Food Security: Regional and Country Perspectives

Asia

In Asia, the increase in the number of food-insecure people of 4 percent from 2007 to 2008 was more a reflection of population growth than deepening food insecurity. The region's food security is largely driven by domestic production performance, and despite the doubling of import volume during the last decade, Asia remains the least dependent of all regions on food imports. While Asia accounted for an estimated 46 percent of the food-insecure people of the 70 countries in 2008, the region accounted for nearly two-thirds of the total population of these 70 countries. In other words, its food-security situation was good in relative terms. Less than 20 percent of the region's population was estimated to consume below the nutritional target in 2008.

Highlighting the importance of national stability, food security will remain precarious in Afghanistan and North Korea because of political problems. Afghanistan is the region's most vulnerable country. Political conflict over the years has devastated the country, creating widespread poverty and food insecurity. Performance of the agricultural sector continues to be influenced by the political chaos, but is also faced with periodic weather-related shocks. Grain production in 2008 is estimated to have declined by 37 percent as a widespread drought reduced crop yields even in irrigated areas. About 10 percent of the country's land is arable, and 40 percent of that is irrigated. However, irrigation infrastructure has deteriorated because of ongoing war and lack of maintenance. Periodic droughts have contributed to overgrazing by livestock, leading to widespread soil erosion. The Government has weak institutional capacity to enforce laws and regulations needed for market transactions such as grading and standards, and it has limited financial capacity to invest in market infrastructure.

North Korea is faced with persistent food shortages. The number of food-insecure people more than doubled between 1995-96 and 2007-08 due to a series of natural disasters and the dissolution of the Soviet bloc, which dried up much needed financial support and resulted in the collapse of the country's economy in the 1990s. In 2008, according to the UN World Food Programme, 40 percent of the country's population or about 9 million people were in need of emergency food aid. Data are sketchy but a decline in agricultural production, coupled with the collapse of the country's economy, has put this country in a chronic state of food shortages. In 2008, despite good weather conditions, the low availability of fertilizer and fuel led to a 27-percent decline in grain production. Most of the country's imports consist of food aid, which might decrease because of the global financial slump and continuing conflict between major donors and the North Korean Government.

The baseline outlook indicates modest improvements in Asia's regional food security for 2009—a 1-percent decline in the number of food-insecure people relative to 2008, but a much higher reduction in the intensity of food insecurity as the distribution gap is estimated to decline 20 percent. This reduction in the gap is mainly due to a recovery in agricultural production in Afghanistan and North Korea after a severe shortfall in 2008. The picture, however, will likely change given the expected impact of the financial downturn, despite the fact that several large countries such as India and Indonesia entered the year with large cash reserves to compensate for any decline in their import budgets. Most countries in the region have increased their share in global trade and therefore have become more vulnerable to the vagaries of the international economic environment, particularly the import demand of the major developed countries.

Under a scenario of a decline in export growth and a cutback in net capital inflows (Scenario 2), the number of food-insecure people in the region is projected to increase by 13 percent in 2009 relative to the food-security baseline. This increase is principally driven by the impact of this economic shock on Bangladesh and the Philippines.

Bangladesh had made some remarkable achievements in reducing poverty and improving its social and economic situation since the early 1990s. Export earnings grew 13 percent per year (1990-2006) and per capita income grew by 3 percent. However, the country's per capita income remains below $500 (in 2006) and per capita food consumption is close to the nutritional requirement (2,199 calories per day in 2004). Almost 80 percent of Bangladesh's population lives in rural areas, with 54 percent of them employed in agriculture and the remainder in the rural nonfarm sector. Rural poverty is deep, with more than half of the rural population classified as poor. Urbanization has put pressure on land, leading to a decline of about 1 percent per year in cultivated area. The country's location in the flood plain of three large rivers has meant that 20 to 30 percent (annually), and in some years up to 40 percent, of the country is flooded. This has caused severe damage to crops and market infrastructure despite the Government's extensive investment to protect against floods.

The economic downturn in Bangladesh, reflected in Scenario 2, results in a reduction in food consumption so that 40 percent of the population falls below the threshold of nutritional requirements compared with the 20 percent estimated under the food-security baseline. The Government of Bangladesh can prevent this outcome because of its commitment to provide affordable food prices and to safeguard food security. In 2008, the sharp rise in food prices was in part mitigated by increased food imports and public distribution of food. The long-term food-security challenge for the Government is how, in a fiscally sustainable system, to provide reasonably priced food for the poor while securing incentives to farmers to increase food production. In 2008, in an effort to mitigate the high food prices, the Government increased agricultural input subsidies, including subsidies for diesel, which is widely used by farmers in irrigation.

In addition to Bangladesh, food security in the Philippines is projected to suffer from the decline in export earnings and net inflow of capital, increasing the number of food-insecure people from 10 percent of the population to about 20 percent. It is not certain that this scenario will be relevant because the Government of the Philippines has acted to reduce the impact of higher food prices on consumers in 2008. Among other assistance, the Government provided cash transfers to poor families and provided rice subsidies that were targeted to the poor. In January 2009, the Government announced a $6.9-billion stimulus package based on the anticipation of

Table 2

Food availability and food gaps for Asia

Year	Grain production	Root production (grain equiv.)	Commercial imports	Food aid receipts (grain equivalent)		Aggregate availability of all food
			1,000 tons			
1999	426,873	18,480	20,691	4,259		546,673
2000	432,739	18,910	16,053	3,070		553,569
2001	435,437	19,310	12,465	4,209		555,263
2002	406,827	19,808	17,637	3,345		559,568
2003	443,663	20,240	17,170	2,379		571,792
2004	441,068	20,913	16,238	2,009		580,661
2005	462,220	21,549	16,369	2,493		594,800
2006	467,907	22,339	25,647	1,397		606,448
2007	483,990	23,582	26,536	1,774		621,166
				Food gap*		
Projections				NR	DG	
2008	498,850	23,140	19,631	**4,716**	**8,048**	627,735
2013	539,595	24,747	25,326	**2,246**	**5,658**	677,637
2018	585,777	26,447	31,057	**2,746**	**5,239**	731,423

*See table 1.

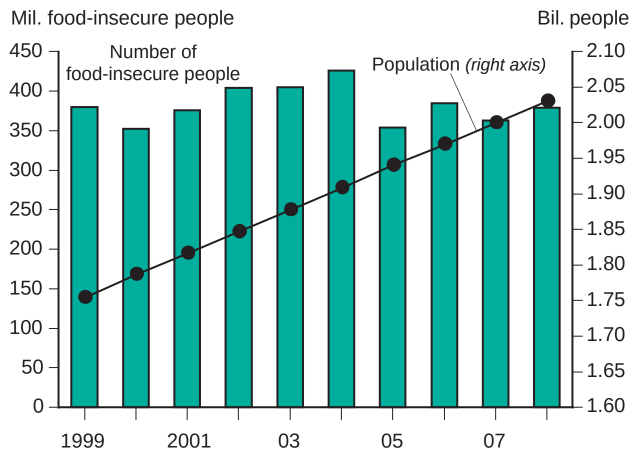
Asia

(2.03 billion people in 2008)

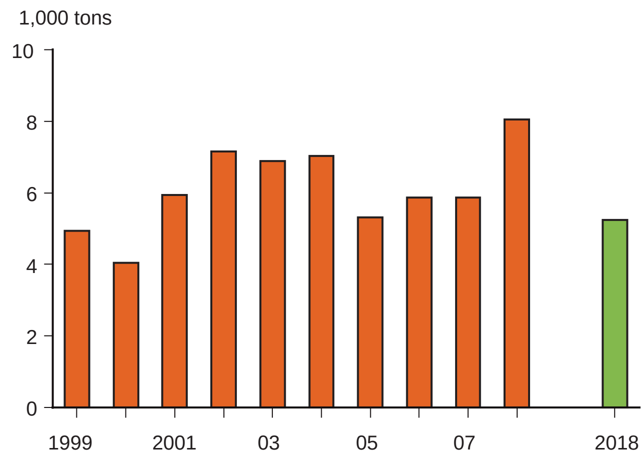
Asia has made significant gains in increasing food availability. The region's food security is largely driven by domestic production performance, and despite the doubling of import volume during the last decade, Asia remains the least dependent of all regions on food imports.

Afghanistan is the region's most vulnerable country as political conflict has devastated the country. North Korea also is faced with persistent food shortages. The number of food-insesure people in North Korea more than doubled between 1995-96 and 2007-08.

Asia: Trend in number of food-insecure people vs. population



Asia: Distribution gaps



Asia: Capital inflows as share of gross domestic product (GDP) in 2006

	Export earnings	Remittances*	Foreign direct investment	Sum
		Percent		
India	23.0	2.8	1.9	27.7
Indonesia	30.9	1.6	1.5	34.0
Pakistan	15.3	4.0	3.4	22.7
Philippines	46.4	13.0	2.0	61.3
Vietnam	73.5	7.9	3.8	85.1

*Workers' remittances and compensation of employees, received.

Source: World Bank Indicators, 2008.

slower domestic demand growth that in part is due to a decline in remittances and export earnings. The plan is to expand welfare programs including cash transfers to poor segments of the population and to embark on projects that are labor-intensive, such as road maintenance and reforestation, to increase employment among unskilled workers.

The Asian food-security outlook over the next 10 years indicates that just over 20 percent of this region's population will remain food insecure. After averaging 2 percent per year throughout the 1990s, Asia's population growth is projected to slow to about 1.4 percent per year through the next decade, thereby reducing pressure on resources. The expected improvement in the food-security situation in India will be the dominant factor in this projection. In 2000, an estimated 20 percent of India's population fell short of nutritional requirements. By 2018, however, this share is projected to be only 10 percent, or 135 million people. The country's population growth, which averaged about 1.7 percent per year during the 1990s, is projected to average under 1.4 percent during the next decade. The Government of India places a high priority on reducing poverty and improving food security by raising agricultural productivity. The country's economic and trade reforms in the 1990s helped to improve agricultural production incentives, but overregulation of domestic markets has increased costs, limiting incentives in the agricultural sector. The potential to increase food production is large, however. Currently, India's yields for rice, a staple food, are at a level about one-third of China's and one-half of those in Vietnam and Indonesia.

One important factor that can change projection results is the growing income inequality in several countries, including India, Indonesia, and the Philippines. In our projections, income distribution is assumed to stay constant during the next decade. In general, income inequality tends to grow during the industrialization process as skill-based technologies are introduced to the economy. Growing income inequality will not result in any food-security problems as long as income growth benefits all income groups, however.

Commonwealth of Independent States

Due to higher food and fuel prices and a weather-induced sharp decline in food production, the Commonwealth of Independent States (CIS) region, was estimated to have 6 million food-insecure people in 2008, about 8 percent of the region's total population. In an attempt to maintain food security, several countries in the region undertook strong measures to combat high prices. The Government of Kazakhstan, the region's main wheat exporter, introduced export taxes on wheat to protect domestic supplies and to curb food inflation. Other countries adopted measures such as tariff reductions and price ceilings to reduce the impact of higher food prices.

In Georgia, food consumption for the lowest income quintile fell below the nutritional target in 2008, reflecting economic disruption arising from the country's conflict with Russia, continued high food and fuel prices, and the onset of the global economic crisis. According to the *Asian Development Outlook 2008*, gross domestic product (GDP) growth for Georgia in 2008 was 2 percent, the lowest increase since 2000 (Asian Development Bank, 2008). The country is highly dependent on food and fuel imports, so the higher prices resulted in a 20-percent increase in the import bill in 2008. The

Table 3

Food availability and food gaps for Commonwealth of Independent States

Year	Grain production	Root production *(grain equiv.)*	Commercial imports	Food aid receipts *(grain equivalent)*		Aggregate availability of all food
			1,000 tons			
1999	24,346	1,358	3,024	353		22,982
2000	21,434	1,385	3,474	360		22,511
2001	27,050	1,664	2,534	521		22,671
2002	29,532	1,764	2,780	516		22,307
2003	29,056	1,909	2,870	272		21,682
2004	26,757	2,006	3,551	301		22,487
2005	28,954	2,076	4,243	282		26,174
2006	31,502	2,047	4,333	349		27,055
2007	34,539	2,078	4,548	453		26,946
				Food gap*		
Projections				NR	DG	
2008	30,418	2,182	6,897	**53**	**123**	28,394
2013	32,276	2,331	6,973	**0**	**13**	29,508
2018	33,874	2,487	7,993	**0**	**53**	32,069

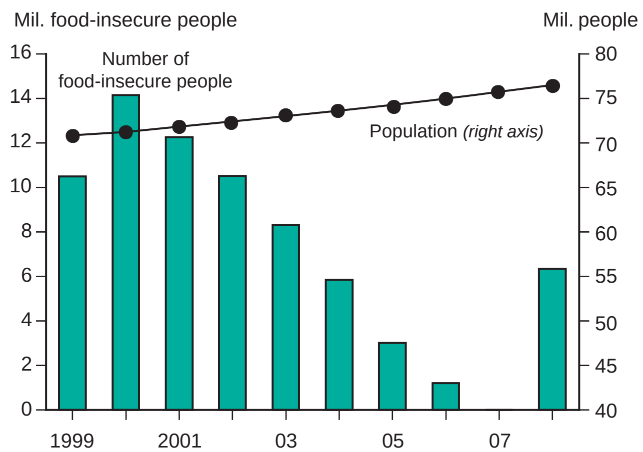
*See table 1.

Commonwealth of Independent States (CIS)
(76 million people in 2008)

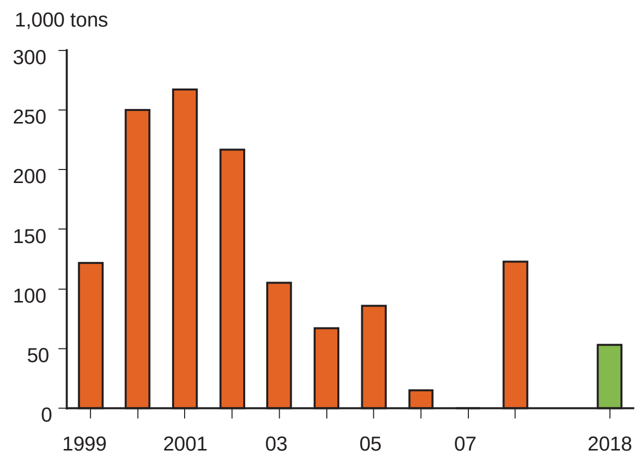
Tajikistan was the most food-insecure country in the region in 2008. Eighty percent of the population was estimated to consume below the nutritional target. In 2008, remittances equaled about half of the country's GDP, but this inflow is expected to decline, thereby exacerbating vulerability to food insecurity.

In Georgia, food consumption for 20 percent of the population fell below the nutritional target in 2008.

CIS: Trend in number of food-insecure people vs. population



CIS: Distribution gaps



Commonwealth of Independent States: Capital inflows as share of gross domestic product (GDP) in 2006

	Export earnings	Remittances*	Foreign direct investment	Sum
		Percent		
Armenia	22.0	18.4	5.4	45.8
Georgia	32.9	6.3	13.7	52.8
Kazakhstan	51.1	0.2	7.6	59.0
Kyrgyz Republic	39.3	17.1	6.5	62.8
Tajikistan	23.2	36.2	12.0	71.5
Turkmenistan	72.2	--	7.0	79.1

*Workers' remittances and compensation of employees, received.

Source: World Bank Indicators, 2008.

country's balance of trade was also adversely affected by the decline in prices for copper and other metals, some of the country's major exports.

Tajikistan was the most vulnerable country in the region in 2008, with 80 percent of the population estimated to be food insecure. The country is one of the poorest in the region and as a result, nearly half of the population works outside the country, mostly in Russia. In 2008, Tajikistanis working in Russia contributed remittances equal to about half of Tajikistan's GDP. However, as the Russian economy weakened, those remittances slowed at the end of 2008. Cotton is the country's most important crop, providing about 80 percent of the employment in rural areas. It also accounts for 20 percent of the country's export earnings. The sector is highly inefficient, however, and suffers from heavy debt and weak infrastructure. Export earnings for cotton in 2008 were adversely affected by the drop in prices; by the end of 2008, these prices reverted to levels of the mid-2000s.

Many of the countries in this region are highly dependent on earnings from oil exports and remittances. In 2007 and 2008, when these factors were strong, growth in the region was equally robust. According to the IMF, economic growth measured 8.6 percent in 2007 and 6 percent in 2008, far outstripping the world average growth. As these indicators weaken, however, so too does the region's growth. In November 2008, the IMF estimated the region's growth for 2009 to be 3.2 percent, and, by January 2009, that estimate was lowered to about 1 percent, reflecting the lower oil prices as well as the decline in remittances.

Baseline results of the food security model indicate that the region's food-security situation will improve in 2009 and the number of food-insecure people and the distribution gap are estimated to decline. However, these results are based on a continuation of trend indicators. Under Scenario 2, where export earnings and capital inflow are cut, the food security of Georgia and Tajikistan are projected to worsen.

These cuts in financial capacity have by far the greatest impact on Georgia, already one of the vulnerable countries in the region. In the baseline estimates, 20 percent of the country's population is considered food insecure in 2009. Under Scenario 2, that number jumps to 80 percent. In other words, when export earnings growth and capital inflow are cut, only the top 20 percent of the population is estimated to be food secure. This result is largely driven by the fact that import capacity becomes limited under these financial conditions. Since imports generally contribute to 60 percent of the country's grain supplies, a severe cut can adversely affect food security.

In the long term, 40 percent of Tajikistan's population is projected to be food insecure in 2018—the highest rate of all the CIS countries. The country's economy depends heavily on remittances, making Tajikistan highly vulnerable to the health and political stability of neighboring countries. As for other countries in the region, strength of commodity prices and global demand will be a significant factor in their continued food-secure position given their strong reliance on oil and other metals for much of their export earnings.

Latin America and the Caribbean

The Latin America and Caribbean (LAC) region experienced the largest increase in food-insecure people—more than 14 percent—between 2007 and 2008. This increase was largely due to a cut in commercial import capacity due to declining terms of trade. As a result, the share of food-insecure people in the region rose from less than 28 percent to more than 31 percent. However, more important than the increase in the number of food-insecure people was the 30-percent increase in the distribution gap. This means that food insecurity not only became more widespread, but its intensity grew. The region depends heavily on imports of grains and vegetable oils. Grain imports increased from about 30 percent of domestic supplies in the early 1980s to around 50 percent in recent years. Food aid historically accounted for a large share of imports, peaking at above 40 percent in 1987, but the region's dependence on food aid has declined as strong economic growth lifted large numbers of people out of poverty. Food aid is still important in Haiti, the poorest country in the hemisphere, and becomes important throughout the region at times of natural disasters. Food aid accounted for only 3 percent of total imports in the last 3 years. The region's dependence on imports made it difficult to shield consumers from rising grain prices.

The LAC region mostly consists of lower middle income countries, except for Jamaica, which is classified as upper middle income and Haiti, the only low-income country in the Western Hemisphere. While average national incomes seem sufficiently high in all the LAC countries to prevent a slide into food insecurity in times of crises, income distribution is unequal within the nations, meaning that a large share of the region's population lives in poverty and is highly vulnerable to escalating food inflation.

In 2008, Ecuador, the Dominican Republic, Honduras, Jamaica, and Nicaragua experienced decreases in food consumption that resulted in increased numbers of food-insecure people. It should be noted that even though our model did not detect an increase in the share of food-insecure people in the other countries, it did find a decline in food consumption in every country in the region between 2007 and 2008.

The food-security baseline projections for 2009 show little change in food security assuming stable export revenues, capital inflows, grain prices, and adequate domestic production. However, if we assume a reduction in export earnings growth and capital inflows (Scenario 2) noticeable food-security impacts are projected that will lead to increases in the number of food-insecure people in El Salvador, Guatemala, Haiti, Honduras, Jamaica, and Nicaragua, all countries that are highly dependent on export earnings or remittances to help finance their food imports. As a consequence of the global economic downturn, LAC countries may find it difficult to finance necessary imports. All forms of capital inflows are likely to contract, including: export revenues due to lower commodity prices and demand; foreign direct investment due to uncertainty and lack of credit; and remittances, as many of those sending money from abroad will incur losses or lose their jobs in the wave of rising unemployment around the globe.

Remittances, in particular, are of crucial importance to the Central American and Caribbean countries, accounting for close to 17 percent of GDP in 2006.

In Honduras and Haiti, remittances accounted for around one-quarter of GDP. A drop in remittances has its most severe effect on poor households that depend on income from earners in other countries for their livelihood. A decline in remittances is expected to adversely impact food security.

Haiti continues to be the most food-insecure country in the Western Hemisphere. Up to 80 percent of the population is estimated to consume less than nutritionally required levels for food security. Therefore, in 2008, Haitians were strongly affected by rising rice and fuel prices. The Government, with the help of the IMF, provided temporary subsidies on the price of rice as well as targeted assistance to the most vulnerable part of the population through school feedings and public works employment. The Government also initiated programs to stimulate domestic production. However, the steady decline of agricultural production in Haiti, food as well as cash crops, is difficult to reverse. To improve Haitian competitiveness, investment in infrastructure and improved access to inputs will be needed.

Export earnings in the region started to decline in the second half of 2008, and by November of that year the annualized 3-month decline in merchandise export value was close to 40 percent (International Monetary Fund, May 2009). Several LAC countries export oil, minerals, or metals and the dramatic slide in the prices of these commodities seriously strains the countries' ability to import and finance domestic support programs. Ecuador, for example, depends heavily on oil revenue, which is expected to decline in 2009 to 28.8 percent of GDP compared to 43.2 percent in 2008 (*The Economist*, 2009). Peru has enjoyed a prolonged period of strong economic growth and so far the country appears less affected by the global crisis than its neighbors, despite Peru's dependence on copper and zinc exports. Peru's exports have become more diversified in the last 10 to 15 years, which makes the country less vulnerable to price declines in selected export commodities. Peru has attracted foreign direct investment (FDI), $2 billion in 2007, and in 2008 the country was awarded an investment-grade credit rating. February 2009 marked the start of the Peru Trade Promotion Agreement (PTPA), a comprehensive free trade agreement between the United States and Peru. PTPA is expected to stimulate trade. While GDP growth in Peru is not expected to continue at recent years' high rates, it is still expected to exceed 3 percent.

Some countries in the LAC region are less dependent on oil, metal, or mineral exports. Nicaragua exports fishery products and shrimp in addition to the traditional exports of coffee and bananas and has been deriving more and more income from tourism. Tourism also has become a leading industry in the Dominican Republic, but that industry in both countries is certain to experience a downturn in the coming year.

Without any major effort to reduce poverty, in the long run (by 2018), food insecurity in the region is projected to remain close to current levels, affecting about 33 percent of the population. The number of food-insecure people is projected to increase slightly, mostly driven by Guatemala, while food gaps are projected to decline over the next decade. Given the poverty of the lowest income groups, it will take a long time to ensure access to sufficient food for all people.

Table 4
Food availability and food gaps for Latin America and the Caribbean

Year	Grain production	Root production *(grain equiv.)*	Commercial imports	Food aid receipts *(grain equivalent)*		Aggregate availability of all food
			1,000 tons			
1999	13,977	3,599	9,711	1,178		38,222
2000	14,856	3,728	10,209	887		39,653
2001	14,940	3,681	11,125	1,067		40,469
2002	15,437	3,737	11,680	1,127		40,432
2003	16,815	3,416	11,774	491		40,785
2004	16,822	3,437	12,055	568		42,049
2005	17,505	3,589	13,412	688		46,193
2006	16,965	3,524	14,832	671		47,457
2007	16,630	3,662	15,783	392		48,247
				Food gap*		
Projections				NR	DG	
2008	18,012	3,703	12,849	**323**	**1,868**	45,921
2013	19,352	3,943	15,336	**94**	**1,619**	51,713
2018	20,586	4,198	17,024	**0**	**1,429**	57,075

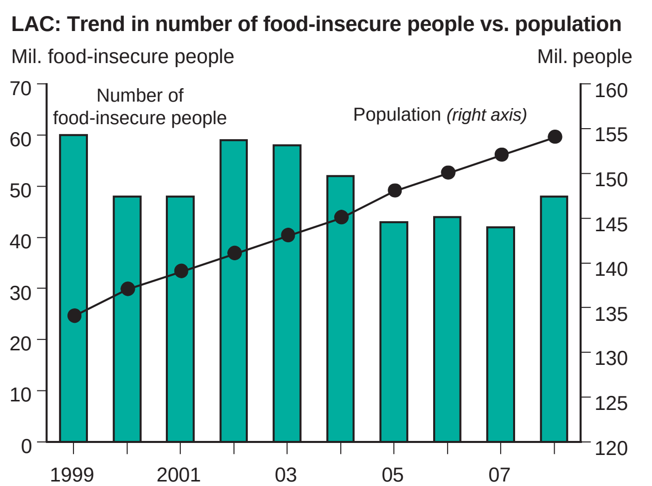
*See table 1.

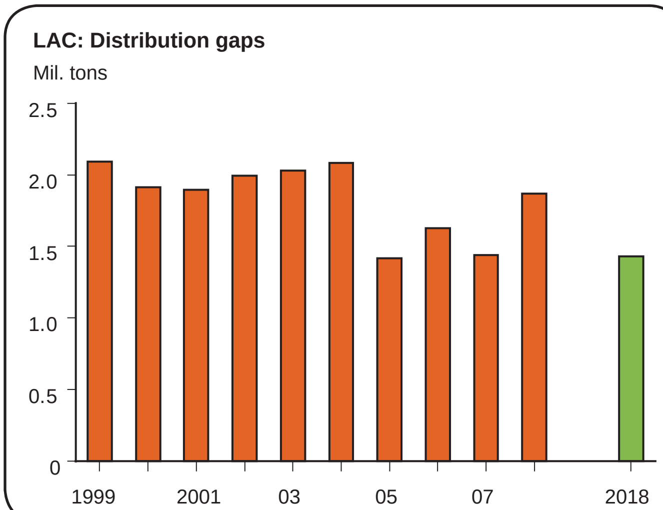
Latin America and the Caribbean (LAC)
(154 million people in 2008)

The global economic downturn is affecting food security in those countries in the region that depend most heavily on exports and capital inflows to pay for crucial imports.

In Haiti, where 80 percent of the population is food insecure, targeted food-security policies were implemented with the goal to dampen the effect of price hikes and reduction in remittances.

Food security is expected to improve slightly over the next decade.





Latin America and the Caribbean: Capital inflows as share of gross domestic product (GDP) in 2006

	Export earnings	Remittances*	Foreign direct investment	Sum
		Percent		
Ecuador	34.3	7.1	0.7	42.0
Haiti	14.1	21.5	3.2	38.8
Honduras	40.8	25.6	4.2	70.6
Jamaica	45.8	19.4	8.8	74.0
Nicaragua	31.1	12.4	5.3	48.8
Peru	28.7	2.0	3.8	34.5

*Workers' remittances and compensation of employees, received.

Source: World Bank Indicators, 2008.

North Africa

North Africa continues to be the most food-secure region among the five regions studied in this report. Food consumption levels continue to be high, despite higher food prices and consequently higher import bills than in recent years. Per capita food consumption in North Africa, at more than 3,000 calories per day, is close to that in high-income countries and far above consumption levels in other developing countries. Even so, higher global food prices in 2008 had an impact in this food-secure region as average per capita food-consumption levels declined by more than 10 percent from 2007 levels. Projections for 2009 hint at a slight decline in food security that could become more severe if the cuts outlined in Scenario 2 occur. North Africa's dependence on export earnings and capital inflows to finance food imports means that a decline in these factors would have an impact on food security. Such a decline likely would lower food-consumption levels of the poorest segments of the population to a level that barely exceeds the nutritional requirements.

In the long run, food security in North Africa is expected to deteriorate, with per capita consumption levels projected to decline 4.4 percent between 2008 and 2018. But there are differences among the countries. Morocco and Tunisia are expected to improve, while Algeria is projected to deteriorate slightly if foreign exchange availability does not recover. Egypt, the most populous country in the region, is projected to experience the largest decline in consumption, 15 percent over the next 10 years. The lowest income group in Egypt is in danger of becoming food insecure.

Domestic grain production in North Africa is highly variable due to undependable rainfall, except in Egypt, where production is mostly irrigated and therefore much less variable. Production variability, as measured by the coefficient of variation, averaged 44.3 between 1990 and 2008 in Algeria, Morocco, and Tunisia, more than any other region (the average coefficient of variation is 20.9 in CIS, 19.5 in SSA, 12.1 in LAC, and 9.9 in Asia). Despite its relative stability, production in Egypt is constrained from increasing because of limited availability of irrigated area. Due to these factors, the region has for decades been dependent on imports, which average close to half of total grain supplies. Imports vary considerably from year to year as they fluctuate with domestic production. They peaked in 2000, when more than 53 percent of total grain supplies came from imports. Vegetable oils, another important part of daily diets, are mostly imported, with just 10-20 percent of overall use coming from domestic production. Governments in the region have been trying to reduce their dependence on food imports by implementing policies that encourage increased domestic production.

In Tunisia, for example, policies to ensure food security include incentives to improve domestic grain production. Farmgate prices for wheat and barley were raised about 60 and 100 percent. In addition, farmers benefited from improved credit terms and less expensive feed imports for the livestock sector as tariffs and other import duties were waived. Despite the incentives, Tunisia's grain crop declined from 2007 to 2008, and imports exceeded 2007's record levels. Insufficient rainfall may result in another below-average crop in 2009. As a result of higher food prices, about 1 million people or 10 percent of the population were estimated to be food insecure in 2008.

Table 5
Food availability and food gaps for North Africa

Year	Grain production	Root production *(grain equiv.)*	Commercial imports	Food aid receipts *(grain equivalent)*		Aggregate availability of all food
			1,000 tons			
1999	38,222	1,287	23,233	105		49,844
2000	39,653	1,312	24,530	356		50,786
2001	40,469	1,329	23,996	82		51,543
2002	40,432	1,483	27,456	72		52,594
2003	40,785	1,704	20,730	35		56,455
2004	42,049	1,885	19,855	58		58,062
2005	46,193	1,928	26,605	53		60,974
2006	47,457	1,995	23,239	56		63,493
2007	48,247	1,898	26,588	51		60,613
				Food gap*		
Projections				NR	DG	
2008	34,213	2,037	24,132	**0**	**0**	57,943
2013	38,107	2,222	25,097	**0**	**0**	60,591
2018	41,152	2,418	25,184	**0**	**0**	60,558

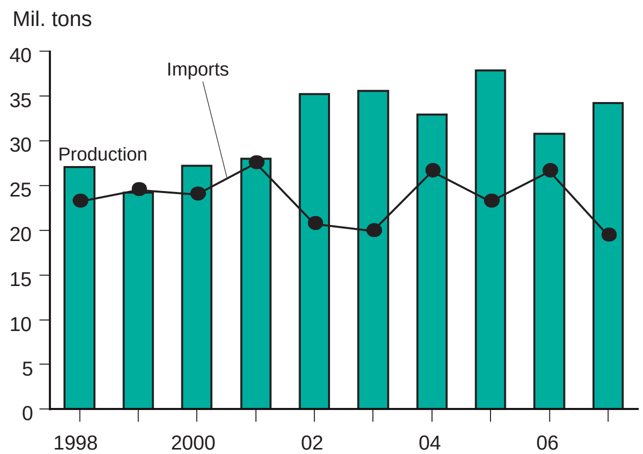
*See table 1.

North Africa
(153 million people in 2008)

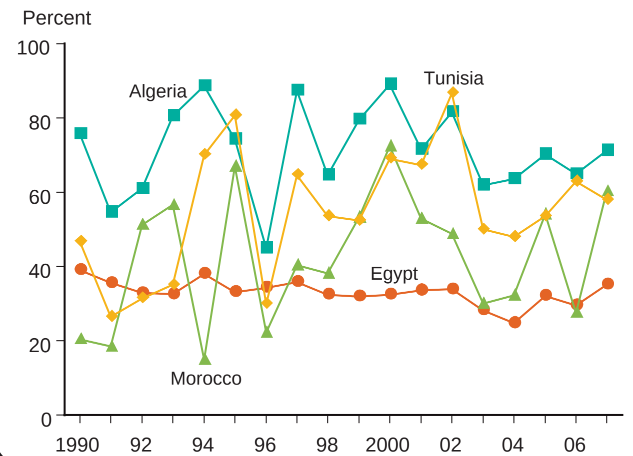
Rising food prices in 2008 led to consumption declines in North Africa. However, food security was not threatened, in part thanks to government policies that helped keep prices of bread and other important staples at pre-crisis levels.

The global economic downturn is expected to dampen growth prospects of North Africa given sharp declines in export earnings. These are crucial for financing imports, which have accounted for about 50 percent of the region's grain supply.

North Africa: Grain production and imports



North Africa: Grain imports as a share of supplies



North Africa: Capital inflows as share of gross domestic product (GDP) in 2006

	Export earnings	Remittances*	Foreign direct investment	Sum
		Percent		
Algeria**	47.8	1.9	1.1	50.8
Egypt	29.9	5.0	9.3	44.3
Morocco	33.0	8.3	4.1	45.5
Tunisia	54.4	5.0	10.8	70.2

*Workers' remittances and compensation of employees, received.
**Data for 2005.

Source: World Bank Indicators, 2008.

The countries' governments also are heavily involved on the consumer side. In Morocco, in 2008, the Government attempted to pass higher food import prices on to consumers, but local unrest and heavy media criticism caused the Moroccan Government to back down from its attempt. A number of policies were implemented to maintain bread prices at pre-crisis levels, such as the elimination of import duties on wheat and the fixing of wheat and flour prices well below international levels. Import duties on feed also were phased out to help the livestock industry keep retail prices low. These policies presented a heavy burden on the country's finances. Similarly, in Algeria, in 2008, the Government allocated $2.5 billion to support staple food prices and thus protect household incomes. Ceilings on bread and bread flour prices have been in place for decades. Weather conditions have been favorable for the last 3 years and are expected to remain so in 2009.

Egypt, the most populous country in the region with close to 80 million people, imported 12 million tons of grain in 2008, which is close to 34 percent of that nation's grain supply. The high prices made it necessary for the Egyptian Government to more than double the budget for bread price supports to $1.5 billion in FY 2007/08 (Oct. 1, 2007-Sept. 30, 2008).

The price-support policies are putting a strain on government budgets in North Africa. The worldwide recession coupled with falling commodity prices is expected to decrease export earnings dramatically, thus making it harder to finance expensive domestic programs. Algeria and Egypt will receive less revenue on their oil exports and Morocco's earnings will suffer due to the decline in the price of phosphate rock. The sharp decline in oil prices will have a dramatic negative impact on the finances of the Algerian Government, which in 2008 depended on oil for 90 percent of its export revenue. Egypt's oil exports accounted for 46 percent of its total exports in 2007. The IMF projects a 0.8-percent decline in export earnings for emerging and developing countries in 2009. As mentioned above, the tighter budget conditions, if unaddressed, could lead to food insecurity in Egypt by 2018, threatening to prevent the lowest population quintile from having access to a nutritionally adequate diet.

Sub-Saharan Africa

Sub-Saharan Africa's food security deteriorated between 2007 and 2008, despite higher than normal grain production across much of the region. The region remains the most vulnerable of the five regions to food insecurity, as roughly half of the region's population is estimated to be food insecure. In contrast to Asia, Sub-Saharan Africa accounts for only a quarter of the population of the 70 countries, but its share of the number of food-insecure people is 47 percent.

The region's distribution gap was estimated at more than 14 million tons in 2008. To put this number in perspective, the region generally receives about 4 million tons of food aid, in grain equivalent, per year.

SSA has become increasingly dependent on imports of grain, a staple of the region's diet. In the late 1980s, imports accounted for around 10 percent of the region's grain supplies. In recent years, this share has consistently exceeded 20 percent. Therefore, when international prices rise, the ability to import is likely to fall given the limited financial capacity of the region. Grain prices started to rise in 2002 and continued to rise through early 2008 before falling off in late 2008. The expected impact of this price increase was offset by above-average or record grain production in many SSA countries in 2008. As a result, the number of food-insecure people in the region remained flat between 2007 and 2008.

Somalia and Zimbabwe were estimated to be the most food-insecure countries in the region in 2008 as consumption in all income groups fell well below the nutritional target. These two countries have been characterized by unstable political situations that have disrupted agricultural activities. Somalia has endured nearly 20 years of civil strife since its Government collapsed in 1991. The country's grain production averages about one-quarter to one-third of the levels achieved prior to that time. Consumption in even the highest income group was estimated at less than two-thirds of the nutritional requirement in 2008.

Zimbabwe, which had been a net exporter of grains until the 2000s, now imports roughly 500,000 tons of grain per year. The country's persistent political and economic difficulties have resulted in extreme shortages of seeds and other inputs. Lack of foreign exchange precludes the importation of fertilizer as well as the raw materials to produce fertilizer domestically. Hyperinflation has cut purchasing power of consumers who were already financially unstable. These factors have resulted in declining per capita food consumption. Many Zimbabweans are even cutting down on the number of meals eaten per day.

Without any increase in external assistance, SSA food security is expected to deteriorate in 2009. ERS analysis shows that the number of food-insecure people will increase 5.5 percent in 2009 to 406 million (food-security baseline estimate). The distribution gap is projected to remain virtually unchanged at less than 15 million tons. The disparity in these growth rates indicates that food insecurity will spread among the region's population, but, on average, not deepen among those who had been consuming below the nutritional target. The deterioration between 2008 and 2009 is likely a reflection of production returning to trend levels as opposed to the above-average output levels of 2008.

Another factor adversely affecting consumers in 2009 is high prices. Despite the decline of prices on the world market in the later part of 2008 and early 2009, prices in many countries in this region remain high. According to the United Nations' Food and Agriculture Organization, millet prices in January 2009 were 25 percent higher than they were in January 2008 in Burkina Faso (UN, FAO, February 2009). In Niger, these prices were 40 percent higher. In Senegal, the price of rice, a diet staple, was 80 percent higher in November 2008 than it was earlier in the year. Kenya was one Sub-Saharan country that did not have a good 2008 crop. In fact, grain output fell more than 20 percent. As a result, the price of corn, the country's staple food, in January 2009 was nearly 50 percent higher than the January 2008 price. While prices in Ethiopia have fallen considerably in recent months, reflecting the good 2008 crop, food prices remain well above last year's level. Wheat prices, for example, were about 50 percent higher in January 2009 than January 2008. Corn prices were 13 percent higher.

The financial downturn is expected to weaken the food security of the region further by exacerbating the impact of the food and fuel price shocks of 2006-08 that accelerated inflation and deteriorated the financial position of these countries. The metal- and oil-exporting countries have been hit by the recent decline in those prices. On the other hand, the benefits of the lower oil prices for importing countries were negated by the more rapidly declining prices for their export commodities such as coffee, cocoa, and cotton.

IMF projects a decline in all sources of foreign exchange including tourism, foreign direct investment, remittances, and external aid (IMF, *Impact of the Global Financial Crisis on Sub-Saharan Africa*, January 2009). In terms of food security, under Scenario 2, which represents slower export growth and a cutback on net inflow of capital, the number of food-insecure people is projected to increase by 9 percent from the 2009 food-security baseline. The distribution gap is projected to rise by 11 percent meaning that, in addition to an increase in food insecurity, food insecurity also will intensify. The countries that will be affected most are countries that have done well economically in recent years such as Angola, which benefited a great deal from high oil prices, and Cape Verde, Côte d'Ivoire, Lesotho, Mauritania, and Senegal, because of their growing import dependence. In addition, the financial slump will further deteriorate food security of highly foreign-aid-dependent countries such as Eritrea, Somalia, and Sierra Leone.

According to the IMF report, "the slump in global growth could persist longer and the impact of the slow down could be more pronounced than expected, negatively affecting Sub-Saharan Africa's internal and external equilibrium." However, under the positive assumption of full economic recovery in 2010, the region's food security is projected to remain virtually unchanged over the next decade. The number of food-insecure people is projected to increase at roughly the same rate as the increase in overall population. However, relative to other regions in this report, the situation is projected to deteriorate. In 2008, the region was estimated to account for 47 percent of the food-insecure people in the 70 countries. In 2018, this share is projected to jump to more than 57 percent.

Sub-Saharan Africa receives more food aid than any other region and its share of the world total has grown over time, from roughly a third to well over half. While global food aid levels have trended downward over time, Sub-Saharan Africa's food aid receipts, although fluctuating from year to year, have remained relatively flat. In 2006-07, the region received about 3.5 million tons of food aid per year. The composition of food aid has changed over time. About a decade ago, over half of the aid was for emergency purposes, more than a quarter was project aid, and about a fifth was program aid. Project food aid is nonemergency aid that can be targeted to needy groups or monetized (sold on the open market). Program food aid is government-to-government donations that are sold in the recipient country markets. These open-market sales can distort local markets and provide disincentives to local producers. More recently, 75 percent of the aid was for emergency purposes while only 20 percent was project aid. There is a very small amount allocated to program aid. These trends somewhat mirror global trends, but in the case of Sub-Saharan Africa, aid for emergency purposes predominates.

Table 6

Food availability and food gaps for Sub-Saharan Africa

Year	Grain production	Root production (grain equiv.)	Commercial imports	Food aid receipts (grain equivalent)		Aggregate availability of all food
			1,000 tons			
1999	76,637	44,236	9,850	2,690		151,767
2000	72,750	45,542	11,554	4,027		158,690
2001	78,420	47,263	13,166	3,722		163,535
2002	76,324	48,744	15,118	3,225		170,098
2003	85,394	50,309	14,626	5,422		177,831
2004	84,663	52,913	16,270	3,717		181,294
2005	94,229	55,172	18,213	4,872		195,084
2006	102,792	57,271	18,610	4,223		208,094
2007	107,698	57,273	18,756	3,204		214,387
Projections				Food gap*		
				NR	DG	(w/o food aid)
2008	110,675	58,577	15,410	**6,307**	**14,368**	210,428
2013	124,518	64,051	17,949	**5,775**	**15,441**	236,724
2018	141,084	69,965	19,694	**7,428**	**17,738**	264,563

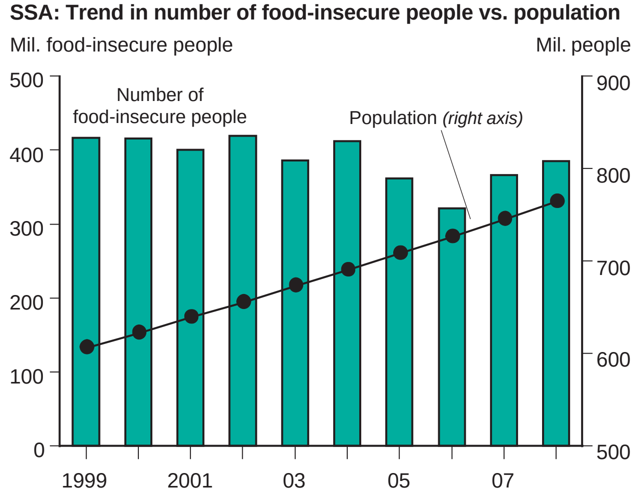
*See table 1.

Sub-Saharan Africa (SSA)
(764 million people in 2008)

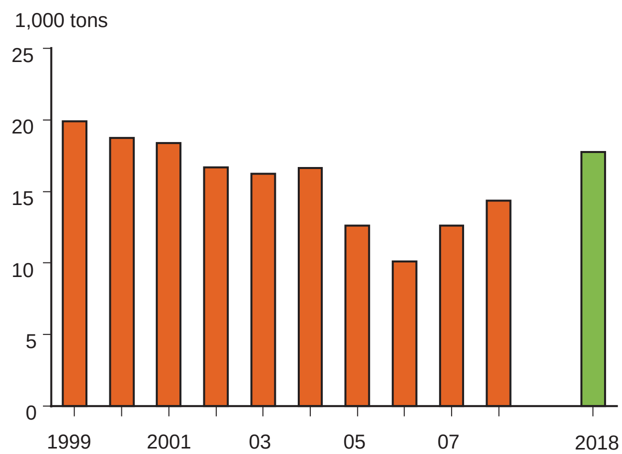
Sub-Saharan Africa (SSA) is the world's most food-insecure region. Half of the region's population was estimated to consume below the nutritional requirement of 2,100 calories per capita per day in 2008.

The financial downturn is expected to weaken the food-security situation of the region further by exacerbating the impact of the food and fuel price shocks of 2006–2008 that accelerated inflation and deteriorated the financial position of these countries.

SSA: Trend in number of food-insecure people vs. population



SSA: Distribution gaps



Sub-Saharan Africa: Capital inflows as share of gross domestic product (GDP) in 2006

	Export earnings	Remittances*	Foreign direct investment	Sum
		Percent		
Gambia, The**	44.8	12.4	11.3	68.5
Kenya	26.2	5.0	0.2	31.4
Madagascar	29.7	0.2	4.2	34.1
Nigeria	56.3	2.9	4.7	63.9
Uganda	14.9	8.6	4.2	27.7
Zambia	38.2	0.5	5.4	44.1

*Workers' remittances and compensation of employees, received.
**Data for 2005.

Source: World Bank Indicators, 2008.

Ethiopia is the largest recipient of aid in the region, accounting for roughly 20 to 25 percent of the total. Despite strong growth in grain output during the last few years, consumption for many people in this poor country still falls well below the nutritional requirements. According to ERS estimates, 60 percent of the country's population was food insecure in 2008. Aid to Sudan has grown over time in response to the country's persistent political problems, which have displaced large segments of populations. Food aid to Sudan now accounts for 15 to 20 percent of Sub-Saharan Africa's total food aid receipts.

SSA will remain the most vulnerable region in 2018 with 25 percent of the population of the 70 countries and 57 percent of the food-insecure people. Several countries such as Somalia and the Democratic Republic of Congo are likely to remain politically unstable, as they continue to be plagued by disastrous armed conflicts that have caused catastrophic breakdowns of law and order. The resulting social dislocation, food insecurity, and famine preclude any optimism for the future. In other countries in the region, overcoming chronic food insecurity is difficult given the recent high food prices that increased their trade deficits.

Lagging agricultural productivity also is preventing progress. Agriculture is a major source of employment in many countries and therefore is the key to achieving both poverty reduction and increased food security. Since 1990, SSA had the highest growth in grain production of the regions studied—2.8 percent per year—but this growth was offset by SSA's high population growth of 2.7 percent per year. Population growth in the other regions ranged from 0.7 percent to 1.9 percent per year. In SSA, nearly 90 percent of the growth in production came from area expansion during the last couple of decades. The region's yields are the lowest in the world, measuring about a third of the world average. This means that most countries are far from their maximum potential for growing crops, even using existing technologies.

During the last two decades, despite the adoption of policies to encourage economic openness in many lower income countries, economic signals have not been fully transmitted from the global level to producers. While these weak linkages buffer the rural communities from global economic downturns to some extent, they also limit the benefits of an economic upturn. For example, the rising food prices of 2002-08 should have improved production incentives in the agricultural sector, but supply responses were minimal in most SSA countries. An ERS study of five SSA countries (Ghana, Kenya, Mozambique, Senegal, and Uganda) showed that a variety of factors mitigated a local supply response to the higher prices, including rising costs of imported inputs and transportation and infrastructure constraints (USDA, ERS, 2008). These higher prices were, however, transmitted to consumers in most cases. In some instances (Mozambique and Senegal), governments did intervene to counter the higher consumer prices, but in all instances, consumers experienced significant price increases.

The World Bank's *World Development Report 2008: Agriculture for Development* emphasizes the need to increase investment in agriculture. The discussion of Africa, both in the short and long term, focused on the need to increase agricultural productivity by improving soil fertility. This would be achieved by increasing fertilizer use which is currently less than 10 percent of the level used per unit of land than in other developing regions. Most least developed countries (LDCs) are in the early stages of adopting new agricultural technologies and the potential to increase productivity is enormous. But sustained agricultural growth requires substantial investment in irrigation, rural infrastructure, human capital, and institutions, not just access to basic inputs.

On a positive note, economic growth in the region has been quite strong over the last decade and has even outstripped growth in the rest of the world since 2000. According to the IMF, real GDP growth averaged nearly 5 percent per year between 1995 and 2007 (IMF, *Regional Economic Outlook, Sub-Saharan Africa*, October 2008). This growth has been largely achieved in countries with political and economic stability. Sustaining this growth during the current global economic crisis and associated decline in demand in the developed world may prove difficult. However, to have any hope of improvement in their status, these countries must continue to invest in infrastructure, support agricultural research and extension services, and eliminate price and trade controls that often weaken production incentives.

Conclusion: Challenges and Opportunities

The slow pace or lack of progress in improving food insecurity in lower income countries raised concerns even before the current economic downturn. While the full consequences of the current global economic downturn are not known, for lower income countries food-security problems are expected to worsen. The short-term concern is that these countries have very few domestic safety net programs in place. The international safety nets that do exist are inadequate for stabilizing food supplies for the more vulnerable countries. Food aid has been the primary safety net, but is not sufficient to meet estimated needs around the world. Food-security safety net programs such as Progresa (Programa de Educación, Salud y Alimentación) in Mexico and the Public Food Distribution System in India can play a major role in reducing the impact of economic shocks. Integrating international and national resources to design these safety net programs can be very effective for mitigating the effects of shocks and in this way serve as adjuncts to longer term food-security strategies. The challenge, however, is to design efficient programs that minimize costs, while working toward longer term solutions.

Another concern is the linkage between food insecurity and political unrest, with human costs that are staggering. Establishing the causal relationship between food insecurity, poverty, and political unrest is not straightforward, but the experience in a number of food-insecure countries indicates that political instability often emerges in poorer countries where the safety net programs are weakest.

In sum, food security is one of the foundations for “social security.” Short-term food insecurity mitigation and prevention should be combined with long-term food-security strategies.

An important step in this direction is to expand the use of new technologies to improve productivity and increase farm income and assets, thereby enhancing the capacity to cope better with food-supply shocks. For example, in Sub-Saharan Africa in particular, there is significant potential to increase food production through relatively simple means such as increased fertilizer use or improved seeds.

In addition to increasing the productivity of the agricultural sector, support for rural development provides nonfarm employment and an opportunity for rural communities to diversify their sources of incomes, leading to higher incomes and greater stability. The World Bank has recently devoted much attention to the issue of rural development. Currently, many countries in Latin America and Africa are facing growing unemployment in rural areas because of the reduction in international migration. Agricultural laborers in these countries, in general, have few skills or job opportunities. Developing rural markets will create a low-risk environment that is essential for sustainable economic growth that can improve food security.