

- The overall food security situation in Cambodia deteriorated in the previous quarter (August – October) primarily due to the seasonal increase in the price of rice and heavy flooding in several provinces in October. The period coincided with the traditional lean season.
- In the upcoming quarter, the overall food security situation is expected to improve as the main wet season rice harvest will drive down rice prices and the end of the wet season will mark the end of the drought and flooding season.

Key Highlights of the Food and Nutrition Security Situation and Outlook

Weather, Hazard and Disaster Risk

- While April and May were characterized by significant rainfall deficits, August and October rains were 70 and 55 percent above historical averages, respectively; the cumulative rainfall in 2010 now surpasses the historical average by more than 10 percent.
- Heavy storms and flooding in the second half of October affected 33,000 households, temporarily displacing 6,300 families and creating food shortages for more than 18,000 households; emergency food assistance was found to be mainly required in Kandal, Banteay Meanchey, and Pursat provinces.

Food availability: Crop Production and Food Trade

- The destruction of paddy surfaces due to weather hazards, plant diseases and pests in Cambodia remain well below the levels recorded in 2009.
- The national outlook for rice production is positive. Cambodia is currently projected to increase its production of paddy rice by 4.5 percent in 2010, corresponding to a surplus of 2.3 million MT of milled rice.

Food access: Food Prices and Purchasing Power

- Access to food deteriorated in the previous quarter (August–October) as households entered the traditional lean season and rice prices reached their annual peak. The price of rice is expected to decrease as the main wet season harvest begins in mid-November; this will improve household purchasing power and increase food accessibility.
- The relative price of food, in general, has stabilized at a level significantly higher than that seen prior to the food-price crisis of 2008. Further analysis is recommended to investigate this anomaly and determine its implications on household purchasing power.

Food use and utilization: Health and Nutrition

- The current levels of diarrhea are down from their mid-year peak, but reported cases are expected to increase as the country enters the dry, cool season in January 2011.
- There has been no significant change in the nutritional status of children under five since 2005; continued high levels of malnutrition are a cause for concern. In addition, there is a need to be vigilant during diarrheal outbreaks and to link responses with the nutrition sector as these can rapidly result in elevated malnutrition rates.

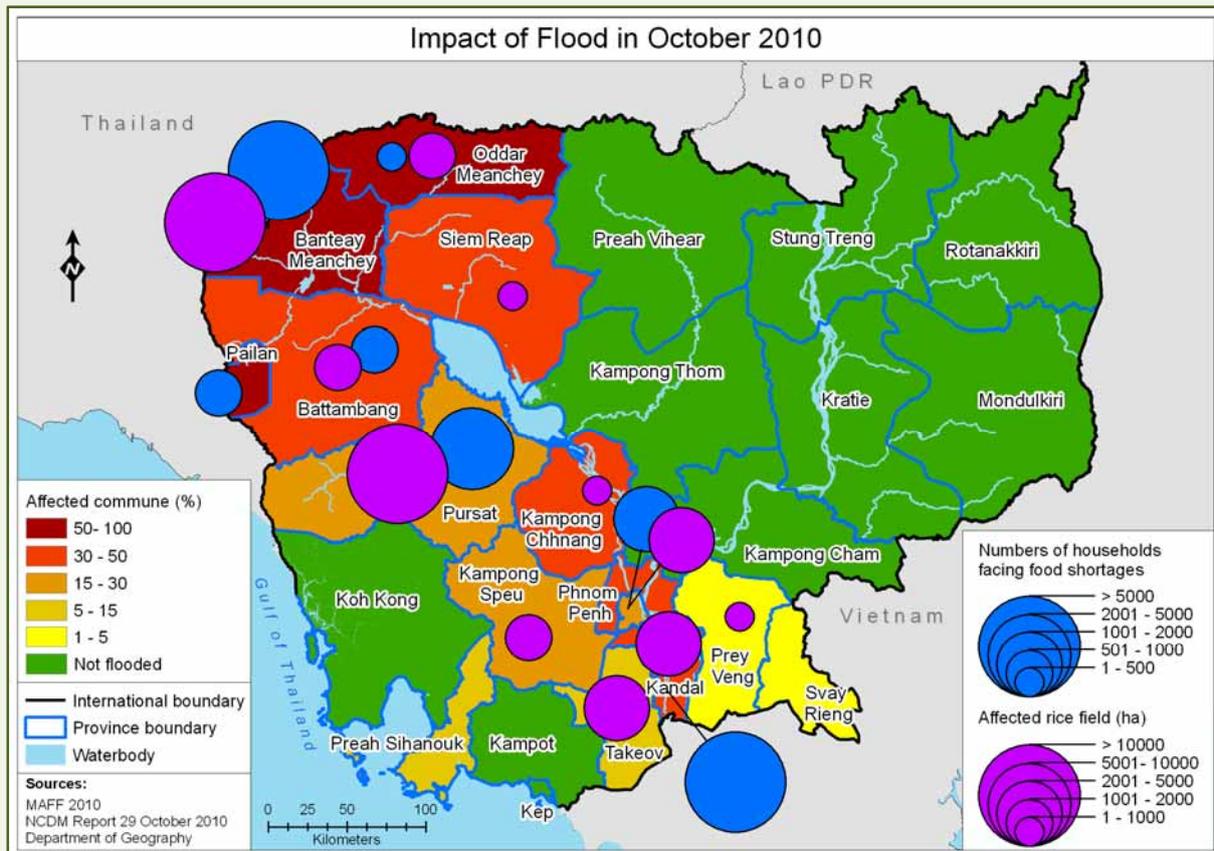
Contents	Page
<i>Water, Hazard and Disaster Risk Summary</i>	2
<i>Food Availability</i>	4
<i>Food Access</i>	6
<i>Food Use and Utilization</i>	8

This Early Warning Bulletin aims to provide decision makers a rapid overview of trends and emerging threats relating to food and nutrition security in Cambodia. It represents 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 Planning (MoP), the Ministry of Health (MoH), the National Center for Disaster Management (NCDM), UNICEF, the World Food Programme, the EC-FAO Food Security Programme, and the Emergency Food Assistance Project of the Asian Development Bank (ADB).

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WEATHER, HAZARD AND DISASTER RISK SUMMARY



Impact of October 2010 Storms and Floods

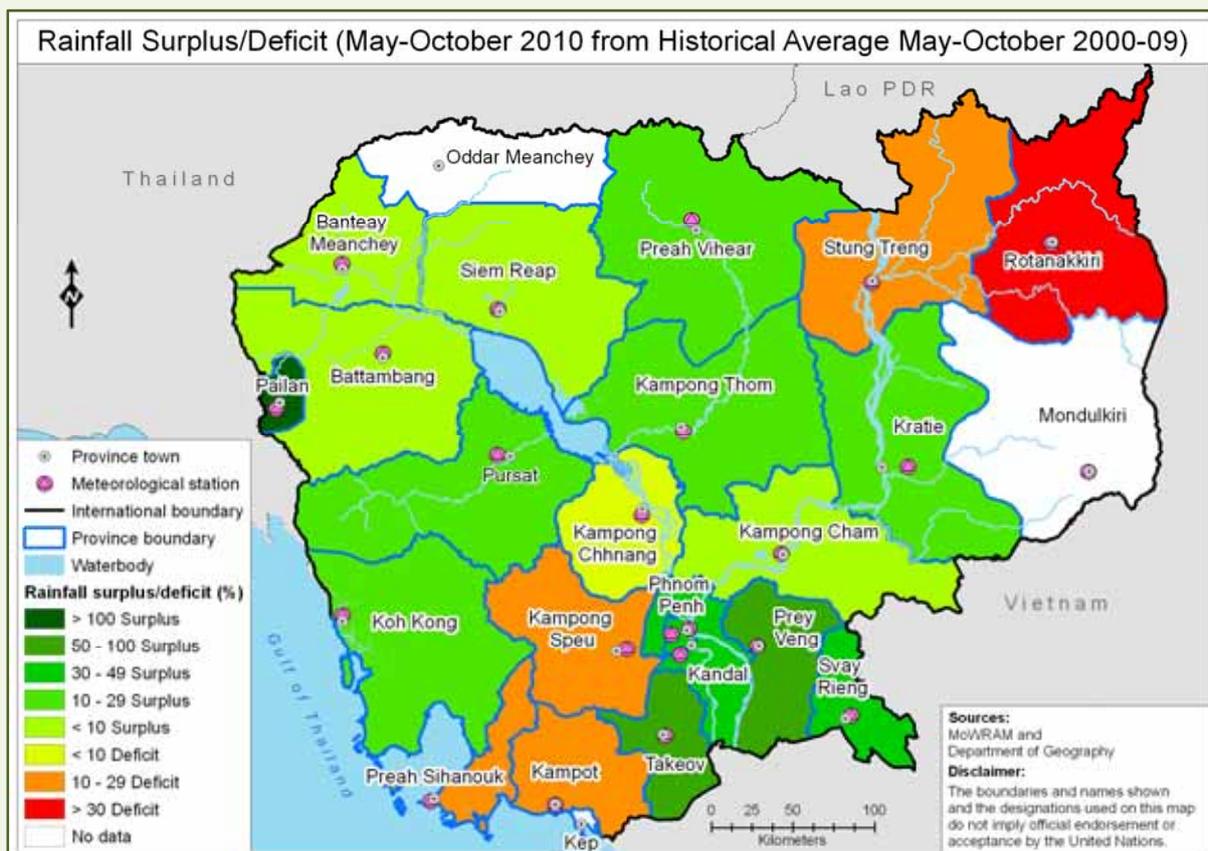
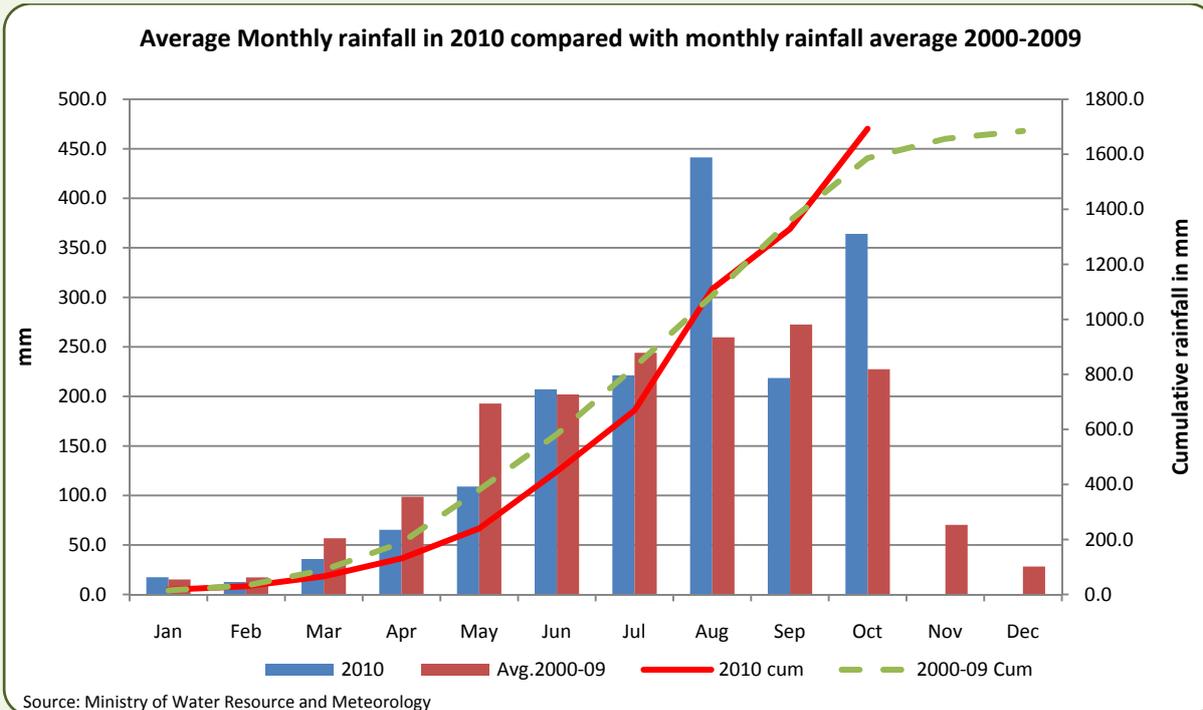
Heavy storms and flooding in the second half of October affected 33,000 households, temporarily displacing 6,300 families and creating food shortages for more than 18,000 households; according to the National Committee for Disaster Management (NCDM) estimates of 29 October, emergency food assistance was mainly required in Kandal, Banteay Meanchey, and Pursat provinces. Banteay Meanchey province accounted for 80 percent of the displaced households and 50 percent of the affected households. Preliminary damage reports point to considerable destruction of private assets and public infrastructure, including over 8,000 ha of paddy, 7,000 ha of subsidiary crops (mainly cassava in Pailin and Banteay Meanchey provinces), 100 family homes (60% of which were in Siem Reap province), and 272 schools and roads. The Cambodian Red Cross, as well as various NGOs, responded by providing emergency assistance to the affected populations, while authorities, including the Ministry of Public Works and Transportation and Ministry of Rural Development, carried out more detailed assessments of damages.

Slow Onset of Rains in 2010 Wet Season

The beginning of the 2010 rainy season (which in Cambodia typically starts the last week of April and continues until mid-November) was significantly delayed: April rainfall was 33.8 percent below the 10-year monthly average and May rainfall was 43.5 percent lower than the historical average. The rainfall picked up in June (2.6 percent higher than the 10-year average) and nearly doubled the historical average for August, with the total by the end of the month (70.0 percent higher than the average). The cumulative rainfall data highlights the significant shortfalls in total rainfall at the beginning of the rainy season. However, with the above average rainfall in August and data from October 2010 showing rainfall was 55 percent higher than the 10-year average, the cumulative rainfall for the 2010 rainy season (May-October) was 10.8 percent higher than the 2000-09 rainy season average. It should be noted that large variations in rainfall distribution and intensity were found between the provinces: whereas the cumulative 2010 rainfall was over 30 percent above the historical average in certain provinces (Pailin, Prey Veng, Svay Rieng, Takeov), very significant deficits exist in others (Rotanak Kiri).

Water Levels Mirror Rainfall Pattern

Mekong water-level data from 8 stations monitored daily by the Mekong River Commission (MRC) corresponds with the rainfall data in the early months of the rainy season (May – July), when water levels in all stations were significantly lower than the 30-year historical average (1980 – 2009). Beginning in August 2010, water levels in all 8 stations rose rapidly to reach their October 2010 levels, which are on par with historical averages. In none of the 8 stations did the water levels reach flooding levels.



Areas Prone to Flood and Drought

The Asia-Pacific Disaster Report 2010 indicates that Cambodia has the highest risk of flooding in the region, with 12.2 percent of Cambodia’s population (1.7 million people) exposed to flooding. This is in line with the 2003 study by the NCDM and WFP which highlights that 292 communes out of a total of 1,621 communes in Cambodia are prone to drought and around 260 communes are prone to flood. Fifteen percent of Cambodia’s population lives in communes prone to flood.

FOOD AVAILABILITY

Crop Production and Food Trade

Due to the late onset of rains, land preparation and planting of the main wet season rice crop was delayed in most areas by one month to the end of May. This resulted in a negative food production outlook at the beginning of the season. With the rains intensifying during the following months, the overall outlook for Cambodia as a whole was subsequently revised positively. Current Ministry of Agriculture, Fisheries and Forestry (MAFF) estimates suggest that the country will be able to increase its paddy production by 4.6 percent compared to 2009, which corresponds to a surplus of about 2.42 million MT of milled rice.

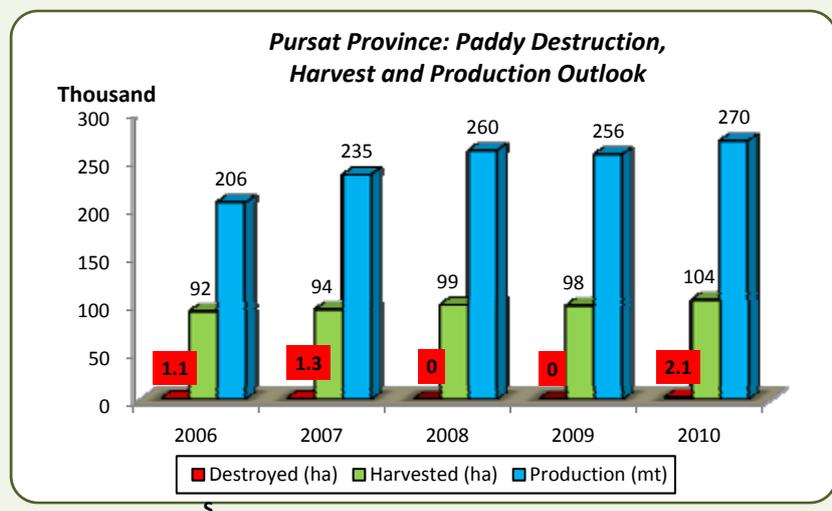
Less Crop Destruction at National Level

The destruction of paddy surfaces due to weather hazards, plant diseases and pests during the 2010 season was significantly below the levels recorded in the previous year. Based on field observations and records consolidated as of November 3, MAFF estimates that the overall destruction of paddy surfaces has up to now been limited to 8,600 ha. This represents less than 19 percent of the 45,770 ha destroyed during the 2009 planting seasons and is a mere 0.3 percent of the total cultivated area.

The flash floods during October caused the large majority of the overall paddy destruction (8,351 ha out of 8,600 ha, translating into about 22,000 MT of lost harvests). Although 73,989 ha of paddy surfaces were temporarily submerged in 13 provinces, this resulted only on some 11 percent of the area in the actual destruction of rice crops once the flood waters receded and plants recovered. The provinces most affected were Banteay Meanchey, Pursat and Kandal, followed by Oddar Meanchey, Phnom Penh City, Siem Reap, Battambang and Kampong Speu.

In Banteay Meanchey province, 2,889 ha of paddy (corresponding to some 1.2 percent of the overall planted area) were destroyed according to MAFF records of 03 November 2010, translating into about 7,670 mt of lost harvest. As damage assessments in the province were still ongoing in early November, that figure is expected to increase further, possibly eclipsing the area damaged in 2009 which was over 10,000 ha.

Pursat farmers suffered paddy destruction on 2,018 ha (representing 1.9 percent of the overall estimated area planted within the province), translating into some 5,324 mt of lost harvest. Losses suffered by individual disaster affected communes and families are however significantly more serious in percentage terms due to the fact that the damages were concentrated within only a quarter of all communes. This year's level of destruction in Pursat importantly exceeds losses recorded during the preceding four years when destroyed surface figures were limited to between 0 and 1,307 ha. A 7.6 percent increase in the overall cultivated area is projected to increase paddy production in the province by 5.4 percent (13,829 mt) to 269,871 mt despite the floods.



Source: MAFF estimates as of 3 November 2010

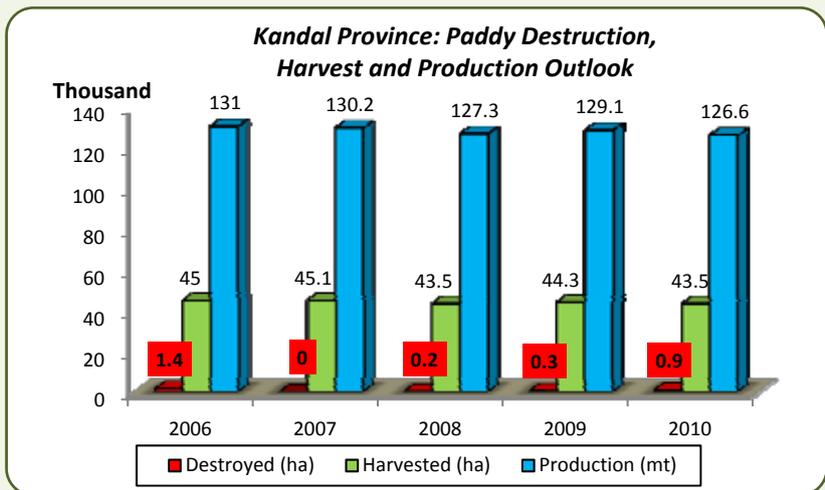
Negative Production Outlook in KandalKrovance

Kandal province saw 867 ha of paddy (2 percent of the province's planted area in 44 communes) destroyed, translating into some 2,526 mt of lost harvest.. A similar level of destruction in Kandal was last recorded in 2006 when farmers suffered paddy losses of 1,363 ha. Between 2007 and 2009 the destruction remained limited to between 0 and 269 ha only. Kandal is the only province where flood damages are expected to reduce the overall rice production below the levels of previous years. MAFF estimates from October project the total production in Kandal to be 126,532 mt, which is 2,492 mt fewer than produced in 2009 (a 2 percent reduction)

Estimates of flood-related destruction in Oddar Meanchey, Phnom Penh, Siem Reap, Battambang and Kampong Speu provinces were 859 ha, 842 ha, 205 and 159 ha, respectively.

Limited Losses Due to Drought and Pests

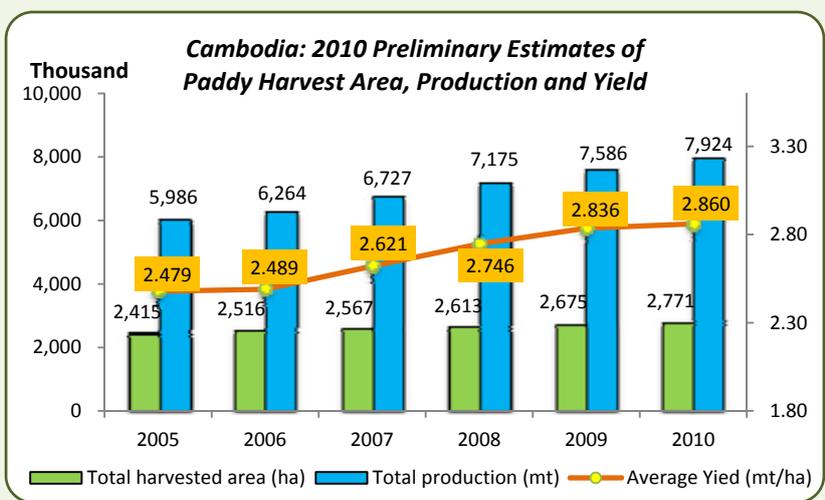
Farmers in Battambang province lost roughly 100 ha of paddy due to drought this season. An additional 266 ha were destroyed in Kratie (0.9 percent of the total planted paddy surface). Nationally, however, drought is expected to cause very limited damage to the current crop (just 455 ha have been destroyed). No drought damages have so far been reported from Rotanak Kiri, where rainfall deviation charts show a deficit of more than 50 percent for the April to October period. To what degree this may influence the development of crops there during the remaining growth period is uncertain. Recorded destruction due to plant pests so far amount to only 19 ha in Preah Vihear and 11 ha in Mondul Kiri, which represents a mere 0.05% of the planted area in those two provinces.



Source: MAFF estimates as of 3 November 2010

Overall Increase in Rice Production Expected

Assuming favorable weather during the remaining cultivation period, MAFF projects that the country will be able to increase its combined wet and dry season paddy rice production by over 0.3 million mt to reach 7.9 million mt. This is due, in part, to forecasted increases in total area cultivated (+ 2.1 percent) and harvested surfaces (+ 3.6 percent to 2.77 million ha), as well as to slightly higher expected yields (2.860 ton/ha in 2010 for wet and dry seasons combined; 2.656 ton/ha for the wet season and 4.126 ton/ha for the dry season). Advances in productivity are a result of improvements made in farming practices, seed quality, and fertilizer application, as well as the provision of agricultural extension services and technical assistance by NGOs and other development partners. In response to the delayed start of the season, farmers increased their reliance on medium- and early-maturing rice varieties instead of late-maturing ones traditionally used. The total area planted with medium-maturing varieties increased this season by 92'606 ha and represents 50 % of the overall wet season rice production area. The area planted with late-maturing varieties decreased by 32,000 ha, while the cultivation of early-maturing varieties increased by 24,000 ha.



Source: MAFF estimates as of 20 October 2010.

High Seasonal Variability of Fish Catches

Small-scale inland fishery, which is the main source of fish in Cambodia, is characterized by a high seasonal (and spatial) variability of catches. During the June to September period, fishing-dependent households commonly catch only a small fraction of the fish caught between October and May. Given the particularly low water levels in all parts of the country at the beginning of the season, it is expected that this pattern was further amplified in 2010.

Foot and Mouth Disease Outbreaks and Avian Influenza

Multiple recently reported outbreaks of Foot and Mouth Disease (FMD) may to some degree influence the outlook in the animal husbandry sector and in certain locations negatively affect the availability of cattle and buffaloes as draught animals. Latest new FMD cases in cattle and buffaloes were in October confirmed from Kandal (over 2,000 animals infected) and Kampong Chhnang (379 animals infected) provinces, whereas earlier in the year outbreaks reportedly caused partly significant damages and losses for farmers in Kampong Cham, Siem Reap and Kratie provinces. There have been no recent new cases of H5N1 Avian Influenza.

Growing Trade in Rice

Exports of Cambodian milled rice are growing rapidly. Data released by the Ministry of Commerce showed an increase to 107,291 mt of exported milled rice during the January to June 2010 period, up from just 4,369 mt recorded during the first half of 2009. Some of the increase is due to trade now being conducted through formal channels, whereas previously it would have been informally exported across the border to neighbouring Thailand and Vietnam. Credit provided to rice millers, greater confidence from investors and the Cambodian government's promotion of the sector are thought to have contributed to this development. Cambodia is also among the least-developed countries that can benefit from tariff-free imports allowed by the EU under its Everything-but-Arms initiative. Key exporters earlier in the year hoped that the country may export up to 700,000 mt of milled rice during 2010, which is however highly unlikely to be reached.

Cambodia aims to become a leading exporter of rice, although on August 18th the government announced that initially only one-half of the export target of at least one million mt by 2015 would be of high-quality. Although there have recently been investments in rice milling, meeting the export standards for developed countries entails costly modern machinery. Lower-quality rice with a higher percentage of broken grains, which can be produced using more basic milling machines, has already been successfully exported to Africa. Informal exports of un-milled paddy to Thailand and Vietnam (for the time being expected to remain the majority of exports) partly return to Cambodia as milled rice. Some is re-exported to other higher value markets from Thailand and Vietnam.

FOOD ACCESS

Food Prices and Purchasing Power

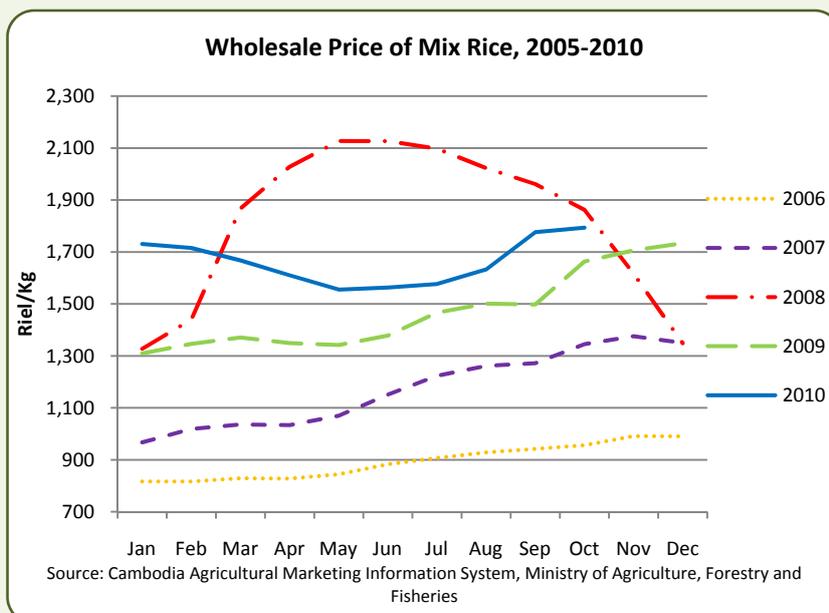
Overall consumer prices have been stable in the past quarter (August—October). However, the price of rice, the major staple, has been rising since August, which coincides with the beginning of the lean season, and will most likely continue to do so until November, when the main wet season harvest begins. The capacity of vulnerable households to access food has decreased during this time, but seems within the bounds of typical seasonal patterns caused by fluctuations in the price of rice.

Domestic Rice Prices Increased

The average wholesale price of mixed rice in Cambodia saw month-on-month increases of 3.5, 8.8, and 1.0 percent in August, September, and October 2010, respectively. The increase in the price of rice in these months were expected as the price of rice typically increases and peaks during the lean season (August – November). In the lean season, demand for rice increases as households' deplete rice from own production and purchase more rice in the markets and the supply decreases as the paddy rice stock in rice mills are depleted.

The year-on-year increase in the price of rice was significant. Rice prices in August 2010 were 8.7 percent higher than August 2009, and September and October 2010 prices were 18.6 percent and 7.8 percent higher than the same time last year, respectively.

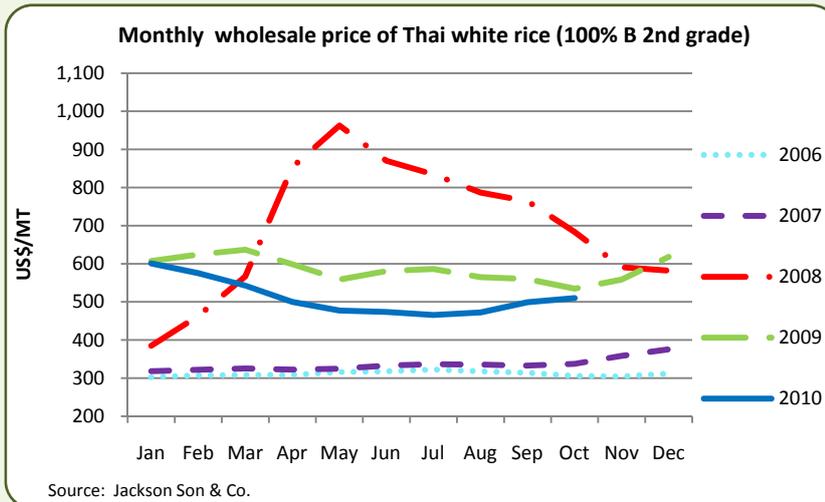
If wage rates, especially for unskilled labor, have not increased on par with rice prices, it can be assumed that the food security situation of poor rural households¹ has deteriorated in the last quarter, as the rice price increases has been significant both on a month-on-month and year-on-year basis.



¹ The CSES 2007 survey estimates that the poverty rate in Cambodia was 30.1% and the food poverty rate was 18.0%. 92.3% and 92.7% of those under the poverty line and food poverty line, respectively, live in rural areas.

International Rice Prices

In October 2010, the export price of Thai 100% grade-B white rice, the benchmark for Asia, was 510 US\$/MT. This was a 2.2 percent month-on-month increase but a 4.6 percent year-on-year decrease. This price is significantly lower than in the food price crisis of 2008, but still higher than the price before the food price crisis.



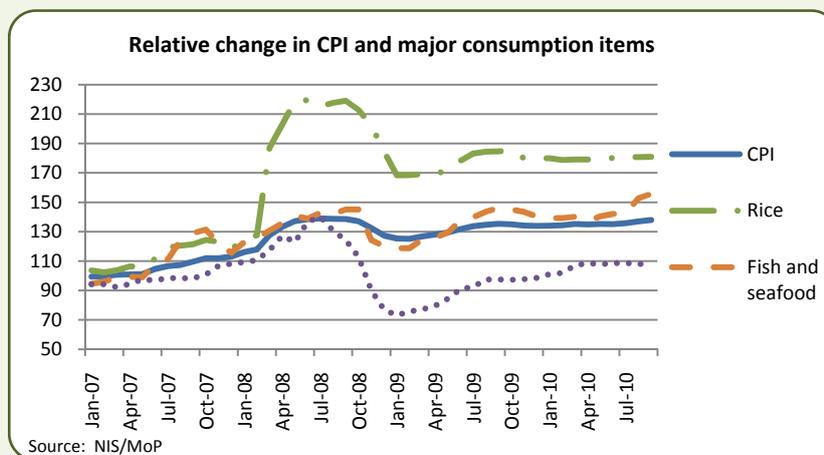
Macroeconomic Indicators

The inflation rate, measured by the year-on-year increase in the Consumer Price Index reported by NIS, was 1.9 percent in September 2010. On a month-on-month basis, prices were stable in September 2010, as consumer prices increased only 0.7 percent. In the most recent quarter (July – September 2010), consumer prices were stable at 1.7 percent on average, after steadily decreasing from its 2010 peak of 7.3 percent in February.

Gasoline prices as indicated in the Consumer Price Index increased by 12.2 percent year-on-year in September 2010. After averaging a year-on-year increase of 37.0% in the first quarter of 2010, gasoline prices have stabilized to 13.5 percent year-on-year increase in the third quarter, but still experienced significant year-on-year increase.

The chart below shows the relative changes of the CPI and some components since the 2007. The values of all items are near 100 in January 2007 as the base period for the index is October-December 2006.

The riel is expected to remain under downward pressure in the following two years due to the persistence of a large current account deficit. This weakening of the riel against the US dollar could also contribute to inflationary pressures by raising prices for imported goods and services in local-currency terms.



After contracting by an estimated 1.5 percent in 2009 as a result of the impact of the global recession on garment exports, foreign investment and tourism, Cambodia’s real GDP is expected to grow 4.1 percent in 2010 and 5.1 percent in 2011. Private consumption is expected to recover in 2010-11 as personal disposable income will increase as agricultural commodities sell for higher prices and garment factories begin to hire again.

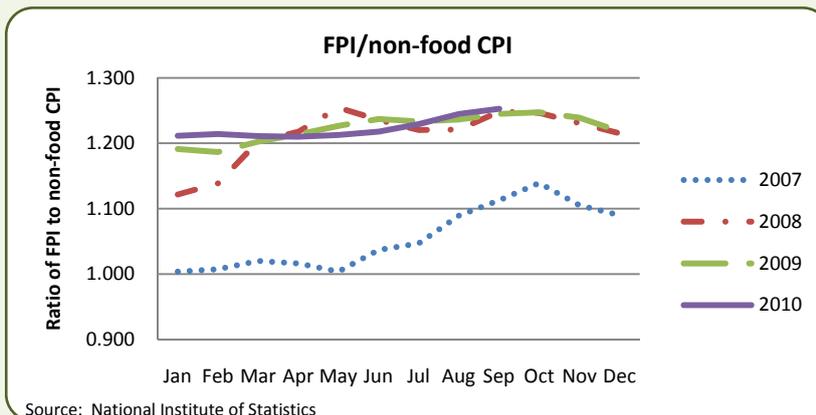
Food Purchasing Power

In September 2010, food and non-alcoholic beverages constituted 50.4 percent of the Consumer Price Index. The Food Price Index (FPI; Food and non-alcoholic beverage component of the Consumer Price Index) increased slightly more than the overall inflation rate as the year-on-year increase in the Food Price Index was 2.2 percent, and the month-on-month increase was 1.0 percent in September 2010.

The ratio of the Food Price Index and the non-food Consumer Price Index (FPI/non-food CPI) is, in the absence of regular wage data required to establish the terms of trade of daily unskilled wage and price of rice, used as a proxy indicator for food purchasing power. When the FPI/non-food CPI ratio goes above 1, i.e. when FPI increases exceeds non-food CPI, the relative cost of food is increasing relative to the prices of other goods in the typical consumer basket. This could indicate increasing difficulty in access to food, as food purchasing power decreases for households.

The FPI/non-food CPI ratio increased slightly during the last quarter (June – September), reflecting the fact that the price of food is relatively higher in the lean season, which ends with the beginning of the main harvest in November. The ratio has not decreased since rapidly rising during the latter half of 2007 and the first half of 2008.

In September 2010, the FPI has increased by 55.3 percent since the base period of October – December 2006, while the non-food CPI has increased by 24.0 percent during the same time period (in January 2007, the FPI/non-food CPI ratio is close to 1, as both FPI and non-food CPI are set at 100 for October – December 2006, the base period). Further analysis is required to determine the causes of the relative increase in food prices. Also, the impact of the relative increase in food prices on household purchasing power can be better estimated using wage data.



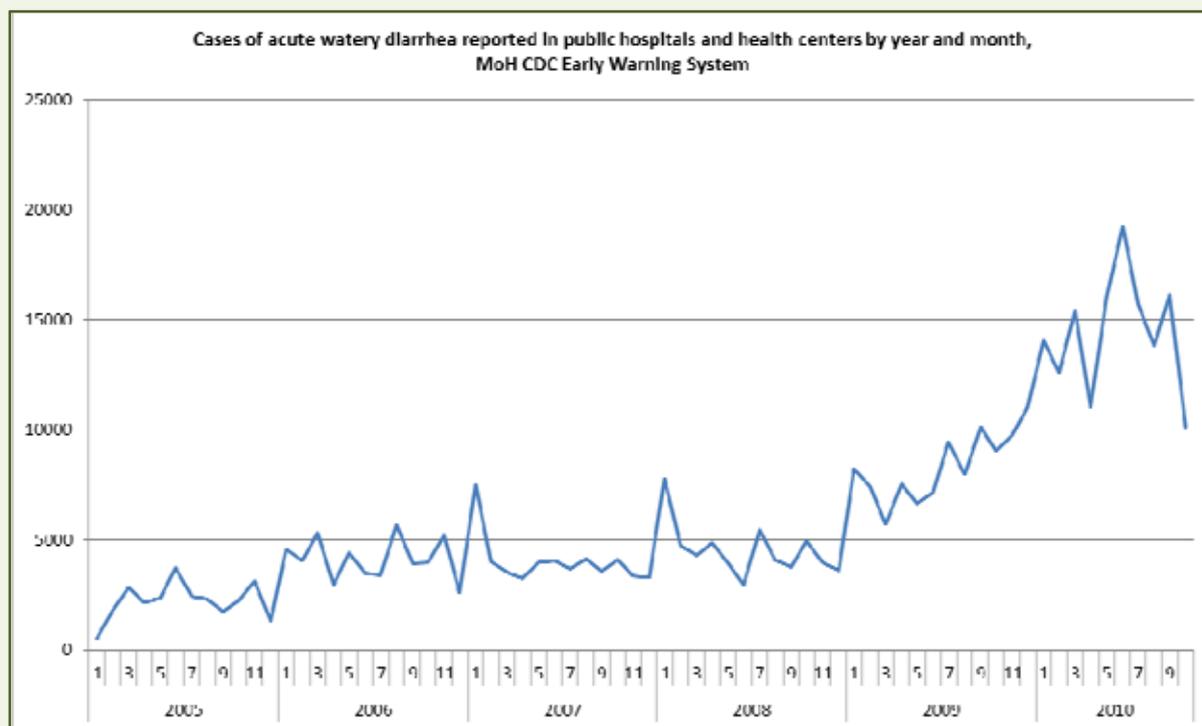
Food Aid, Social Protection and Food Reserves

Food aid from donors accounts for a small portion of total food surplus (approximately 1 to 2 percent in 2007-10). The average level of food aid distributed by WFP for the period 2007-2010 was approximately 30,000 MT/year. WFP has been the major food aid donor in Cambodia, but considerable levels of food assistance are channelled through NGOs as well. Data on NGO food assistance is not available over this period, but figures for 2005 indicate that USDA provided 9,400 MT to Cambodia through several NGOs. Despite improving trends, government spending on social protection measures is low compared to regional levels, according to a World Bank report (citation). Given the current government budget structure, the World Bank (2009) states that it is difficult to determine the level of spending on social protection and safety nets. Most of the government's explicit social protection spending currently targets public employees and formal sector workers. About 8,000 mt of emergency rice reserves are currently being held by Green Trade and CRC.

Food Use and Utilization

Health and Nutrition

The current level of diarrhea is down from the mid-year peak, but it is expected that diarrhea incidence will increase again in the dry season. 2010 has seen the largest number of reported diarrhea cases in the last five years, although it is not possible to determine how much of this increase is true and how much is related to an improve in reporting as the reporting system was revised in 2009.



Seasonal fluctuations in the incidence of diarrhea likely follow trends seen throughout the SE Asia region where there is evidence of a strong association between weather and the incidence of diarrhea. Annual peaks of diarrhea are seen in the cold, dry season (November-January) and at the beginning of the rainy season (May-July). It is suggested that two peaks exist because different pathogens thrive in the different conditions. Density of vectors and source of drinking water also vary throughout the year and could contribute to fluctuations in the incidence of diarrhea.

Diarrhea can cause malnutrition through the loss of nutrients and a lack of appetite. It is likely that in addition to high malnutrition levels during the lean season, there is seasonal fluctuation related to diarrhea incidence.

Child Nutritional Status

The most recent data found wasting (weight-for-height, a measurement that captures whether there have been any recent changes in the nutritional status of the child) to be 8.9 percent (CAS 2008) and underweight (weight-for-age) to be 29.6 percent (CSES 2009). Stunting (height-for-age) is used to assess levels of chronic under nutrition. The latest estimate, also from CAS 2008, found that more than one-third of children were stunted (39.5 percent); 17.3 percent were severely stunted. These estimates suggest there has been no change in the nutritional status of children since 2005, whereas from 2000 to 2005 there were large improvements in the nutritional status of children.

Nearly two percent of children are severely wasted and need therapeutic treatment. Of the 50,000 children a year estimated to have severe wasting, less than 5 percent are currently receiving treatment. The MoH plans to revise the Integrated Management of Childhood Illness (IMCI) protocol to achieve higher coverage by bringing outpatient therapeutic treatment to the health centers.

Weight-for-age data show that after a decline in Cambodia's overall prevalence of underweight in the first half of the decade, the level has remained stagnant at around 29 percent in surveys conducted in 2005, 2008, and 2009 (CDHS, CAS, CSES). The rise in food prices is likely a major reason underweight is no longer improving. In 2009, 9.6 percent of children were severely underweight.

