

CAMBODIA FOOD SECURITY AND NUTRITION QUARTERLY BULLETIN

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HIGHLIGHTS

- Flooding in September affected 14,322 households and affected 45,587 hectares of agricultural land.
- Low rainfall in the third quarter (July – September) contributed to drought in some areas, which disrupted wet season rice planting.
- Cultivated area of wet season rice in September was 3.3% lower than the corresponding month in 2011.
- Cultivated area of maize in September increased by 10%, cassava decreased by 9% and mung bean remained unchanged.
- Wholesale rice prices increased by 1.8% month-on-month in September. The price is expected to increase in October 2012 due to increased demand for rice during the lean season.
- The number of children treated for severe acute malnutrition in the first six months of 2012 increased due to the restart of malnutrition treatment services in the National Pediatric Hospital and an increase in the number of hospitals implementing malnutrition treatment.

Environmental Conditions and Disasters

During the first five months of 2012, Cambodia experienced rainfall levels similar to that of 2011, which enabled timely planting of the wet season rice crop. However, in the third quarter of 2012, the level of rainfall was comparatively lower than in 2011 and the historical average during the same time period. Decreased rainfall contributed to lower river water levels of the Mekong and Tonle Sap Rivers. Flooding in September affected 14,322 households and affected 45,587 hectares of agricultural land. Banteay Meanchey was the worst affected province.

Food Production

Wet season rice cultivation figures at the end of the third quarter (September 2012) show that rice cultivated areas have decreased by 3.3% compared to the corresponding time last year. A contributing factor was the effect of drought in July/August. The cultivation of maize, however, increased by 10% year-on-year while the cultivation of cassava decreased by 9%.

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Food Prices

The overall inflation rate was 2.2% in August 2012. Food prices increased by 1.2% month-on-month and 2.4% year-on-year. Gasoline prices rose by 7.8% month-on-month and 4.2% year-on-year.

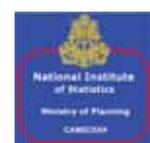
Wholesale price of mixed rice in the third quarter of 2012 was higher than that in the previous quarter. In September the price increased by 1.8% on a month-on-month basis. Rice prices are expected to increase in October due to an increase in demand.

Health and Nutrition

During the first six months of 2012, the number of children treated for severe acute malnutrition increased by 45% compared to the same period last year. The increase was due to the restart of services in the National Pediatric Hospital in late 2011 as well as an increase in the number of hospitals implementing malnutrition treatment.

The Cambodia Food Security and Nutrition Quarterly Bulletin aims to provide decision makers with a regular overview of trends and emerging threats relating to food and nutrition security in Cambodia. It is a collaborative effort between the Council for Agricultural and Rural Development (CARD), the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Ministry of Water Resource and Meteorology (MoWRAM), the Ministry of Health (MoH), the National Committee for Disaster Management (NCDM) and the National Institute of Statistics (NIS), with technical and financial support from UNICEF, the World Food Programme, the EC-FAO Food Security Programme and the World Health Organization, and with financial support from the MDG Achievement Fund for Children, Food Security and Nutrition.

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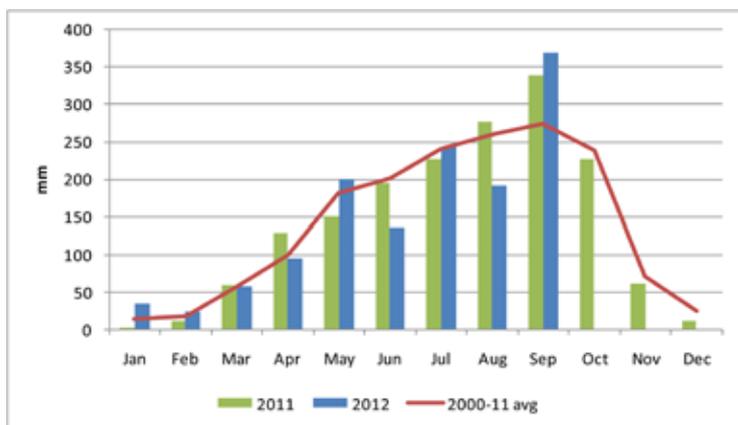
This bulletin consists of secondary analysis of government administrative data and publically available data on a list of standard indicators – from regularly collected government data – agreed upon in the terms of reference of the Food Security and Nutrition Data Analysis Team.

ENVIRONMENTAL CONDITIONS AND DISASTERS

Rainfall

Figure 1 shows the rainfall level by month in 2012 compared to the historical average (2000-2011). In the first five months of 2012, the rainfall level was similar to the historical average. From July to September 2012, the average rainfall level was higher than the historical average but less than the same period in 2011. The average rainfall level in quarter three was 267.7mm, 4.7% less than in 2011. Table 1 shows rainfall levels in four selected provinces¹ representing the main agro-ecological zones. Map 1 shows the rainfall surplus and deficit amount in this quarter compared to the historical average.

Figure 1: Rainfall levels in Cambodia



Source: Ministry of Water Resources and Meteorology

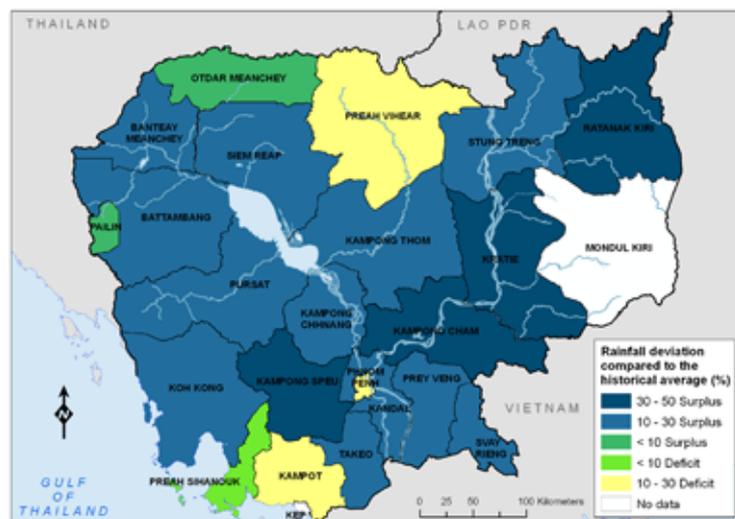
Table 1: Rainfall in Cambodia in July, August and September

	Month	2012 (mm)	2011 (mm)	2000-2011 average (mm)
Cambodia	July	242.7	226.4	240.4
	August	191.9	275.9	259.8
	September	368.5	338.6	273.5
	Average	267.7	280.3	257.9
Kampot	July	189.0	292.8	324.7
	August	324.2	287.6	378.0
	September	252.5	439.4	257.0
	Average	255.2	339.9	319.9
Prey Veng	July	195.5	172.7	153.3
	August	231.5	286.4	199.4
	September	243.5	240.0	229.9
	Average	223.5	233.0	194.2
Banteay Meanchey	July	92.9	213.8	162.3
	August	105.1	298.6	164.6
	September	452.5	204.0	227.7
	Average	216.8	238.8	184.8
Kratie	July	537.8	259.2	272.6
	August	184.6	230.4	295.8
	September	453.8	379.5	288.1
	Average	392.1	289.7	285.5

Source: Ministry of Water Resources and Meteorology

¹ Kampot is in the Coastal zone, Prey Veng in the Plains zone, Banteay Meanchey in the Tonle Sap zone, and Kratie in the Plateau/Mountain zone.

Map 1: Rainfall surplus and deficit, July-September 2012



Source: Ministry of Water Resources and Meteorology

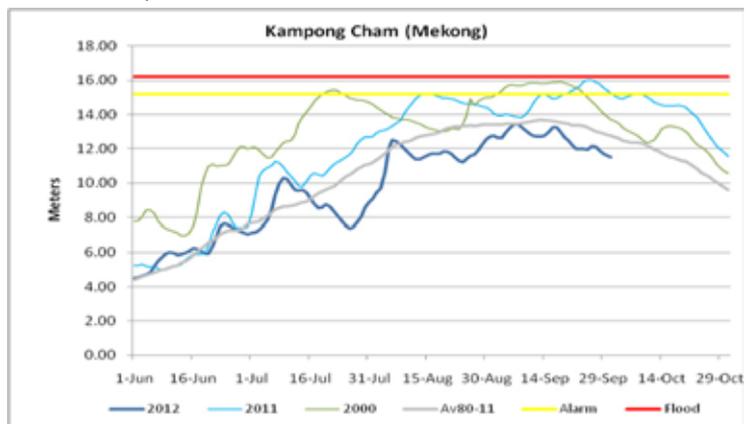
River Water Levels

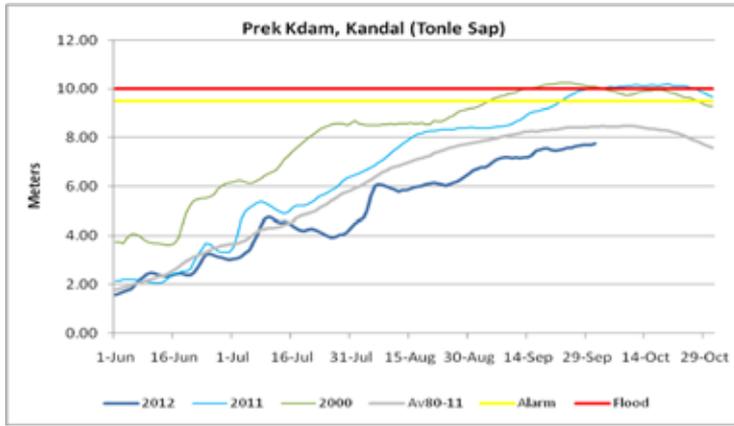
The water levels of the Mekong and Tonle Sap Rivers normally start to increase in June. This year the water level of both rivers followed the same pattern, although the water levels in quarter three were comparatively lower than the same period last year and the historical average (1980-2011). River water levels in two monitoring stations (Kampong Cham on the Mekong River and Prek Kdam on the Tonle Sap River) are presented in Figure 2.

In September, the Mekong River water level (as measured by the Kampong Cham monitoring station) was, on average, 15% lower than in September 2011 and 6% lower than the historical average in the same period. This was due to the low water level upstream in the Mekong River and the low rainfall level in quarter three. The highest river water level at this station was recorded on 7 September 2012 at 13.46 meters, 3.74 meters lower than the maximum river water level recorded in 2011.

The low water level of the Mekong River also affected the water level of the Tonle Sap River. In September, the Tonle Sap River water level (as measured by the Prek Kdam monitoring station) was, on average, 19% lower than September 2011 and 11% lower than the historical average in the same period. The highest river water level at this station was recorded on 1 October 2012 at 7.76 meters, 2.43 meters lower than the maximum river water level recorded in 2011.

Figure 2: Water levels in selected monitoring stations on the Mekong and Tonle Sap Rivers





Source: Ministry of Water Resources and Meteorology

Disasters

Heavy rainfall and flooding in mid-September affected some parts of western Cambodia, particularly Banteay Meanchey. According to data² from the National Committee for Disaster Management, 14,322 households were affected, 4,057 households were displaced and 18 persons died. Flooding also affected infrastructure, including 12,274 houses, 112 schools, 7 pagodas, 3 health centers, and 160,696 meters of rural roads (2,711 meters were destroyed). Table 2 presents the flood impact by province.

Table 2: Flood impact by province

Province	Population			Infrastructure						
	Affected households	Displaced households	Deaths	Affected houses	Destroyed houses	Affected Schools	Affected Pagodas	Affected Health centers	Affected rural roads (m)	Destroyed rural roads (m)
Preah Vihear	317	250		265						
Kampong Thom	140	140	4	140		11				
Banteay Meanchey	13,710	3,667	13	11,714	2	98	7	3	160,696	2,711
Siem Reap			1			3				
Takeo	10			10						
Preah Sihanouk	76			76						
Pailin	69			69						
Total	14,322	4,057	18	12,274	2	112	7	3	160,696	2,711

Source: National Committee for Disaster Management

FOOD PRODUCTION

Rice Cultivation

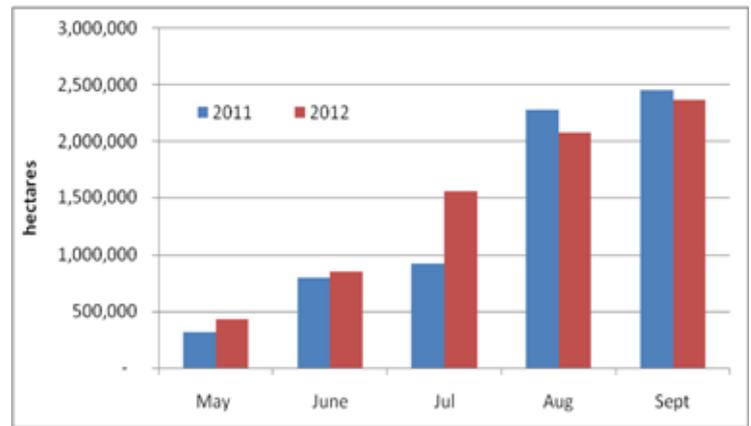
Figure 3 shows that total rice cultivated area in the early wet season increased significantly, due to early and sufficient rainfall and the government’s policy encouraging farmers to plant rice two to three times during the year. However, rice planting in many areas was disrupted due to water shortages from mid July to early September. By mid September, rains resumed, enabling farmers to continue rice planting. Nevertheless, the total rice cultivated area decreased. By September 2012, the total rice cultivated area was 2,366,238 hectares, 3.3% lower than the same period in 2011 (Figure 3).

Table 3 below compares total rice cultivated areas in selected provinces in September 2011 and 2012. The year-on-year variation in Kampong Thom was a 5.6% increase; in Prey Veng, Takeo and Battambang the total wet season rice cultivated area decreased by 11.8%, 5.9% and 3.4%, respectively. Nevertheless, nationwide, the

² National Committee for Disaster Management, Disaster report, 2 October 2012

total cultivated area in September 2012 was nearly 100% of the planned figure.

Figure 3: Rice cultivated areas, cumulative by month



Source: Ministry of Agriculture, Forestry and Fisheries

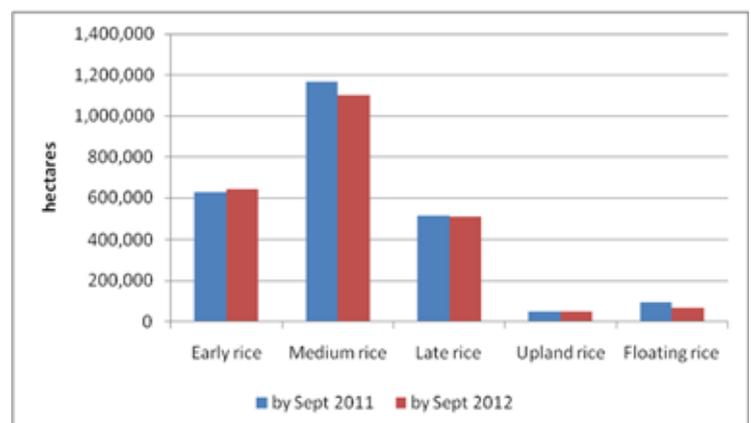
Table 3: Wet season rice cultivated area (ha) by province

Province	Sep-11 (ha)	Sep-12 (ha)	% change	% of planned in 2012
Banteay M’chey	232,720	235,003	1.0%	104.4%
Battambang	283,694	273,923	-3.4%	109.4%
Kampong Cham	165,277	162,784	-1.5%	98.4%
Kampong Thom	190,764	201,375	5.6%	95.9%
Prey Veng	271,351	239,455	-11.8%	95.8%
Siem Reap	179,710	180,855	0.6%	101.0%
Svay Rieng	162,994	158,691	-2.6%	96.2%
Takeo	192,259	180,932	-5.9%	106.4%
Other provinces	769,174	733,220	-4.7%	97.5%
Total	2,447,943	2,366,238	-3.3%	99.9%

Source: Ministry of Agriculture, Forestry and Fisheries

Figure 4 presents the cultivated area by type of rice in September 2011 and 2012. In September 2012, the cultivated area of early rice was 2% higher than the same month last year, while the cultivated area of medium and late rice was 5.2% and 1%, respectively, lower than the same month last year. Floating rice had the greatest change, with a 27.5% decrease year-on-year, likely due to concerns about severe flooding, which can affect late rice planting. As a result, farmers increased early rice planting rather than late rice planting.

Figure 4: Cultivated area by type of rice

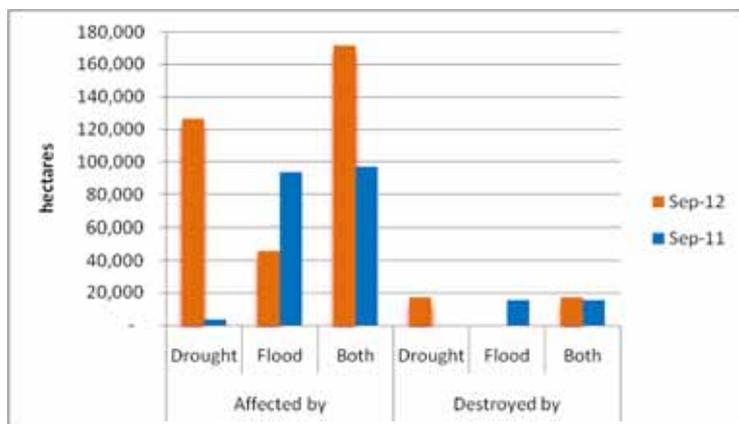


Source: Ministry of Agriculture, Forestry and Fisheries

According to MAFF data, drought and flash flood conditions affected agricultural areas in several provinces in this quarter. Drought in 14 provinces affected 140,647 ha (14,190 hectares of which were seedling) of rice cultivated area, equivalent to 6% of total cultivated areas in 2012; in addition, 20,236 ha (3,151 hectares of which were seedling) of rice cultivated areas were destroyed (Figure 5). The most affected provinces were Otdar Meanchey, Battambang, Svay Rieng, Prey Veng and Takeo (Map 2).

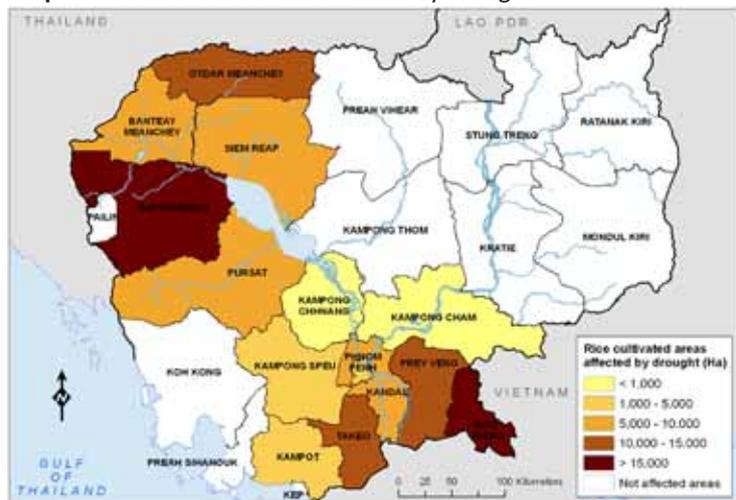
In this quarter, flooding affected some parts of Cambodia, primarily in the western and northwestern provinces. Floods affected 45,587 hectares of rice cultivated areas, equivalent to 2% of total cultivated areas in 2012. The most affected province was Banteay Meanchey, with 40,945 hectares of rice cultivated area affected due to high rainfall and flooding in September. A report on the amount of rice cultivated area destroyed was not available at the time of publication of this bulletin.

Figure 5: Rice cultivated areas affected & destroyed by disasters



Source: Ministry of Agriculture, Forestry and Fisheries

Map 2: Rice cultivated areas affected by drought

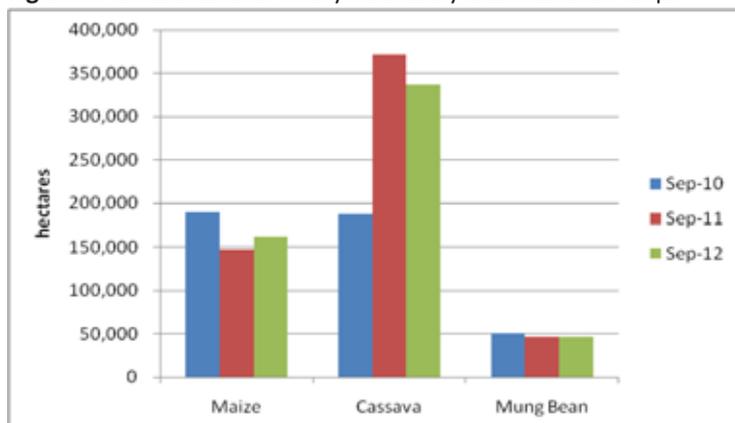


Source: Ministry of Agriculture, Forestry and Fisheries

Subsidiary and Industrial Crop Cultivation

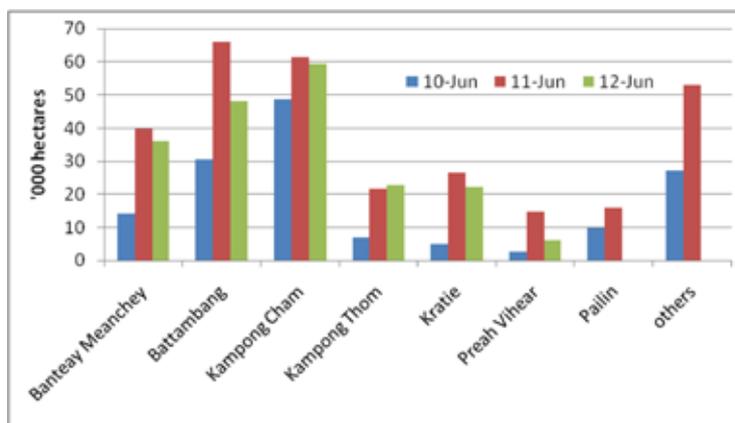
Total cultivated area of subsidiary and industrial crops are presented in Figure 6. The cultivated area of maize increased by 10% from 147,591 hectares in September 2011 to 162,149 hectares in September 2012 due to increased maize prices, higher demand in neighboring countries and higher demand for animal feed. In September 2012, the cultivated area of cassava decreased by 9% on a year-on-year basis. Figure 7 shows variations in selected provinces in cultivated area of cassava. Cultivated area of mung bean showed no significant change compared to last year.

Figure 6: Cultivated area of key subsidiary and industrial crops



Source: Ministry of Agriculture, Forestry and Fisheries

Figure 7: Cultivated area of cassava by province



Source: Ministry of Agriculture, Forestry and Fisheries

FOOD PRICES

International and Regional Food and Rice Prices

The FAO Food Price Index³, measuring the international price level of a basket of key food commodities, averaged 216 points in September 2012, an increase of 1.4% compared to last month (Figure 8). The index rose due to an increase in the prices of dairy, meat and cereal products. The International Rice Price Index, at 244 points, increased by 0.8% on a month-on-month basis in September 2012.

Figure 8: FAO Food and Rice Price Indices (100 = 2002-04)



Source: FAO, <http://www.fao.org/worldfoodsituation/FoodPricesIndex/en/>

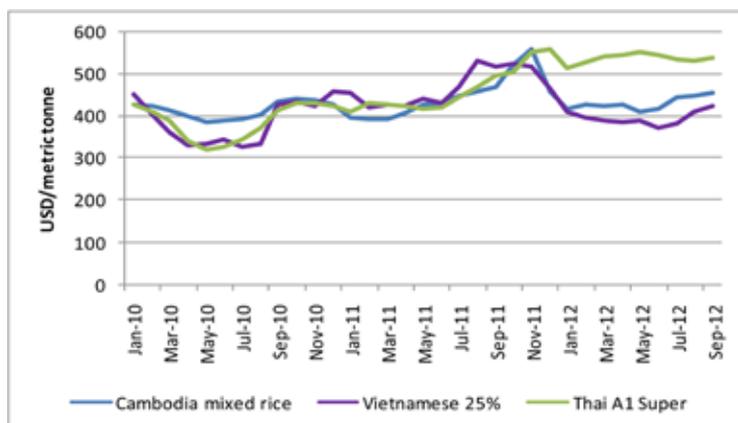
3 The FAO Food Price Index consists of the average of commodity group price indices (i.e. meat, dairy, cereals, oils/fats, and sugar) weighted with the average export shares of each of the groups for 2002-2004.

In September, the f.o.b. prices⁴ of Thai A1 Super white rice (100% broken) and Vietnamese white rice (25% broken), two benchmark prices for Asia, were 540 USD/mt and 421 USD/mt, respectively (Figure 9).

Thai Supper A1 rice prices increased slightly after decreasing by 1.6% in June. In September, the price increased by 1.5% month-on-month and 8.7% year-on-year. The Thai government's rice pledging policy remains in effect and according to media reports is extended until November 2012.

The price of Vietnamese white rice in this quarter increased after decreasing in the previous quarter. In September 2012, the price of Vietnamese rice increased by 3.4% month-on-month but decreased 18.3% year-on-year.

Figure 9: Wholesale price of Thai, Vietnamese and Cambodian white rice



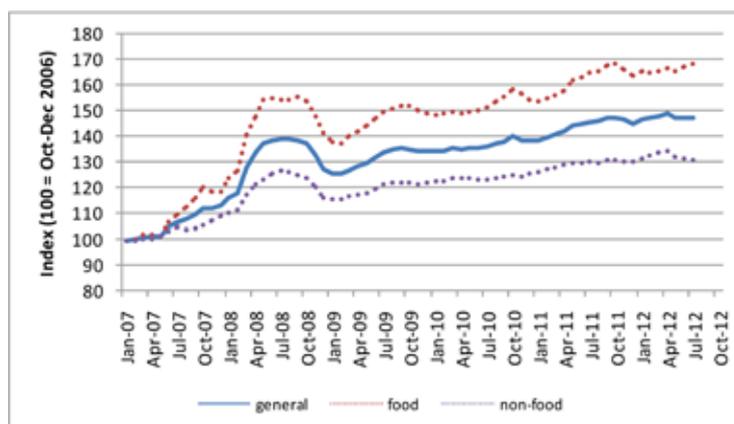
Source: FAO, <http://www.fao.org/es/esc/prices/PricesServlet.jsp?lang=en>

Local Consumer Price Index and Food Price Index

The general Consumer Price Index (CPI)⁵ measures the cost of a consumption basket composed of 259 items. Each item is weighted based on their importance in an average household's expenditure⁶. In August 2012⁷, the general CPI slightly increased by 1.0% month-on-month. The inflation rate, as measured by the year-on-year increase in the consumer price index, was 2.2%.

The Food Price Index (FPI) measures the cost of the food items in the general CPI's consumption basket. Food items make up 43.2% of the total consumption basket. In August, food prices increased by 1.2% month-on-month and 2.8% year-on-year (Figure 10). Gasoline price levels rose by 7.8% month-on-month, increasing transportation costs for both food and non-food items. Gasoline prices were 4.2% above levels in the corresponding month last year.

Figure 10: Relative change in general consumer prices, food prices and non-food prices (base = Oct-Dec 2006)

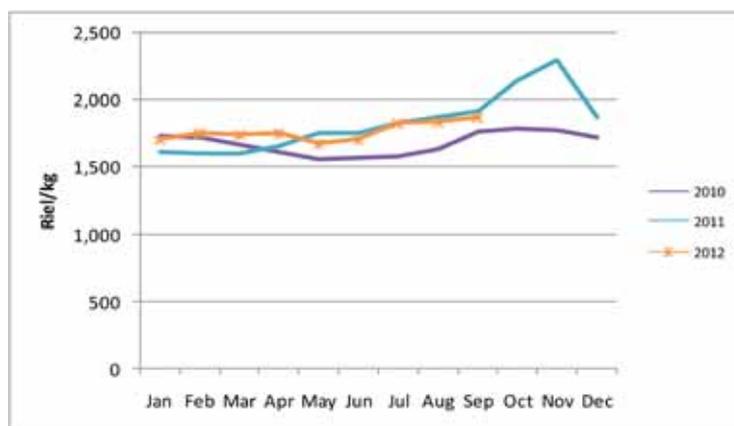


Source: National Institute of Statistics

Local Wholesale Food Commodity Prices

Price reports from the Agricultural Marketing Office of the Ministry of Agriculture, Forestry and Fisheries (AMO MAFF) show that mixed rice⁸ wholesale prices in the third quarter of 2012 were higher than in the previous quarter. In July, August and September 2012, prices increased by 6.7%, 0.6%, and 1.8% on a month-on-month basis, respectively. The upward pressure on rice prices in quarter three was due to the increase in demand and depleting household rice stocks. Even though the price increased in this quarter, it is still lower than the same time period last year (Figure 11).

Figure 11: Wholesale price of mixed rice⁹



Source: Cambodia Agricultural Market Information Service, MAFF

Price Monitoring and Forecasting

FAO's price monitoring tool compares recent actual wholesale prices from AMO MAFF with "normal" price levels. The normal price level takes into account historical price levels and adjusts for inflation and seasonal factors. A discrepancy between current actual prices and "normal" prices indicates that current prices are higher/lower than what would be expected based on historical price levels, inflation, and seasonal factors.

In September 2012, the actual price of wholesale rice was 0.4% lower than the expected normal price, which indicates that price levels were below historically normal levels.

⁴ Free on board (f.o.b.) price includes all charges up to the placing of goods on board a ship at the port of departure specified by the buyer.

⁵ The CPI is collected and reported by the National Institute of Statistics (NIS).

⁶ Relative item expenditure weights are derived from the 2004 Cambodia Socio-Economic Survey and adjusted to October-December 2006 price levels.

⁷ The CPI data for September 2012 was not released by NIS at the time of publication.

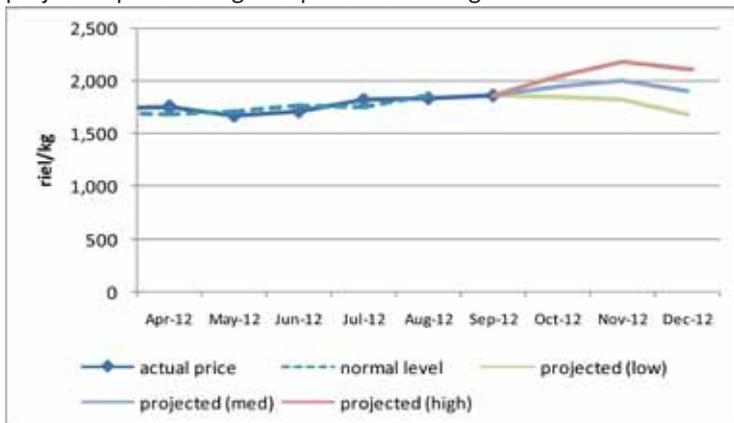
⁸ Mixed rice is considered a lowest quality rice.

⁹ Wholesale rice prices are calculated with price quotes from urban markets or rice mills in the following provinces: Kampong Chhnang, Kampong Cham, Takeo, Siem Reap, Prey Veng, Phnom Penh, Kampong Speu, Battambang, Banteay Meanchey.

The FAO price monitoring tool also projects prices based on the current price, current inflation rate and seasonal factors. The high and low bands are set so that actual prices will fall within the range 80% of the time.

Prices for the upcoming three months (October, November and December) were projected by the price monitoring tool using the September 2012 price, current inflation rate, and seasonal factors. Rice prices are expected to increase in October. This is the usual trend in rice price fluctuation during the wet season due to the increase in demand and depleting rice stocks of the wet and dry season harvest. However, in November and December, rice prices are projected to ease due to the beginning of the main wet season harvest, which will increase the supply in local markets (Figure 12).

Figure 12: Comparison of recent wholesale prices with normal and projected prices using FAO price monitoring tool



Source: AMO, WFP, FAO

Food Purchasing Power of Vulnerable Households

The daily wages of unskilled workers engaged in rice and non-rice farming and construction work are monitored by Provincial Department of Agriculture staff on a monthly basis since September 2011 in six provinces¹⁰. In this quarter the unskilled wage rate increased for three consecutive months (Table 4).

Terms of trade (ToT) is used to assess the food purchasing power of households that are dependent on wages from unskilled labour by using the ratio of the average daily wage rates of unskilled laborers and the average retail price of mixed rice in the market. This gives an indication of the amount of rice that an unskilled wage labourer can purchase with a daily wage.

In July, the ToT for unskilled labor and mixed rice increased by 7% month-on-month. In August, the ToT decreased by 4% and again increased by 3% on a month-on-month basis in September. The increase in the ToT during the third quarter was due to an upward trend in unskilled wage rates resulting in increasing household purchasing power.

Table 4: Terms of trade of unskilled labour and lowest quality rice

	Jun-12	Jul-12	Aug-12	Sep-12
Unskilled wage (riel/day)	14,449	14,683	15,000	15,363
Mixed rice price (riel/kg)	1,994	1,913	2,040	2,011
Terms of Trade (kg rice/daily wage)	7.2	7.7	7.4	7.6

Source: Cambodia Agricultural Market Information Service, MAFF

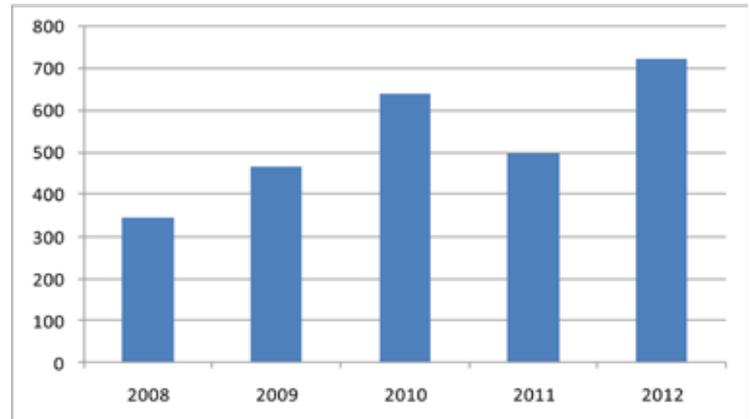
¹⁰ Battambang, Kampong Cham, Kampong Thom, Prey Veng, Pursat and Siem Reap

HEALTH AND NUTRITION

Malnutrition is the underlying cause of an estimated 35% of deaths of children under five years of age. Poor nutritional status also contributes to increased child morbidity and reduced cognitive ability and productivity in adulthood.

Early identification of acute malnutrition and referral for treatment is a key to the success of addressing acute malnutrition in Cambodia.

Figure 13: Number of children under five with malnutrition treated at a hospital, January-June



Source: National Nutrition Programme, Hospital report

Since 2008 the number of children treated for severe acute malnutrition has more than doubled. In the first semester of 2012 more than 700 children were treated, 45% higher than the corresponding semester in 2011. With the exception of 2011, there has been a steady increase since 2008. From 2010 to 2011 there was a decrease of 22%; most of the drop in 2011 occurred because of less children coming for consultation visits. In late 2011 the service was restarted in the National Pediatric Hospital and this has contributed to the 2012 increase.

The trends suggest that coverage is more sensitive to programme operations than to fluctuations in the rate of malnutrition. This is expected because the programme is in the process of scaling-up. Data on malnutrition treatment cannot yet be used to describe temporal or seasonal trends in the rate of malnutrition.

Since 2008 the number of hospitals implementing malnutrition treatment increased from 16 to 29. The increased number of implementing hospitals explains some of the increase of under five children receiving treatment. It appears that hospitals are also identifying more cases due to initial efforts to improve screening for children with malnutrition, improve service in the hospital and increase awareness of mothers of the programme. While scale-up of hospital based malnutrition treatment has seen some progress over the last five years, financial and human resource constraints have limited the pace of scale-up. With current coverage rates, expansion to all hospitals with pediatric services could reach 5,000 children per year.