

CAMBODIA FOOD SECURITY AND NUTRITION QUARTERLY BULLETIN

ISSUE #13 | October – December 2013



HIGHLIGHTS

- *Flooding in 2013 killed 168 people, affected 377,354 households and destroyed 128,521 ha of cultivated area of wet season rice in 21 provinces.*
- *Wet season rice production in 2013 was 1.74% higher than in 2012. The cultivated area of dry season rice in this quarter was above 100% of the planned figure. On a year-on-year basis, production of maize and cassava during the wet season increased by 1.1% and 10.4%, respectively, while, mung bean decreased by 4.1%.*
- *In December 2013, wholesale rice prices decreased by 3.8% on a month-on-month basis; the price is expected to decrease in January 2014 due to the increase in rice supply from the main wet season harvest.*
- *The purchasing power of vulnerable households increased in December 2013 due to an increase in the average unskilled wage rate and a decrease in the average retail price of rice.*
- *From January to September 2013, 1,220 children (0-59 months) were treated as in-patient for severe acute malnutrition (SAM). 92% of children aged from 6-59 months received one dose of vitamin A in round one. 84% of the pregnant women received 90 tablets of iron during the first and second visit and 77% of post-partum women received 42 tablets of iron during the post-natal visit.*

Environmental Conditions and Disasters

Heavy rainfall in September and October caused flash floods, affecting 21 provinces. The floods caused 168 deaths, affected 377,354 households and destroyed 128,521 hectares of cultivated area of wet season rice, as well as other infrastructure.

Food Production

Wet season rice production in 2013 was around 7.3 million tonnes, 1.74% higher than in 2012. Dry season rice cultivated areas was 472,483 hectares, approximately 123% of the planned areas in 2013/2014. Production of maize and cassava during the wet season increased by 1.1% and 10.4%, respectively, while, mung bean decreased by 4.1%.

Content

Environmental Conditions and Disasters.....	2
» Rainfall	
» River water levels	
» Disasters	
Food Production.....	3
» Rice cultivation	
» Subsidiary and industrial crop cultivation	
Food Prices.....	5
» International and regional food and rice prices	
» Local consumer price index and food price index	
» Local wholesale food commodity prices	
» Price monitoring and forecasting	
» Food purchasing power of vulnerable households	
Health and Nutrition.....	7

Food Prices

The overall inflation rate was 4.7% in December 2013. Food prices increased by 0.2% month-on-month and by 6.2% year-on-year, and gasoline prices increased by 0.2% on a month-on-month. In December 2013, wholesale rice prices decreased by 3.8% on a month-on-month basis, and are expected to decrease in January 2014 due to the increase in the supply of rice from the main wet season harvest. In December 2013, the terms of trade for unskilled labor and mixed rice was 10.7, an increase of 8% on a month-on-month basis due to an increase in the average unskilled wage rate and a decrease in the average retail price of rice, indicating an improvement in household food purchasing power.

Health and Nutrition

From January to September 2013, 1,220 children (0-59 months) were treated as in-patient for severe acute malnutrition (SAM). The drop out and mortality rates decreased to 6.0% and 1.3%, respectively. In 2013, 92% of children aged from 6-59 months received one dose of vitamin A in round one and 110% at round two; and 84% of the pregnant women received 90 tablets of iron during the first and second visit and 77% of post-partum women received 42 tablets of iron during the post-natal visit.

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 the United Nations World Food Programme, UNICEF, the Food and Agriculture Organization of the United Nations, and the World Health Organization.

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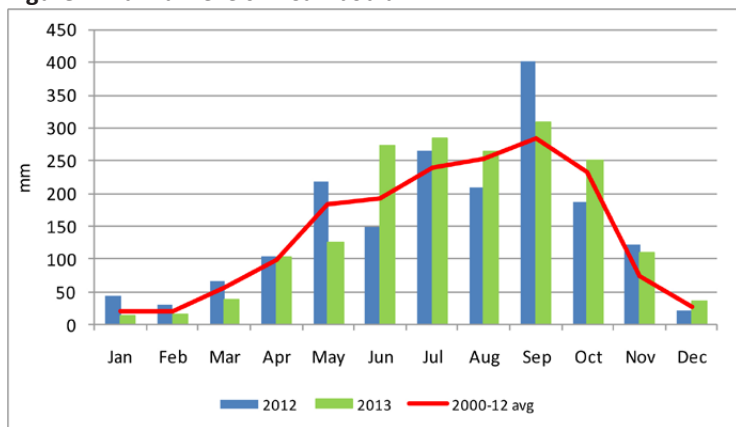
This bulletin presents primary and secondary analysis of government administrative data and national sample surveys.

ENVIRONMENTAL CONDITIONS AND DISASTERS

Rainfall

Figure 1 shows the rainfall level by month in 2013 compared to 2012 and the historical average (2000-2012). In October 2013, Cambodia still experienced higher rainfall level due to the effect from imbalanced atmospheric pressure and the late wet season period until December. In the fourth quarter (October-December) of 2013, the average rainfall level was 131.6 mm, 20% and 19% higher than the same period in 2012 and the historical average, respectively. Table 1 shows rainfall levels in 2012, 2013 and historical average in four selected provinces¹ representing the main agro-ecological zones.

Figure 1: Rainfall levels in Cambodia



Source: Ministry of Water Resources and Meteorology

Table 1: Rainfall in four selected provinces in Cambodia

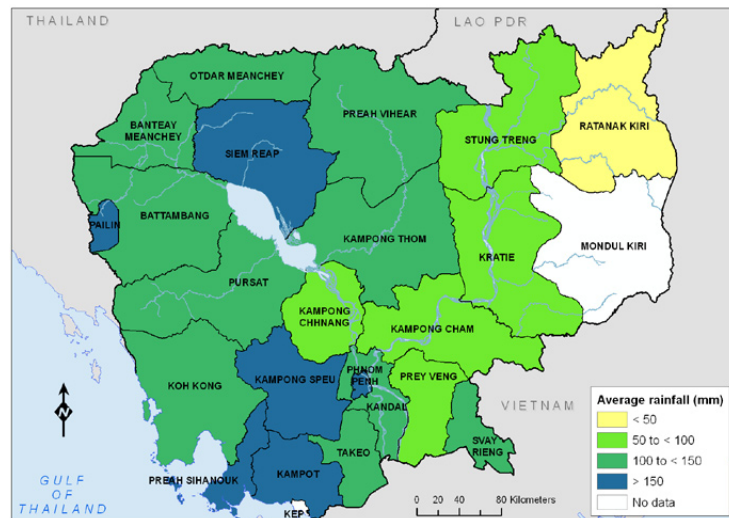
Province	Month	2012 (mm)	2013 (mm)	2000-2012 Average (mm)
Kampot	Oct	202.6	204.1	257.5
	Nov	98.4	221.4	106.5
	Dec	10.6	56.8	32.9
	Average	103.9	160.8	132.3
Prey Veng	Oct	263.6	99.5	270.7
	Nov	238.0	131.7	101.1
	Dec	8.6	40.6	47.7
	Average	170.1	90.6	139.8
Banteay Meanchey	Oct	137.8	309.2	186.2
	Nov	48.5	42.0	25.9
	Dec	0.0	11.5	7.0
	Average	93.2	120.9	73.0
Kratie	Oct	139.9	130.2	179.2
	Nov	144.2	28	49.4
	Dec	0	64.2	14.2
	Average	142.1	74.1	80.9

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 shows the recorded rainfall pattern in the fourth quarter (October-December) in 2013. The average rainfall in most provinces was higher than 100 mm except Prey Veng, Kampong Chhnang, Kampong Cham, Kratie, Stung Treng and Ratanakiri.

Map 1: Average rainfall pattern, October-December 2013



Source: Ministry of Water Resources and Meteorology

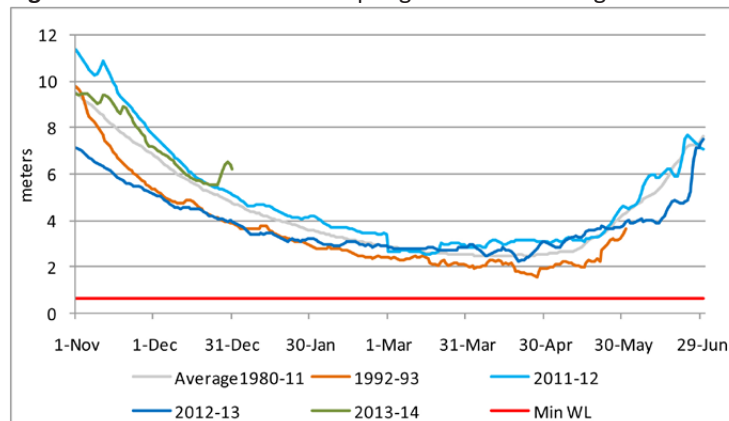
River Water Levels

Figures 2 and 3 present the river water levels in two monitoring stations (Kampong Cham on the Mekong River and Prek Kdam on the Tonle Sap River). In quarter four (October-December) in 2013, the water level of both the Mekong and Tonle Sap Rivers decreased due to the start of the dry season. But the water level on both rivers was higher than in 2012 and the historical average (1980-2011).

The maximum Mekong water level in the fourth quarter measured at Kampong Cham monitoring station was recorded on 1st of October at 15.58 meters, 4 meters and 2.85 meters higher than the same period in 2012 and the historical average, respectively. From November, the water level continuously decreased, but it highly rose in late December due to heavy rainfall upstream in the Mekong Basin.

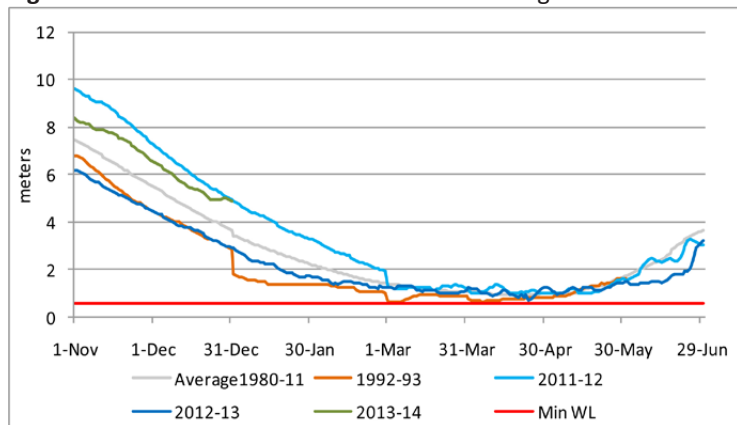
The highest river water level measured at Prek Kdam monitoring station was recorded on 10 of October at 9.39 meters, 1.66 meters and 0.94 meters higher than the same period in 2012 and the historical average, respectively. From November, the Tonle Sap River water level continuously decreased.

Figure 2: Water level at the Kampong Cham monitoring station



Source: Ministry of Water Resources and Meteorology

Figure 3: Water level at the Prek Kdam monitoring station



Source: Ministry of Water Resources and Meteorology

Disasters

2013 flash floods and river floods affected 21 provinces along the Mekong River, Tonles Sap Lake and parts of Northwest of the country. According to the latest data (25 November 2013) from the National Committee for Disaster Management (NCDM), 168 people have been killed, 29 people injured, 377,354 households were affected, of which 45,905 households were evacuated. Flooding also affected infrastructure including: 240,195 houses (of which 455 were destroyed); 1,254 schools; 533 pagodas; 92 health centers; 440 kilometers of national and provincial road (of which 301 kilometers were destroyed); 3,570 kilometers of rural roads; 192 bridges; and 130 dams. Detailed data on floods impact by province is presented in table 2.

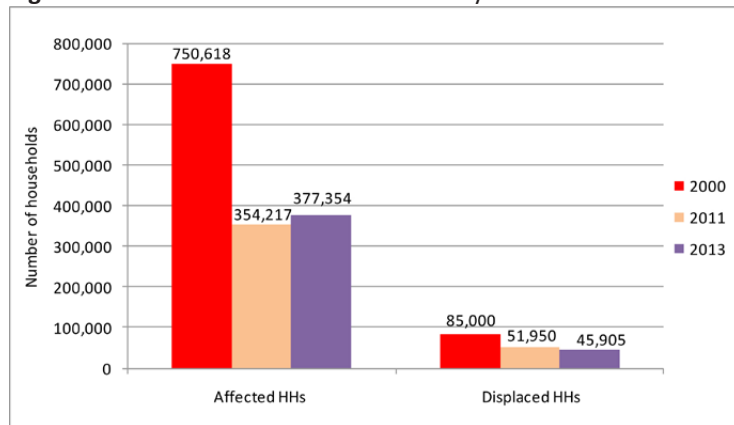
Table 2: Impact of floods by province

Province	# affected (family)	# evacuated (family)	# Deaths	# Injured	# house affected	# house damaged	# School	# Pagoda	# HC/ Hospital	National/provincial roads affected (m)	Commune/rural road affected (m)	# damaged	# bridge (national)	# dam flooded
Preah Vihea	4609	903	1		981	3	9			8205	33700	31	3	1
Kampong Thom	17463	1988	24	3	17463		121	41	8	26015	94545	35		13
Banteay Meanchey	54463	8902	9	1	15027	3	249	128	15	78130	747228	136		4
Siem Reap	19022	3550	15	2	3645	13	39	8	10	30941	410800	66	7	19
Otdar Meanchey	13244	1364	4		3217	3	12		1	21900	218153	35	17	43
Kampong Cham	51376	3546	29		43759	127	268	144	30	11174	506517	105	4	10
Kratie	18552	1252	5		12447	2	88	59	10	35768	142000	13		
Steoung Treng	9813	1523	3		9385	2	31	20	3	16500	103000	8	119	
Prey Veng	44764	972	26		32193	8	155	53	11	2748	143500	28	1	
Kandal	35311	235	15		22327	31	126	23		8892	115142	100	7	15
Kampong Chhnang	6667	954	9		3891	17	2	38		4110	38290	76		
Phnom Penh	3522	1622			2737	4					41320	13		
Ratanakiri	6524	2289				13				8940	48200	13	6	
Batambang	74160	15172	17	4	67913	223	77	14	4	152450	656350	103	9	16
Pailin	1989	624	3	1	851		17	2		2249	57600	13	4	5
Pursat	9271	746	2	18	1004	5	57			21800	83313	39	15	2
Svay Rieng	3808	253	1		559	1		1		3700	26840	12		2
Takeo	2796	10	5		2796		3	2		6850	48281	26		
Monduliri											55000	7		
Preah Sihanuk										200				
Total	377,354	45,905	168	29	240,195	455	1,254	533	92	440,572	3,569,779	859	192	130

Source: National Committee for Disaster Management

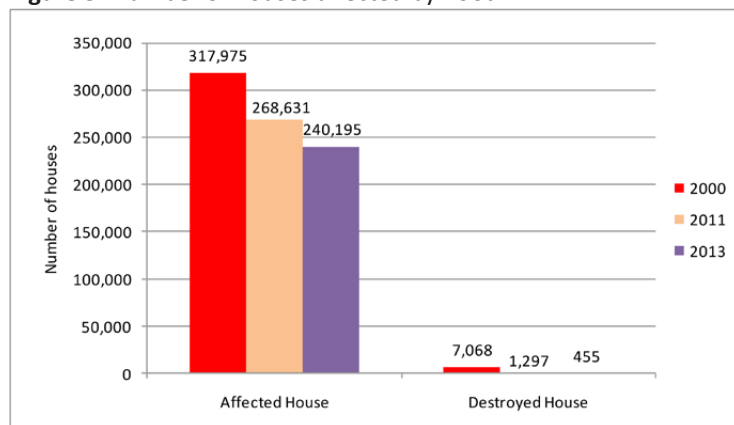
Figure 4 and 5 present the total number of households and houses affected by floods in 2013 compared to the last two years with major floods (2000 and 2011). The number of affected households in 2013 was higher than in 2011, but lower than in 2000. However, number of displaced households and affected and destroyed houses in 2013 was lower than in 2011 and 2000.

Figure 4: Number of households affected by flood



Source: National Committee for Disaster Management

Figure 5: Number of houses affected by flood



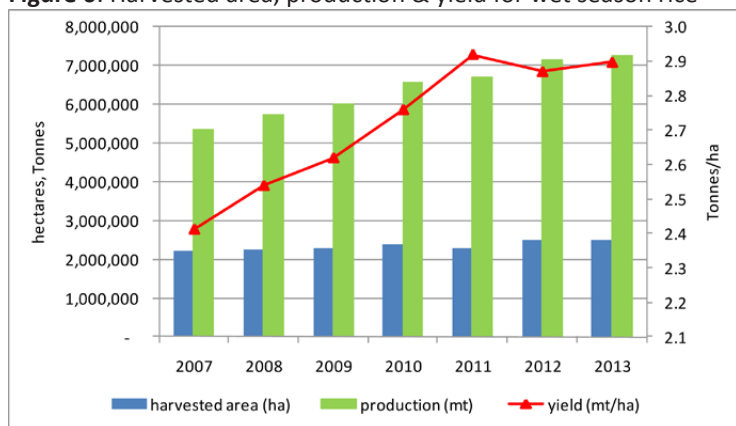
Source: National Committee for Disaster Management

FOOD PRODUCTION

Rice Cultivation

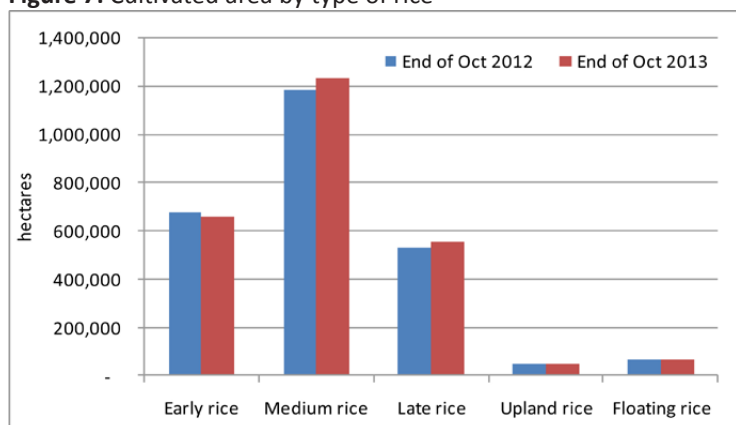
The wet season rice cultivation was completed in October 2013. Wet season rice cultivated areas, harvested areas and production were higher than in 2011 due to the implementation of government policy, support and investment on agriculture, dissemination, mainstreaming, transfer and adaptation of agricultural technology among farmers and changing farmer behavior in relation to cultivation.

Figure 6 shows the trend of the harvested area, production and yield for wet season rice from 2007 to 2013. Compared to 2012, the wet season rice cultivated area in 2013 was 2,562,764 hectares, increased by 2.0%, harvested area was 2,485,559 hectares, increased by 0.03%, and total rice production was 7,259,989 tonnes, increased by 1.74%.

Figure 6: Harvested area, production & yield for wet season rice

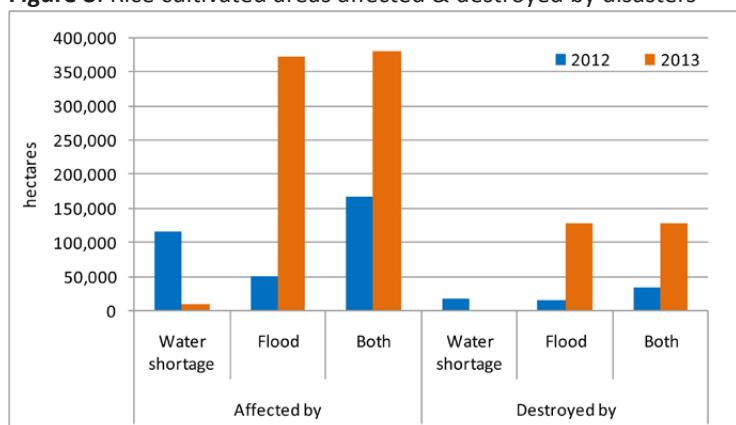
Source: Ministry of Agriculture, Forestry and Fisheries

Figure 7 presents the cultivated area by type of rice in October 2012 and 2013. The cultivated area of medium rice and late rice were respectively 4.3% and 5.4% higher than the corresponding month in 2012. However, the cultivated area of early rice, upland rice and floating rice was respectively 2.8%, 6% and 4% lower than that in October 2012 due to the government rice export policy boosting rice quality and quantity in international markets.

Figure 7: Cultivated area by type of rice

Source: Ministry of Agriculture, Forestry and Fisheries

Water shortage and floods in 2013 had not severely affected the production for wet season rice. Water shortage and flooding destroyed 128,521 hectares of rice cultivated areas equivalent to 5% of total wet season rice cultivated areas in 2013.

Figure 8: Rice cultivated areas affected & destroyed by disasters

Source: Ministry of Agriculture, Forestry and Fisheries

The Ministry of Agriculture, Forestry and Fisheries continuously urged farmers to replant wet season rice after destroyed by water shortage and flooding. Taking into account rice replanting, wet season rice cultivated areas were destroyed mainly in Banteay Meanchey, Battambang, Rattanak Kiri and Stung Treng. Table 3 shows the total destroyed and replanted areas of wet season rice by province.

Table 3: Destroyed and replanted area, by province

Province	Destroyed/cultivated (%)	Replanted/destroyed (%)	(Destroyed-Replanted)/Cultivated(%)
Banteay Meanchey	12.5	17.9	10.2
Battam Bang	14.0	35.5	9.1
Kampong Cham	4.1	73.8	1.1
Kampong Chhnang	1.4	0.0	1.4
Kampong Thom	3.4	29.9	2.4
Kandal	2.1	71.5	0.6
Koh Kong	0.2	0.0	0.2
Kratie	10.4	49.1	5.3
Monduliri	0.1	0.0	0.1
Phnom Penh	0.1	0.0	0.1
Preah Vihear	4.4	0.0	4.4
Prey Veng	5.0	92.9	0.4
Pursat	6.0	3.9	5.8
Rattanak Kiri	7.3	0.5	7.3
Siem Reap	3.3	21.5	2.6
Preah Sihanouk	0.2	100.0	0.0
Stung Treng	11.0	22.0	8.6
Svay Rieng	0.4	65.0	0.1
Takeo	0.4	100.0	0.0
Otdar Meanchey	1.2	0.0	1.2
Pailin	3.9	0.0	3.9
Total	5.0	36.0	3.2

Source: Ministry of Agriculture, Forestry and Fisheries

Table 4 shows dry season rice cultivated area by province. According to preliminary estimation by the Ministry of Agriculture, Forestry and Fisheries, the total dry season rice cultivated area in quarter four of 2013 was 472,483 hectares, or roughly 123% of the planned figure for 2013/2014. Kampong Thom, Kampong Chhnang, Takeo, Prey Veng and Svay Rieng cultivated more area than initially planned.

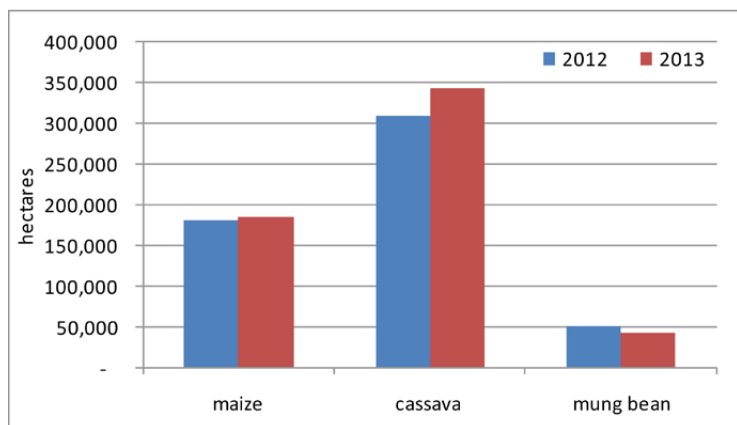
Table 4: Dry season rice cultivated area (ha) by province

Province	Planned area (ha)	Cultivated areas (ha)	% of Plan
Kampong Cham	52,000	53,000	102
Kampong Chhnang	24,200	36,110	149
Kampong Thom	15,000	40,454	270
Kandal	62,000	64,940	105
Kratie	14,000	14,000	100
Prey Veng	75,000	90,814	121
Siem Reap	16,200	16,200	100
Svay Rieng	18,000	21,670	120
Takeo	75,000	96,530	129
Other	32,240	38,765	120
Total	383,640	472,483	123

Source: Ministry of Agriculture, Forestry and Fisheries

Subsidiary and Industrial Crop Cultivation

Figure 9 below compares the harvested area of three key industrial crops in the wet season in 2012 and 2013. On a year-on-year basis the harvested areas of maize increased by 2.1%, cassava increased by 11.4%, but mung beans decreased by 15.7%.

Figure 9: Harvested area of key industrial crops, wet season

Source: Ministry of Agriculture, Forestry and Fisheries

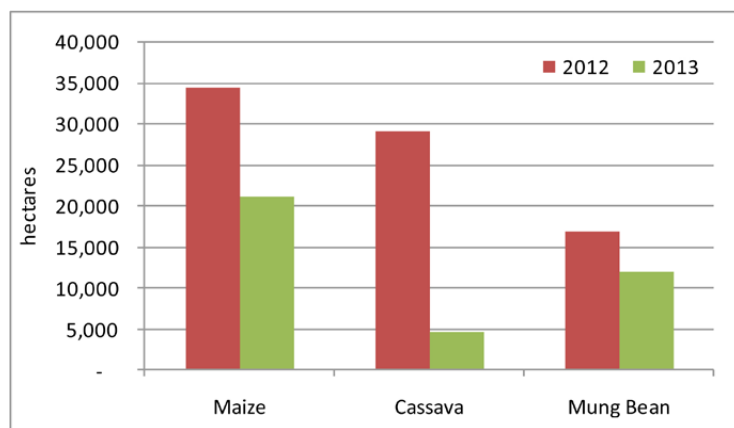
In quarter four the production figures for maize and cassava confirm the trend of harvested areas. On a year-on-year basis, the production of maize and cassava increased by 1.1% and 10.4%, respectively, but the production of mung bean decreased by 4.1% (Table 5).

Table 5: Production (mt) of key industrial crops

Industrial crop	2012	2013	%
Maize	820,348	829,558	1.1
Cassava	6,773,041	7,475,984	10.4
Mung bean	54,883	52,658	-4.1

Source: Ministry of Agriculture, Forestry and Fisheries

Figure 10 shows the estimation of cultivated area of three subsidiary and industrial crops (maize, mung bean and cassava) in the dry season. The cultivated area of maize, cassava and mung bean in 2013 was 21,061 hectares, 4,533 hectares and 12,062 hectares, respectively. The cultivated areas of those crops were lower than in previous year due primarily to the decrease in the local and international price and delayed harvesting of cassava.

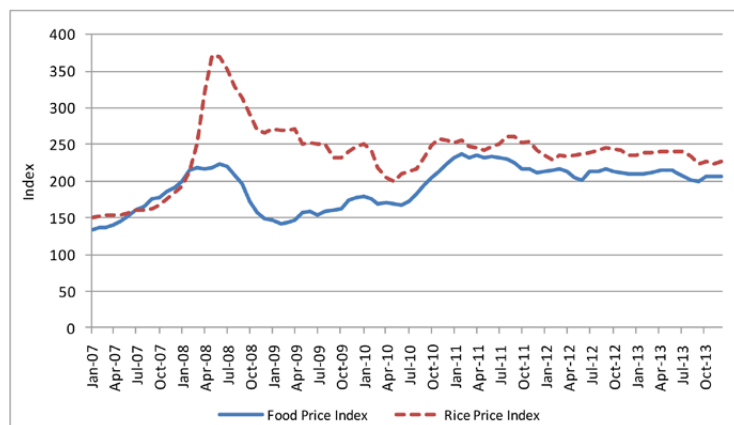
Figure 10: Cultivated area of key industrial crops, dry season

Source: Ministry of Agriculture, Forestry and Fisheries

FOOD PRICES

International and Regional Food and Rice Prices

The FAO Food Price Index², measures the international price level of a basket of key food commodities. In December 2013, the food price index averaged 206.7 points, 0.2% higher than the previous month (Figure 11). The International Rice Price Index was 227 points, an increase of 1.3% on a month-on-month basis in December 2013.

Figure 11: FAO Food and Rice Price Indices (100 = 2002-2004)

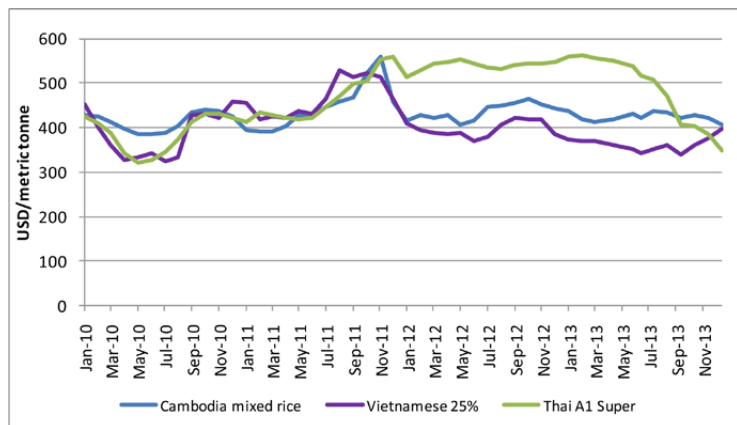
Source: FAO, <http://www.fao.org/worldfoodsituation/FoodPricesIndex/en/>

The price of Thai A1 Super white rice (100% broken) and Vietnamese white rice (25% broken) are the two benchmark prices for Asia. In December 2013, the f.o.b. prices³ of Thai A1 Super white rice and Vietnamese white rice were 347 USD/mt and 398 USD/mt, respectively (Figure 12). Thai A1 Super white rice prices decreased by 9.6% month-on-month, while the price of Vietnamese white rice increased by 6.1% month-on-month.

² 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.

³ 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.

Figure 12: Wholesale price of Thai, Vietnamese and Cambodian white rice



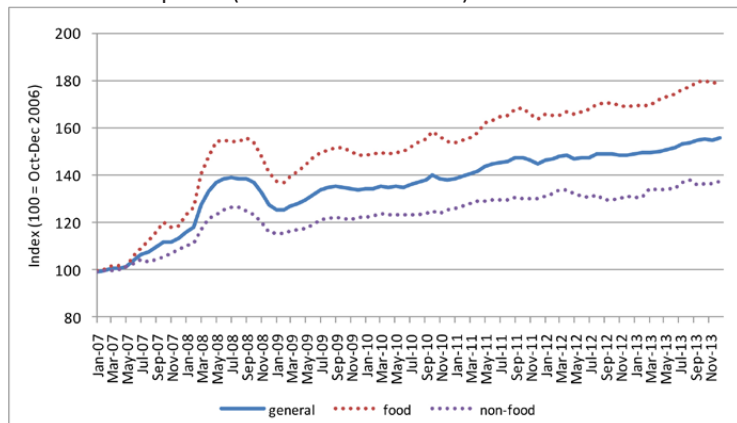
Source: FAO, <http://www.fao.org/es/esc/prices/PricesServlet.jsp?lang=en>

Local Consumer Price Index and Food Price Index

The general Consumer Price Index (CPI)⁴ measures the cost of a consumption basket composed of 259 items. Each item is weighted based on its importance in an average household’s expenditure⁵. In December 2013, the general CPI averaged 155.6 points, an increase of 0.5% on a month-on-month basis, and the inflation rate was 4.7%.

The Food Price Index (FPI) measures the cost of the food items in the general CPI consumption basket in which food items make up 43.2% of the total consumption basket. In December 2013, food prices increased by 0.2% on a month-on-month basis and by 6.2% on a year-on-year basis (Figure 13). Gasoline prices in December 2013 increased 0.2% on a month-on-month basis.

Figure 13: Relative change in general consumer prices, food prices and non-food prices (base = Oct-Dec 2006)



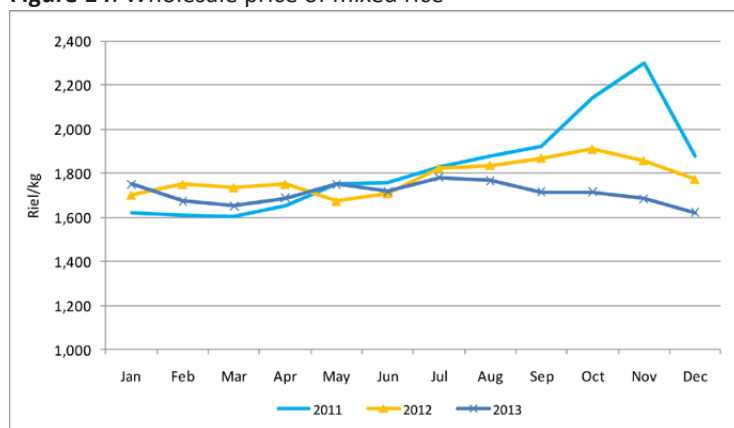
Source: National Institute of Statistics

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 rice⁶ wholesale prices in the fourth quarter of 2013 decreased for three consecutive months. In December, the price was 1,622 riel/kg, a decrease of 3.8% on a month-on-month basis and 8.5% on a year-on-year basis (Figure 14).

4 The CPI is collected and reported by the National Institute of Statistics (NIS).
 5 Relative item expenditure weights are derived from the 2004 Cambodia Socio-Economic Survey and adjusted to October-December 2006 price levels.
 6 Mixed rice is considered a low-quality type of rice.

Figure 14: Wholesale price of mixed rice⁷



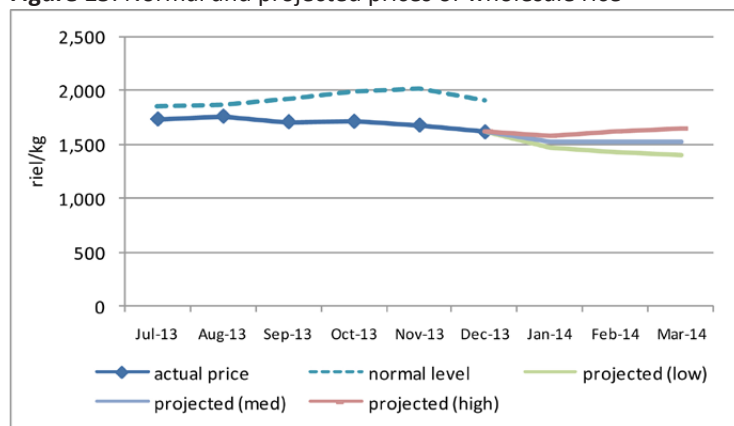
Source: Cambodia Agricultural Market Information Service, MAFF

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. In December 2013, the actual wholesale price of mixed rice was 15.4% lower than the expected normal price, which indicates that price levels were below historically normal levels.

Prices for the upcoming quarter (January to March 2014) were projected by the price monitoring tool using the December 2013 price, current inflation rate, and seasonal factors. Rice prices are expected to decrease in January. This is the usual trend in rice price fluctuation after the main wet season harvest. However, rice prices are likely to increase in February and March due to the depletion of household rice stocks and an increase in demand for rice (Figure 15).

Figure 15: Normal and projected prices of wholesale rice



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 on a monthly basis by MAFF staff⁸. In this quarter the unskilled wage rate increased for three consecutive months (Table 6). In December 2013, the average daily unskilled wage rate was 18,929 Riel/day, 3.5% and 4% higher than November and October, respectively.

Terms of trade (ToT) is used to assess the food purchasing power of households. It is a 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 the fourth quarter of 2013, the ToT for unskilled labor and mixed rice was higher than previous quarter. In December, the ToT was 10.7, an increase of 8% month-on-month. The increase in the ToT was due to an increase in unskilled wage rates and a decrease in rice prices resulting in an improvement of household food purchasing power.

Table 6: Terms of trade of unskilled labour and mixed rice

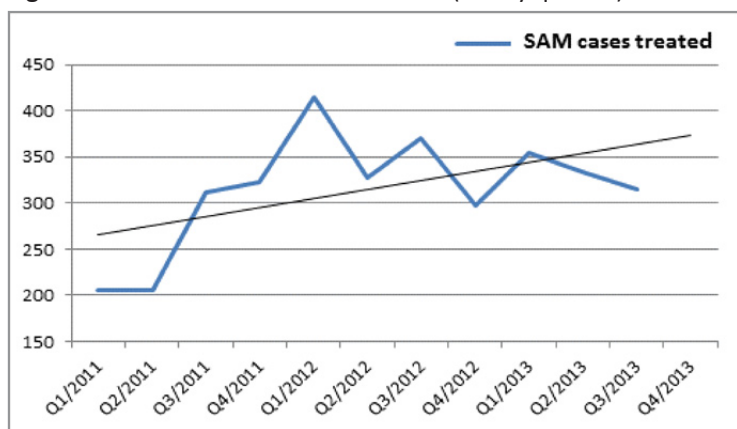
	Oct-13	Nov-13	Dec-13
Unskilled wage (riel/day)	18,196.4	18,285.7	18,928.6
Retail prices of mixed rice (riel/kg)	1,777.7	1,838.7	1,764.3
Terms of Trade (kg rice/daily wage)	10.2	9.9	10.7

Source: Cambodia Agricultural Market Information Service, MAFF

HEALTH AND NUTRITION

Since the beginning of January-September 2013, 1,220 children (0-59 months) were treated as in-patient for severe acute malnutrition (SAM) among 29 out of 33 hospitals currently are implementing the Management of SAM. In the same period, the drop out and mortality rates decreased respectively from 9.5% to 6.0% and 1.6% to 1.3% (2012 as compared to 2013). There is no more improvement in the rates of severe acute malnourished (SAM) children returning for at least 1 follow-up visit post-discharge, remaining at 60% and 50% the third visit. Since 2011, 3,795 children were treated.

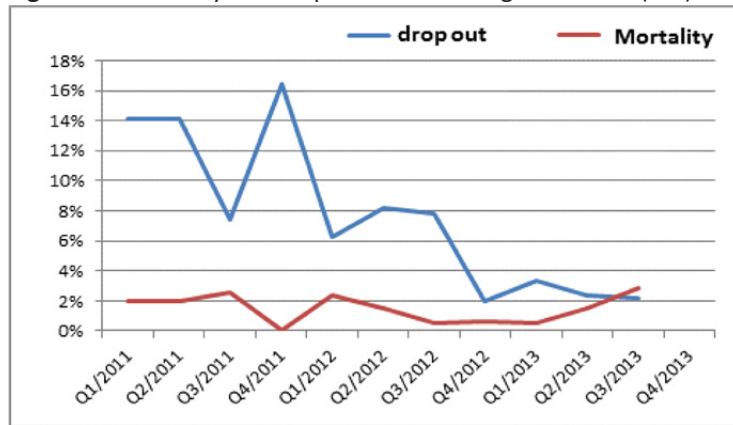
Figure 16: Number of SAM cases treated (IPD by quarter)



Source: NNP and MAGNA

8 Since 2011 the MAFF, with technical and financial support from the United Nations World Food Programme, had been equipped three trainings on the data collection capacity building to agricultural marketing staff. The MAFF has started collecting unskilled wage in six provinces: Battambang, Kampong Cham, Kampong Thom, Prey Veng, Pursat and Siem Reap since September 2011 and has been expanded to 14 provinces: Battambang, Kampong Cham, Kampong Thom, Prey Veng, Pursat, Siem Reap, Kampong Chhnang, Kampong Speu, Kandal, Takeo, Svay Rieng, Banteay Meancheay, Otdar Meancheay and Stung Treng.

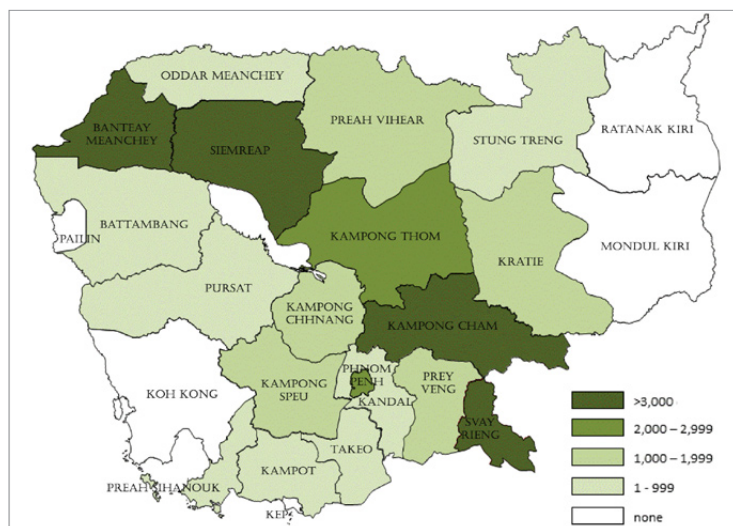
Figure 17: Mortality and drop-out rates among SAM cases (IPD)



Source: NNP and MAGNA

In the meantime, UNICEF is supporting cooking demonstration for malnourished children within the 29 hospitals currently implementing the management of SAM. Over the past two years from 2012 to 2013, 3,419 cooking demonstration sessions have been conducted in 19 provinces reaching more than 34,000 participants (in average, 9.48 mothers or participants attended per session). The following map shows the reach in each of the 19 provinces.

Map 2: Participants in cooking demonstration in Referring hospital from 2012-2013

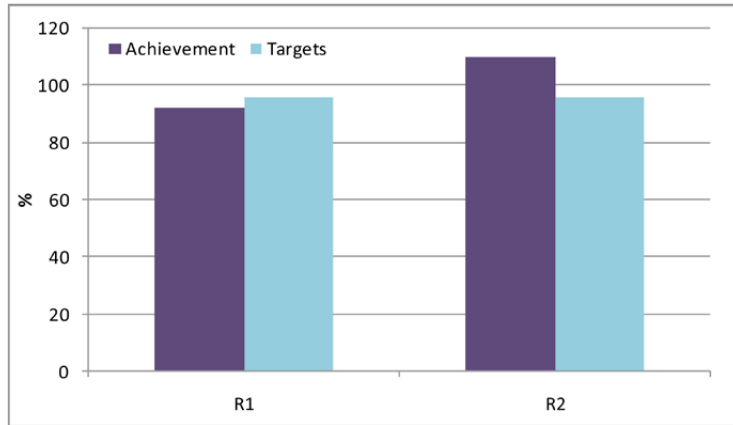


Source: UNICEF 2012

To prevent micronutrient deficiencies, 3.7 million sachets of MNPs were distributed to 23 ODs (≈20% of the children) in 2013 through government system in collaboration with 7 NGO partners. According to the Health Management Information System (HMIS), the percentage of women receiving their two rounds of Iron and Folate tablets during pregnancy raised from 82% in 2011 to 86% in 2012. In the same manner, Vitamin A supplementation for children 6-59 months increased from 88% to 93%.

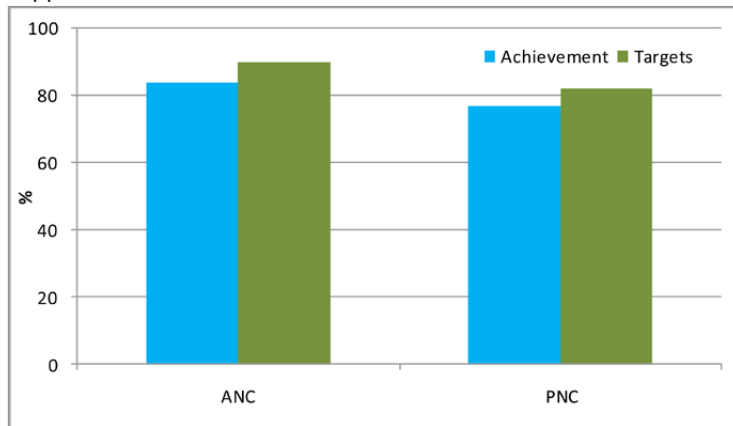
In November 2013, 92% of children aged from 6-59 months received one dose of vitamin A in round one and 110% at round two (Figure 18). 84% of the pregnant women received 90 tablets of iron during the first and second visit, and 77% of post-partum women received 42 tablets of iron during the post-natal visit (Figure 19).

Figure 18: Children aged from 6-59 months received Vitamin A supplementation



Source: HMIS 2013

Figure 19: ANC and PNC received Iron and folic acid supplementation



Source: HMIS 2013