Food Price Watch







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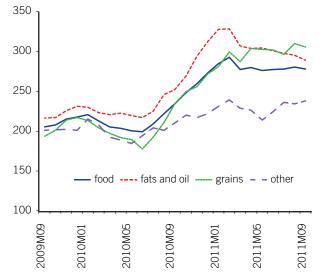
Global food prices remain high and volatile even though the average global Food Price Index did not change between July and September. Domestic food prices also remained volatile in the same period. But domestic price volatility does not follow a clear pattern, making it difficult to predict the direction of future domestic prices. Among the 20 countries that experienced the largest increases in food prices in the most recent global spike between June 2010 and February 2011, some saw further increases (as much as 86%), while others experienced stable or decreasing prices (as much as 25%) thereafter. There are multiple reasons that make both global and domestic prices volatile and it is unclear which factor or factors dominate. Therefore monitoring of food price volatility must remain vigilant, more so in the context of a persistently troubled global economy. Global price volatility remains slightly higher than domestic food price volatility. Volatility in domestic food prices seems to be driven more by country characteristics and conditions than by shocks to global food prices. Domestic prices are more volatile in low-income and landlocked countries than in middle-income countries and countries with port access.

Global Price Trends

Global food prices remain high even though the World Bank global Food Price Index remained unchanged between July and September. Despite dipping marginally in September by 1% and settling at 5% below its February peak, the food price index is still 19% above its September 2010 levels (figure 1, table 1). Also, global price trends differ by commodity. Over the last quarter, an increase of 3% in the price of cereal grains was roughly offset by a 3% decline in the prices of fats and oils. Within cereal grains, the increase was driven by an increase in the price of rice (11%) and wheat (4%). Maize prices declined by 2%, as did the prices of sugar (6%) and soybean oil (2%). During the same period, average crude oil prices also declined by 7%, but the price of fertilizers increased by 3%.

A favorable outlook on supply and stocks is likely to relieve some of the pressure on global food prices. The United States Department of Agriculture's (USDA) latest forecasts¹ show global wheat stocks reaching a 10-year high in 2011/2012 following a rebound in production in major producing countries such as Kazakhstan, Australia

Figure 1. World Bank Global Food Price Index



Source: World Bank DECPG.

Note: The Global Food Price Index weighs export prices of a variety of food commodities around the world in nominal U.S. dollar prices, 2000=100.

Table 1: Price Change of Key Food Commodities

Indices	Jul 11–Sept 11 (%)	Feb 11–Sept 11 (%)	Sept 10–Sept 11 (%)
Food	0	-5	19
Grains	3	2	30
Fats and oils	-3	-12	15
Other	1	-1	13
Fertilizers	3	29	50
Prices			
Maize	-2	1	43
Rice (Thai, 5%)	11	14	26
Wheat (U.S., HRW)	4	-9	16
Sugar (world)	-6	-10	18
Soybean oil	-2	-4	26
Crude oil, average	-7	3	32

Source: World Bank, DECPG.

and Canada, and in the Euro Zone, which could cause global production to be 5% higher than the estimated output for 2010/2011. Similarly for maize, despite a marginal decline in expected production in the United States on account of the excessively hot summer, global production is forecasted to increase by 4% because of increased production in China, Ukraine, the Russian Federation, Argentina, and Brazil. Global rice output is also likely to get a boost in 2011/2012, largely on account of a bumper harvest expected in India following very beneficial monsoon rains. India also started allowing private entities to export nonbasmati rice in July for the first time in three years following a record buildup of government stocks. However, Thai rice exports are expected to decline in relative terms, from 1/3 to 1/4 of global exports by 2012, as a result of the increase in export prices due to the announcement of Thailand's Rice Mortgage Scheme.² Other large exporters such as India and Pakistan are expected to fill this gap.³

Other factors also bode well for food prices in the coming months. Concerns about the troubled world economy—particularly in the United States and the Euro Zone—have generally dampened demand. The persistently troubled global economy must be monitored vigilantly because the risk of a global deceleration in demand is real.⁴ A protracted deceleration of global demand will likely have a subsequent impact on global food prices. A potential decline in global prices will affect developing countries differently, depending on each country's position as net

importer or net exporter of such commodities. Also, effects will depend on the macroeconomic vulnerability of developing countries and, ultimately, each country's fiscal space and effectiveness in protecting their most vulnerable groups to food price variations: typically poor net producers in rural areas when prices go down, and poor net consumers when prices go up. In general, it is believed that developing countries now have less fiscal space to counteract a slowdown than before the financial crisis in 2007-largely due to the implementation of stimulus spending packages (in

some cases, higher subsidies for food and fuel).⁵ More worrisome, fears associated with the global economy may affect domestic decisions on medium- to long-term investments in agricultural research and more productive agricultural techniques—more so if food prices remain volatile (see next section).

Coupled with the general decline in energy prices, a declining global demand is also likely to lower the demand for ethanol, which is expected to increase only 1% for 2011/12, after growing 9%, 24%, and 21% for the last three consecutive years. This might contribute to lower the use of maize and vegetable oils in the production of ethanol and biofuels. Furthermore, record crops of maize in China and of rice in India and Ukraine's decision to end duties on grain exports (by July 2012) are all contributing factors to keep global prices from increasing.

But a number of concerns remain regarding the potential for global food price volatility. First, prices still remain significantly higher than their levels last year and, for the case of rice, prices have continued to rise since May (see figure 1). Second, fertilizer prices—which are critical inputs for agricultural production—have remained high, some 50% higher than a year ago. Third, global food markets have become tightly entwined with energy markets in recent years. Protracted concerns about the outlook for the global economy, coupled with uncertainties surrounding the supply of oil amid fears of potential disruptions in the Syrian Arab Republic and hopes of a quick resumption of Libya's exports, are likely to keep

energy prices volatile.7 Prices of other nonfood commodities, such as minerals and metals, have also been volatile, with declining prices in August and September and increases observed in early October (especially among precious metals). Some of this volatility will inevitably seep into food prices. Fourth, the good overall outlook for production notwithstanding, rice markets will need to be monitored closely because the Thai Rice Mortgage Scheme has increased export prices of Thai rice (5% broken), which went up from an average of US\$566 in August to US\$598 in September.8 A number of analysts continue to expect further price rises in the coming months. In addition, recent floods in Thailand—the worst in 50 years may bring further uncertainty in the short run following production losses estimated at 4-6 million tons of rice (or about 16-24% of the total forecasted total production). The flooding has affected the north, northeast and central regions of the country, with 2.4 million people affected and substantive extensions of farm lands covered by water. Floods are hampering shipments (although news of defaults has not yet been received) and are reported to have destroyed a number of rice warehouses and mills. On the positive side, the harvest-main crop-was mostly completed in some areas-central region-before the flooding occurred. Also, projections of large off-season crops might partially offset these production losses.9 Finally, although cereal grain stocks are expected to increase in 2011/12, they are still low at a 21% stocks-touse ratio (and even lower at 7% for maize in the United States). Even small shocks can have an amplified effect on price volatility when stocks are low.

Global and Domestic Food Price Volatility

Because these uncertainties are likely to remain, global food prices will stay volatile. In effect, there is general consensus that high and volatile global prices will continue in the medium term due to structural factors. The recent 2011 State of Food Insecurity report by the Food and Agriculture Organization (FAO) argues that rapidly growing economies and populations; increasingly intertwined relations between food prices and energy prices; and increasing production of biofuels are all structural factors affecting both volatility and high prices. Similarly, high domestic price volatility is also likely to continue. Differences across countries regarding their dependence on food imports and the seasonality of harvests are predictable contributors to price variation across and within countries. In the most dramatic recent case, in the Horn of Africa, food prices on average slightly

declined in August—after reaching historical peaks in June and July—reflecting an increasing supply from main season harvests recently completed or still underway. But even for surplus producing areas, upward price pressure might continue because of the strong demand from deficit areas of the region and Central Africa. ¹⁰ Box 1 reports on the current humanitarian situation in the Horn of Africa.

The pass through of global prices to domestic prices is commodity specific and depends on multiple factors that are country specific, such as the degree of integration of domestic and international markets, transport conditions, oil and fertilizer prices, and national policies such as taxation rates. Recently, there have been multiple countryspecific factors driving the observed domestic price volatility. For example, currency depreciation; high inflation; and the *outbreak* of *fighting* in the southern states of Blue and South Kordofan, both key production zones of sorghum, have coalesced to explain price volatility in Sudan. Export restrictions have just recently been introduced in South Sudan and Ethiopia—in the form of export bans for maize, while trade restrictions have been lifted in Malawi (for maize) and Nicaragua (for beans) after good harvests. The reintroduction of price controls for the first time in 20 years in Kenya¹¹—or the massive maize purchases in Zambia by the Food Reserve Agency (which reduce opportunities)—contrasts discontinuation of state fertilizer subsidies in Haiti, which is expected to affect rice planting and yields.

These factors explain stark differences in domestic price fluctuations across countries even when average global food prices decline or remain unchanged. Using information from FAO's Global Information and Early Warning System (GIEWS) monthly prices, the price of maize between June and August 2011 increased by 57% in local markets in Malawi, and by more than 30% in local markets in Uganda, Ethiopia and Burundi, while prices in Kenya and Rwanda decreased by double digits. Wheat price increases of around 10% in Burundi, Belarus, and Pakistan contrast with decreases in prices of a similar magnitude at local markets in Armenia and El Salvador. Also, meat prices have increased sharply in China (49% since August 2010 in the case of pork) and Central Asia (beef).

Domestic price volatility does not follow a clear pattern, making it difficult to predict the direction of future price changes. Table 2 tracks country commodities with the largest food price increases between June 2010 and February 2011—the most recent period of a global food price spike—into the subsequent period. Domestic food

Box 1: Horn of Africa Update

The crisis in the Horn of Africa continues to affect over 13.3 million people in the region. 14 This is an additional million people since the last Food Price Watch in August. Famine continues in Somalia and it was declared in the southern Bay region on September 3. An estimated 50,000 people from primarily poor agropastoral households in Gedo and Juba and pastoral households in Bakool also face faminelevel food deficits. The number of people facing a humanitarian crisis in Somalia has risen to 4 million; 750,000 are at risk of death due to famine in the next four months "in the absence of adequate response." 15 In contrast, in other areas of the Horn of Africa, food security is expected to improve to a crisis status (down from the humanitarian disaster phase) in pastoral areas of Kenya and Ethiopia between October and December. This more favorable outlook is due to the forecast for near normal to above normal October to December rains in most of the eastern Horn; ongoing relief interventions; and expected declines in staple food prices. However, concerns remain in Sudan, where the start of the crop season has been poor. Conflict in the Blue Nile State has caused increased displacement, limited access to employment opportunities, and has hindered seasonal cattle migration,16 making it more difficult for those populations to access food. The summit on the Horn of Africa crisis (held on September 24 at the United Nations Secretariat in New York) pledged some US\$218 million of new humanitarian aid.17 In total, 74% of the 2011 Horn of Africa Drought Appeal has been funded.18 The World Bank Group announced in September a \$1.88 billion three-phase initiative for the Horn of Africa: i) the initial emergency phase focuses on protecting lives such as providing critical safety nets in affected communities and putting in place cash for work programs; ii) the second phase aims to strengthen livelihood recovery by boosting crop and livestock production; and iii) the third phase emphasizes reinforcing and amplifying the Bank's long-standing focus on building drought resilience and preparedness.

A new food security alert for West Africa: on September 30, FEWSNET (Famine Early Warning System Network) issued a food security alert for specific parts of the Sahel due to poor rainfalls. Below average cereal and pastoral production is expected in western Niger, western Mali, and some other areas of Chad, Nigeria, and Mauritania. However, some mitigating factors have been identified, such as still well-supplied markets from unusually high carryover stocks in most Sahel countries due to the record 2010/11 harvests, and humanitarian assistance.¹⁹

Source: Food Security and Nutrition Analysis Unit (FSNAU), United States Agency for International Development (USAID) FEWSNET.

prices have generally stabilized since the February peak in 9 of the 20 countries that experienced the sharpest increase in food prices between June 2010 and February 2011. In Brazil, for example, maize prices have declined by 6% since February, after the 81% increase in the preceding eight months. Likewise, wheat prices in Bangladesh, Georgia, Kyrgyz Republic and Sudan, and rice prices in Burundi, Haiti, Niger, and Bangladesh have also stabilized since February, after large spikes earlier. In contrast, maize prices have continued to rise in a number of countries, most notably in the eastern and southern Africa regions as well as Central America. Maize prices have increased in Honduras (30%), Uganda (86%), South Africa (27%), and Somalia (57%) since February.

Therefore, high domestic volatility takes place both in countries that reduced their prices as well as in countries where prices kept increasing after the 2011 February peak. Considering month-to-month price changes of four specific countries, figure 2 shows large price swings in

countries in which prices increased (Uganda) and decreased (Bangladesh, Brazil and Georgia) after February 2011. It is unlikely that this high variability is exclusively associated with seasonal volatility, as similar patterns are not seen in the previous years.

This poses the obvious question of which price volatility, global or domestic, is largest. As indicated above, there are multiple reasons that make both global and domestic prices volatile, and it is unclear which factor or sets of factors dominate. In effect, countries have a number of instruments to protect them from global price volatility, such as price controls, trade interventions, buffer stocks, or investments in improved agricultural productivity, to mention some. The extent that countries use these tools effectively also varies and cannot be assumed to be uniform.²⁰ Countries are also vulnerable to domestic sources of volatility such as conflict or weather disasters. More integration with international markets may imply a higher transmission of

Table 2: Largest Food Price Increases

Country (commodity)	Jun 10–Feb 11 (%)	Feb 11–Aug 11 (%)
Somalia (sorghum)	83	31
Brazil (maize)	81	-6
Kyrgyz Republic (wheat)	69	4
Honduras (maize)	67	30
Uganda (maize)	65	86
Costa Rica (beans)	52	-2
Malawi (maize)	50	3
Tajikistan (wheat)	50	5
Bangladesh (wheat)	50	-25
South Africa (maize)	48	27
DRC (cassava)	44	-13
Sudan (wheat)	37	0
Burundi (rice)	37	4
Mongolia (wheat)	36	-3
Georgia (wheat)	32	-2
Somalia (maize)	26	57
Haiti (rice)	22	-10
Niger (rice)	22	-11
Bangladesh (rice)	21	-7
Rwanda (rice)	21	47

Source: FAO, GIEWS.

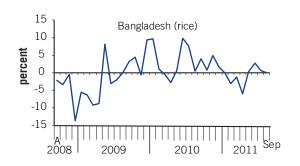
global shocks into domestic markets, but also a higher smoothing of domestic shocks through global trade. Furthermore, a collective action problem may emerge: many countries simultaneously insulating against global price shocks—through restrictive trade measures, for

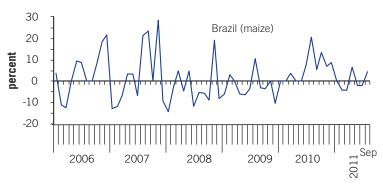
instance—may well *create* higher volatility for global prices. The interplay of these factors is hard to disentangle a priori and makes volatility patterns hard to predict.

In a simple comparison exercise with a sample of 46 countries for which data were available for rice, wheat, or maize for the 2006-11 period, global price volatility is higher than domestic price volatility. Domestic characteristics-and the choice of domestic policies—may be a more dominant source of food price volatility vulnerability to global food price shocks. However, this effect is not strong. In fact, differences between global and domestic price volatilities-defined as the deviations of monthly price inflation—are not substantive in most cases.²¹ Volatility is also higher for vulnerable countries because the measure of volatility is higher for low-income countries compared to middle-income countries for maize and wheat (and equal for rice). On average, domestic price volatility is higher among Sub-Saharan African countries than Latin American countries—and although not shown here, domestic price volatility is also higher among landlocked countries than countries with sea access, the former typically less integrated with international markets.

Finally, domestic price volatility is higher among countries with an estimated low pass through of global prices than countries with a high pass through of global prices for maize and wheat, while the opposite appears to be the case for rice (figure 3).

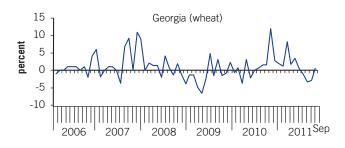
Figure 2: Monthly Food Price Variation in Selected Countries

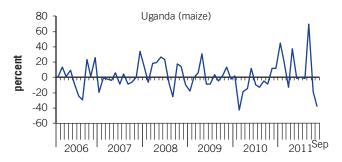




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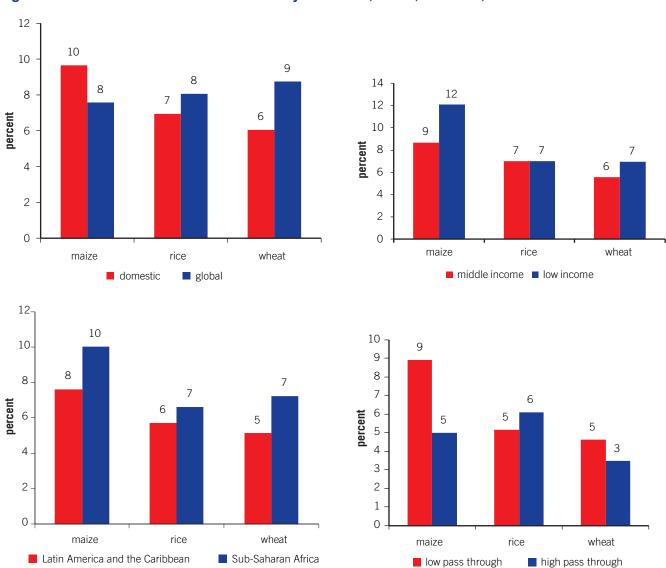
Figure 2: Monthly Food Price Variation in Selected Countries (continued)





Source: World Bank staff calculations based on data from FAO GIEWS.

Figure 3: Global and Domestic Price Volatility for Wheat, Maize, and Rice, 2006-11



Source: World Bank staff calculations based on data from FAO GIEWS.

Note: The domestic price data consist of 46 countries²² for which data were available for rice, wheat, maize, or any combination thereof for the entire 2006–11 period. There were 27 observations for maize, 30 for rice, and 20 for wheat. The measure of volatility is the standard deviation of the monthly "return," where return is defined as the proportional change in price from one month to the other and is calculated as the standard deviation of $\ln(P/P_{t,1})$. Domestic price volatilities are simple averages of volatilities calculated separately for each country. The pass-through cutoffs used in the analysis are the medians of each of the commodities in the sample.

Toward Improved Information on Price Volatility

This volatility analysis underscores the need for further analysis and deeper understanding of global and domestic food price volatility. Improving market information is a step in this direction, and a policy tool that may reduce price volatility. Table 3 describes the objectives, coverage, and updating practices of several toolkits and products for existing market information systems related to food security. Despite several global, regional, and national early warning information systems for food security and vulnerability, there is general consensus on the need to enhance and improve quality, reliability, accuracy, timeliness, and comparability of food market outlook information.²³ But there is also an urgent need to accelerate more effective policy responses to the foreseen emergencies. In fact, for food security crises that have taken place since 2005—in the Horn of Africa, West Africa, Niger, and Guatemala—in all cases, there was an alert issued at least six months before. In the case of the current Horn of Africa famine, alerts were issued as early as in August 2010.²⁴

There are a number of ongoing efforts to improve agricultural market information. In June 2011, the meeting of the G-20 agriculture ministers introduced the Agricultural Market Information System (AMIS), which was officially launched in September 2011 in Rome. This system seeks to improve market transparency through better information on the short-term global food outlook, especially on stocks, and through effectively defining what constitutes abnormal international market conditions that should prompt early coordinated interventions. FAO houses this new information system with a secretariat made up of a number of international and bilateral agencies. AMIS is expected to start producing reports by June 2012. In addition, the International Food Policy Research Institute's (IFPRI) Excessive Food Price Early Warning System, operational since July 2011, identifies periods of protracted excessive variation for wheat and maize prices. The challenge for the new and existing information systems will continue to be ensuring the necessary urgent attention for a coordinated, timely and rapid response, especially when high price volatility may become pervasive.

Notes

 USDA, World Agricultural Supply and Demand Estimates, WASDE, October 12, 2011.

- 2. FEWSNET, Special Brief, September 15, 2011. The program—also known as the Paddy Pledging Program—allows farmers to pledge their rice paddies to the government before harvest in exchange for loans. After the harvest, the farmer can use the rice as payment for the loan—which will then build up government stocks of rice—or sell the crop and repay the loan. If the pledged price is above the market price, farmers will expectedly default on the loan. This development is important because Thailand remains the largest exporter of rice—a market in which only 6% of world output is internationally traded (less than a third of the 19% for wheat).
- 3. USDA, WASDE, October 12, 2011.
- 4. World Bank, Weekly Global Economic Brief, October 20, 2011, DECPG.
- 5. World Bank, Economic Outlook, October 6, 2011, DECPG.
- FAO, Food Outlook, June 2011. Production of ethanol might slow down even further with the approval of a U.S. bill proposing reduction of the requirement to blend increasing amounts of ethanol into motor fuel.
- U.S. Energy Information Agency, Short-Term Energy and Winter Fuels Outlook, October 12, 2011.
- World Bank, "Briefing Note on Short-Term Prospects for Global Food Prices," September 3, 2011, Sustainable Development Network Vice Presidency and DECPG.
- 9. USDA, WASDE, October 12, 2011.
- 10. USAID FEWSNET, Price Watch, September 30, 2011.
- 11. More exactly, granting authority to the Ministry of Finance to declare a commodity essential and set maximum prices by the Price Control Acts 2011. However, it is not clear whether this authority has so far been used (see USAID FEWSNET, *Price Watch*, September 30, 2011).
- 12. FAO, Global Food Price Monitor, September 2011.
- World Bank, East Asia and Pacific Food and Energy Prices Brief, September 29, 2011, East Asia and Pacific Poverty Reduction Unit.
- United Nations Office for the Coordination of Humanitarian Affairs (OCHA), Horn of Africa Crisis, Situation Report No. 16, September 29, 2011(http://relief-web.int/sites/reliefweb.int/files/resources/Full_Report_2574.pdf).
- 15. Food Security and Nutrition Analysis Unit (FSNAU), Famine Spreads into Bay Region—750,000 People Face Imminent Starvation, September 5, 2011 (http:// www.fsnau.org/in-focus/famine-spreads-bay-region-750000-people-face-imminent-starvation); FSNAU, Food Security and Nutrition Analysis Post Gu 2011, Technical Series Report No. VI. 42, October 8, 2011 (http://www.fsnau.org/ downloads/FSNAU-Post-Gu-2011-Food-Security-Technical-Series-Report. pdf).
- USAID FEWSNET, East Africa Report, October 8, 2011 (http://www.fews.net/pages/region.aspx?gb=r2).
- OCHA, Horn of Africa Summit Calls for Joint Action to Help Millions, October 8, 2011 (http://www.unocha.org/top-stories/all-stories/horn-africa-summit-calls-joint-action-help-millions).
- 18. OCHA, Financial Tracking Service-Tracking Global Humanitarian Aid Flows, October 8, 2011 (http://fts.unocha.org/); OCHA, 2011 Horn of Africa Drought-Funding Summary, October 8, 2011, (https://spreadsheets4.google.com/spreadsheet/pub?hl=en_GB&hl=en_GB&key=0AjD1WOKa42dTdDNI RUxSZWl6amVfQWZvMTd4SjNFZlE&single=true&gid=0&output=html).
- 19. USAID FEWSNET, Price Watch, September 30, 2011.
- 20. FAO, 2011 State of Food Insecurity, June 2011. The report cites, for example, that while export controls contributed to stable prices in China, India, and Indonesia during 2006–8, they are associated with increasing food prices in Malawi (2007–9) and Zambia (2005).
- 21. Global price volatility is higher for rice and wheat, but not for maize. The sample for maize includes many Sub-Saharan African countries where domestic prices may more likely vary as a result of changing prices in neighboring countries than changing global prices. Also, maize is the least imported of the three food commodities analyzed in the sample, which may contribute to making maize prices more vulnerable to domestic factors.
- 22. Afghanistan, Armenia, Azerbaijan, Benin, Bolivia, Brazil, Burkina Faso, Burundi, Cambodia, Colombia, Costa Rica, Djibouti, Dominican Republic, El

Table 3: Existing Market Information Systems for Food Insecurity

Coverage						
global (G), regional (R),						
System	Key objective	national (N), subnational (S)	Key products			
GIEWS (Global Information and Early Warning Systems, 1975); Trade & Markets Division, FAO Multiple partners involved	Anticipate ex ante food insecurity emergencies	 G, R, N, S 78 countries and a total of 20 different food commodity categories Frequency of updates varies from continuous follow-ups to three reports a year 	Tools: • GIEWS Food Price Data and Analysis Tool (2009) • Workstation portal Reports: • Global Food Price Monitor • Special alerts/special reports • Food Outlook • Food Crops and Shortages • Food Supply Situation & Crop Prospects • Sahel Report			
World Bank Commodity Price Data—Pink Sheet (1972); Development Research Group, World Bank	Monitor major commodity markets important to the developing countries	 G Global food prices based on 70 major commodities since 1973 Daily, monthly 	Products: • Food Price Watch • Prices (Pink Sheet) • Daily Markets Review • Price Forecasts • Commodity Outlook			
VAM (Vulnerability Analysis & Mapping, 1994); World Food Program Multiple partners involved	Identify areas and populations most vulnerable to food insecurity and most effective responses	 R, N, S 50 countries (considered most vulnerable to food insecurity) Continuous updating on a country basis 	Tools: • Food Security Monitoring System (FSMS), 2005 Reports: • Market assessments and bulletins • Comprehensive Food Security and Vulnerability Analysis (CFSVA) • Emergency Food Security Assessment (EFSA)			
IPC (Integrated Food Security Phase Classification, 2005); Food Security Analysis Unit, FAO Multiple partners involved	Categorization of food insecurity severity and risk	R, N, S • 29 countries at different stages of implementation of the IPC methodology (only Burundi, Côte d'Ivoire, Kenya, Somalia, South Sudan, and Nepal use it regularly) • Continuous updating on a country basis	Products: • IPC phase classification			
FEWSNET (Famine Early Warning Systems Network, 1985); USAID	Provide early warning and vulnerability information on food security	R, N, SCurrently covers 25 countriesContinuous updating on a country basis	Products: • FEWSNET Price Watch • Food Security updates • Food Assistance Outlooks • Weather hazards • Special reports			
Excessive Food Price Variability Early Warning System (July 2011); IFPRI	Identify time spans of excessive food price variability	G • Global coverage • Daily	Tools: • Excessive Food Price Variability Early Warning System			

Source: FAO, WPF, USAID, IFPRI, and World Bank.

- Salvador, Ethiopia, Georgia, Guatemala, Haiti, Honduras, India, Kenya, Kyrgyz Republic, Lao PDR, Madagascar, Mali, Mexico, Mozambique, Nepal, Nicaragua, Niger, Nigeria, Pakistan, Panama, Peru, the Philippines, the Russian Federation, Rwanda, Somalia, South Africa, Sudan, Tanzania, Thailand, Togo, Uganda, Uruguay, and Zambia.
- 23. G-20, *Action Plan on Food Price Volatility and Agriculture*, Ministerial Declaration: Meeting of G-20 Agriculture Ministers, Paris, June 22–23, 2011.
- 24. FEWSNET and FSNAU began providing regular early warning information regarding the impending crisis in August 2010 ("Famine in Southern Somalia: Questions and Answers," http://www.fsnau.org/downloads/Famine-in-Southern-Somalia-Q%26A-July-2011.pdf, and "Horn of Africa-Drought," Fact Sheet No. 3, Fiscal Year 2011, USAID, July 21, 2011).