,292 | 29,262 | 28,979 |
| Lotus Nut | 2800 | 3045 | 3200 | 3420 | 4408 | 4381 | 4275 |
| | 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: 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) | 8547 | 8095 | 8820 | 8767 | 8460 | 9050 | 7877 | 8783 |
| 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) | 6500 | 7000 | 7000 | 8389 | 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) | 6933 | 7350 | 6867 | 6850 | 7400 | 7500 | 6838 | 6450 |
| Butter Catfish (No.1) | 5900 | 5550 | 5000 | 6150 | 7100 | 8450 | 9250 | 10,000 |
| Eel (No.1) | 13,000 | 11,750 | 10,125 | 12,600 | 13,433 | 12,400 | 13,300 | 14,000 |
| Featherback (No.1) | 6767 | 8850 | 7567 | 7600 | 8500 | 7125 | 8775 | 9900 |
| Great White Shealfish (No.1) | 8300 | 8600 | 8000 | 8000 | | | | |
| Micronema (No.1) | 14,000 | 14,750 | 20,000 | 25,000 | 24,333 | 25,000 | 25,000 | 25,000 |
| Small Scale Croker (No.1) | 9333 | 9900 | 9800 | 9950 | 10,500 | 12,250 | 12,500 | 12,500 |
| Tire Traek Eel (No.1) | 11,333 | 9350 | 9833 | 9600 | 10,500 | 13,125 | 13,000 | 13,000 |
| Frozen Fish (Chhdor) | 7250 | 10,240 | 8975 | 9033 | 9380 | 8900 | 9160 | 9500 |
| Frozen Fish (Deap) | 5600 | 9120 | 7475 | 8033 | 7000 | 7950 | 8260 | 8600 |
| Crab (Ses) | 14,558 | 16,139 | 16,413 | 17,267 | 16,803 | 19,838 | 18,167 | 21,117 |
| Kamong Fish | 2731 | 2994 | 2705 | 2786 | 2921 | 1890 | 2917 | 3458 |
| 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: Ministry of Agriculture, Forestry and Fisheries, Marketing Office*

***Table A3.1: Reported Change in Cash Income in the Past Six Months, by Income Groups (%)***

| Source of cash income | **change income in the past 6 month** | | | share of total |
|---|---|---|---|---|
| | 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 agricultural 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 others | 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 |
| remittances from overseas | | | 100 | 0.1 |
| remittances in country | 44.4 | 55.6 | .0 | 0.6 |
| forests | 30.3 | 30.3 | 39.5 | 5.0 |
| fishing | 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 |
| Source of cash income | **income decline by strata** | | | share of total |
| | 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 agricultural 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 |
| forests | | | 100.0 | 5.0 |
| fishing | | 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 |

***Table A3.2: Reported Change in Cash Income from One Year Earlier, by Income Groups (%)***

| Source of cash income | **change income in the past 1 Year** | | | share of total |
|---|---|---|---|---|
| | 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 agricultural 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 |
| forests | 28.9 | 32.9 | 38.2 | 5.0 |
| fishing | 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** | | | share of total |
| | 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 agricultural 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 |
| forests | | | 100 | 5.0 |
| fishing | | 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 (%)***

| 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 | | | |
| 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 | 1327 | 20 | 3079 | 7 | 8433 | 561 | 918 |
| yield per ha | 436 | 2682 | 99 | 1589 | 20 | 2086 | 7 | 900 | 561 | 2448 |
| | | | | | | | | | | |
| seed (meun riel) | 265 | 0.3 | 85 | 1.9 | 9 | 0.0 | 4 | 75.0 | 364 | 2 |
| ploughing (meun riel) | 335 | 3.7 | 90 | 9.4 | 13 | 11.0 | 4 | 11.5 | 443 | 5 |
| transplanting (meun riel) | 346 | 4.2 | 96 | 10.0 | 15 | 22.4 | 4 | 60.0 | 462 | 7 |
| pumping (meun riel) | 311 | 3.0 | 90 | 2.6 | 13 | 13.7 | 4 | 86.5 | 418 | 4 |
| harvesting (meun riel) | 315 | 3.6 | 101 | 8.2 | 15 | 25.1 | 4 | 80.0 | 436 | 6 |
| threshing (meun riel) | 359 | 2.1 | 101 | 4.2 | 18 | 6.9 | 4 | 19.0 | 482 | 3 |
| transporting (meun riel) | 296 | 1.5 | 92 | 1.4 | 13 | 4.7 | 4 | 7.5 | 405 | 2 |
| other (meun riel) | 381 | 6.1 | 94 | 9.1 | 15 | 37.3 | 4 | 17.5 | 495 | 8 |
| Total cost (meun 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 |

*Note: "n" stands for number of surveyed cases*

***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 | 1140 | 121 | 2278 | 20 | 4600 | 561 | 1259 |
| yield per ha | 247 | 1844 | 173 | 1232 | 121 | 1104 | 20 | 842 | 561 | 1461 |
| | | | | | | | | | | |
| seed (meun riel) | 94 | 4 | 55 | 6 | 35 | 10 | 3 | 0 | 187 | 6 |
| ploughing (meun riel) | 122 | 2 | 106 | 9 | 88 | 22 | 16 | 31 | 332 | 11 |
| transplanting (meun riel) | 101 | 3 | 67 | 5 | 38 | 19 | 9 | 31 | 214 | 8 |
| pumping (meun riel) | 114 | 3 | 51 | 3 | 34 | 5 | 4 | 2 | 203 | 3 |
| harvesting (meun riel) | 111 | 2 | 104 | 9 | 70 | 24 | 13 | 60 | 297 | 12 |
| threshing (meun riel) | 172 | 3 | 138 | 4 | 105 | 8 | 14 | 17 | 429 | 5 |
| transporting (meun riel) | 102 | 1 | 72 | 2 | 57 | 5 | 11 | 8 | 243 | 3 |
| other (meun riel) | 149 | 5 | 91 | 8 | 67 | 19 | 10 | 35 | 316 | 10 |
| Total cost (meun 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 | 1217 | 52 | 1964 | 5 | 2163 | 257 | 1124 |
| yield per ha | 110 | 2168 | 89 | 1448 | 52 | 938 | 5 | 453 | 256 | 1636 |
| | | | | | | | | | | |
| seed (meun riel) | 35 | 0 | 36 | 0 | 21 | 0 | 2 | 0 | 93 | 0 |
| ploughing (meun riel) | 50 | 3 | 45 | 8 | 34 | 13 | 4 | 22 | 133 | 8 |
| transplanting (meun riel) | 52 | 3 | 50 | 5 | 28 | 7 | 2 | 9 | 132 | 5 |
| pumping (meun riel) | 41 | 2 | 37 | 1 | 22 | 2 | 2 | 0 | 102 | 2 |
| harvesting (meun riel) | 52 | 3 | 45 | 4 | 32 | 9 | 2 | 9 | 131 | 5 |
| threshing (meun riel) | 42 | 2 | 44 | 4 | 39 | 6 | 4 | 8 | 130 | 4 |
| transporting (meun riel) | 37 | 1 | 37 | 1 | 27 | 3 | 2 | 5 | 104 | 1 |
| other (meun riel) | 64 | 5 | 43 | 3 | 27 | 8 | 3 | 10 | 137 | 5 |
| Total cost (meun 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 |

*Note: "n" stands for number of surveyed cases*

***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 | 1179 | 11 | 2830 | 2 | 3160 | 143 | 810 |
| yield per ha | 107 | 2117 | 23 | 1386 | 11 | 1596 | 2 | 718 | 143 | 1942 |
| | | | | | | | | | | |
| seed (meun riel) | 57 | 1 | 15 | 1 | 9 | 0 | 1 | 3 | 82 | 1 |
| ploughing (meun riel) | 60 | 2 | 16 | 4 | 9 | 5 | 2 | 16 | 86 | 3 |
| transplanting (meun riel) | 61 | 2 | 16 | 8 | 9 | 15 | 2 | 56 | 88 | 5 |
| pumping (meun riel) | 55 | 1 | 15 | 2 | 9 | 1 | 1 | 2 | 80 | 1 |
| harvesting (meun riel) | 57 | 2 | 16 | 7 | 9 | 11 | 2 | 52 | 84 | 5 |
| threshing (meun riel) | 55 | 1 | 16 | 2 | 9 | 6 | 2 | 10 | 81 | 2 |
| transporting (meun riel) | 54 | 0 | 15 | 1 | 9 | 2 | 1 | 0 | 79 | 1 |
| other (meun riel) | 73 | 5 | 17 | 5 | 10 | 26 | 2 | 30 | 101 | 8 |
| Total cost (meun 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 |

*Note: "n" stands for number of surveyed cases*

***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 | 1295 | 94 | 3220 | 55 | 6967 | 11 | 17040 | 320 | 3373 |
| yield per ha | 160 | 4453 | 94 | 3822 | 55 | 3530 | 11 | 2541 | 320 | 4044 |
| | | | | | | | | | | |
| seed (meun riel) | 90 | 7 | 66 | 16 | 37 | 28 | 11 | 194 | 204 | 24 |
| ploughing (meun riel) | 138 | 6 | 72 | 13 | 39 | 22 | 11 | 50 | 261 | 12 |
| transplanting (meun riel) | 99 | 5 | 61 | 12 | 33 | 23 | 11 | 49 | 204 | 13 |
| pumping (meun riel) | 151 | 14 | 88 | 30 | 53 | 59 | 11 | 244 | 302 | 35 |
| harvesting (meun riel) | 142 | 6 | 79 | 15 | 53 | 41 | 11 | 208 | 285 | 23 |
| threshing (meun riel) | 151 | 5 | 85 | 12 | 53 | 20 | 11 | 123 | 300 | 14 |
| transporting (meun riel) | 136 | 4 | 68 | 6 | 31 | 7 | 11 | 67 | 245 | 8 |
| other (meun riel) | 129 | 10 | 81 | 38 | 44 | 148 | 11 | 149 | 265 | 47 |
| Total cost (meun riel) | 158 | 47 | 92 | 127 | 53 | 299 | 11 | 1084 | 313 | 149 |
| | | | | | | | | | | |
| total cost/ plot (USD) | | 118 | | 318 | | 748 | | 2710 | | 373 |
| revenue/ plot (USD) | | 291 | | 725 | | 1568 | | 3834 | | 759 |
| net profit/ plot (USD) | | 173 | | 407 | | 820 | | 1124 | | 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 |

*Note: "n" stands for number of surveyed cases*

***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 | 1147 | 24 | 2386 | 14 | 3065 | 3 | 14000 | 68 | 2521 |
| yield per ha | 27 | 2843 | 24 | 2688 | 14 | 2000 | 3 | 1611 | 68 | 2561 |
| | | | | | | | | | | |
| seed (meun riel) | 16 | 12 | 14 | 20 | 9 | 43 | 1 | 20 | 40 | 22 |
| ploughing (meun riel) | 20 | 8 | 20 | 15 | 10 | 9 | 1 | 20 | 51 | 11 |
| transplanting (meun riel) | 7 | 8 | 11 | 7 | 7 | 0 | 0 | . | 26 | 5 |
| pumping (meun riel) | 11 | 15 | 13 | 15 | 9 | 37 | 1 | 15 | 34 | 20 |
| harvesting (meun riel) | 14 | 12 | 16 | 22 | 10 | 29 | 1 | 60 | 41 | 21 |
| threshing (meun riel) | 23 | 5 | 17 | 9 | 13 | 11 | 1 | 30 | 54 | 8 |
| transporting (meun riel) | 18 | 4 | 14 | 6 | 11 | 6 | 1 | 40 | 45 | 6 |
| other (meun riel) | 14 | 5 | 16 | 6 | 10 | 8 | 0 | . | 40 | 6 |
| Total cost (meun 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 | | 3150 | | 567 |
| net profit/ plot (USD) | | 163 | | 380 | | 429 | | 2294 | | 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 |

*Note: "n" stands for number of surveyed cases*

***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 | 2515 | 18 | 1,584 |
| yield per ha | 4 | 2857 | 6 | 1081 | 8 | 1463 | 18 | 1,681 |
| | | | | | | | | |
| seed (meun riel) | 1 | 2 | 4 | 8 | 4 | 11 | 9 | 9 |
| ploughing (meun riel) | 1 | 2 | 5 | 13 | 6 | 15 | 11 | 13 |
| transplanting (meun riel) | 2 | 5 | 4 | 13 | 7 | 27 | 14 | 19 |
| pumping (meun riel) | 2 | 18 | 6 | 25 | 7 | 31 | 16 | 27 |
| harvesting (meun riel) | 2 | 10 | 4 | 18 | 7 | 27 | 14 | 22 |
| threshing (meun riel) | 2 | 4 | 5 | 6 | 7 | 11 | 15 | 8 |
| transporting (meun riel) | 1 | 2 | 4 | 2 | 7 | 4 | 11 | 3 |
| other (meun riel) | 0 | . | 2 | 0 | 2 | 0 | 4 | 0 |
| Total cost (meun 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 |

*Note: "n" stands for number of surveyed cases*

## ANNEX 2: 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 household's 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)<br>**2**= Private house with tin roof **3**= Private house/hut mostly in non-durable material (wood, herbs)<br>**4**= flat in multi-storey building **5**= room(s) in a shared house or shared flat<br>**6**= room(s) in a collective centre **7**= plastic sheeting<br>**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<br>**3**= Sale of other agric. produce<br>**5**= Work in garment factory<br>**7**= Self-employed<br>**9=** Government, NGO, company<br>**11=** Sale of animal/ animal products<br>**13** = Remittances in country<br>**15** = Income from forests<br>**17** = Commission from land trade | **2**= Sale of vegetables and/or fruits<br>**4**= Agricultural wage labour<br>**6**= Work in construction<br>**8**= Other work for other<br>**10**= Sale of handicrafts<br>**12**= Pension, allowances<br>**14**= Remittances from overseas<br>**16**= Income from fishery<br>**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* | | Do you have currently: | | Did you buy this in the past 6 months? | |
|---|---|---|---|---|---|
| Radio | *Codes for questions 3.22 - 3.51:*<br>**1** = No<br>**2** = Yes | 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 *(kouyon)* | | 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<br>**3**= To pay school, education costs<br>**5**= To expand business<br>**7**= To land<br>**9**= To buy clothes | | **2**= To cover health expenses<br>**4**= To buy agricultural inputs (seed, tools...)<br>**6**= To buy animals or animal feed<br>**8**= To build house<br>**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**<br>1= Own production<br>2= Fishing, hunting, gathering<br>3= Purchase<br>4= Traded goods or services<br>5= Borrowed<br>6= Exchange of labour for food<br>7= Exchange of items for food<br>8= Received as gift<br>9= Food aid<br>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 or 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 more days can your household rely on the paddy and/or 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 your 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 HH MEMBERS** | 7.8 | \|__\| |
| **MOTHERS AND / OR ELDER SISTERS SKIP MORE MEALS THAN OTHER HH 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 EMIGRATING 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 go?** 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 MAJOR 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, LET 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 schoolchildren (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, fertiliser | \|__\| |
| **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 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"* | .....ares |
| 8.3 What kind of land is it by its main use?<br>**1**= Wet season **2**= Dry season<br>**3**= Both wet and dry season **4**=Chamkar<br>**5**= Farm land under perennial crops (cashew, mango)<br>**6**= Land for raising livestock **7**= Other (specify……) | \|__\| |
| 8.4. How did you obtain the plot?<br>**1**= allocated by the authority **2**=clear the forest<br>**3**= bought **4**= inherited / gift from relative | \|__\| |
| 8.5. What kind of document do you have for this plot?<br>**1**= Application receipt **2**= Land title (old type)<br>**3**= Land title (new type) **4**= Other documents……..<br>**5**= No document | \|__\| |
| 8.6. Is the plot in conflict currently?<br>**1** = No (Go to 8.9) **2**=Yes | \|__\| |
| 8.7. If the plot is in conflict, who is in conflict with you?<br>**1**= Relatives **2**= Authorities in commune<br>**3**= Authorities from provincial town or Phnom Penh<br>**4**= Business 5= Other…… | \|__\| |
| 8.8. If in conflict, does it reduce production?<br>**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?<br>**1 =** Cultivate<br>**2 =** Let someone else cultivate for free *(go to next plot)*<br>**3 =** Left idle *(go to next plot)*<br>**4 =** Rent out / sharecrop to someone else | \|__\| |
| 8.12 If you rent it out last season or last year, how much did you get? (meun riel) | ……meun riel |
| 8.13 What did you grow on this plot in the last season?<br>**1 =** Rice, wet season **6 =** Permanent crops e.g. mango, cashew (specify)<br>**2 =** Rice, dry season **7 =** don't know / can't say<br>**3 =** Maize **8 =** nothing (left uncultivated)<br>**4 =** Cassava **9 =** Grazing livestock<br>**5 =** Vegetable (specify) **10** = other (specify) | \|__\| |
| 8.14 How much did you harvest?<br>*Record in units given (kg, tang, tau...) then convert to kg.* | ……..kg |
| 8.15 Expenditure on seeds | ……meun riel |
| 8.16 Expenditure on land preparation | ……meun riel |
| 8.17 Expenditure on transplanting | ……meun riel |
| 8.18 Expenditure on pumping | ……meun riel |
| 8.19 Expenditure on harvesting | ……meun riel |
| 8.20 Expenditure on threshing | ……meun riel |
| 8.21 Expenditure on transporting to house or storehouse | ……meun riel |
| 8.22 Expenditure on others | ……meun riel |
| 8.23 Total expenditures in the last season (add up from all items above or write down the lump sum expenditure if s/he does not remember detailed expenditures) | ……meun 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 / draught 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 obtain loan only 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 |

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

PLOT 2

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

| | |
|---|---|
| 8.49 Expenditure on threshing | ……meun riel |
| 8.50 Expenditure on transporting to house or storehouse | ……meun riel |
| 8.51 Expenditure on others | ……meun riel |
| 8.52 Total expenditures in the last season (add up from all items above or write down the lump sum expenditure if s/he does not remember detailed expenditures) | ……meun 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 / draught 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 obtain loan only 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?<br>**1 =** Cultivate it<br>**2 =** Rent it out<br>**3 =** Sharecrop to someone else (specify rent received: *$ and note unit, e.g. kg, tang)*<br>**4 =** Let someone else cultivate for free<br>**5 =** Will leave idle because land is too poor<br>**6 =** Will leave idle because of other reasons | \|__\| |
| 8.58 If you rent it out, how much will you get? | ……meun riel |
| 8.59 What do you plan to grow on this plot next season?<br>**1**= Rice, wet season **2**= Rice, dry season<br>**3**= Maize **4**= Cassava<br>**5 =** Vegetable (specify **6**= Permanent crops e.g. mango, cashew<br>**7**= don't know / can't say **8**= nothing (left uncultivated)<br>**9**= Grazing livestock **10** = other (specify) | \|__\| |

PLOT3

| **Item** | **Plot 3** |
|---|---|
| 8.60. Area of each plot<br>*(record in units given rai, ha, etc. then convert it to ares* | .....ares |
| 8.61 What kind of land is it by its main use?<br>**1**= Wet season **2**= Dry season<br>**3**= Both wet and dry season **4**= Chamkar<br>**5**= Farm land under perennial crops (cashew, mango)<br>**6**= Land for raising livestock **7**= Other (specify……) | \|__\| |
| 8.62. How did you obtain the plot?<br>**1**= allocated by authorities **2**=clearing forest<br>**3**= bought **4**= inherited / gift from relative | \|__\| |
| 8.63. What kind of document do you have for this plot?<br>**1**= Application receipt **2**= Land title (Old type)<br>**3**= Land title (new type) **4**= Other documents……..<br>**5**= No document | \|__\| |
| 8.64. Is the plot in conflict currently?<br>**1** = No (Go to 8.67) **2**=Yes | \|__\| |
| 8.65. If the plot is in conflict, who is in conflict with you?<br>**1**= Relatives<br>**2**= Authorities in commune<br>**3**= Authorities from provincial town or Phnom Penh<br>**4**= Business<br>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?<br>**1** = No **2**=Yes | \|__\| |

| | |
|---|---|
| 8.69 Last season, did you cultivate this plot yourself?<br>**1 =** Cultivate<br>**2 =** Let someone else cultivate for free *(go to next plot)*<br>**3 =** Left idle *(go to next plot)*<br>**4 =** Rent out / sharecrop to someone else | \|__\| |
| 8.70 If you rent it out last season or last year, how much did you get? (meun riel) | .....meun riel |
| 8.71 What did you grow on this plot in the last season?<br>**1 =** Rice, wet season<br>**2 =** Rice, dry season<br>**3 =** Maize<br>**4 =** Cassava<br>**5 =** Vegetable (specify)<br>**6 =** Permanent crops e.g. mango, cashew (specify)<br>**7 =** don't know / can't say<br>**8 =** nothing (left uncultivated)<br>**9 =** Grazing livestock<br>**10 =** other (specify) | \|__\| |
| 8.72 How much did you harvest?<br>*Record in units given (kg, tang, tau...) then convert to kg.* | .....kg |
| 8.73 Expenditure on seeds | .....meun riel |
| 8.74 Expenditure on land preparation | .....meun riel |
| 8.75 Expenditure on transplanting | .....meun riel |
| 8.76 Expenditure on pumping | .....meun riel |
| 8.77 Expenditure on harvesting | .....meun riel |
| 8.78 Expenditure on threshing | .....meun riel |
| 8.79 Expenditure on transporting to house or storehouse | .....meun riel |
| 8.80 Expenditure on others | .....meun riel |
| 8.81 Total expenditures in the last season (add up from items all above or write down the lump sum expenditure if s/he does not remember detailed expenditures) | .....meun 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 / draught 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 obtain loan only 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 |

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

PLOT4

| Item | Plot 4 |
|---|---|
| 8.89. Area of each plot<br>*(record in units given rai, ha, etc. then convert it to ares* | .....ares |
| 8.90 What kind of land is it by its main use?<br>**1**= Wet season **2**= Dry season<br>**3**= Both wet and dry season **4**=Chamkar<br>**5**= Farm land under perennial crops (cashew, mango)<br>**6**= Land for raising livestock **7**= Other (specify……) | \|__\| |
| 8.91. How did you obtain the plot?<br>**1**= allocated by the authority **2**=clearing forest<br>**3**= bought **4**= inherited / gift from relative | \|__\| |
| 8.92. What kind of document do you have for this plot?<br>**1**= Application receipt **2**= Land title (Old type)<br>**3**= Land title (new type) **4**= Other documents……..<br>**5**= No document | \|__\| |

| | |
|---|---|
| 8.93. Is the plot in conflict currently?<br>**1** = No (Go to 8.96) **2**=Yes | \|__\| |
| 8.94. If the plot is in conflict, who is in conflict with you?<br>**1**= Relatives **2**= Authorities in commune<br>**3**= Authorities from provincial town or Phnom Penh **4**= Business<br>5= Other…… | \|__\| |
| 8.95. If in conflict, does it reduce production?<br>**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?<br>**1 =** Cultivate<br>**2 =** Let someone else cultivate for free *(go to next plot)*<br>**3 =** Left idle *(go to next plot)*<br>**4 =** Rent out / sharecrop to someone else | \|__\| |
| 8.99 If you rent it out last season or last year, how much did you get? (meun riel) | ……meun riel |
| 8.100 What did you grow on this plot in the last season?<br>**1 =** Rice, wet season **6 =** Permanent crops e.g. mango, cashew (specify)<br>**2 =** Rice, dry season **7 =** Don't know / can't say<br>**3 =** Maize **8 =** Nothing (left uncultivated)<br>**4 =** Cassava **9 =** Grazing livestock<br>**5 =** Vegetable (specify) **10 =** Other (specify) | \|__\| |
| 8.101 How much did you harvest?<br>*Record in units given (kg, tang, tau...) then convert to kg.* | ……kg |
| 8.102 Expenditure on seeds | ……meun riel |
| 8.103 Expenditure on land preparation | ……meun riel |
| 8.104 Expenditure on transplanting | ……meun riel |
| 8.105 Expenditure on pumping | ……meun riel |
| 8.106 Expenditure on harvesting | ……meun riel |
| 8.107 Expenditure on threshing | ……meun riel |
| 8.108 Expenditure on transporting to house or storehouse | ……meun riel |
| 8.109 Expenditure on others | ……meun riel |
| 8.110 Total expenditures in the last season (add up from items all above or write down the lump sum expenditure if s/he does not remember detailed expenditures) | ……meun 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 / draught 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 obtain loan only 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?<br>**1 =** Cultivate it<br>**2 =** Rent it out<br>**3 =** Sharecrop to someone else (specify rent received: *$ OR note unit, e.g. kg, tang)*<br>**4 =** Let someone else cultivate for free<br>**5 =** Will leave idle because land is too poor<br>**6 =** Will leave idle because of other reasons | \|__\| |
| 8.116 If you rent it out, how much will you get? | ……meun riel |
| 8.117 What do you plan to grow on this plot next season?<br>**1**= Rice, wet season **2**= Rice, dry season<br>**3**= Maize **4**=Cassava<br>**5 =** Vegetable (specify **6**= Permanent crops e.g. mango, cashew<br>**7**= don't know / can't say **8**=nothing (left uncultivated)<br>**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 next season? **1** = No (skip to 9.1) **2**=Yes |__|
If not, why not?

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

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

| | | |
|---|---|---|
| ***Codes for 8.125-8.126***<br>1= credit to buy agricultural inputs<br>2= credit to clear land | 3 = household labour<br>4 = farming techniques<br>5 = other ( specify……..) | 8.125 Reason 1 (Most important) \|__\|<br>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 / sharecrop / cultivate for free)? ……plots

| Item | Plot 1 | Plot 2 | Plot 3 | Plot 4 |
|---|---|---|---|---|
| 9.2. Area of each plot<br>*(record in units given (are, rai, ha....); NOTE THE UNIT)* | ….are | ….are | ….are | ….are |
| 9.3 How much did you pay the owner?<br>*($ and note unit, e.g. kg, tang)* | ……meun riel | ……. meun riel | …. meun riel | …. meun riel |
| 9.4 What did you grow on this plot in the last season?<br>**1 =** Rice, wet season<br>**2 =** Rice, dry season<br>**3 =** Maize<br>**4 =** Cassava<br>**5 =** Vegetable (specify)<br>**6 =** Permanent crops e.g. mango, cashew (specify)<br>**7 =** don't know / can't say<br>**8 =** nothing (left uncultivated)<br>**9 =** Graze livestock<br>**10 =** other (specify) | \|__\| | \|__\| | \|__\| | \|__\| |
| 9.5 Did you use irrigation on this plot last season?<br>**1**= No **2**= Yes, dry season<br>**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 = 4000 riels; 1 chi = $100; 1 domlong = $1000* | | | |
| include Seed, fertiliser, Irrigation (charges; rent pump; petrol for pump), pesticides, ploughing and labour costs, other) | ……. meun riel | ……... meun riel | ….. meun riel | …. meun riel |
| 9.7 How much did you harvest?<br>*(Record in units given (kg, tang, tau...) then convert to kg* | ……..kg | ……..kg | ……..kg | ……..kg |

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

9.9 If intend to buy or rent, 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 land next season? |__|

**1** = to raise money for basic consumption (food, health care, 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 households that 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?**<br>**11** = Nov. 07<br>**12** = Dec. 07<br>**1** = Jan. 08<br>**2** = Feb. 08<br>**3** = Mar. 08<br>**4** = April. 08<br>**5** = May 08<br>**6 =** June 08 | **To whom?**<br>**1 =** Cambodian traders in commune<br>**2 =** Cambodian traders outside commune<br>**3 =** Vietnamese traders<br>**4 =** Other …….. |
|---|---|---|---|---|
| | (a) | (b) | (c) | (d) |
| 1st time | 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)*<br>**1 =** Maize<br>**2 =** Cassava<br>**3 =** Vegetable (specify)<br>**4 =** Fruit or nuts (specify)<br>**5 =** other (specify) | **Amount sold each time (kg)** | **Price received** (riels / kg) | **When?**<br>**11** = Nov. 07<br>**12** = Dec. 07<br>**1** = Jan. 08<br>**2** = Feb. 08<br>**3** = Mar. 08<br>**4** = April. 08<br>**5** = May 08<br>**6** = June 08 | **To whom?**<br>**5 =** Cambodian traders in commune<br>**6 =** Cambodian traders outside commune<br>**7 =** Vietnamese traders<br>**8 =** Other …….. |
|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) |
| | kg | riels/kg | \|___\| | \|__\| |
| | kg | riels/kg | \|___\| | \|__\| |
| | kg | riels/kg | \|___\| | \|__\| |
| | kg | riels/kg | \|___\| | \|__\| |

**Rice Purchases (for households that purchased rice for consumption)**

10.3 How much milled rice do you need for one month (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?**<br><br>**1** = paddy<br>**2** = milled rice | **Amount purchased each time** (kg) | **Price paid** (riels/ kg) | **When?**<br>**11** = Nov. 07<br>**12** = Dec. 07<br>**1** = Jan. 08<br>**2** = Feb. 08<br>**3** = Mar. 08<br>**4** = April. 08<br>**5** = May 08<br>**6**= June 08 | **From whom?**<br>**1** = sellers from village<br>**2** = mobile sellers from outside village<br>**3** = nearest market<br>**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 3: 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 COLUMN IS** |
| 2 | **compiled by** | | **EXTREMELY IMPORTANT** |
| 3 | **on** | | |
| | | | **comments by the interviewer** |

| | | | |
|---|---|---|---|
| | **GENERAL INFORMATION** | | |
| | **Interviewed persons (specify institutional role)** | | |
| | suggested list | enter codes here | |
| 4 | 1 - village head | | |
| 5 | 2 - women's representative | | |
| 6 | 3 - local merchant | | |
| 7 | 4 - teacher | | |
| 8 | 5 - nurse | | |
| 9 | 6 - shopper | | |
| 10 | other: specify …….. | | |
| 11 | 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 HHs ….. | | 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 months of inaccessibility | | 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 access 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 merchants (buyers) | | write here your comments |
| | 1 = same village, 2 = outside but near, 3 = outside and 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 and 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** | comments by the interviewer |
| | 1 = Very Low, 2 = Low, 3 = Average, 4 = High, 5 = very High V | | |
| **50-51** | Sept | Sept | |
| **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 agricultural labourer (**June 2008**) (currency) | | write here your comments |
| **75** | (amount) | | write here your comments |
| **76** | Daily earning of an agricultural 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=Yes, 2=No | | 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 emigration 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 | | |
|---|---|---|---|
| | % of HH food self-sufficient for: (use piling) | | |
| 98 | <4 months % | | comments by the interviewer |
| 99 | 4-6 months % | | |
| 100 | nearly one year % | | |
| 101 | % of 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=Yes, 2=No | | 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 production 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-harvest losses are important 1 = Yes, 2 = No | | write here your comments |

| | | | |
|---|---|---|---|
| **142** | Local nutritional taboos related to local traditions, beliefs and religious constraints 1=Yes, 2=No | | write here your comments |
| **143** | Taboo 1 (in words) | | write here your comments |
| **144** | Taboo 2 (in words) | | write here your comments |

| | **PRIMARY EDUCATION — additional questions to be addressed to the teacher** | | |
|---|---|---|---|
| **145** | Dropouts exist? 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 |

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