2009

The State of Food Insecurity in the World

Economic crises – impacts and lessons learned

WFP

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Key messages

The State of Food Insecurity in the World 2009 is FAO's tenth progress report on world hunger since the 1996 World Food Summit (WFS). This report highlights the fact that, even before the food crisis and the economic crisis, the number of hungry people had been increasing slowly but steadily. With the onset of these crises, however, the number of hungry people in the world increased sharply.

As a result of the global economic crisis, developing countries are facing declines in remittances, export earnings, foreign direct investment and foreign aid, leading to loss of employment and income. This loss of income is compounded by food prices that are still relatively high in the local markets of many poor countries. As a result, poor households have been forced to eat fewer meals and less-nutritious food, cut back on health and education expenses, and sell their assets.

Despite the financial constraints faced by governments around the world, agricultural investment and safety nets remain key parts of an effective response to reduce food insecurity both now and in the future.

- **Even before the food and economic crises, hunger was on the rise.** The World Food Summit target of reducing the number of undernourished people by half to no more than 420 million by 2015 will not be reached if the trends that prevailed before those crises continue.

- **FAO estimates that 1.02 billion people are under-nourished worldwide in 2009.** This represents more hungry people than at any time since 1970 and a worsening of the unsatisfactory trends that were present even before the economic crisis. The increase in food insecurity is not a result of poor crop harvests but because high domestic food prices, lower incomes and increasing unemployment have reduced access to food by the poor. In other words, any benefits from falling world cereal prices have been more than offset by the global economic downturn.

- **In trying to cope with the burden of consecutive food and economic crises, poor people reduce their dietary diversity and spending on essential items such as education and health care.** These coping mechanisms were strained during the food crisis, and the poor will now be forced to draw on their meagre assets even more deeply, creating poverty traps and negatively affecting longer-term food security. Infant mortality will increase, with girls being more affected than boys.

- **A healthy agriculture sector can provide an economic and employment buffer in times of crisis, especially in poorer countries.** However, past experience of economic crises suggests that investment in agriculture may soon decline. This must be avoided so that agriculture can play its role as an engine of growth and poverty reduction and act as the longer-term pillar of the twin-track approach to fighting hunger. Indeed, increased investment in agriculture during the 1970s and 1980s helped reduce the number of undernourished. Due attention must also be given to developing the rural non-farm sector in parallel with agriculture, which is another key pathway out of poverty and food insecurity.

- **Safety-net interventions should address the immediate impact on the vulnerable while also providing sustainable solutions to the underlying problems.** As the shorter-term pillar of the twin-track approach, safety nets must enable recipients to become more credit-worthy and more able to access modern inputs and adopt new technologies, thus allowing them to graduate from the safety-net programme. To achieve these goals, safety nets should be well integrated with broader social assistance programmes. The urban poor, in particular, will need help, as they were hurt severely by the food crisis and are now most likely to suffer unemployment because of the economic crisis.

- **The fact that hunger was increasing even before the food and economic crises suggests that present solutions are insufficient and that a right-to-food approach has an important role to play in eradicating food insecurity.** To lift themselves out of hunger, the food-insecure need control over resources, access to opportunities, and improved governance at the international, national and local levels.

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CONTENTS

FOREWORD

This report comes at a time of severe economic crisis. Countries across the globe are seeing their economies slow and recede. No nation is immune and, as usual, it is the poorest countries – and the poorest people – that are suffering the most. As a result of the economic crisis, estimates reported in this edition of *The State of Food Insecurity in the World* show that, for the first time since 1970, more than one billion people – about 100 million more than last year and around one-sixth of all of humanity – are hungry and undernourished worldwide.

The current crisis is historically unprecedented, with several factors converging to make it particularly damaging to people at risk of food insecurity. First, it overlaps with a food crisis that in 2006–08 pushed the prices of basic staples beyond the reach of millions of poor people. And, although they have retreated from their mid-2008 highs, international food commodity prices remain high by recent historical standards and volatile. Also, domestic prices have been slower to fall. At the end of 2008, domestic staple food prices remained, on average, 17 percent higher in real terms than two years earlier. The price increases had forced many poor families to sell assets or sacrifice health care, education or food just to stay afloat. With their resources stretched to breaking point, those households will find it difficult to ride out the economic storm.

Second, the crisis is affecting large parts of the world simultaneously. Previous economic crises that hit developing countries tended to be confined to individual countries, or several countries in a particular region. In such situations, affected countries made recourse to various instruments such as currency devaluation, borrowing or increased use of official assistance to face the effects of the crisis. In a global crisis, the scope of such instruments becomes more limited.

Third, with developing countries today more financially and commercially integrated into the world economy than they were 20 years ago, they are far more exposed to shocks in international markets. Indeed, many countries have experienced across-the-board drops in their trade and financial inflows, and have seen their export earnings, foreign investment, development aid and remittances falling. This situation will conspire not only to cull employment opportunities, but also to reduce the money available for government programmes that are indispensable to promoting growth and supporting those in need.

Faced with the crisis, households are forced to find ways to cope. Coping mechanisms involve undesirable but often unavoidable compromises, such as replacing more-nutritious food with less-nutritious food, selling productive assets, withdrawing children from school, forgoing health care or education, or simply eating less. Based on direct interviews with people who are most affected by food insecurity, country case studies conducted by the World Food Programme (WFP) included in this year's report give an insight into how households are affected by the fall in remittances and other impacts of the economic downturn. The case studies also show how governments are responding to the crisis by investing in agriculture and infrastructure and expanding safety nets. These interventions will help to save lives and families, although given the severity of the crisis, much more needs to be done.

If global food security is to be achieved and sustained as soon as possible, the twin-track approach supported by FAO, WFP, the International Fund for Agricultural Development (IFAD) and their development partners will be crucial. This strategy seeks to address both the shorter-term acute hunger spurred by food or economic shocks and the longer-term chronic hunger that is symptomatic of extreme poverty.

To help hungry people *now*, safety nets and social-protection programmes must be created or improved to reach those most in need. Among these, national food safety-net programmes, such as school feeding or voucher programmes, should be designed to stimulate the local economy by creating jobs and increasing agriculture and local value-added food production. In addition, they should integrate best practices so as to be affordable and sustainable, with handover plans embedded and scalable in the face of crises and shocks. At the same time, small-scale farmers need access to modern inputs, resources and technologies – such as high-quality seeds, fertilizers, feed and farming tools and equipment – that will allow them to boost productivity and production. This should, in turn, lower food prices for poor consumers, both rural and urban.

To ensure that hunger is conquered in the years to come, developing countries must be assisted with the development, economic and policy tools required to boost their agriculture sectors in terms of both productivity and resilience in the face of crises. Stable and effective policies, regulatory and institutional mechanisms, and functional market infrastructures that promote investment in the agriculture sector are paramount. Investments in food and agricultural science and technology need to be stepped up. Without robust agricultural systems and stronger global food-security governance mechanisms, many countries will continue to struggle to increase production in line with demand, move food to where it is needed and find foreign exchange to finance their food import requirements. Whenever possible, efforts should be integrated and produce a multiplier effect. For instance, local purchase of produce for school meals can generate income and guaranteed markets for smallholder farmers – both men and women – while community grain reserves can serve as a local food safety net.

The food crisis has propelled agriculture and food security, especially in developing countries, back onto the front pages of newspapers and the top of policy-makers' agendas. The *Joint Statement on Global Food Security ("L'Aquila Food Security Initiative")* produced by the G8 with partner governments, agencies and institutions, is a testimony to this renewed commitment of the global community. Nevertheless, there is a risk that a preoccupation with stagnating developed country economies and failing corporations due to the financial and economic crisis will shift resources away from the plight of the poorer countries. Yet food, the most basic of all human needs, is no more affordable, leaving more and more people without the means to consistently obtain nutritious food throughout the year. Indeed, if the food crisis was about higher prices, the economic crisis is about lower household incomes, which can be even more devastating, aggravating already unacceptable levels of food insecurity and poverty.

Past economic crises have typically led to declines in public investment in agriculture. However, history tells us that there is no greater engine for driving growth and thereby reducing poverty and hunger than investing in agriculture, complemented by programmes that ensure people can access the food that is produced. Despite the difficult global economic conditions, support to agriculture should not be reduced; indeed, it must be increased. A healthy agriculture sector, combined with a growing non-farm economy and effective safety nets and social-protection programmes, including food safety nets and nutrition-assistance programmes, is a proven way to eradicate poverty and food insecurity in a sustainable manner.

This year's *State of Food Insecurity in the World* is a true collaborative effort between our two organizations, combining our different strengths to create new insights and a publication that benefited tremendously from our joint cooperation. Collaboration with the United States Department of Agriculture on certain parts of the report has also been instrumental and is highly valued; we thank them for their efforts and willingness to share their expertise.

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Undernourishment around the world

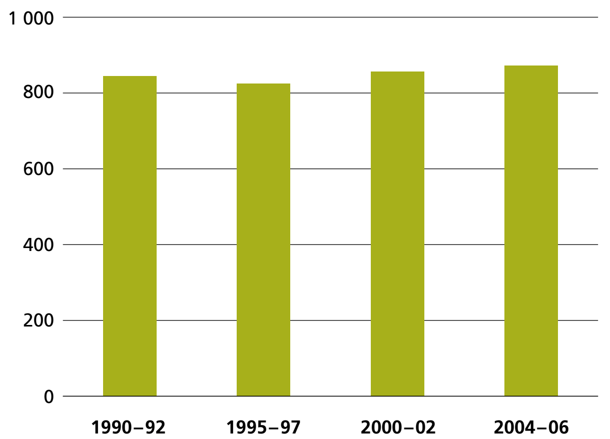
Hunger has been on the rise for the past decade

Even before the consecutive food and economic crises,[1] the number of undernourished people in the world had been increasing slowly but steadily for a decade (Figure 1). The most recent FAO undernourishment data covering all countries in the world show that this trend continued into 2004–06.[2] Thus, no progress was being made towards the World Food Summit hunger reduction target (see box), even before the two consecutive crises made the situation substantially worse. This is especially disappointing because, in the 1980s and early 1990s, good progress had been made in reducing chronic hunger.

The number of hungry people increased between 1995–97 and 2004–06 in all regions except Latin America and the Caribbean. Even in this region, however, the downward trend was reversed because of the food and economic crises (Figure 2). While the proportion of undernourished continually declined from 1990–92 to 2004–06, the decline was much slower than the pace needed to meet the hunger-reduction target of the first Millennium Development Goal (MDG).

FIGURE **1**

Chronic hunger has been increasing since 1995–97



Source: FAO.

What is food security and what are the hunger reduction targets?

- **Food security** exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern.

- **Food insecurity** exists when people do not have adequate physical, social or economic access to food as defined above.

- **Undernourishment** exists when caloric intake is below the minimum dietary energy requirement (MDER). The MDER is the amount of energy needed for light activity and a minimum acceptable weight for attained height, and it varies by country and from year to year depending on the gender and age structure of the population. Throughout this report, the words "hunger" and "undernourishment" are used interchangeably.

- The **World Food Summit goal** is to reduce, between 1990–92 and 2015, the number of undernourished people by half. **Millennium Development Goal 1**, target 1C, is to halve, between 1990 and 2015, the proportion of people who suffer from hunger.

The global economic crisis: another blow to the food-insecure and vulnerable

In late 2008, as international food and fuel prices continued to fall, there was some optimism that the developing countries might be decoupled from the crisis and recession that had started in the advanced economies. This proved to be a false hope, however, and major international organizations quickly revised their 2009–10 economic growth projections sharply downward for all parts of the world, including the developing countries.

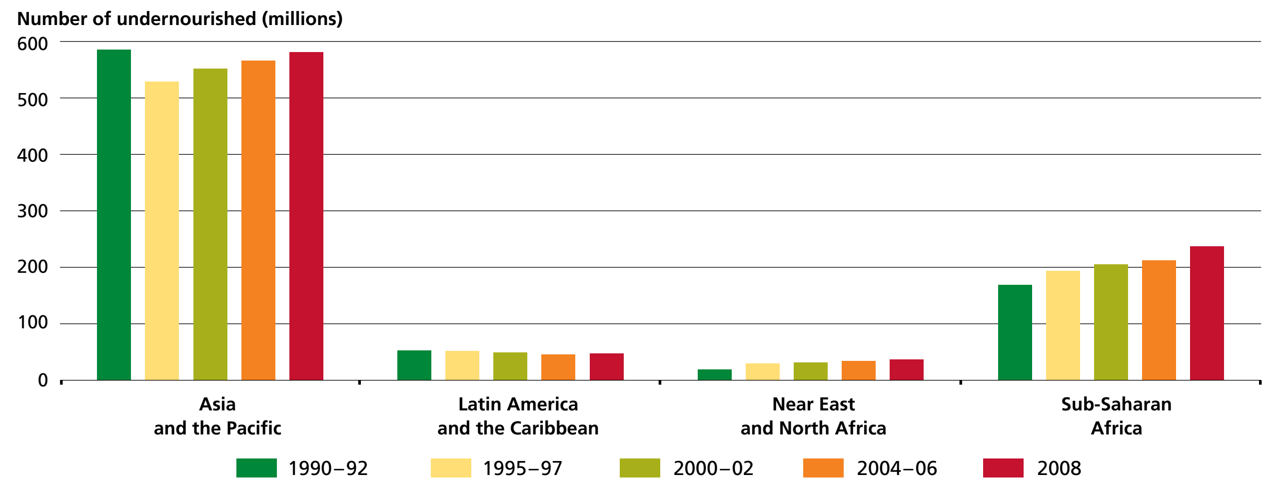
The current crisis is different from past crises

While developing countries have been hit by many crises in the past, the current economic turmoil is different in at least three important aspects. First, the crisis is affecting large parts of the world simultaneously, and, as such, traditional coping mechanisms at national and subnational levels are likely to be less effective than they were in the past. Previous crises that affected the developing countries tended to be confined to individual countries or several countries in a particular region. Under such circumstances, these countries tended to rely on large exchange-rate depreciations to help them adjust to macroeconomic shocks,[3] while remittances (money sent home from family members working in other areas or countries) represented an important coping mechanism, especially for poorer households. During the 2009 crisis, however, many countries have seen a substantial decline in remittance inflows. The scope for real exchange-rate depreciation is also more limited in a global crisis, as it is not possible for the currencies of all developing countries to depreciate against one another; some must appreciate while others depreciate. This situation has left developing countries with less room to adjust to the rapidly changing economic conditions.

The second key difference is that the current economic crisis emerged immediately following the food and fuel crisis of 2006–08. While food commodity prices in world markets declined substantially in the wake of the financial crisis, they remained high by recent historical standards. Also, food prices in domestic markets came down more slowly, partly because the US dollar, in which most imports are priced, continued to appreciate for some time, but also, more importantly, because of lags in price transmission from world markets to domestic markets. At the end of 2008, domestic prices for staple foods remained, on average, 17 percent higher in real terms than two years earlier. This represented a considerable reduction in the effective purchasing power of poor consumers, who spend a substantial share of their income (often 40 percent) on staple foods.

FIGURE **2**

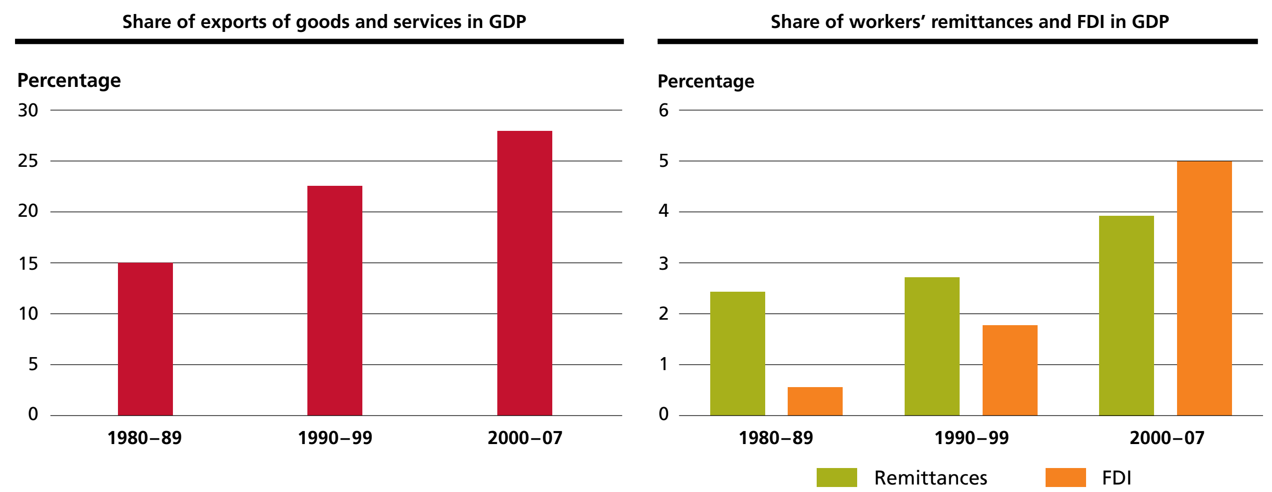
Undernourishment on the rise throughout the world: number of undernourished in selected regions, 1990–92 to 2008



Source: FAO.

FIGURE 3

Increased commercial and financial integration of developing countries



Note: GDP = gross domestic product; FDI = foreign direct investment.

Source: World Bank.

Further, even if domestic food prices eventually return to previous levels, months of unusually high food and fuel prices have stretched the coping mechanisms of many poor families to the brink as they have been forced to draw down their assets (financial, physical or human) in attempts – not always successful – to avoid large declines in consumption. As shown in *The State of Food Insecurity in the World 2008*, higher food prices hurt most the poorest of the poor, especially the landless poor and female-headed households in both urban and rural areas. Higher food and fuel prices forced families to choose which type of asset to sell first, and which family member (mother, child or key labourer) should pay the price in terms of reduced health care, education or food consumption. Such decisions are especially difficult given the large share that food represents in the budgets of the poor and their limited access to credit markets. Whatever choices were made would have diminished already limited assets, thus reducing the ability of the most vulnerable populations to deal with another crisis so soon after the earlier one. Higher food prices and reduced incomes and employment mean that, even though aggregate world food availability was relatively good in 2008 and 2009, access by the poor to that food has been adversely affected.

The third factor that differentiates this crisis from those of the past is that developing countries have become more integrated, both financially and commercially, into the world economy than they were 20 years ago. As a consequence, they are more exposed to changes in international markets. Figure 3 illustrates both the increasing significance of remittances – their share in gross domestic product (GDP) during 2000–07 represented a 50 percent increase over that of the 1990s – and marked increases in foreign direct investment (FDI – foreign ownership of productive assets, such as factories, mines and land) and exports.

Which groups will be most affected by the economic crisis?

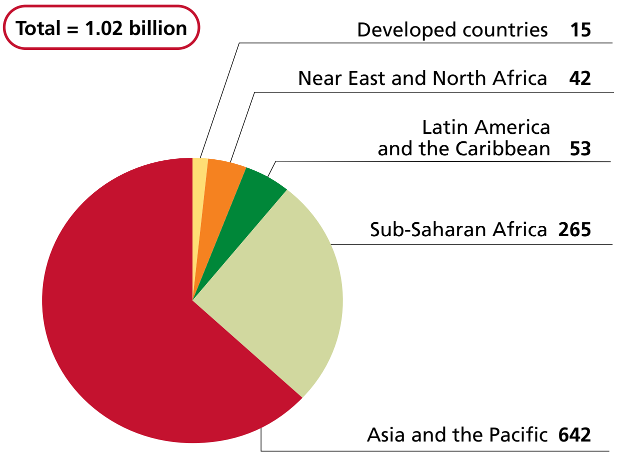
The economic crisis will negatively affect large segments of the population in developing countries. The position of those who were hurt most by higher food prices (the rural landless, female-headed households and the urban poor) is particularly precarious because they have already approached, or in many cases reached, the limit of their ability to cope during the food crisis. Among these groups, the urban poor may experience the most severe problems because lower export demand and reduced FDI are more likely to cause employment to fall in urban areas, which are more closely connected to world markets than rural areas. But rural areas will not be spared – reductions in employment have caused back-migration from urban to rural areas, forcing the rural poor to share the burden in many cases. In some countries, declining prices for specific crops will add to that burden. Thus, despite the recent fall in food prices, urban and rural areas have experienced a reduction in various sources of income, including remittances, diminishing the overall purchasing power of the poor and food-insecure.

Undernourishment estimates for 2008 and 2009

In spite of the negative consequences of the food and fuel crisis on the world's poorest and most vulnerable population groups, better-than-expected global food supply in 2007–08 has led FAO to revise its earlier estimates of undernourishment for 2008 down to 915 million (from 963 million). However, based on projections produced by the United States Department of Agriculture (USDA) Economic Research Service (see *Quantifying the food-*

FIGURE 4

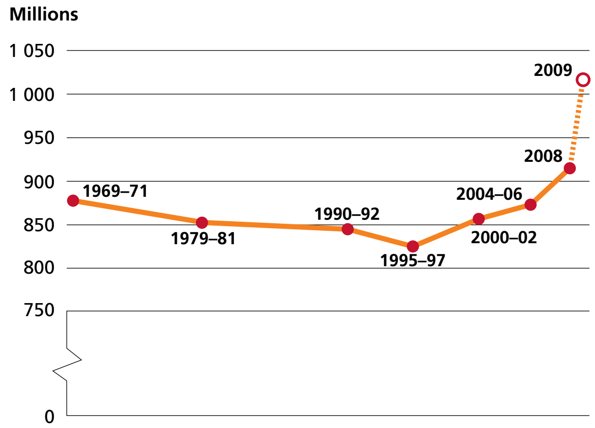
Undernourishment in 2009, by region (millions)



Source: FAO.

FIGURE 5

Learning from the past: number of undernourished in the world, 1969–71 to 2009



Source: FAO.

security impacts of the economic crisis on page 22), the economic crisis is expected to *increase* the number of food-insecure by about 9 percent in 2009, which comes on top of a projected baseline increase of 2 percent for 2009 even in the absence of crisis (see Figure 4 for a regional breakdown). When applied to the revised FAO undernourishment estimates, these projections imply that the number of undernourished in the world will have risen to 1.02 billion people during 2009, even though international food commodity prices have declined from their earlier peaks. If these projections are realized, this will represent the highest level of chronically hungry people since 1970.

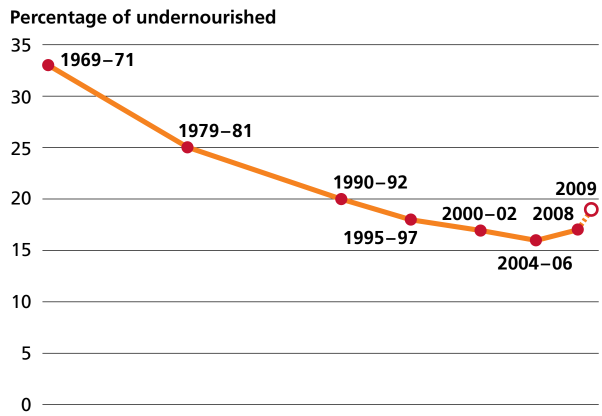
While the number of hungry people has been increasing since the mid-1990s, the number of undernourished in the world was actually declining in the 1970s and 1980s in spite of relatively rapid population growth during those decades (Figure 5), and the proportion of undernourished in developing countries was declining quite rapidly (Figure 6). At that time, especially in the wake of the global food crisis of 1973–75, large investments in the agriculture sector (including for scientific research, rural roads and irrigation) led to rapid growth in cereal yields (Figure 7) and lower cereal prices that, in turn, significantly reduced food insecurity. During those decades, the proportion of official development assistance (ODA, i.e. development aid contributed by donor governments) devoted to agriculture was also relatively high (Figure 8).

During the 1990s and the current decade, however, the number of undernourished has risen, despite the benefit of slower population growth, and the proportion of undernourished increased in 2008 (Figure 6). In the same period, the proportion of ODA devoted to agriculture declined substantially; in 2007, after adjusting for inflation, the level of ODA was 37 percent lower than in 1988. Rice and wheat yield growth has also slowed substantially. Maize yield growth has increased, but this may be attributable to the fact that a much greater proportion of research and development (R&D) for maize is in the hands of the private sector compared with rice and wheat, and private R&D has been responsible for an increasingly large share of total R&D.

Given the increased importance of biofuels and the new linkages between agricultural and energy markets, increased cereal yields, if achieved, may not necessarily continue to lead to lower cereal prices. Because the world energy market is so much larger than the world grain market, grain prices may be determined by oil prices in the energy market as opposed to being determined by grain supply. Even if this proves to be the case, however, higher cereal yields will still

FIGURE 6

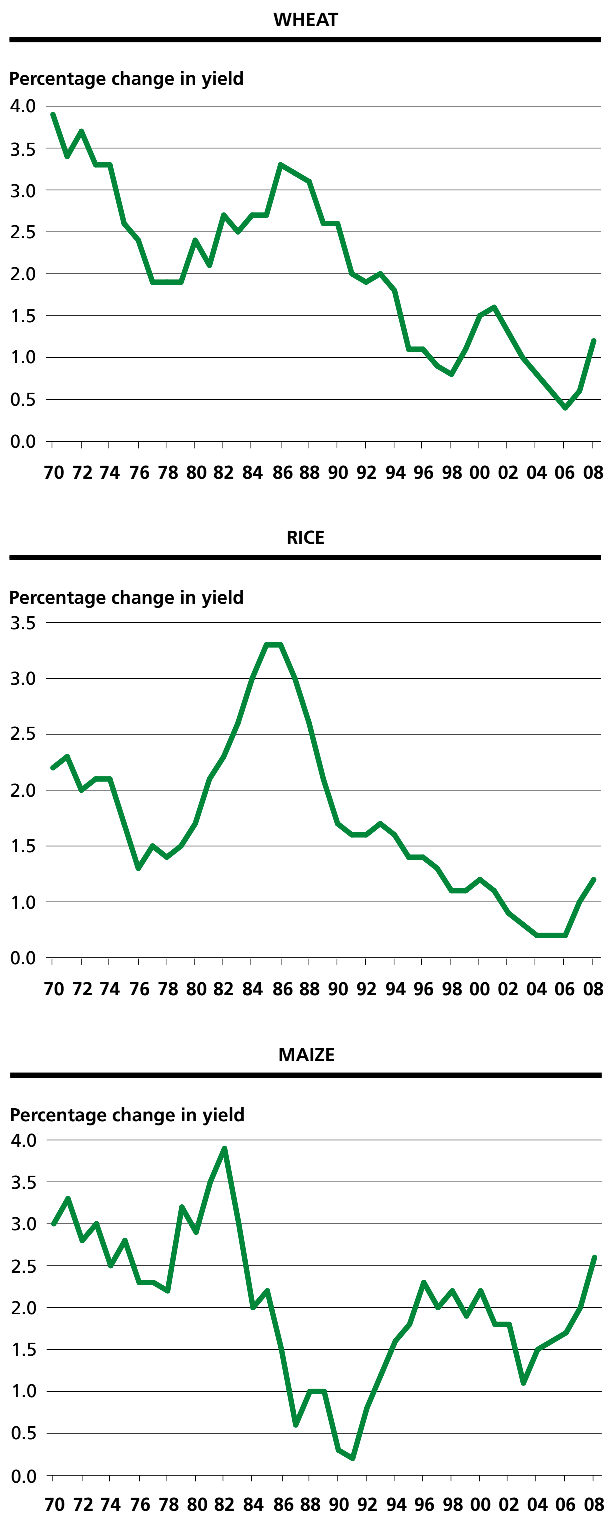
The declining trend in the proportion of undernourished in developing countries has been reversed



Source: FAO.

FIGURE 7

Investment in agriculture is needed to rejuvenate cereal yield growth rates

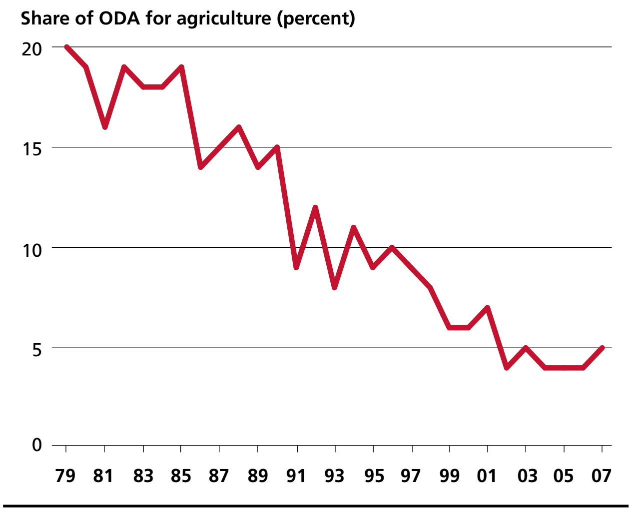


Note: Data represent the average annual percentage increase in yield between successive rolling five-year periods (e.g. data for 1970 refer to the increase in average yield comparing 1966–70 with 1961–65).

Source: FAO.

FIGURE 8

Aid for agriculture has declined



Note: ODA = official development assistance.

Source: OECD.

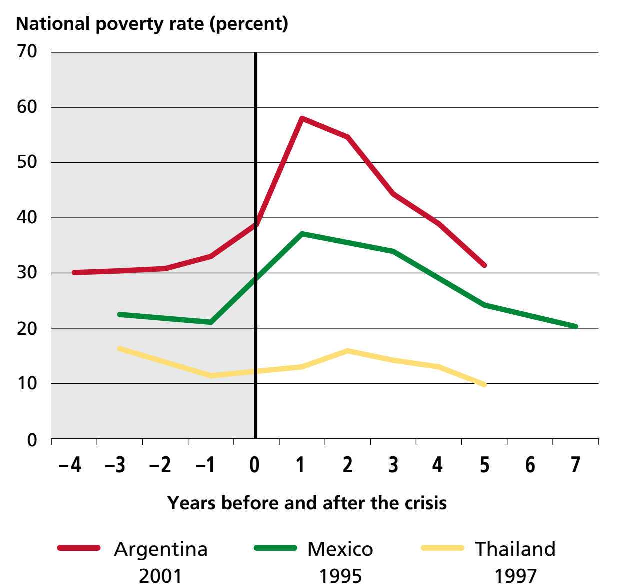
help reduce poverty by raising revenues for small farmers and increasing demand for rural labour. Thus, it is time to learn from the past and re-invest in the agriculture sector to reduce food insecurity and poverty.

Transmission of the economic crisis to the developing countries

Economic crises can have severe impacts on poverty and income levels, which in turn affect food security. An FAO analysis of six developing countries shows that, in the wake of the 1995 Mexican peso crisis and the Asian crisis of 1997–98, poverty rates increased by up to 24 percentage points (e.g. from 35 to 59 percent), with an average of 12 percent. It took the affected countries five to eight years to recover to pre-crisis poverty rates. Figure 9 illustrates the cases of three of these countries: Argentina, Mexico and Thailand. Furthermore, given today's greater global integration, economic crises in one country or region can easily be transmitted to others. For example, after the 1997–98 Asian crisis, GDP fell in 12 of the 17 largest Latin American economies, with a median drop of 5.4 percent in real per capita GDP; it took, on average, five years for countries to restore their pre-crisis income levels.[4] Unemployment increased in 15 of the 17 countries, with a median increase of 4 percentage points, and it took, on average, eight years for countries to recover to their pre-crisis employment rates.

FIGURE 9

Economic crises can wipe out years of poverty reduction



Source: see notes on p. 56.

Countries with large current account deficits, recurring crises and large food price shocks are most vulnerable

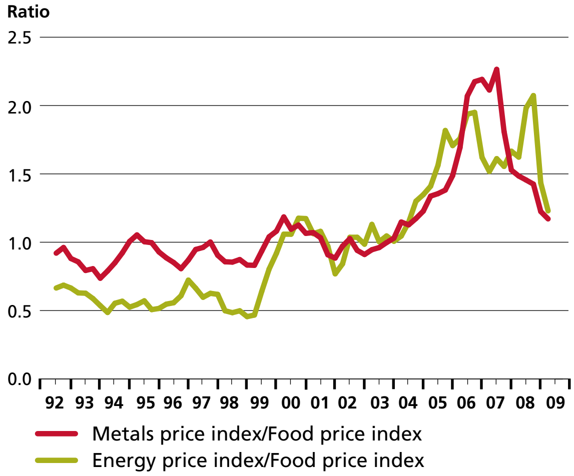
The degree to which countries are affected by economic crises that started elsewhere depends on their degree of integration with international markets for goods and services, including financial products. Countries with large current account deficits (which occur when a country's total imports of goods, services and transfers is greater than its total exports of goods, services and transfers) and low levels of foreign reserves (foreign currency deposits and bonds held by central banks and monetary authorities) are particularly at risk, because these deficits are paid for with inflows of private or public capital, such as FDI, remittances, foreign aid and borrowing. But these financial inflows can end abruptly: the 17 largest Latin American economies received US$184 billion in 2007, which was roughly halved in 2008 to US$89 billion, and is expected to be halved again to US$43 billion in 2009. A reduction in capital inflows will mean that consumption must be reduced. For some low-income food-deficit countries (LIFDCs), adjusting consumption may mean reducing badly needed food imports and other imported welfare-related items such as health-care equipment and medicines.

Countries that have experienced other crises in recent years are particularly vulnerable to the current crisis because national and regional crises strain coping systems and often lead to macroeconomic imbalances. FAO's Global Information and Early Warning System (GIEWS), which identifies hotspots and emergencies every year, has identified 16 countries that have experienced human-made crises, natural crises or both at least once in each of the past ten years (Table 1, page 15). Nearly all these countries have been ranked by the International Monetary Fund (IMF) as highly vulnerable to the current crisis (only Uganda was considered to be at low risk). Indeed, these countries constituted a major share of the 26 countries identified by the IMF as highly vulnerable.

Because many low-income countries are also net food importers, large numbers of poor people in these countries were vulnerable to the domestic food price increases experienced during the global food crisis. However, the extent to which basic food prices rose in low-income countries – and subsequently fell in late 2008 – was not

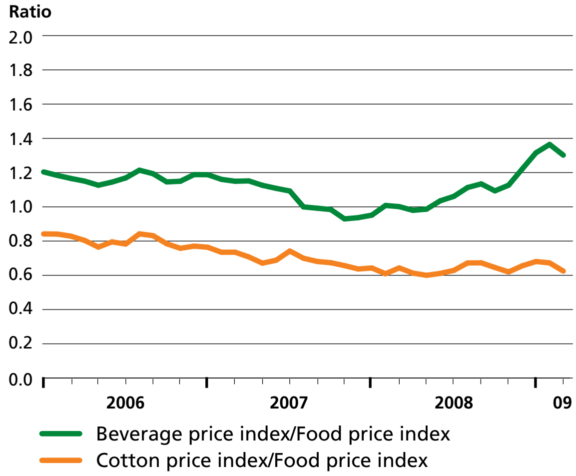
Changing terms of trade can make some countries vulnerable

A The ratios of metals and energy prices to food prices have returned to more normal levels



Sources: FAO and IMF.

B Changing terms of trade, January 2006 to March 2009



Sources: FAO and IMF.

As the economic crisis took hold, world commodity prices plunged across the board. The declines for metals, fuel and fertilizers were particularly sharp. World food prices also fell, but not to the same extent. World prices for beverages (coffee, cocoa, tea) relative to food commodities actually increased, as beverage prices fell less than the food price index. Such changes in relative prices are referred to as changes in the terms of trade (the relationship between the prices at which a country sells its exports and the prices it pays for its imports). If the prices of a country's exports rise relative to the prices of its imports, its terms of trade are said to have improved.

Although the fall in metal and energy prices was steep, the International Monetary Fund (IMF) price indices for these commodities in the first quarter of 2009, relative to the FAO food price index, were still well above their average level from 1992 to 2003 (by 25 and 66 percent, respectively; see Figure A). Thus, while lower prices obviously hurt oil and metal exporters, the declines started from a historical high. To the extent that metal- and energy-exporting countries practised prudent macroeconomic management by saving some of the windfall earnings and increasing foreign-exchange reserves, the impact of the recent reduction in prices can be mitigated.

The ratio of beverage prices to food prices on world markets started to increase in the second half of 2008 (Figure B), although the ratio remains within normal historical ranges. Thus, several countries that rely on earnings from beverage exports to import food seem to have experienced a slight improvement in their terms of trade as the economic crisis took hold.

In the case of cotton exporters, the story is more pessimistic. Cotton prices have been falling relative to food prices since 2006, and their decline continued into early 2009 (Figure B). Burkina Faso is one country that has been particularly hurt by these shifts in the terms of trade. Economic modelling suggests that the fall in cotton prices has reduced the purchasing power of households by 3.4 percent. Burkina Faso was also hit hard by the rise in oil prices from 2004 to mid-2008, although the decline in the latter half of 2008 provided some relief.[1]

[1] L.G. Bellù. 2009. *International price shocks and technological changes for poverty reduction in Burkina Faso: a general equilibrium approach.* Rome, FAO.

TABLE 1

Number of consecutive years with crisis occurrence, by type

Country	Consecutive years with occurrence of some type of crisis[1]	Occurrences of human-made crises[1]	Occurrences of natural crises[1]	IMF overall vulnerability assessment[2]	Main type of vulnerability[3]
Somalia	15	16	15	NA	NA
Afghanistan	15	16	10	M	ODA, R
Ethiopia	15	11	13	M	ODA
Iraq	15	15	9	NA	NA
Eritrea	15	11	12	M	R
Sudan	15	15	8	H	T, ODA, R
Haiti	15	4	14	H	ODA, R
Burundi	15	15	1	H	ODA
Democratic Republic of the Congo	15	15	0	H	T
Liberia	15	15	0	H	T, R
Angola	14	13	1	H	T
Mongolia	13	13	12	H	–
Democratic People's Republic of Korea	13	7	12	NA	NA
Uganda	12	13	8	L	–
Tajikistan	11	9	12	H	R
Georgia	10	11	4	M	–

[1] The sum of columns 3 and 4 can exceed the number in column 2 if countries experience more than one crisis in a given year.
[2] H = high, M = medium, L = low, NA= not assessed.
[3] Type of vulnerability indicates the types of shock to which the country is highly vulnerable: trade (T), foreign direct investment (FDI), official development assistance (ODA), remittances (R). A dash (–) indicates that the country did not receive a highly vulnerable ranking for any of the four types of shock, although medium risks from many different types of shocks can lead to high overall vulnerability; NA indicates that the country was not assessed.

Sources: FAO, GIEWS and IMF. 2009. *The implications of the global financial crisis for low-income countries.* Washington, DC.

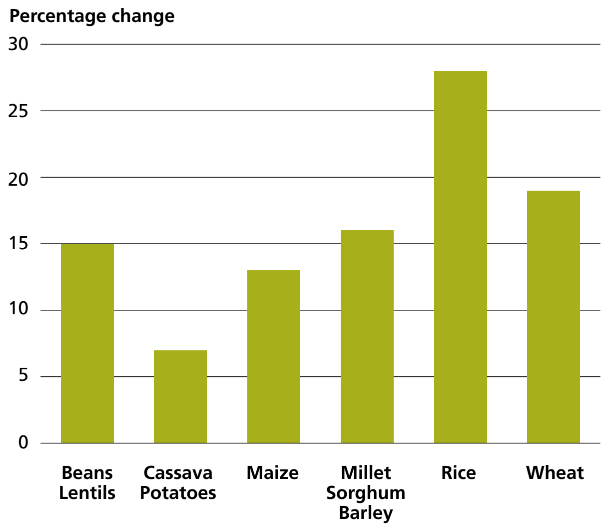
fully understood until recently. The domestic food price database compiled by FAO shows that year-on-year price increases (e.g. January 2007 compared with the same month a year earlier), even after adjusting for general inflation, exceeded 48 percent for half of nearly 127 case studies of domestic grain and bean prices in the developing countries. Although domestic prices for most countries declined somewhat during the second half of 2008, in the vast majority of cases, and in all regions, their decline did not keep pace with that of international food commodity prices. At the end of 2008, domestic staple food prices were still 17 percent higher in real terms than two years earlier, and this was true across a range of important foodstuffs (Figure 10).

Migration and remittances

It is clear that the current economic crisis is precipitating a drop in remittances that will result in lower incomes, and consequent problems, for many. For a significant share of the population living in developing countries, migration and subsequent remittances represent an important livelihood strategy and a source of income for the family members who stay behind. Officially recorded remittances account for around US$300 billion, or 2 percent of total GDP of

FIGURE 10

Domestic food prices remain higher than before the crisis: price increases over two years to end-2008



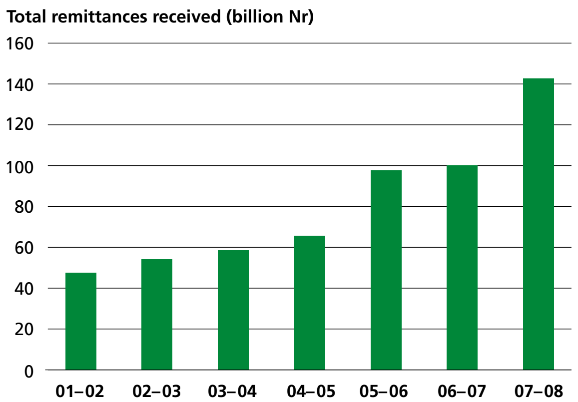
Note: Data refer to median percentage increase in inflation-adjusted price, December 2008 compared with December 2006.

Source: FAO.

Variation in remittance income within countries: the case of Nepal

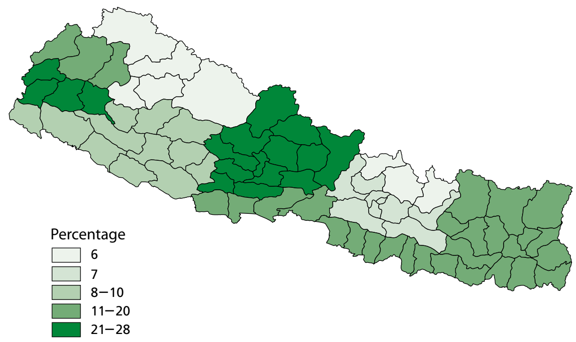
The flow of workers' remittances into Nepal continuously increased from 2001–02 to 2007–08 (Figure A). Remittances tripled from 47.5 billion rupees (Nr) in 2001–02 to Nr 142 billion in 2007–08 (more than doubling in real terms).[1] On the basis of data provided by the Nepalese Department of Labour and Employment Promotion, the number of workers going abroad for employment in 2007–08 increased by almost 13 percent from 2006–07. Many factors have contributed to the recent increase in labour migration. Rapid population and labour-force expansion combined with inadequate domestic growth has stretched the capacity of the economy to absorb workers. In the agriculture sector, arable land is limited, landlessness is pervasive and the number of landless households has been steadily increasing. In the non-agriculture sector, the slowdown in growth as a result of civil strife has further retarded the pace of employment creation. Armed conflict has also

A The increasing importance of out-migration: remittance trends in Nepal



Note: Data are in nominal terms.
Source: Nepal Rastra Bank.

B Share of remittances in household income in Nepal



Source: Calculation based on data from 2003–04 Nepal Living Standards Survey.

developing countries, but the figure goes up to 6 percent for low-income countries.[5] Actual figures are likely to be higher because not all transfers travel through official and measurable channels.

In 2005, 75 million people from less-developed regions were classified as international migrants. At an aggregate level, both men and women have migrated to the same extent for many years: the share of female migrants was estimated at 50 percent in 2005, little changed from 47 percent in 1960.[6]

Global figures fail to convey the important role that migration plays for many individuals, households, nations and regions. For example, remittances tend to be the main source of capital inflow in small countries near the migration corridors of Europe, North America and the Russian Federation. World Bank figures for 2007 show that remittances in Tajikistan amount to 46 percent of GDP, with figures of 25 percent in Honduras and 24 percent in Lebanon.[7] In several large African countries (Egypt, Ethiopia, Morocco, Nigeria and Senegal), remittances account for between 5 and 10 percent of GDP. Within countries, remittances are often concentrated among certain geographic regions (see box on Nepal).

In many developing countries, a sizeable share of households relies on migrant remittances as a source of income. In the Philippines, for example, 17 percent of households receive remittances from abroad. Similar proportions are seen in Albania, Armenia, El Salvador and Haiti, while 25 percent of households in Peru receive some form of private transfer (largely migrant remittances). In the Dominican Republic, 40 percent of households in the Sierra, one of the country's poorer regions, report having migrant members, with about half of them sending remittances.[8]

Remittances flow directly to households, and in some countries and regions (e.g. South Asia; see Figure 11) they are much larger than either FDI or ODA. In many developing countries, remittances constitute a higher share of income for the wealthiest quintiles (Figure 12),[9] although poorer households are generally affected more by a decline in remittance flows because they are less able to cope with income loss.

As with other sources of income, remittances generate multiplier effects for the local economy. For example, when created difficult living and security conditions, especially in rural areas. Many workers view foreign employment as their only viable option.

Increased remittances have contributed significantly to strengthening national GDP. The share of remittances in GDP increased from 10 percent in 2001–02 to 17 percent in 2007–08. The geographical proximity of India, the historical and cultural links between the two countries, and their extensive and porous border, has made India a traditional destination for Nepalese migrants, and it remains their most important destination country. In recent years, however, an increasingly larger share of remittances to Nepal has come from other countries as a result of better job opportunities and higher earnings, especially in the Near East. Indeed, remittances from the Near East now represent a larger share (33 percent) than those from India (24 percent). Malaysia and the United States of America are also important sources of remittances.

Most migrants earn wages in the non-agricultural sectors and are employed in restaurants and factories, or as domestic workers, security guards and maids (in India) and as security personnel, chauffeurs and construction workers in the Near East.[2]

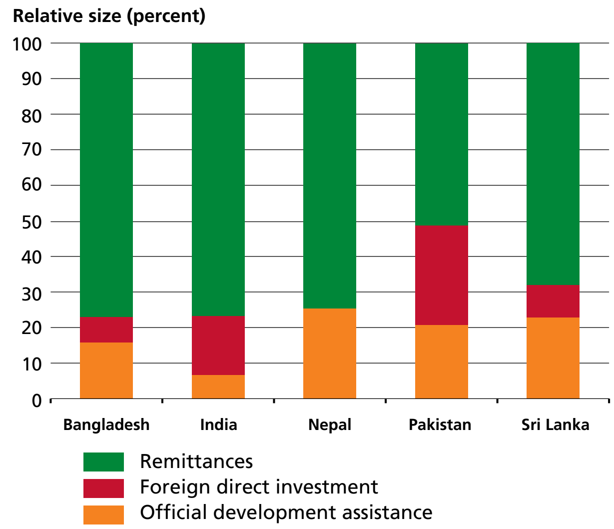
Remittances generate many benefits for Nepal. However, their impact on household income and poverty varies substantially across different parts of the country (Figure B). Based on the 2003–04 Nepal Living Standards Survey, the share of remittances in total household income ranged from more than 20 percent in the Western Mountains, Western Hills and Far-Western Hills to only about 6 percent in the Mid-Western Mountains and Central Mountains. This variance shows why national averages can obscure the importance of remittances in certain parts of a country.

Given the importance of remittances to Nepal, any slowdown as a consequence of the economic crisis could hinder national economic growth. Because the impact of remittances on household income and poverty reduction is uneven across the country, household-level analysis is necessary if appropriate interventions are to reach the right people.

[1] At current exchange rates, approximately US$623.7 million and US$1.86 billion, respectively.
[2] P. Bhubanesh. 2008. *Mobilizing remittances for productive use: a policy-oriented approach.* NRB Working Paper 4. Kathmandu, Nepal Rastra Bank.

FIGURE 11

Remittances are important in South Asia



Source: World Bank.

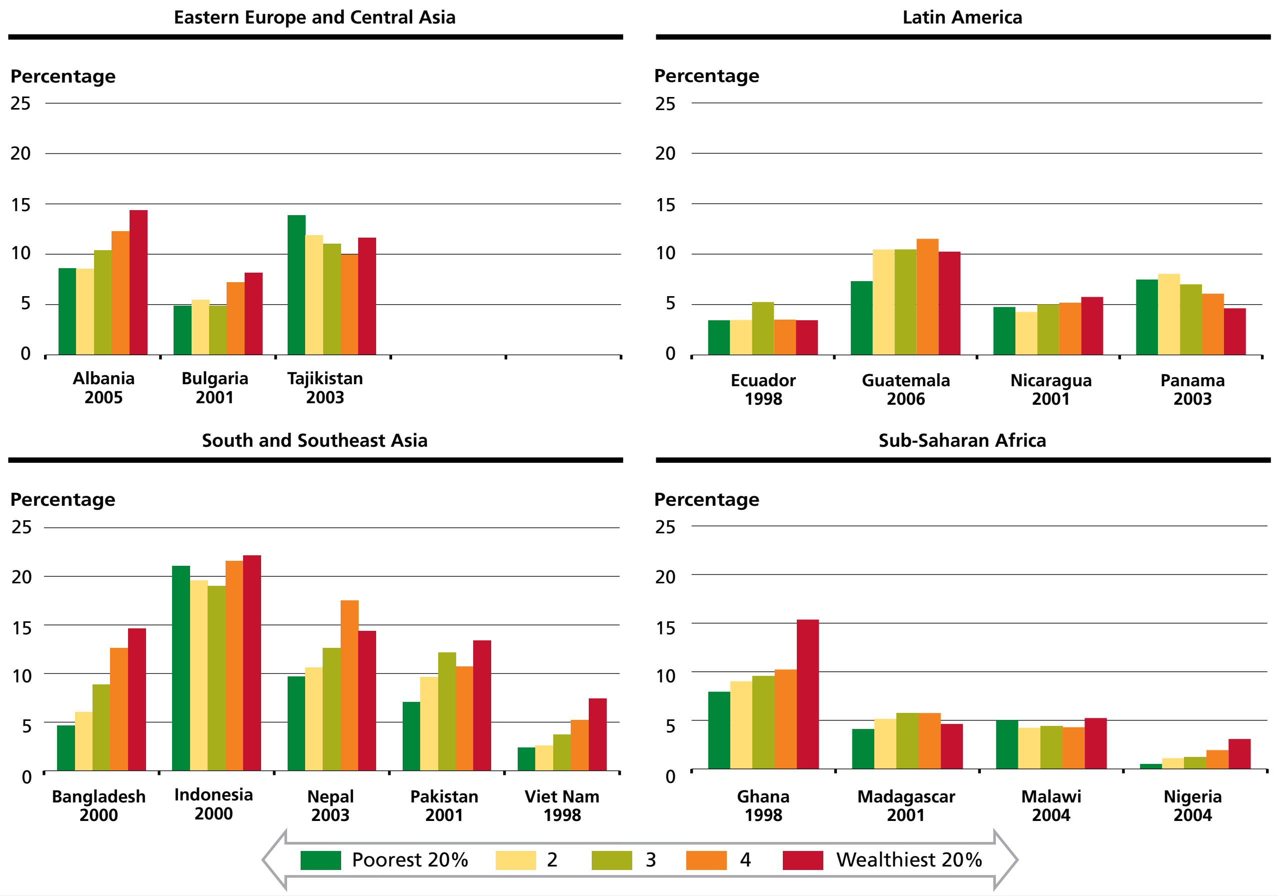
remittances are used to build a house, demand for semi-skilled labour increases, benefiting those who do not have direct access to remittances. These multiplier effects imply that the total impact of a decline in remittances will be greater than the decline in the remittances itself. Empirical studies indicate that the value of this multiplier is often between 1.5 and 2.

In Africa and Latin America, a 1 percentage-point increase in the ratio of remittances to GDP results in 0.29 percent and 0.37 percent declines, respectively, in the number of people living below the poverty line.[10] Remittances are also generally less volatile than FDI, and in past crises have often been counter-cyclical, meaning that they tend to increase when home-country economic growth slows down (or when the home country is hit by a disaster). However, given the global nature of the current crisis – and the fact that the crisis first struck and is most severe in host countries – the World Bank estimates that remittances will fall by 5–8 percent in 2009 after growing by 15–20 percent per year from 2005 to 2007.[11]

The extent of the impact of reduced remittances on different countries will also depend on exchange-rate

FIGURE 12

Remittances typically constitute a lower share of income for the poor: percentage of household income from private transfers (mostly remittances) in selected countries, by income group



Source: FAO.

movements, which will affect, first, decisions on how much money is sent home and, second, the purchasing power of the recipients when remittances are changed into local currency. Eastern Europe and Central Asia, which receive a large share of their remittances from the Russian Federation, are set to face sharp declines given the slowdown in the Russian economy and the devaluation of the Russian rouble (see box on Tajikistan).

Trade, credit, foreign direct investment and foreign aid

The recession in developed countries has had a severe negative impact on trade, credit, FDI and foreign aid. In 2009, global trade is predicted to fall between 5 percent[12] and 9 percent.[13] The plunge in the value of exports will be higher in developing countries than in advanced economies,[14] and will be especially damaging for economies that rely on exports as their main source of foreign exchange.

As the crisis evolves, developing countries face higher costs for external credit, from both private and public sources, as the risk premium for lending money to developing countries has increased by about one-quarter of a percentage point. In many cases, credit is not available at any price as banks ration credit and lend only to those perceived as the most reliable borrowers. Microfinance institutions (MFIs) are experiencing difficulties, although most have built a solid foundation and are poised to expand further in the years ahead (see box, page 20).

Foreign direct investment tends to be highly volatile across time. In the current crisis, it has fallen sharply as private corporations in developed economies face pronounced recession. Table 2 in the technical annex shows that in countries such as Georgia, the Gambia, Jordan and Lebanon, FDI amounts on average to more than 10 percent of annual GDP. The IMF estimated in April 2009 that FDI would fall 32 percent in 2009 in developing economies as a group, with a 15 percent fall in Africa. Most FDI is for mining, industry and services, with very little directed towards agriculture (although some is related to agricultural processing), but reduced employment stemming from the decline will have economy-wide ripple effects, and will in

The impact of declining remittances to Tajikistan

Tajikistan has the world's highest ratio of remittances to GDP, currently estimated at around 46 percent. Based on data from the 2007 Tajikistan Living Standards Survey, researchers at the World Bank have simulated the poverty impact of a decline in international migrant remittances using two different methodologies.[1] The study focused solely on direct remittances effects, without taking into consideration the potential economic recession in Tajikistan (i.e., worsening conditions in the local labour market) or potential second-order effects of remittances (the multiplier effect).

The first approach simulated the impact on poverty of a universal decline in remittances, applying the same percentage reduction across all households and assuming that, at least in the short term, households would not be able to compensate for the loss. The second approach simulated the poverty impact of a given percentage of migrants losing their jobs abroad and returning home to find employment in similar jobs locally, but at substantially lower wages. In both approaches, the poverty impacts of reductions in remittances and migrant employment of 20, 30 and 50 percent, respectively, were simulated.

Under all scenarios, a decline in remittances was seen to push more people into poverty. In the worst-case scenario, a 50 percent reduction in remittances would raise the proportion of people living below the poverty line from 53.1 percent to 59.6 percent, representing a 12.2 percent increase in poverty (see Table). The impact is somewhat lower, although still substantial, when a 50 percent decline in migrant employment is simulated. In this case, absolute poverty would increase to 56.5 percent, or by 6.4 percent. The research found that rural areas would be affected more markedly than urban areas, with the impact ranging between 1.3 and 1.8 times greater, depending on the scenario.

[1] O. Ivaschenko and A.M. Danzer. *Simulation of the impact of reduced migrant remittances on poverty in Tajikistan*. Washington, DC, The World Bank.

Potential impact of economic crisis on poverty in Tajikistan, under various scenarios of reduced remittances

Decline in remittances/ employment abroad *(Percentage)*	Simulated poverty rates under methodology 1 (decline in remittances) *(Percentage of population)*			Simulated poverty rates under methodology 2 (decline in employment abroad) *(Percentage of population)*		
	Urban	**Rural**	**Total**	**Urban**	**Rural**	**Total**
Current (baseline)	*49.3*	*54.4*	*53.1*	*49.3*	*54.4*	*53.1*
–20	51.4	58.6	56.8	50.4	56.3	54.8
–30	52.6	59.7	57.9	51.1	57.3	55.7
–50	53.8	61.5	59.6	51.9	58.2	56.5

Note: Poverty rates are based on the absolute national poverty line derived from Tajikistan Living Standards Survey 2007.
Source: World Bank estimates based on Tajikistan Living Standards Survey 2007.

some circumstances increase back-migration from urban to rural areas.

Foreign aid is the principal source of capital inflow for some of the poorest countries. In sub-Saharan Africa, ODA often accounts for a large proportion of GDP (more than 40 percent in Burundi and Liberia, for example). In Haiti, the Lao People's Democratic Republic and Nicaragua, the share is more than 10 percent. In response to the steep rise in food prices, ODA at the global level increased substantially in 2008. However, development aid typically decreases when donor GDP decreases. Thus, with donor countries facing tougher budgetary constraints in 2009, the IMF projects that the poorest 71 countries will experience an overall drop in ODA of about 25 percent, although the new level will remain above that of 2007.

Agriculture as a macroeconomic buffer

Economic crises have different impacts on various sectors, depending on the nature of the crisis, the size of the sector in terms of employment, and the trade structure of the sector. However, patterns emerge in regard to the agriculture sector. First, for almost all of the cases listed in Table 2, agriculture sector growth rates before and after the crisis were less than that of aggregate GDP (these cases are highlighted in green in the table). Second, in all cases, the growth rate of agriculture is greater than that of GDP *during* the crisis (these cases are highlighted in orange). Thus, agricultural growth tends to be more stable than growth in other sectors.

Agricultural employment also tends to expand during a crisis, as illustrated by the example of Indonesia during the

Impact of the economic crisis on microfinance

Microfinance is widely seen as an important intervention for fighting poverty. The current crisis has not only underscored the vital role of finance in economic growth and development, but has also seriously affected microfinance institutions (MFIs) in many developing countries. One reason is that private investors are withdrawing their funding, which forces MFIs to scale down their lending. This, in turn, can have adverse effects on poverty because the client base of MFIs is dominated by the poor, including consumers, the self-employed and smallholder farmers in rural areas.

Developing countries and emerging economies are affected in different ways and for different reasons. Microfinance institutions in more integrated economies – particularly Central Asia, Europe and Latin America – report the largest impact from the crisis. On the other hand, India-focused microfinance funds supported by foreign investors, which experienced delays in receiving funds in 2008 as investors were concerned about the impact of the financial crisis, can now expect robust fund flows in 2009. Local and regional MFIs in Africa are struggling to survive liquidity pressures as loan defaults soar as a result of higher food prices and reduced incomes. According to a recent survey conducted by the Consultative Group to Assist the Poor (CGAP – an independent microfinance policy and research centre, of which IFAD is one of 33 members), in collaboration with a group of practitioners and development agencies, two-thirds of more than 400 participating MFIs reported declining – or at best stable – loan portfolios and an increase in their portfolio-at-risk levels, reflecting the impact of the crisis.

However, the global industry survey on the impact of the crisis on MFIs and their clients also indicated that the microfinance sector is showing great resilience, in particular where it is built on domestic funding sources (e.g. small-balance deposits). Thus, despite the increased links of MFIs with domestic and international financial markets that have created some problems during the crisis, the microfinance sector as a whole has built sound foundations. There is a broad consensus with regard to financial transparency through the use of ratings, audits and social performance standards, while partnerships with socially driven investors and development finance institutions are providing emergency liquidity funds. This strength, coupled with the potential for substantial further expansion through tapping markets of creditworthy poor clients in rural areas, will ensure that the microfinance sector will survive and help mitigate the effects of the global economic downturn on low-income households. Looking ahead, there is a need to explore the links between financial services and government social safety-net programmes by delivering grant payments into bank accounts, thereby linking social protection and financial inclusion.

This box was contributed by Michael Hamp, Senior Rural Finance Advisor, International Fund for Agricultural Development (IFAD).

economic crisis of 1997–98. Although employment in the Indonesian industrial and electricity sectors fell by 13 and 27 percent, respectively, during the economic crisis of 1997–98, employment expansion in agriculture (at 15.2 percent), more than made up for the reduction in other sectors.[15] A similar pattern emerged in other Asian countries affected by the 1997–98 crisis: agricultural employment rose by 9.1 percent in Malaysia and 5.4 percent in the Republic of Korea, while it fell in the manufacturing sector in both countries.

Why would agricultural growth be less affected than growth in other sectors? First, as income drops, demand for agricultural products, especially food, does not decrease proportionately – people will sacrifice other goods, such as industrial products and services, to make sure they can buy enough food (or as much as their income allows). On the supply side, other sectors may use credit more intensively, while agriculture, especially if it is dominated by smallholders, is more self-financed and thus less affected by sudden credit shortages. This latter argument would be less relevant for large and commercial farms where credit is a key input. Further, the supply of credit might be augmented by migrants who return from urban areas.

In many cases, crises may be accompanied by a depreciation of the exchange rate (e.g. Mexico in 1995, Indonesia and Thailand in 1997–98). This will tend to benefit agriculture because agricultural products are often considered to be relatively more tradable than output from the service sector. But not all economic crises are the same. In the current crisis, the beneficial effects of exchange-rate depreciation on agriculture will be mitigated by the global nature of the economic slowdown and attendant reductions in world commodity prices. Moreover, the global nature of the crisis also makes it less likely that depreciation of any one currency could be an effective boost to that country's exports.

TABLE **2**

Growth rates by major sector for selected countries before, during and after an economic crisis

COUNTRY	PERIOD	Annual average growth rate by sector (Percentage)				
		Agriculture	Industry	Manufacturing	Services	GDP
Indonesia	5 years pre-crisis	2.5	9.2	10.3	8.5	7.1
	1998	**–1.3**	–14.0	–11.4	–16.5	–13.1
	5 years post-crisis	3.0	4.1	4.9	5.8	3.7
Malaysia	5 years pre-crisis	0.5	11.1	12.7	10.2	9.2
	1998	**–2.8**	–10.7	–13.4	–5.0	–7.4
	5 years post-crisis	3.4	6.1	7.5	5.2	5.0
Republic of Korea	5 years pre-crisis	1.4	8.0	7.7	7.2	6.9
	1998	**–6.4**	–8.2	–7.9	–3.9	–6.9
	5 years post-crisis	1.0	7.4	9.7	4.6	6.4
Thailand	5 years pre-crisis	0.7	9.8	10.6	7.2	6.5
	1998	**–1.5**	–13.0	–10.9	–10.0	–10.5
	5 years post crisis	3.3	6.3	6.8	4.0	4.8
Argentina	5 years pre-crisis	1.8	2.0	1.1	3.4	2.7
	2001	**1.1**	–6.5	–7.4	–4.0	–4.4
	5 years post-crisis	3.4	7.1	6.7	3.7	4.9
Brazil	5 years pre-crisis	4.1	3.1	2.2	3.9	3.0
	1999	**6.5**	–1.9	–1.9	1.4	0.3
	5 years post-crisis	4.1	3.0	3.4	4.1	3.0
Mexico	5 years pre-crisis	2.2	3.9	3.6	4.0	3.9
	1995	**0.9**	–7.8	–4.9	–6.2	–6.2
	5 years post-crisis	2.0	3.9	3.9	3.8	5.5
Cameroon	5 years pre-crisis	1.9	–6.1	–1.8	–7.5	–3.6
	1994	**3.1**	–14.4	–3.3	13.1	–2.5
	5 years post-crisis	7.5	4.7	4.3	0.2	4.6
Ghana	5 years pre-crisis	0.2	–1.5	–0.2	2.6	0.3
	1979–1983[1]	**–1.8**	–11.7	–13.8	–1.8	–3.4
	5 years post-crisis	3.5	10.6	12.6	7.7	5.9
Mali	5 years pre-crisis	4.2	5.0	4.8	2.5	3.5
	1994	**6.6**	–4.0	–3.6	–0.6	0.9
	5 years post-crisis	4.4	8.8	–3.4	4.2	5.8

[1] The year when the crisis began and ended in Ghana is not as clear-cut as in other cases but the nadir fell within the years chosen.

Source: FAO calculations based on data from World Development Indicators, World Bank.

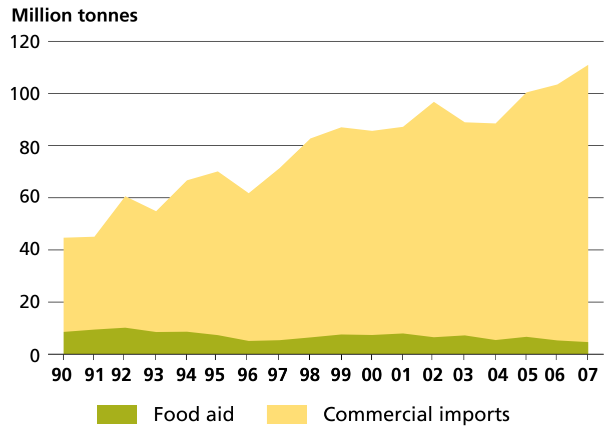
Quantifying the food security impacts of the economic crisis[16]

The impact of the economic crisis on the poor and food-insecure is likely to be substantial, especially in light of the negative impact of soaring food and fuel prices already experienced by the most vulnerable population groups during 2006–08. The more difficult global economic environment has a significant influence on national food security in a number of poorer countries, many of which have become increasingly dependent on grain imports over the past decade (Figure 13). This reliance on food imports was spurred by trade liberalization policies and the expansion and improvement of the global transportation system. Increased reliance on grain imports has helped keep prices more affordable for consumers, but the lack of domestic agricultural growth that drove the imports has exposed many countries to volatility on international markets.

Imported foods, including basic staples such as grains and vegetable oils, now constitute an important component of diets in most countries. From 1970 to 2003, import dependency grew most among the least-developed countries compared with higher-income country groups. In 2003, least-developed countries relied on imports for 17 percent of their grain consumption (compared with 8 percent in 1970), 45 percent for sugar and sweeteners (18 percent in 1970), and 55 percent for vegetable oils (9 percent in 1970). At individual country level, the situation varies significantly. For example, imports accounted for more than half of grain supplies in 11 countries in sub-Saharan Africa (Angola, Cape Verde, Eritrea, the Gambia, Lesotho, Liberia, Mauritania, Senegal, Somalia, Swaziland and Zimbabwe) in 2005–06. In another seven countries (Benin, Cameroon, Côte d'Ivoire, the Democratic Republic of the Congo, Ghana, Guinea-Bissau and Mozambique), this share ranged from 30 to 50 percent.

FIGURE **13**

Developing countries have become increasingly dependent on food imports: grain imports in 70 countries



Note: Data refer to 70 developing countries comprising the model used by the USDA Economic Research Service for its Food Security Assessments.

Source: FAO.

Financial and economic crisis set to deepen food insecurity in 2009

In spite of declines in international food commodity prices during the latter part of 2008, deteriorating purchasing power and higher levels of food insecurity are expected in 2009. Based on historical trends in production in the 70 countries considered by the USDA Economic Research Service model (see box, page 24), the number of food-insecure people will increase by at least 2 percent, which is consistent with FAO's data showing that undernourishment was increasing even before the crises (see page 8). The economic crisis will exacerbate this problem substantially. For countries that are dependent on food imports, and assuming no major domestic production shortfalls, two critical determinants of food import capacity are export earnings and capital inflow (FDI, remittances and foreign aid). When a decline in exports or capital inflows occurs, this is likely to force a reduction in imports, including food imports (unless the country is able to borrow internationally, which is not an option for many poor countries). Thus, even if aggregate world food availability remains unchanged, the access of poor countries to that food will be reduced, compromising their food security. The USDA model examined quantitatively the changes in import capacity of the low-income countries in the face of various external shocks and the resulting implications for food security.

Three scenarios were developed to evaluate the probable impact of the economic crisis on the food security of low-income countries. In the first scenario, export growth of the countries in 2009 is reduced relative to the baseline estimation (i.e., export growth in the absence of economic crisis). This reduction is in the same proportion as the estimated decline in the countries' economic growth for

Are food imports necessarily bad?

The global food crisis of 2006–08 prompted many countries to reconsider the virtues of relying on imports for a significant share of their food consumption. Given the high and volatile prices and market turbulence during this period, it is obvious that countries become concerned about excessive reliance on world food markets. But what constitutes "excessive" reliance, and what are the advantages and disadvantages of reducing this reliance?

First, it is important to realize that domestic food prices in many exporting countries also increased sharply during the crisis, e.g. rice prices in Pakistan, Thailand and Viet Nam, and maize prices in South Africa. In other words, importers are not the only countries that are vulnerable to higher prices on world markets; any country that is open to trade can be affected. Second, price surges can also originate from shocks to domestic agricultural production: a simple policy of insulation from world markets (self-sufficiency) exposes the country to substantial weather-related risks. Thus, there is no easy way to eliminate price instability on domestic markets.

Domestic price stabilization in the face of world price surges is easier if the quantity of imports or exports is a relatively small share of consumption or production, because it can be buffered more easily by reasonable levels of stockholdings. If imports account for 50 percent of consumption, it will be difficult to implement an effective stabilization policy that protects against world price surges. The same is true if exports account for half of production.

The merits of reducing the share of trade in consumption or production depend on comparative advantage. If a country has a strong comparative advantage in producing a particular food commodity, reducing production to reduce the importance of trade (exports) will be counterproductive and harm many farmers. Similarly, reducing the quantity of imports when a country does not have a comparative advantage in production will hurt consumers. Moreover, it is often the poorest who are affected most by such a policy, as was shown in *The State of Food Insecurity in the World 2008.* Analysis of household survey data can help determine which groups are hurt most severely with respect to a specific country and specific commodity.

Of course, comparative advantage is not a static concept. If a country lacks comparative advantage in producing a specific commodity, it may be because of underinvestment in agricultural research, rural infrastructure, roads or other public goods. In such cases, the most appropriate solution would be to increase investment in agriculture, not impose trade restrictions. Even in the short term, before the investment can bear fruit, trade restrictions are likely to be damaging if they increase domestic prices to levels well above world prices on a medium-term basis because the high prices will typically hurt most the poorest of the poor. Further, while it may be sensible to allow domestic prices to deviate from world prices in the short run, pursuing such a strategy over several years can be dangerous. Trade restrictions, once implemented, are often difficult to remove, and can fail to provide sufficient market discipline to ensure that governments and the private sector invest their money wisely. Thus, restricting imports simply to avoid reliance on the world market may lead to domestic food prices remaining high all the time, not only when world prices are high. A more effective and lasting solution would be to invest more in agriculture to enhance productivity growth.

2009, resulting in estimated 50 percent declines in export growth in North Africa and sub-Saharan Africa, a 40 percent decline in Asia (60 percent in Central Asia) and a 60 percent decline in Latin America and the Caribbean. For example, an Asian country with previously forecast export growth of 10 percent would see this growth reduced by 40 percent, that is, to 6 percent. This scenario assumes constant financial inflow (including FDI, remittances and foreign aid) to finance trade deficits. The second, or middle, scenario takes the assumption of the first scenario and, in addition, reduces capital inflow in 2009 by 25 percent (because of cuts in FDI, remittances and, possibly, ODA). The third scenario takes the assumption of the first scenario and reduces capital inflow in 2009 by 50 percent.

Under the first scenario, the reduction in export earnings growth and the subsequent cut in import capacity are projected to result in a decline in food consumption that equates to a 7.3 percent rise, over the baseline estimate, in the number of food-insecure people. The impact will not be uniform across all regions and countries as the results vary according to individual countries' dependence on food imports, export earnings relative to overall foreign exchange availability, and initial position with respect to food security.

Under the second scenario, when a 25 percent cutback in capital inflows is added to the reduced growth of export earnings, the food security situation of the countries is projected to deteriorate to a larger extent because of an even greater decline in food imports. Under this scenario, 9.2 percent more people are projected to become food-insecure relative to the baseline estimates for 2009. This scenario has been used to generate the undernourishment estimates provided earlier in this report (see page 11). Finally, the third scenario results in an 11.6 percent increase in the number of food-insecure. All three scenarios are, of course, hypothetical: the actual impact will vary depending on national and international responses to the economic downturn.

The number of food-insecure people in sub-Saharan Africa is projected to increase by 6 percent under the second scenario (Figure 14), compared with 3 percent and 9 percent under the first and third scenarios, respectively. Sub-Saharan Africa is the world's most food-insecure region. Average calorie intake in the region barely exceeds the daily requirement of 2 100 kcal, and is by far the lowest in the world. Many countries in this region do not have an adequate supply of food, and income inequality exacerbates the problem. The countries that will be hardest hit by the economic crisis are those with high levels of balance-of-payments deficits and high food-import dependency.

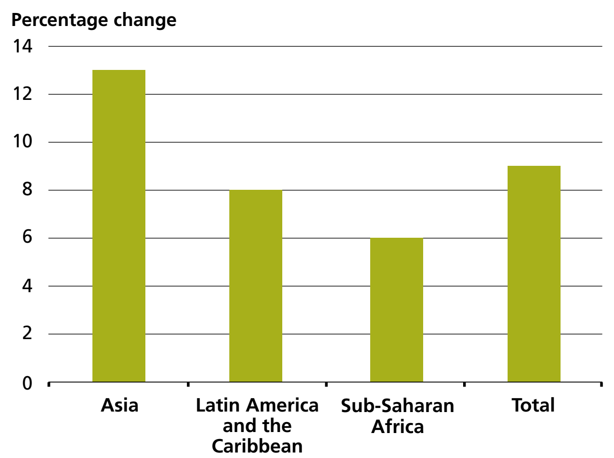
The impact of the second scenario relative to the baseline is projected to be an 8 percent increase in the number of food-insecure people in Latin America and the Caribbean (compared with 4 percent and 20 percent under the first and third scenarios). As in sub-Saharan Africa, the share of food imports has grown over time, as domestic food production has failed to keep pace with rising food demand. Trade liberalization policies and income growth have been the main forces behind the increase in consumption. High levels of income inequality increase vulnerability to food insecurity in this region also. A key concern in the region is the decline in remittances, which in many countries exceed the sum of FDI, ODA, and government and private borrowing. Remittances often provide income for the poorest segment of society and are spent on basic necessities such as food (see *Migration and remittances* on page 15).

The number of food-insecure people in Asia (including Central Asia) under the second scenario is estimated to increase by 13 percent from the 2009 baseline, compared with increases of 11 percent and 13 percent, respectively, under the first and third scenarios. The impact is generally larger than in sub-Saharan Africa and Latin America and the Caribbean, driven by the importance of foreign trade to Asian economies. The importance of trade in goods and services also means that the incremental impact of a further decline in capital inflows is relatively small, as evidenced by the similar decline across the three scenarios. Asia's increasing links with the international economic environment, particularly the performance and policies of the major developed countries, means that the weakening of the global economy directly affects the food security situation of countries in this region, many of which suffer from persistent and extreme poverty. India will be less affected than many other Asian countries because its cautious financial policies have reduced the country's exposure to external financial shocks. In addition, continuing government support to the agriculture sector has transformed India from a net importer of grains to a net exporter.

Overall, the magnitude of changes in food-insecurity indicators under the various scenarios described above

FIGURE **14**

The disturbing impact of the economic crisis on undernourishment in 2009



Note: Data refer to USDA Economic Research Service scenario 2 relative to the baseline.

Source: USDA.

How is food security assessed by the USDA Economic Research Service?

The Economic Research Service food security model projects food consumption and access in 70 low-income developing countries: 37 in sub-Saharan Africa, 4 in North Africa, 18 in Asia (including 8 in Central Asia) and 11 in Latin America and the Caribbean. Because of the focus on lower-income developing countries, several large developing countries are not included (e.g. Argentina, Brazil, China, Mexico, South Africa). Commodities included in the model are grains, root crops and a group called "other" that encompasses all other foods. The three commodity groups in total account for 100 percent of calories consumed. The population of each country is divided into five equal groups (quintiles) according to per capita income. Food consumption varies across these groups, with the poorest consuming the least amount of food. Based on the food consumption of each quintile and the total population, the model estimates the number of people who are unable to meet their nutritional requirements of 2 100 kcal per day.

Impact of higher prices on African producers

A recent USDA Economic Research Service project examined the impact of higher food prices in Africa. One aim of the study was to determine whether higher prices are being passed on to local farmers, who might then increase production and compete effectively with imports in regional markets. In most cases, producers' ability to respond to the higher prices was constrained by a lack of access to capital, poor infrastructure, limited technology, limited information, few inputs and poor-quality seeds. These obstacles translate into poorly integrated markets where prices vary significantly between producers and consumers as well as from one area to another.

In Ghana, for example, at the peak of global grain prices in mid-2008, the government provided subsidies for fertilizer and tractors. These subsidies were targeted principally towards poorer maize farmers, but even at the subsidized prices, many farmers were unable to afford fertilizer, let alone tractors. Fertilizer prices in Ghana increased by around 50 percent between April 2007 and August 2008. Marked price variations existed among different local markets to the extent that the difference in maize prices in two different towns – only 65 miles (105 km) apart – was almost threefold.

Similar issues were reported in Kenya, which is vulnerable to increases in world fertilizer and energy prices because all its fuel and fertilizer are imported. Flat farmgate prices (despite rising consumer prices) and the increased costs of agricultural inputs (fertilizer prices tripled in six months) and transportation reduced food-production incentives. This situation, coupled with domestic political unrest, meant that about half of the agricultural land in the northern Rift Valley (the key maize-producing area) was not prepared for the 2008 planting season.

In Mozambique, the recent high food prices were felt strongly at the consumer level but the country's size and geography limited price transmission to farmers. With a fractured agricultural market and poor infrastructure hindering trade, opportunities for agricultural producers to capitalize on the relatively high and growing incomes in the urban areas are limited. The study found that at the market in Maputo, imported Argentinian maize was available for the same price as maize transported internally from the northern part of the country. This means that domestic production is more likely to be traded within rural communities or to rural areas of neighbouring countries, such as Malawi or Zambia, that face similar market infrastructure constraints.

In Uganda, despite growing demand, production response was low for various reasons. The primary factor underlying low productivity is land fragmentation – food production is dominated by smallholders with 1–2 hectares of land. These producers do not have access to credit markets and cannot afford fertilizer or high-quality seed varieties. This situation has led to a decline in both land fertility and crop quality. Moreover, the food market (with the exception of sugar) is fully liberalized, meaning that there are no input or production subsidies and no tariffs on exports and imports. Government expenditures on agriculture accounted for about 1.5 percent of total expenditures in 2006 and 2007. With no farm organizations to enhance producers' bargaining power, cash-strapped farmers tend to sell their crops soon after harvest rather than store their crop and wait for higher prices.

highlights the vulnerability of millions of poor people whose food consumption is equal or close to the daily nutritional requirement. Each year, such vulnerability is intensified either because of internal factors, including weather-related domestic production shortfalls and inadequate domestic policy responses, or external factors such as the global economic shocks currently being experienced.

The scenarios also reveal an important aspect of the food security equation – the growing role of food imports in many low-income countries (see box on page 23). Where domestic production accounts for most of a country's food supplies, a reduction in imports will probably have a negligible effect on food security. However, for countries that have become increasingly dependent on imports, a decline could exacerbate their vulnerability. Regionally, import dependency for grain, the main staple food consumed by the poor, is lowest in Asia, followed by sub-Saharan Africa, Latin America and the Caribbean, and North Africa. Most of the countries in Latin America and the Caribbean and in North Africa included in the USDA study import almost half of their grain supplies. Some countries can forgo imports of other commodities and allocate a much larger share of their import budget to food during the crisis period, but for those that were highly food-insecure at the outset, including many in sub-Saharan Africa, a decline in economic growth and import capacity can have severe adverse implications and amplify food insecurity.

Performance in food production clearly plays a crucial role in national food security. Since 1990, sub-Saharan Africa has demonstrated the highest growth in grain production – 2.8 percent per year – but this growth has been almost negated by the region's high population growth of

2.7 percent per year (compared with less than 1.5 percent in the other regions). Nearly 90 percent of the production growth in sub-Saharan Africa over the last two decades is attributable to area expansion; the region's yields are the lowest in the world, at about one-third of the global average. This means that most countries are far from their maximum technical potential for growing crops. The recent high grain prices have improved production incentives for countries that have relatively productive resources and market economies that are efficient enough to take advantage of the higher prices. However, in most sub-Saharan African countries, producers' responses to price changes are small because of poor market infrastructure, high input costs and limited access to new technologies. A USDA Economic Research Service study of four sub-Saharan African countries (Ghana, Kenya, Mozambique and Uganda) showed that a variety of factors constrained a local supply response to the higher prices, including rising costs of imported inputs and transportation and infrastructure constraints (see box, page 25).

Coping mechanisms of the poor and food-insecure

How do households cope with declines in income?

When families are faced with increased unemployment, declining wages and reduced demand for their work, they will attempt to maintain income through migration or participation in new types of economic activity. Alternatively, they will try to smooth consumption through selling assets, such as livestock, or borrowing when access to credit markets is feasible. They will also alter their spending patterns by decreasing expenditures on durable goods the most and on food the least. Food expenditures also shift towards calorie-rich, energy-dense foods (e.g. grains) and away from more expensive protein- and nutrient-rich foods (Figure 15).

All the above coping strategies draw down the assets of the poor. For example, migration may reduce community cohesion, increased female employment may reduce visits to health-care providers, asset sales reduce the stock of physical or financial resources, and switching from more-nutritious foods (such as meat, dairy products, fruit and vegetables) towards less-nutritious grains may increase malnutrition and reduce children's cognitive potential. When facing a crisis, households must choose which type of assets to draw down. In many cases, there will be a gender dimension to this decision, for example boys' or girls' education, husband's or wife's assets.[17]

Poorer households, faced with tighter budget constraints, are of course hit harder than wealthier households. During the 1997–98 Asian economic crisis, for example, school enrolment in Indonesia declined more among the poor. In Cameroon's economic crisis in the 1990s, the prevalence of underweight children under three years of age increased substantially more for the poorest half of the population (7–8 percentage points) than it did for the wealthiest half of the population (2–3 percentage points). During Zimbabwe's drought in the mid-1990s (not an economic crisis, but it resulted in a loss of income), young children living in the poorest households suffered a substantial reduction in growth rate, and these children remained shorter than would otherwise be expected several years later. These effects are particularly worrisome because there exists a large body of literature that suggests that stunting is associated with reduced cognitive skills and slower progress in school as a child, as well as reduced earnings as an adult.[18]

There is an important gender component to these coping mechanisms in terms of women's work participation. Women in developing countries tend to work more when per capita GDP declines (Figure 16), but the relationship varies among women of different educational levels. In most regions, with the exception of sub-Saharan Africa, women with less education tend to increase work participation more in times of economic crisis than do women with more education.

Because working mothers in developing countries are less likely to seek health care for themselves or their children, health outcomes often deteriorate for the poor during times of crisis, while they actually improve in developed countries. During Mexico's 1995 crisis, infant mortality rates increased most in the areas where women's work participation increased. In addition, economic crises have a significant impact on infant mortality: a 4 percent decline in per capita

FIGURE 15

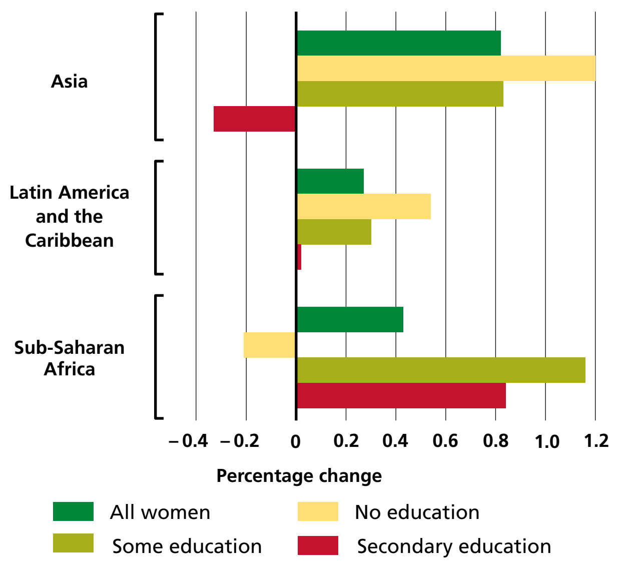
Coping mechanisms in times of crisis: how households respond to declines in income

	ACTIONS	COSTS
New economic activities	Increased participation in income-generating activities (especially women) Migration to areas where there are job opportunities Return migration to village/country of origin	Reduced leisure or other activities; maternal care, nutrition, education may suffer Loss of community cohesion, break-up of family Reduced wages in local labour markets
Consumption smoothing	Sale of assets Borrowing from formal/informal markets	Loss of future earning potential, possible poverty trap Reduced future earning potential, increased risks
Change in consumption patterns	Shifting dietary patterns towards cheaper (starchy) foods and away from micronutrient-rich foods such as milk, meat, fruits and vegetables Reduced expenditures on health, education, durable and semi-durable goods to maintain expenditure on food	May cause malnutrition and micronutrient deficiencies with serious health consequences May negatively affect health of household members and jeopardize future earning potential

Source: FAO.

FIGURE 16

Increase in female work participation rates in response to a 10 percent decline in per capita GDP, by education level



Source: See notes on p. 56.

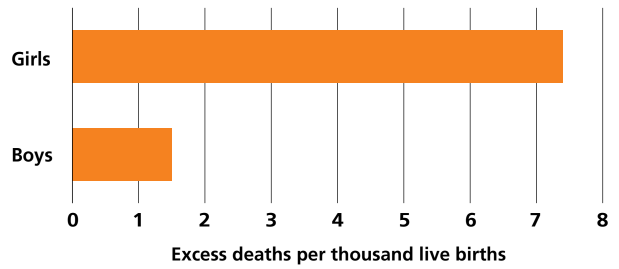
GDP is associated with a 2 percent increase in infant mortality. Furthermore, the effect of negative shocks to GDP on infant mortality is five times larger for girls than for boys (Figure 17).[19]

Internal return migration: agriculture as a household-level crisis buffer[20]

In addition to its macroeconomic buffering function as discussed earlier, agriculture can also serve as a household-level buffer by providing inexpensive shelter, food and employment for unemployed labourers from urban areas in times of crisis. In Ghana, agriculture acted as a safety net for retrenched workers and others during the economic crisis of the 1980s.[21] It also acted as a safety net for many of the 1.2 million Ghanaians who were repatriated from Nigeria in 1983 in response to the economic crisis in that country. This process was eased by the relatively abundant supply of land in some regions of Ghana. During the current crisis, agriculture has served this function in many Asian countries, including China, and even in some developed countries, such as Spain. Non-farm activities in rural areas can also help to absorb labourers who had to leave urban areas. Indeed, such activities may be more

FIGURE 17

Girls are more affected by economic crises: increase in infant mortality above non-crisis baseline



Note: Data are based on 122 cases of major declines in per capita GDP in developing countries.

Source: See notes on p. 56.

appropriate for people who have not worked on a farm in many years.

How large are the back-migration flows? Are they permanent or temporary?

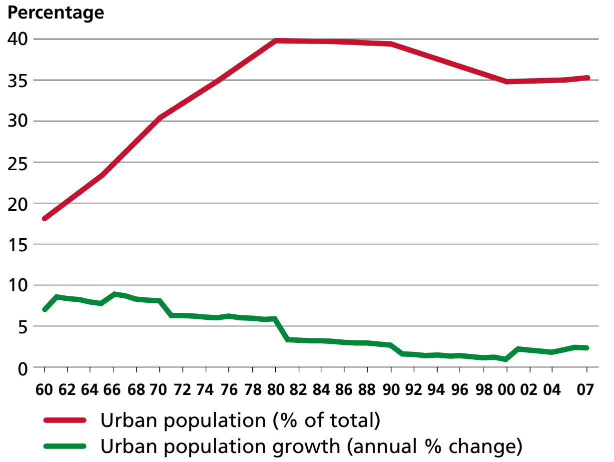
Not surprisingly, back-migration flows from urban to rural areas in times of crisis are greater in poorer countries where the agriculture sector is larger. For example, in Indonesia during the 1997–98 Asian crisis, 6 percent of all prime-age adults moved from urban to rural areas in just one year – this is equivalent to 11 percent of total agricultural employment. In contrast, return migration in Thailand was equal to just 1 percent of total agricultural employment in 1997, and 2–3 percent in 1998, with much of the back-migration going to the impoverished northeast of the country.[22] The reduced absorptive capacity of Thai agriculture was probably a result of investments in labour-saving technology in the early 1990s that were made in response to rising real wages.

For the urban unemployed, return migration is probably a temporary coping strategy in most cases. Agricultural work holds little attraction: the work is hard, the pay is poor and many urban returnees have lost their farming skills, in particular those needed in the cash-crop sector.[23] Thus, while there was urban-to-rural migration in Thailand in the wake of the 1997–98 crisis, that back-migration was quickly reversed by out-migration from rural areas of just over 5 percent of total agricultural employment in 1999, in continuation of the previous longer-term trend.

Nevertheless, in some cases back-migration to rural areas may be more permanent. In China, for example, about 38 percent of all migrants over the past decade have returned home.[24] In part this was due to the *hukou* system, where migration to urban areas is restricted and households need to register their residence. Although now less stringent than in the past, the *hukou* system still influences the job security that rural migrants face in urban areas. A chronic crisis in Zambia's ailing copper industry (located in

FIGURE 18

The decline of Zambia's copper industry has contributed to a reduction in the urbanization rate



Source: FAO.

Copperbelt Province, an urbanized area) may also help explain the gradual fall of the country's urbanization rate (Figure 18).

Buffer role comes at a cost

Some policy-makers encourage return migration as it lessens the burden on cities and makes unemployment less visible, may reduce political instability, and relieves the pressure on a government's already strained budget at a time of crisis. But there are also costs involved. Rural households will need to cope with reduced levels of remittances, and at the same time will have to deal with increased food demand following the arrival of return migrants.

The impact on rural households depends on whether the people returning can be employed productively. If this is not the case, households will be burdened with extra mouths to feed without any attendant increase in resources. Unfortunately, there is little empirical evidence on this issue. There is evidence from China that out-migration has a negative impact on agricultural productivity (implying that return migration will have a positive impact), but evidence from Thailand suggests that the smallholder sector could not absorb the low-skilled urban labour dislocated by the 1997–98 economic crisis.[25]

Case studies of countries affected by the economic crisis

The first section of this report described how hunger has been on the rise for the past decade, even before the 2006–08 food crisis and the current economic crisis. It then described the nature of the economic crisis and how it is transmitted to developing countries, the impact on undernourishment, and the coping mechanisms used by the poor to deal with the situation. In this section, we present case studies that show how the economic crisis is affecting five countries and the poor people who live there. Two of the five (Bangladesh and Nicaragua) are rated by the IMF as being at medium risk from the crisis, while the other three (Armenia, Ghana and Zambia) are rated as high risk.

A variety of coping mechanisms have been used by the poor to adapt to the crisis, depending on their own specific situation (Table 3). The relative importance of remittances, FDI and ODA varies across these countries (Figure 19). The importance of remittances (Figure 20) and trade has been increasing over the past decade (Figure 21), although trade in goods and services relative to GDP has declined in Armenia during the past 15 years.[26] Analysis of the FAO price database shows that the global food crisis caused key staple food prices to increase in all of these countries (Figure 22).

TABLE **3**

Transmission channels (financial inflows), government responses and household adaptations used by the poor in five countries affected by the economic crisis

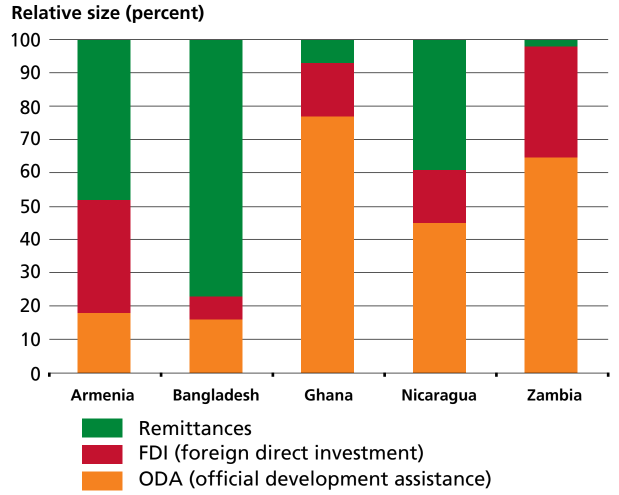
	Armenia	Bangladesh	Ghana	Nicaragua	Zambia
Transmission channels	Remittances	Remittances, FDI, ODA	Remittances, trade, FDI, ODA	Remittances, FDI, ODA	Trade, remittances, FDI, ODA
Government responses	Building infrastructure, subsidies to small and medium enterprises, creation of two free economic zones, building of affordable housing, increase in minimum wage	Scaling-up of pre-existing food distribution programmes, tax breaks, cash subsidies	Targeted cash transfer programme (LEAP), national health insurance, education allowance, school feeding, national youth employment programme	School feeding, productive safety nets, fair-price shops	Increased spending on education, health and agriculture
Household adaptations: new income sources	Small-scale business development	Casual labour	Migration, crop diversification, casual labour	Out-migration, petty trade, collecting fuelwood	Return to farming, petty trade, theft, prostitution
Household adaptations: consumption smoothing	Livestock sales, borrowing	Borrowing	Livestock sales	Livestock sales, borrowing	Support from extended family, livestock sales
Household adaptations: changes in expenditure patterns	Dietary changes (wheat to potatoes), reduced use of health services	Eating fewer meals, eating lower-quality foods, cutting health expenses	Dietary changes (maintain staple food consumption but reduce intake of other foods), shift from private to public school, reduced health expenditures	Dietary changes	Eating fewer meals, eating lower-quality foods, cutting health and education expenses

Notes: The items listed under transmission channels for each country are those identified by the IMF as channels where the particular country is at high or medium risk from an adverse shock. FDI = foreign direct investment. ODA = official development assistance.

Source: FAO.

FIGURE 19

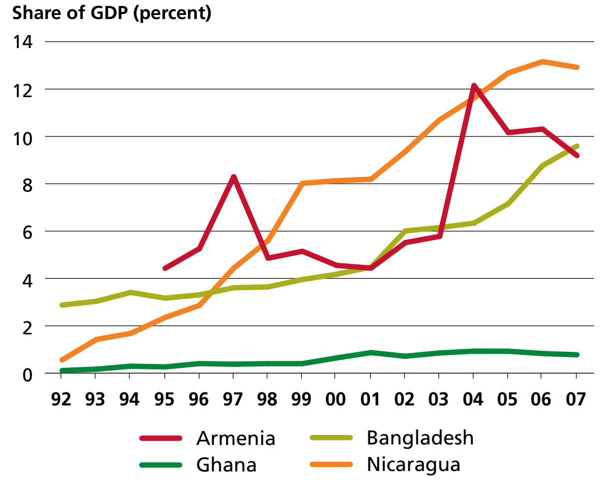
Different countries are vulnerable to different shocks: relative importance of ODA, FDI and remittances



Source: World Bank.

FIGURE 20

The importance of remittances has increased

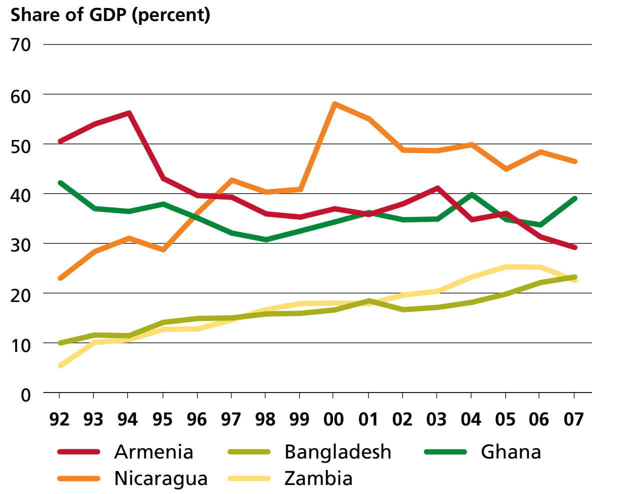


Note: GDP = gross domestic product.

Source: World Bank.

FIGURE 21

The changing importance of trade: average of imports and exports as a share of GDP

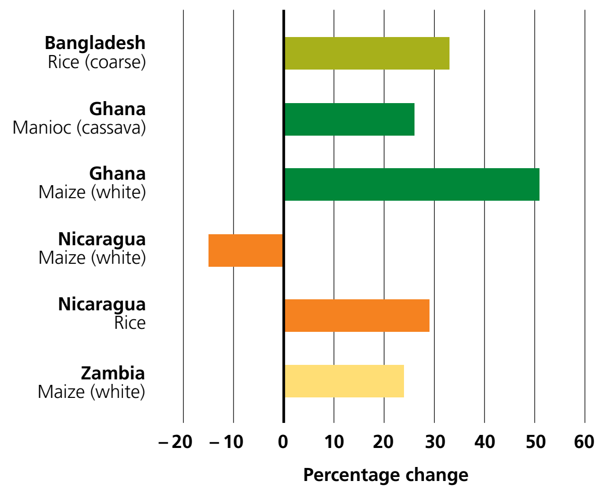


Note: GDP = gross domestic product.

Source: World Bank.

FIGURE 22

Staple food prices soared: increase in real prices from 2007 to 2008



Sources: FAO and Ghana Ministry of Food and Agriculture.

Armenia

Armenia is a mountainous landlocked country in the South Caucasus with a population of 3.2 million, 64 percent of whom live in urban areas. Despite many difficulties, Armenia has successfully switched to a market economy over the past decade, with double-digit growth rates between 2000 and 2007. Wheat is the main staple, supplying about 48 percent of total caloric intake.

Macroeconomic impacts

According to the IMF, the Commonwealth of Independent States (a regional organization whose participating countries are former Soviet republics), of which Armenia is a member, will be more affected by the global economic crisis than any other region.[27] During the first two months of 2009, Armenia's GDP decreased by 3.7 percent compared with the same period in 2008, leading the IMF and the World Bank to revise their growth projections downward for 2009 to minus 5 percent and minus 8 percent, respectively. This situation contrasts with average annual growth of 12.6 percent from 2000 to 2007. In early March 2009, the Armenian currency (the dram) was devalued dramatically, losing 18 percent of its value in a single day. Such depreciation causes substantial inflation.

The Armenian economy relies to a large extent on the European and Russian markets for its trade, and its main trading partners have been hit heavily by the crisis. The slowdown has been particularly felt in the construction sector – a key driving force behind Armenia's recent economic growth – as activity has slowed in the Russian Federation and in Armenia itself. The mining sector has also been hard hit by the steep fall in international prices of copper and molybdenum, as has the chemical industry following a slowdown in global demand for chemical products.

Besides being a major trading partner, the Russian Federation accounts for the bulk of foreign remittances from seasonal and long-term migrants. More than 80 percent of Armenia's labour migrants are in the Russian Federation and remittances in 2007 accounted for about 9 percent of GDP, substantially higher than in the mid-1990s (Figure 20). Because of these factors, the IMF rates Armenia as highly vulnerable to a decline in remittances. Furthermore, an extended decline in remittances seems likely, as official remittances dropped by about 35 percent in February 2009 compared with one year earlier. According to International Organization for Migration (IOM) data, departures to the Russian Federation and other members of the Commonwealth of Independent States in March 2009 decreased by 25 percent compared with the previous year.[28] Foreign direct investment, which is another important source of capital inflow (Figure 19), is also expected to decline given the sharp slowdown in the Russian Federation (the main source country).

Past economic growth in Armenia has been accompanied by significant poverty reduction, but a decline in income levels could cause many people to slip back into poverty, negating the progress of the past few years. According to World Bank estimates, the current crisis could push 172 000 more people below the poverty line in 2009–10, increasing the total number of poor people to an estimated 906 000, of whom 297 000 will be extremely poor.[29]

Effects on food security and livelihoods

As most households in Armenia rely on markets to meet their consumption needs, the crisis has an impact on households' ability to access sufficient food and cover other basic needs such as heating, health and education. Many households have already started to substitute wheat products with cheaper potatoes and have reduced their consumption of meat and dairy products to save money. In the longer term, this could lead to greater risk of micronutrient deficiencies. Combined with an increased exposure to diseases – caused by reduced use of health services and lack of funds for heating during the cold winter months – the crisis could lead to increased malnutrition and child mortality if the negative trend continues and mitigation efforts by the Government and the international community do not succeed.

The households most adversely affected by the shock are those relying on remittances from seasonal and long-term migrants or wage labour in the construction and production sectors (particularly the mining and chemical industries). However, households relying on agriculture, trade or social benefits will also be affected indirectly.

According to national statistics, about one-fifth of households had a migrant member aged 15 years or older in 2007.[30] Two-thirds of this migration is to other countries, primarily the Russian Federation, with an overwhelming majority of migrants working in construction, which – until the economic crisis – had boomed in recent years.

Remittances from migrant labour plus substantial transfers from the large Armenian diaspora constituted a substantial part of household income before the crisis (9.2 percent in 2007). Even in the poorest quintile, remittances still made up 7.1 percent of income. Households depending on remittances from seasonal migrants and other sources have already experienced a steep drop in income as many seasonal migrant labourers are still waiting for their payments from the 2008 migration season. Migrants with permanent residence abroad find it more and more difficult to send money to their families and friends in Armenia. Households are currently coping by increasing their use of credit for purchases, which, given the bleak outlook for the 2009 migration season, could push households into serious debt.

In 2007, the Armenian construction sector accounted for one-quarter of GDP and was a major force behind rapid economic growth. Construction workers in Armenia are facing a decline in construction activities within the country and competition with tens of thousands of construction workers returning from the Russian Federation. Employees in the mining sector and chemical industry have been slightly more protected through government interventions, but even these workers have already been forced to take paid leave at lower wages and fear losing their jobs in the near future.

Small-scale farmers and livestock breeders living at higher altitudes, who often combine subsistence agriculture with seasonal labour migration to the Russian Federation, are particularly vulnerable to the downturn. They are coping by selling off their few productive assets, especially livestock, which will hamper their ability to participate in the eventual recovery.

Many small shops in rural Armenia are faced with the problem of an increasing number of households being forced to buy food and other basic commodities on credit. Shop-keepers are fully aware that many of their customers might not be able to repay their loans in the near future, and some have decided to stop providing goods on credit, further limiting household mitigation strategies.

Despite the importance of education, households may be forced to cut their spending on educational costs. This will primarily effect tertiary education, as parents are no longer able to afford school fees and hostel rents.

What are the ongoing responses?

It is commonly reported that the Government of Armenia's social-benefit system has contributed to poverty reduction. Social transfers such as pensions and family benefits contributed 18 percent of total income for households in the bottom quintile in 2007. Households receiving this benefit are somewhat protected from the impacts of the global crisis as both pensions and family benefits increased between 2008 and 2009. Nevertheless, these households are still affected by price increases caused by the currency depreciation. Unfortunately, about one-third of very poor households were not covered by social transfers in 2007. Furthermore, the crisis will place more people in need of assistance, further straining the Government's budget, which is already hampered by losses in tax revenues as a result of the general economic downturn.

Households with employed members in the public sector were helped by a 50 percent increase in the official monthly minimum wage. Since the dram's depreciation, however, the new monthly minimum is less than US$90, meaning that a household of three or more people with only one income earner will have a per capita income of less than a dollar per day. This group is often referred to as the "working poor".

In April 2009, the Government announced an anti-crisis action plan to promote economic growth through the realization of pan-Armenian projects that had already been planned, including the construction of a nuclear power plant, an Armenia–Iran railway line and the creation of a pan-Armenian bank. In addition, the Government plans to support some existing and emerging enterprises through subsidies, and to promote small- and medium-enterprise development through the creation of two free economic zones. Social-sector priorities include the full and timely implementation of social-sector commitments, a sharp increase in the level of public works, and the availability of affordable housing. These projects, however, can only be realized with the support of external financing.

Bangladesh

Bangladesh is home to more than 150 million people concentrated in 144 000 km^2. More than 40 percent of the population are children and three-quarters of Bangladeshis live in rural areas. The country sits within the world's largest delta, formed by the Ganges, Brahmaputra and Meghna rivers, making it extremely vulnerable to floods and cyclones. Rice is by far the dominant staple, accounting for more than 70 percent of calories.

In the past decade, Bangladesh has made impressive economic and social progress towards achieving some of the MDGs, despite repeated natural disasters and external shocks. Average GDP growth from 2003 to 2008 was more than 6 percent. The country has met the MDGs for gender parity in education (MDG 3) and universal primary education (MDG 2) well ahead of time. Although poverty fell from 57 percent of the population in 1990 to 40 percent in 2005, challenges remain in eradicating hunger (MDG 1). Recently, the global food and fuel crisis and 2007's Cyclone Sidr have further tested the capacity of the country to meet MDG 1.[31] A nationwide survey conducted by WFP, the United Nations Children's Fund and the Government in November–December 2008 to assess the impact of high food prices on the population indicated that one in four Bangladeshis was severely food-insecure and that there was a significant increase in severe malnutrition (wasting, stunting and underweight) from the 2005 levels. The global economic crisis could further compound the situation.

Macroeconomic impacts

The economy has become increasingly open to global markets during the past 15 years, both in terms of remittances and in terms of trade in goods and services (see Figures 20 and 21). Bangladesh is heavily dependent on migrants' earnings in the Persian Gulf and other countries, and the IMF rates it as highly vulnerable to a decline in remittances. Indeed, Bangladesh is the fifth-largest recipient of remittances in the world, and remittances are much more important than either FDI or ODA (Figure 19). Ready-made garments are the main driver of exports, accounting for nearly 80 percent of the total. Almost half of the exports go to the European Union and 25 percent to the United States of America, making Bangladesh vulnerable to the recession in those parts of the world. Agricultural exports of shrimp, jute and tea are also important.

The volume of trade, which had increased in previous years, declined in the second half of 2008. A further decrease of 7 percent was observed in January 2009 compared with January 2008. Exports of ready-made garments are diminishing (as reflected by a decrease of the utilization declaration). Fish exports to the European Union and the United States of America decreased by 16 percent in July–December 2008 compared with July–December 2007. Jute exports to the European Union and the United States of America declined by a similar amount during the same period, and then fell further (by 20 percent) in January 2009 compared with January 2008. The emigration of migrant workers decreased by 40 percent in January–March 2009 compared with the same period in 2008. Cancellation of 55 000 work visas to Malaysia in March 2009 is adding to concerns about the increasing number of deportees, which nearly doubled from 4 800 in January 2009 to 8 000 in February 2009.

Effects on food security and livelihoods

The recent declines in exports, remittances and income arrive on the heels of the global food crisis and Cyclone Sidr (November 2007), and are further testing the resilience of the Bangladeshi people. In January 2008, domestic rice prices soared to 53 percent above January 2007 levels (in real terms), and, as late as July 2008, rice prices were still 45 percent above those of a year earlier. On average, the real price of rice in 2008 was 33 percent higher than in 2007 (Figure 22). Such increases are a significant shock to the real incomes of poor people, who often spend 40 percent of their income on rice in normal times. Analysis of household survey data from FAO's RIGA database shows that the poorest of the poor (the rural landless who rely on wage labour) were most affected by the food crisis. As a result, after a decade of progress, a substantial number of households were pushed back into poverty even before the global economic crisis. As shown in *The State of Food Insecurity in the World 2008*, female-headed households were affected disproportionately by the food price shocks.

On average, at the end of 2008, households were spending 62 percent of their income on food, up from 52 percent in 2005. This increase in the food budget share forced households to reduce their expenditures on health and education. Other coping strategies include eating fewer meals, changing diets, diversifying livelihoods and income sources, and taking on more debt. Income diversification could lead to child labour or less child care provided by mothers because of increased time spent on income-generating activities. One-fifth of households reported cutting expenditures on health and one-third were becoming further indebted to financial institutions.

Discussions with focus groups revealed that the deterioration of macroeconomic conditions has resulted in job losses and a shift towards working as daily labourers. The amount and frequency of remittances has decreased because of job cuts abroad, the depreciation of the pound sterling (a large proportion of Bangladeshi remittances come from the United Kingdom) and higher expenses incurred by migrants in host countries. A significant decline in both production and prices has led to a decrease in unskilled wage rates in the fish/shrimp industry and garment factories.

What are the ongoing responses?

Given that recent studies indicate that household expenditures on several key items remain lower than before the food and economic crises, there are serious concerns about health care, food intake, education and debt, and about how these factors will affect food security and nutrition in the longer term. Focus group discussions revealed a bleak perception of the future: participants generally expected that it would take at least one to two years for households to return to the income level prevailing immediately before the global economic crisis, although several focus groups indicated that it could take three to five years. Such a pessimistic outlook is probably attributable to the continuing shocks (including the food and fuel crisis, Cyclone Sidr, and the global economic crisis) experienced over the past two to three years.

In response to the shocks of the past few years, the central bank has made it easier for banks to lend to businesses. It has also withdrawn investments from overseas banks perceived as risky. The Government has scaled up pre-existing food distribution programmes in order to provide subsidized rice for all workers in the ready-made garments sector, and anticipates an increase in short-term spending for rescue packages including tax breaks and cash subsidies to safeguard vulnerable people. However, there is a danger that increased government spending could lead to higher rates of inflation.

Ghana

Ghana is a West African country of 24 million people that has achieved significant progress in reducing poverty and hunger. The diet in Ghana is relatively varied, with cassava accounting for 24 percent of total calories and maize another 13 percent. The percentage of people living below the national poverty line declined from 52 percent in 1991–92 to 29 percent in 2005–06. This progress is in danger, however, because Ghana's small open economy is vulnerable to external shocks affecting FDI, trade, ODA and remittances. For each of these individual components of financial flows, the IMF rates Ghana's vulnerability as medium, but because it is vulnerable to several different types of shock, the IMF's overall assessment is that Ghana is highly vulnerable to the crisis. In the context of Ghana, ODA is much more important than either FDI or remittances (Figure 19).

Macroeconomic impacts

Ghana's currency lost about 30 percent of its value against the US dollar between early May 2008 and early May 2009. Although a depreciated currency can help countries adjust to macroeconomic shocks, it also means higher import costs for food, fuel and fertilizers, as well as higher debt repayments – putting pressure on the government budget and curtailing economic growth.

Ghana is facing a reduction in foreign capital inflows and higher interest rates, making the financing of the current account and budget deficits more difficult. Timber exports declined by 27 percent and remittances by 16 percent in January–February 2009, compared with the same months in 2008. Exports of horticultural products and shea nuts (the raw material for shea butter, which is used in the cosmetics industry) have also decreased. The impact later in the year is likely to be larger because of lags in transmission of the crisis from developed countries.

Effects on food security and livelihoods

Household purchasing power has been reduced as a result of lower prices for selected cash crops, declining remittances and rising inflation, including of food prices. Fortunately, the price for Ghana's main cash crop, cocoa, has remained relatively high, providing a cushion for the 1.6 million cocoa producers.

For now, the most affected group appear to be shea nut collectors. Shea nut collection is a key income source for women in the savannah – the country's poorest and most hunger-prone area – during the lean season, providing a buffer against seasonal food insecurity. Focus group interviews with women smallholder farmers in the north revealed that one-third of incomes are derived from shea nuts in that area. Lower volumes and lower prices for shea nuts mean that women are spending a larger share of their income on food, at the expense of health and education.

Unskilled labourers' livelihoods are affected by declining volumes in industries such as timber. With their reduced incomes, unskilled labourers who have moved away from home are sending fewer remittances to their families elsewhere in Ghana and are trying to find alternative employment opportunities. Three percent of households in Ghana rely mainly on unskilled labour for their income.

As in many countries, the global food crisis hit poor households hard. Prices of white maize and imported rice in 2008 were 51 and 43 percent higher in real terms than in 2007, constituting a large shock to the purchasing power of the poor (Figure 22). The impact was moderated to some extent by the diversity of the Ghanaian diet; the fact that cassava, which is not widely traded on world markets, accounts for about one-quarter of total caloric intake; and the availability of locally produced rice. However, cassava and local rice prices increased from 2007 to 2008 by 26 and 33 percent, respectively. While these increases were smaller than those for white maize and imported rice, they were still substantial and suggest that demand shifted towards these staples in response to higher prices of other foods.

High food and fuel prices, coupled with lower incomes, have put pressure on food consumption and livelihoods. Urban households – in the capital Accra in particular – face high food and utility costs. The decline in income is to some extent mitigated by Ghana's social-protection system, which includes, among other things, an education allowance and a national health insurance system. This will allow some households to spend more on food without sacrificing access to basic social services.

The main coping mechanisms being used by families include reductions in the quality and quantity of food consumed. There is also probably some substitution towards cassava as it is generally a cheaper source of calories than maize and rice. However, with its low protein content, cassava is less nutritious than an equivalent amount of grain. Casual labourers are migrating, cash-crop farmers are diversifying into crops where prices remain attractive, and smallholders in the north are selling livestock and seeking alternative occupations, such as casual labour. In some cases, parents are moving their children from private schools to public schools, increasing pressure on the government budget.

What are the ongoing responses?

The Government has a broad safety-net system, which includes a targeted cash transfer programme (Livelihood Empowerment Against Poverty, or LEAP), national health insurance, an education allowance, school feeding and a national youth-employment programme. These interventions could be scaled up if necessary. The Government has also created a working group on social protection, which is coordinating interventions to monitor and respond to the effects of the economic crisis.

Nicaragua

Nicaragua is a small Central American country consisting of extensive Atlantic coastal plains rising to central interior mountains, and a narrow Pacific coastal plain interrupted by volcanoes. The country is home to 5.6 million people, with 59 percent living in urban areas and most of the population concentrated in the Pacific lowlands. Maize (21 percent of total calories) and rice (16 percent) are the leading sources of dietary energy. Nicaragua is a low-income open economy with limited capacity to absorb financial shocks.

Macroeconomic impacts

Remittances as a proportion of GDP have tripled over the past ten years (Figure 20). The IMF rates Nicaragua as highly vulnerable to a decline in remittances, which are the country's second-largest source of capital inflow after agricultural exports. In 2008, the central bank estimated remittances at US$818 million (excluding unofficial remittances).[32] This represents about 13 percent of GDP, but the figure is projected to decrease to 12 percent in 2009 as remittances from the United States of America, as well as from neighbouring Costa Rica and El Salvador, decline.

The share of exports and imports in GDP has also increased sharply over the past three decades (Figure 21). The country's economy is highly dependent on the United States of America, not only for remittances but also for FDI and exports (especially relating to *maquila* manufacturing for garments and car equipment, as well as coffee and seafood). The slowdown of the United States economy is expected to affect employment and output of United States-owned companies operating in Nicaragua (around 100 companies in total). Employment in the *maquila* sector (companies in this sector import materials, tariff-free, for assembly or manufacturing, and then re-export the finished product, usually back to the originating country) is expected to diminish, especially in the garment industry, as a result of reduced demand by United States customers. An estimated 19 000 *maquila* workers were laid off in early 2009, and there was also a decrease in employment in the construction sector.

Given these trends, the balance of trade is expected to worsen and GDP growth is projected to decrease from 3 percent in 2008 to 1.5 percent in 2009. Foreign direct investment may also decrease slightly (from 7.1 percent of GDP in 2008 to 6.1 percent in 2009), while official aid should remain about the same (11 percent of GDP).

Effects on food security and livelihoods

An assessment conducted in selected areas among vulnerable population groups in March 2009 confirmed the negative effects expected for the economy, employment, agriculture and remittances. The households most likely to be affected include those for which a significant share of income is derived from remittances or wages from employment in export-oriented activities, or from sales of handicraft. Household survey data from FAO's RIGA database show that the share of remittances in total income is similar across the different income groups (quintiles), although the wealthiest quintile receives a larger share from remittances than does the poorest quintile. However, even remittances that accrue directly to the wealthiest quintile can benefit the poor through multiplier effects such as hiring of construction labour to build housing.

Households receiving remittances reported that these were instrumental in paying for agricultural inputs, investing in land and animals, covering education costs, and carrying out housing repairs and improvement. Participants in the assessment confirmed that remittance flows had decreased as a result of fewer employment opportunities abroad.

Household food insecurity in Nicaragua is essentially a problem of economic access to food, although food availability can be an issue in some isolated rural areas and at some periods of the year because of large distances to markets and poor roads and transportation facilities. The households surveyed noted changes in their food consumption patterns – particularly less consumption of meat and dairy products – and attributed this change to higher prices. Data from FAO's GIEWS price database show that domestic maize and tortilla prices were not substantially affected by the global food crisis, but domestic rice prices in 2008 were 29 percent above those in 2007 in real terms. The diminished economic access to food because of higher prices was compounded by lower incomes resulting from decreased employment opportunities abroad (meaning reduced remittances) and locally (including for agricultural labourers, mine workers and workers in export-oriented factories). Lower earnings from handicrafts, because of reduced demand and higher raw material costs, also contributed to food insecurity for some livelihood groups. Damage from Hurricane Felix and flooding in late 2007 and early 2008 also contributed to reduced incomes and higher food prices.

The types of dietary changes reported (away from meat and dairy products) may translate into higher chronic malnutrition rates among children under five years of age (stunting already affects one out of five children) and worsen energy and micronutrient deficiencies among other vulnerable groups such as pregnant and lactating women, the elderly and the chronically sick. Decreased household spending on health will delay treatment of illness or use of preventive services such as vaccination, with further negative effects on the nutritional status of vulnerable individuals. At the same time, the economic crisis will limit the Government's capacity to expand the coverage of water and sanitation services and improve the quality of health care.

A depressed local economy also means that small businesses will close and local shopkeepers will tighten credit conditions, further limiting access to food by poor households. Those who do not benefit from remittances and are not trusted to repay their debts will be particularly hard hit.

Apart from coping with the crisis through dietary changes, many households indicated their intention to increase out-migration to try to secure jobs and additional income, even though they acknowledge reduced work opportunities abroad. A return to subsistence (instead of cash-oriented) agriculture and engagement in informal, low-earning activities (e.g. petty trade) were also frequently mentioned as coping mechanisms. Some households are also adopting negative or environmentally damaging strategies, such as accumulating more debt, selling livestock and domestic assets, and collecting fuelwood for sale. Depending on the length of the crisis, reduced household investment in child education may impair future livelihood opportunities and contribute to the intergenerational cycle of poverty, given the close association between education levels and poverty rates in Nicaragua.

What are the ongoing responses?

Expansion of responses to the earlier food and fuel crisis by the Government and a number of donors and UN agencies could help address the current economic crisis. These include the Integral School Nutrition Programme (supported by the World Bank and WFP), the Agro-Seeds and Productive Food Programmes (supported by the World Bank and FAO), and opening fair-price shops for basic foods in poor urban neighbourhoods.

It is clear that the global economic crisis will aggravate a pre-crisis situation of widespread chronic poverty, food insecurity and malnutrition. These conditions are themselves related to basic agro-ecological and socio-economic factors compounded by the high vulnerability of Nicaragua to natural disasters. Consequently, responses to the economic crisis should not only aim to mitigate the immediate effects on specific population groups (small-scale agricultural producers, the landless rural poor, the newly unemployed in urban areas and children in poor households) but also continue to tackle the basic causes of poverty and food insecurity. Thus, it will be important to improve services (e.g. health, water, sanitation and education), infrastructure (e.g. roads and electricity), agricultural productivity and access to credit. With no clear sense of the length and depth of the crisis, contingency planning and enhanced monitoring of the evolving economic, fiscal and household food-security situations is also critical.

Zambia

Zambia is a landlocked country in southern Africa with a population of about 12 million people. Overall poverty rates in Zambia declined from 70 percent in 1996 to 64 percent in 2006. Despite this progress, half of the population is still considered extremely poor, with 14 percent classified as moderately poor. The staple food is white maize.

Foreign remittances are of minor importance (Figure 19), but the IMF rates Zambia as highly vulnerable to the economic crisis because of several interlinked factors: a sharp decline in the price of the primary export commodity, copper; devaluation of Zambia's currency, the kwacha; a reduction in foreign direct investment; continued high food inflation and a decline in tourism.

Macroeconomic impacts

Zambia needs a sustained economic growth rate of about 7 percent if it is to meet the MDGs by 2015, but as a result of the global economic crisis, projections for economic growth have been revised downward from 6 percent to 4 percent for 2009. In addition, FDI fell from US$1 323.9 million in 2007 to US$938.6 million in 2008 (a 29 percent drop). Foreign portfolio investment (investment by foreign individuals or companies in bonds and shares as opposed to factories, mines and land) showed an outflow of US$6.1 million in 2008 compared with an inflow of US$41.8 million in 2007. These trends are expected to continue in 2009.

Zambia is particularly vulnerable to the economic crisis because it relies so heavily on mining, particularly of copper. The mining sector accounted for about 8 percent of GDP in 2008, but 74 percent of total export earnings. Expectations of slower economic growth, coupled with political uncertainty and a fall in international copper prices, caused the kwacha to lose one-third of its value against the US dollar between March 2008 and March 2009.

Inflation, particularly of food prices, is on the rise in Zambia. In April 2009, overall inflation was 14.3 percent compared with 10.1 percent in April 2008 and 13.1 percent in March 2009. Food inflation rose sharply to 15.9 percent in April 2009 from 10.1 percent in April 2008 and 13.9 percent in March 2009. As bad as this price inflation is, the increases in the price of maize, the main source of calories for the poor, have been even higher. Data from FAO's GIEWS database show that white maize prices in 2008 were 24 percent higher in real terms than they were in 2007.

Effects on food security and livelihoods

Copperbelt Province: the mining sector

The mining sector in Copperbelt Province directly employed an estimated 30 000 individuals in 2008. Approximately 8 000 have already been retrenched and this figure was predicted to reach 10 000 by June 2009. In terms of overall unemployment, this is an underestimate as it does not account for retrenchments by contractors, suppliers and service providers for the mining companies. In essence, towns in Copperbelt Province are built around the needs of the mining companies and the majority of jobs are either directly or indirectly linked to the sector.

Until mid-2008, mining-sector jobs were considered the most secure and lucrative not only because of the relatively higher salaries but also because of the fringe benefits, including severance pay, free medical care, and allowances for education, housing and meals. The perceived job security in the sector meant that many people took out loans from commercial banks, which, in turn, felt comfortable lending to mine workers. However, when declining global demand for copper forced mining companies to lay off employees, the banks also called in their loans. In many cases, severance pay – two months of base salary for each year worked – went directly to the banks.

The loss of health benefits has been difficult for many people, particularly those on anti-retroviral medication for HIV/AIDS, which is a major problem in Zambia. The private clinics and hospitals established by the mining companies were not only providing drugs but also the necessary high-protein diets. Now, many retrenched workers depend on public health systems that do not necessarily have the capacity to absorb the additional caseload. Thus, already weak public health facilities are becoming further strained, resulting in both reduced quality of care and poor coverage for all. This is a critical issue for a country that has one of the world's highest HIV/AIDS prevalence rates.

Most of the retrenched miners are still residing within the mining communities in the expectation that the situation will soon improve and they will be re-employed. However, their prospects are poor because the mining companies have used the lower copper prices as an opportunity to minimize production costs by shifting from labour-intensive operations to the more capital-intensive technologies (e.g. increased mechanization) required to stay competitive in the current economic environment. Some retrenched workers want to practice agriculture but find themselves ill-prepared and ill-equipped, with neither the skills nor the resources to acquire land and pay for the inputs.

Households in the Copperbelt are employing several coping mechanisms to deal with the economic slowdown. People in the towns have moved their children from private schools to public schools and now rely more on the public health-care system. Some households have reduced the number of meals they consume or are eating less-nutritious but cheaper food. In the province's rural areas, sales of charcoal and livestock have increased.

Because Copperbelt Province has been one of Zambia's more prosperous provinces, there are few UN or other international agencies present to provide humanitarian assistance. WFP is currently absent from the area, but may need to establish a presence given the current and emerging vulnerabilities.

Southern Province: the tourism sector

The main source of livelihood in the district around Southern Province's capital of Livingstone is tourism. The area boasts a range of tourist attractions, including the Victoria Falls, national parks, museums, rafting and boating, and game parks. Most people either work directly for tourism service providers (e.g. lodges) or rely on the industry indirectly as suppliers, transporters and sellers of small handicrafts.

The decline in international tourism triggered by the economic crisis, coupled with extensive flooding along the Zambezi River, has hurt the economic well-being of most communities. It is estimated that as many as three-quarters of the people working for the hospitality and tourism sector have either been retrenched or are working fewer hours.

Business was significantly down during the early period of the 2009 peak tourism season (which begins in April). Managers of quality hotels do not foresee a substantial improvement in the business environment until mid-2010 and were expecting occupancy rates of only about 50 percent during the 2009 high season.

Remittances from Copperbelt and Northwestern Provinces are an important income source for about 23 percent of the households in the Livingstone district. However, both the amount and frequency of the remittances have declined given retrenchments in the copper industry. Around 44 percent of the migrants have already returned home.

The affected households are employing a range of coping mechanisms to mitigate the economic slowdown. Some are venturing into farming, but poor soils, lack of capital for inputs and threats from wild animals are hampering progress. Others are relying on extended family support, but this is unlikely to be sustainable. Many see no option but to reduce expenses by cutting the number of meals, consuming less-nutritious but cheaper food, or spending less on health care and schooling. Focus group interviews with communities suggested that negative coping strategies such as theft and prostitution are also on the rise.

Communities worry that it might take more than two years for the situation to improve, and they are unsure about how they will survive until things do turn around. Their main priorities for weathering the crisis are employment, credit and improved access to food.

What are the ongoing responses?

The Government has not allocated any funds specifically to the crisis, but it has increased spending on agriculture, health and education. These expenditures are aimed at a range of programmes, including increased fertilizer use in agriculture, enhanced treatment of HIV/AIDS and malaria, hiring of new teachers and construction of new schools.

Towards eliminating hunger

The present crisis is not a new crisis. It is the sudden worsening of a structural crisis that, over the past decades, has denied hundreds of millions of human beings access to adequate food for an active and healthy life. The rapid increase in the number of hungry over the past two years, because of first the food and fuel crisis and now the economic crisis, reveals the fragility of present food systems. The current situation points to the urgent need to tackle the structural, root causes of hunger. In addition to macroeconomic stabilization policies designed to minimize the immediate impact of the current shock, governments should boost and encourage their investments in agriculture (including non-farm rural activities), expanding safety nets and social-assistance programmes, and improving governance. Although not a focus of this publication, it will also be important to create income-generating activities for the urban poor.

The importance of investing in agriculture and public goods

The World Bank's *World Development Report 2008* clearly shows that agriculture can make substantial contributions to economic development and poverty alleviation in the least-developed countries.[33] Even though this role is reduced substantially in middle-income countries, agriculture continues to play a crucial role in alleviating poverty, which remains disproportionately rural in spite of the falling relative importance of agriculture in national economies.

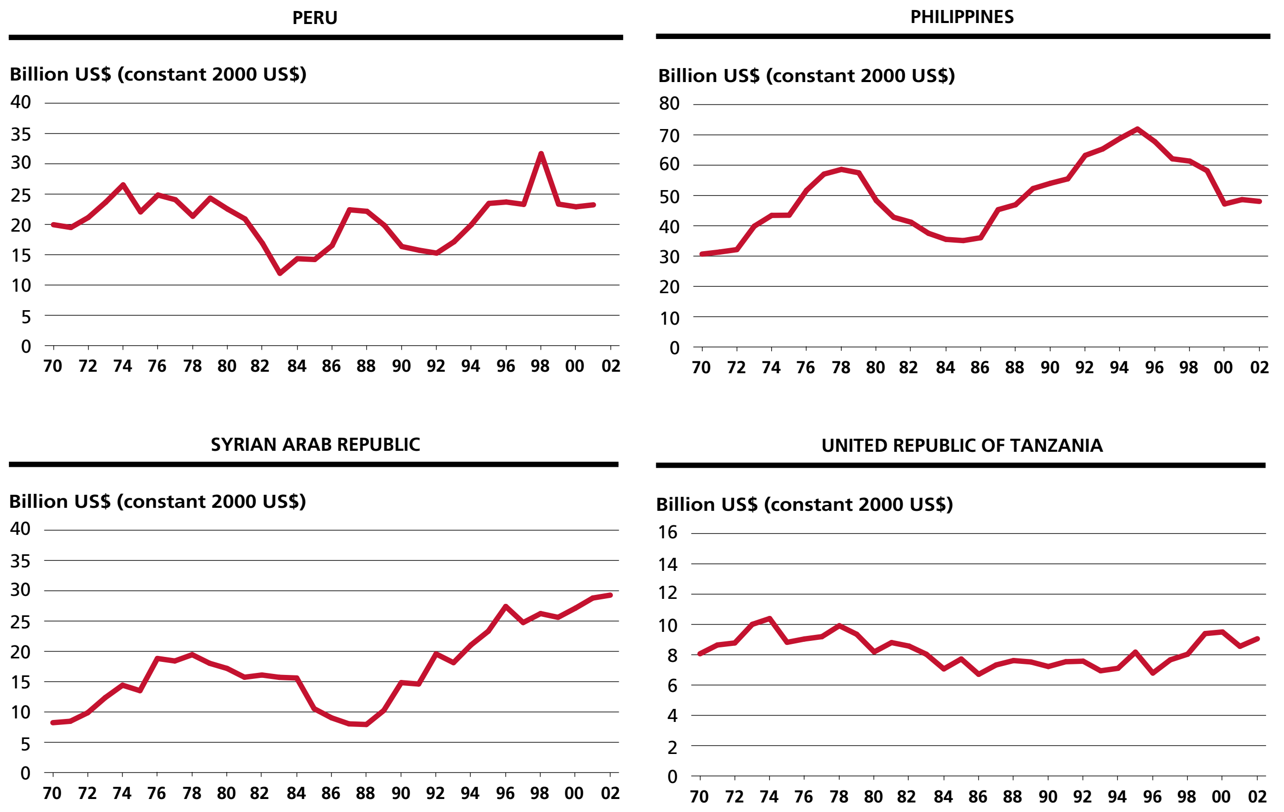
To fulfil its role as an engine of growth and poverty alleviation, however, agriculture itself needs to grow. And agricultural growth cannot be achieved and sustained without investing in agriculture. Unfortunately, in countries where the socio-economic role of agriculture is largest, public investment in agriculture tends to be relatively very low. Public investment in agriculture as a percentage of agricultural GDP is lowest in agriculture-based economies (around 4 percent) and largest in urbanized developing countries (around 15 percent).[34] As discussed earlier, the most rapid progress in reducing food insecurity was made when the level of ODA allocated to agriculture was much higher than it is today.

The problem of underinvestment in agriculture is compounded during times of economic turmoil such as the current global economic slowdown, because when both private and public budgets contract, investments tend to be cut to a greater extent than other expenditures in all sectors – including agriculture. It is as yet uncertain how the current economic environment is affecting capital stocks (including machines, livestock and trees) in agriculture, but history tells us that during economic crises and the years that follow, capital stocks decline as a consequence of reductions in investment. Figure 23 shows that after the debt crisis of 1982 there was a marked reduction in agricultural capital stocks in developing countries (similar declines occurred in developed countries).

It is therefore important that, during and following economic crises, investment in agriculture receives decisive support from both the private and public sectors. For investments in agriculture to fully materialize, a business environment that promotes private, domestic and foreign investment in not only agriculture but also all other sectors needs to be in place. Such an environment includes respect

FIGURE 23

Economic crises are bad for agriculture: evolution of agricultural capital in selected countries



Sources: See notes on p. 56.

for the rule of law, good governance and macroeconomic stability.

Private investment in agriculture requires accompanying public investment. For example, by integrating a fertile region, a public road makes private investments in that region more profitable. Research has shown that in countries as diverse as China, India, Uganda and the United Republic of Tanzania, investments in agricultural research and rural roads contribute substantially to poverty alleviation. A study from Latin America showed that, while government spending on public goods increased agricultural growth rates and accelerated poverty reduction, government spending on private initiatives such as credit subsidies or production promotion that benefits only a small group of large farmers were less beneficial. Thus, the public sector has a crucial role to play in promoting the overall investment in agriculture required to achieve the full socio-economic potential of agricultural growth.[35]

Safety nets for the short term and long term

Safety nets in times of crisis

During any crisis, safety nets and social programmes are particularly important for the food-insecure. At such times, however, government expenditures often contract as developing countries find it hard to implement counter-cyclical spending. For example, during the economic crisis in Peru in the late 1980s, public-health expenditures fell by 58 percent in total and from 4.3 percent to 3 percent as a share of overall government expenditures.[36] Even in other cases where health's share of government expenditures increased, declines in GDP and/or the share of government spending in GDP mean that real per capita government health expenditures often contract in times of crisis.

In addition, evidence from Argentina, Bangladesh, India and Indonesia shows that government social spending tends to be less well-targeted in times of economic contraction, i.e. the non-poor increase their share of benefits relative to the poor.[37] Thus, even if governments are able to protect overall social spending during a contraction, there is no guarantee that the same level of social spending will continue to reach the poor. These considerations suggest the importance of designing safety nets whose coverage automatically increases during downturns. Moreover, to keep costs manageable, it will be important to design a safety-net programme in such a way that the poor are the only people who want to access the benefit (this is termed "self-targeting"). For example, the employment-guarantee schemes used in India are self-targeted to the poor because usually it is only the poor who will want to work as daily labourers. In addition, if market wages decrease during an economic downturn and the wage in the employment-guarantee scheme is fixed, then the number of people who want to participate will increase. Further, as economic recovery takes hold, many people will drop out of the programme automatically as market wages increase, without any need for bureaucratic intervention.[38]

Rationale for safety nets

Social safety nets are not a new concept, but their importance has grown considerably in recent years. Their implementation is often a key recommendation for mitigating the effects of food, fuel and financial crises.[39] The approach to those measures has evolved remarkably since the 1990s, experiencing four core conceptual shifts:[40]

- *From relief to risk management*. In some cases, risks and shocks are predictable. In such cases, they can be prevented or mitigated by advance preparation provided there are comprehensive national and household risk-management strategies, as opposed to relying on coping responses after the event (see box on Ethiopia).
- *From projects to systems*. A number of countries (e.g. Malawi and Mozambique) are rationalizing and coordinating various safety nets in order to create safety-net *systems*, as opposed to collections of scattered projects.[41]
- *From assistance to country ownership*. International assistance should support governments' capacities to make a gradual transition towards nationally owned and funded safety-net systems, such as those in high- and middle-income countries. The provision of national safety nets is a key component of the social contract and mutual accountability between state and citizens.[42]
- *From handouts to investments*. Safety nets can be an integral component of inclusive growth strategies, as opposed to simply being residual to the growth process. For example, safety nets can give people the opportunity and incentive to improve their skills, knowledge and productive capabilities, and encourage risk-taking initiatives.[43]

Defining safety nets

While there are a number of definitions of, and approaches to, safety nets, there is consensus that they are a subset of broader social-protection systems (Figure 24, page 43). Safety nets mostly include transfers that are not dependent on the recipient having previously contributed money. These transfers can be in cash or in kind, and can be conditional or unconditional.[44] In addition to safety nets, social protection also includes labour-market policies and insurance options (e.g. contributory pensions and health insurance), as well as some components of "sectoral" policies whose main focus is on sectors such as education, health, nutrition or agriculture. These other social-protection measures can sometimes overlap with safety nets: the use of weather insurance, for example, represents a common area between safety nets and labour/insurance measures.[45] Sectoral policies can also overlap with safety nets, as they provide physical infrastructure such as schools and health clinics that are necessary for safety nets to function well. However, the

Safety nets in Ethiopia

For many years, Ethiopia has seemed to be in constant crisis. Each year, when harvests failed, the government would ask the international community for emergency assistance. Yet this approach failed to address the structural problems underlying Ethiopia's food insecurity. The need for a strategy that left behind more than empty food sacks triggered the shift from annual relief to multi-annual predictable support under the Productive Safety Net Programme. Predictable and counter-cyclical safety nets put in place *before* crises hit not only decrease the need for relief assistance, but are also vital for enhancing risk management.[1]

Under the Productive Safety Net Programme (the largest safety-net programme in Africa), cash or food goes to some 7 million Ethiopians for six months each year, either through public works such as construction of rural roads and bridges, or as direct payments. Families live off their own income for the rest of the year.

A survey of nearly 1 000 households participating in this programme found that almost all food transfers were consumed and most cash was used to purchase food. Participants were also less likely to sell assets (especially livestock) to buy food, leaving them less prone to destitution.

The programme includes other innovations. In 2006, for example, the World Food Programme (WFP) initiated, with AXA Re, the world's first insurance contract for humanitarian relief. Under this arrangement, support to vulnerable people is triggered by adverse weather events such as drought.[2]

In 2007–08, soaring food prices and a drop in foreign investment and remittances threatened to stall the national progress made through the programme. Problems such as the low value and erratic disbursement of cash and food must be addressed. Preliminary analysis suggests that when families do receive predictable disbursements of cash and food transfers at frequent intervals, as opposed to unpredictable disbursements at varying intervals, several benefits are realized. Households in distress are less likely to sell assets and more likely to adopt riskier but profitable technologies, and the private sector is more likely to extend credit, even for consumption needs, because the default risk is lower.

Improved targeting of beneficiaries and their subsequent "graduation" from a safety-net programme should also be prioritized. Despite progress in expanding the number of eligible beneficiaries, the programme still targets only some of the country's food-insecure households. This issue is particularly compelling for pastoralist areas (e.g. the Somali region in eastern Ethiopia) not yet covered by the programme. At the same time, improved linkages with emergency responses and other development packages need to be explored.[3]

[1] H. Alderman and T. Haque. 2006. Countercyclical safety nets for the poor and vulnerable. *Food Policy* 31(4): 372–383; R. Holzmann and S. Jørgensen. 2000. *Social risk management: a new conceptual framework for social protection and beyond*. World Bank Social Protection Discussion Paper No. 0006. Washington, DC, World Bank; T. Owens, J. Hoddinott and B. Kinsey. 2003. Ex-ante actions and ex-post public responses to drought shocks: evidence and simulations from Zimbabwe. *World Development*, 31(7): 1239–1255; United Kingdom Department for International Development. 2005. *Social transfers and chronic poverty: emerging evidence and challenges ahead*. London.
[2] U. Hess, W. Wiseman and T. Robertson. 2006. *Ethiopia: integrated risk financing to protect livelihoods and foster development*. Rome, WFP.
[3] R. Slater, S. Ashley, M. Tefera, M. Buta and D. Esubalew. 2006. *Ethiopia's Productive Safety Net Programme (PSNP): study on policy, programme and institutional linkages*. London and Addis Ababa, Overseas Development Institute, IDL Group and Indak International.

scope and range of sectoral policies often go beyond social protection.

Key implementation issues

Implementing effective safety nets requires tailoring the interventions to the local context, both in terms of local capacity and the specific crisis being addressed. The design of safety nets should explicitly recognize such diversity and be tailored to meet context-specific conditions and constraints. In particular, it is important to understand countries' institutional, political, technical and financial capacity to introduce or expand safety nets. The four clusters, or models, of safety nets include:[46]

- *Absence of safety-net systems*. This includes very low-capacity, often post-war, countries that do not have formal safety-net systems in place. Factors that characterize such countries include stagnant or declining economic growth, instability, low-productivity food and agricultural systems, market failures and low human-development levels. Safety nets are often provided by the international community, mostly in the form of emergency relief. Such forms of assistance, if designed well, can lay the basis for a transition towards a more permanent national safety-net system.
- *Elements of safety-net systems*. This refers to low-capacity, chronically poor countries prone to recurrent shocks that affect nearly everyone in a large area. Elements of

Brazil's safety-net response to the economic crisis

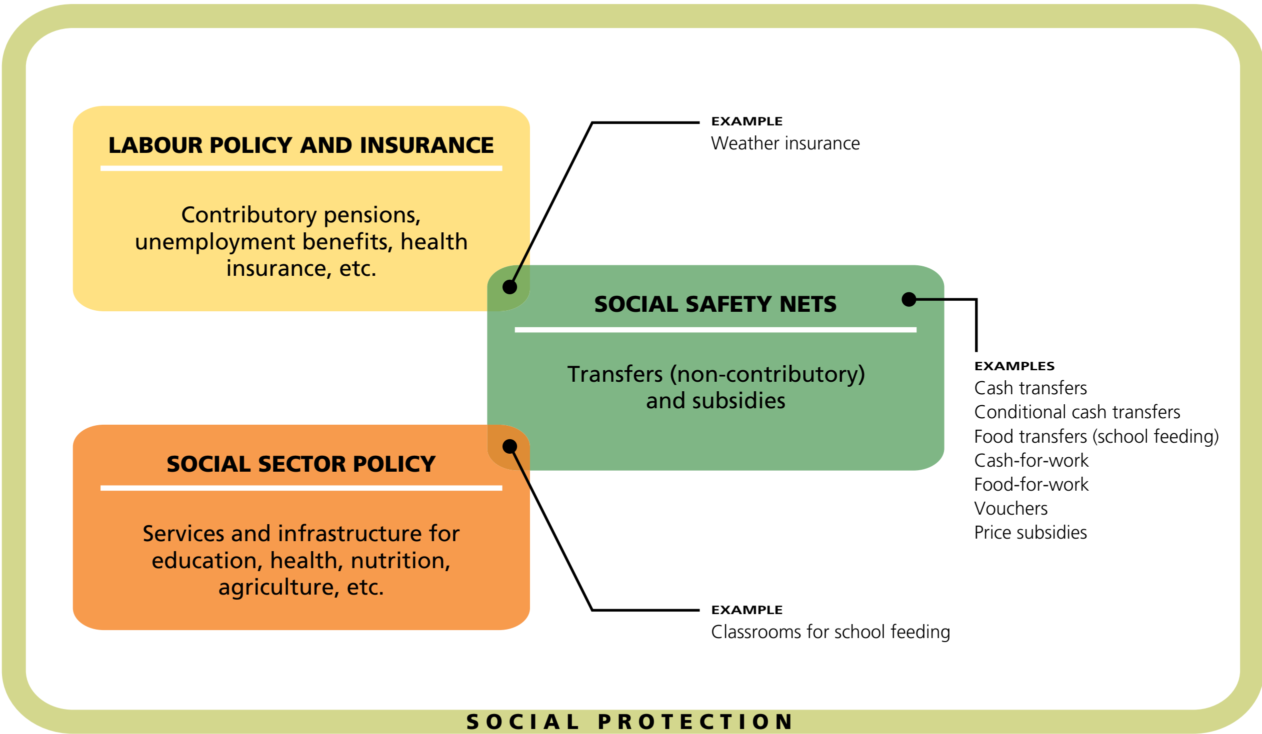
The economic crisis hit Brazil as early as the final quarter of 2008, when GDP declined by 3.6 percent compared with the previous quarter after years of positive growth. The Brazilian Government responded with a range of policies, including counter-cyclical macroeconomic policies (e.g. increasing government spending during an economic downturn to boost employment) made possible by prudent management of current account surpluses accumulated in previous years. In addition, the Government has also implemented a range of safety nets:

- Coverage of the *Bolsa Familia* programme – which awards monthly cash payments to poor families provided that they meet certain conditions such as school attendance, vaccines and prenatal visits – was expanded from 10.6 to 11.9 million families. All families would receive a payment of US$28 per family plus US$9 per child under the age of 9 years and US$14 per older child (all per month). Although this is a small amount of money for wealthy families, it is very important for poor families.
- Unemployment insurance coverage for workers registered at the Labour Secretariat and who work in specific subsectors and states was expanded from 5 months to 7 months.
- The minimum wage was increased by 12 percent (nearly twice the rate of inflation), benefiting 45 million workers and injecting additional spending power into the economy.
- In the wake of falling agricultural prices, coverage of the Price Guarantee Programme for Family Agriculture was expanded from 15 to 29 crops and minimum guaranteed prices were also increased for a number of crops.
- An investment programme, "My house, my life", was established to assist families in the construction of new houses through subsidized credit and reduced taxes on building materials.

This box was contributed by Carlos Santana, Senior Agricultural Researcher, Embrapa (Brazilian Agricultural Research Corporation).

FIGURE **24**

Components of social-protection systems



Source: See notes on p. 56.

national safety-net programmes are present, although they are often uncoordinated, short term, and limited in scale. As mentioned earlier, the Productive Safety Net Programme in Ethiopia has relatively robust coordination and considerable donor support, and is providing cash and food to about 7 million people.

- *Emerging social-protection systems*. Under this model, low- to medium-capacity countries start formulating formal safety-net policies and strategies, and seek to institutionalize multi-annual programmes to improve coverage, coordination and flexibility.
- *Consolidated safety-net systems*. This group includes medium-capacity countries that have institutionalized a safety-net system funded by national governments. In these countries, markets and food and agricultural systems tend to function relatively well, and the challenges are mostly in filling gaps, making the system work more efficiently, and enhancing the technical aspects and quality of the assistance.

Ultimately, the design of safety nets appropriate for the local context involves making decisions about what conditions recipients must meet; the choice of cash, food or vouchers; and the extent of targeting. Effective targeting is important to maximize impact and minimize distortions to incentives. A number of targeting methods exist (e.g. means-tested, categorical, geographical and community-based), and each has advantages and disadvantages in any given context. It is important to strike a balance between ensuring that benefits reach the most vulnerable populations while at the same time do not create artificial boundaries between and within communities that are almost equally vulnerable.

While the understanding of safety nets in middle- and some low-income counties is growing, the challenge often lies in how to make the lessons learned relevant to fragile states and other low-income countries with lower capacities. Broader applied research priorities should include appraising country capacity to provide safety nets; identifying methods to fill capacity gaps; testing institutional flexibility to respond to unexpected emergencies; investigating the ability of safety nets to reduce the sources and perception of risks so as to ultimately trigger behavioural change; nurturing in governments a genuine demand for social protection; and establishing common platforms for sustainable handover from external agencies to national governments.

The right to food

In 2008, the right to adequate food was recognized as a fundamental component of a sustainable solution to the world food-security crisis caused by high food prices. The reasons are twofold. On the one hand, the crisis disproportionately affected those who were already vulnerable, typically people who spend large proportions of their income on food. On the other hand, there was wide recognition that, when it came to responding to the crisis, the "business-as-usual" approach would not work. Traditional approaches, which dealt with the technical dimensions of food insecurity in terms of both their emergency and structural aspects, needed to be complemented with an additional dimension focusing on the promotion of the right to adequate food and the reform of both global and national food-security governance.

The right to food was also central to the January 2009 High-Level Meeting on Food Security for All, held in Madrid. In his closing remarks to the conference, United Nations Secretary-General Ban Ki-moon pleaded for inclusion of the right to food "*as a basis for analysis, action and accountability*" in promoting food security.

The right to food is, first of all, a basic human right enshrined in international law. It is the right of every person to have continuous access to the resources necessary to produce, earn or purchase enough food not only to prevent hunger, but also to ensure health and well-being. The right to food provides a coherent framework within which to address critical governance dimensions of the fight against hunger and gives voice to a wide array of relevant groups and individuals. It establishes principles that govern decision-making and implementation processes, namely participation, non-discrimination, transparency and empowerment. It also provides a legal framework – based on the concepts of rights and obligations – and mechanisms for increased accountability and the rule of law.

A right-to-food perspective provides a framework for the diagnosis of the food security problem as well as guidance for the design, implementation and monitoring of initiatives taken in response to the food crisis. In this context, the Right to Food Guidelines (*Voluntary Guidelines to support the progressive realization of the right to adequate food in the context of national food security*)[47] provide a context for translating political commitments into practical and concrete action. The Guidelines recommend that states adopt a national strategy for the realization of the right to adequate food that includes: mapping the groups that are most vulnerable and ensuring their participation; clearly allocating responsibilities across different branches of government and improving coordination; setting benchmarks and imposing time frames; and empowering

The right to food in Brazil

The conceptual discussion on the relevance of the "human right to adequate food" approach to fighting hunger, and its effective incorporation into Brazil's food and nutritional security strategy, is closely intertwined with the discussions held around the 1996 World Food Summit (WFS) in Rome and the resolutions of the World Conference on Human Rights in 1993 in Vienna. The strong participation of civil society in the process bridged the struggles against hunger and poverty with those promoting human rights, with the right to food at the centre.

The 1994 National Food Security Conference convened by Brazil's National Council of Food and Nutrition Security defined the direction for a national food-security strategy, and incorporated the right to adequate food into the discussions. This was clearly reflected in Brazil's official report to the WFS, which reaffirmed the relevance of the right to adequate food to a national food security strategy.

The new Federal Government, elected in 2002 in the midst of a serious social crisis, defined a rights-based fight against hunger as one of its central political banners. One of the Government's first measures was to reconstitute the National Council of Food and Nutrition Security, with the mission to guarantee the realization of the right to adequate food by instituting the Zero Hunger Programme as a strategy geared to reach those Brazilians most affected by food and nutritional insecurity and hunger.

The national food and nutritional security policy – implemented by the Government with the support of the National Council, and state and municipal councils composed of civil-society and governmental representatives – is based on and geared towards promoting the right to food. This policy promotes the coordination of all food and nutritional security-related public policies and programmes along two main lines of action: guaranteeing immediate access to healthy and adequate food to the most affected sectors of the population, and the promotion of socio-economic inclusion of these groups into productive and economic activities. Most importantly, the food and economic assistance programmes are planned and implemented so as to stimulate and consolidate small-scale farm production and local economies, thereby helping people pull themselves out of poverty.

In 2006, the National Congress approved the National Food and Nutritional Security Organic Law, which reaffirms the State's obligation to respect, protect and fulfil the right to food, including the obligation to establish recourse mechanisms through which people can claim their right.

The Zero Hunger Programme incorporates more than 40 social and social-security policies and programmes, reaching out to more than one-third of the Brazilian population (through means such as cash transfers, school-feeding programmes and direct procurement from smallholder farmers). These programmes, which are associated with further agrarian reform and strong credit and technical support to smallholder agriculture, have allowed Brazil to mitigate the impact of the global food and economic crises on food security and overall economic growth.

This box was contributed by Flavio Valente, Secretary General, FoodFirst Information and Action Network (FIAN).

independent institutions, including courts, to enhance accountability.

The Right to Food Guidelines also recommend that states promote good governance as an essential factor for sustained economic growth, sustainable development, and poverty and hunger eradication, as well as for the realization of all human rights including the progressive realization of the right to adequate food.

Improved governance of public institutions that monitor, design and implement food security policies and programmes is an essential part of the implementation of the Guidelines. At government level, this means that all relevant ministries, technical departments and commissions need to combine their complementary skills and efforts to design and implement effective, integrated cross-sectoral initiatives. Participation of households, families, farmers' organizations, agribusiness, civil society organizations and others in the policy-making process – not only at the national level but also at the regional, village and even family levels – is essential.

Strengthening governance mechanisms for world food security

The persistence of undernourishment and its aggravation during the recent food and economic crises underscore the need for improved global food-security governance to address fundamental weaknesses in the fight against hunger. In spite of ongoing global food-security analysis and timely warning of likely immediate and long-term problems, such knowledge has not been translated effectively into appropriate and timely policies, programmes, institutions and response mechanisms. The attention currently focused on global food insecurity should be utilized to tackle the root causes of hunger and show how future crises could be avoided by addressing long-term challenges to food security such as rural poverty, inappropriate policies and strategies, and insufficient investment in food and agriculture.

Such objectives would require coherent and coordinated action over the longer term. To be addressed in a sustainable manner, they require common policies, strategies and programmes and also strengthened capacity for implementation and monitoring of interventions. To that end, the governance of the fight against food insecurity needs to be consolidated at the global level, drawing and building on existing structures.

The Committee on World Food Security is a universal intergovernmental body made up of Member Nations of FAO and UN Member States that is mandated to review and follow up policies concerning world food security and to examine issues affecting the world food-security situation. It is currently undergoing reform, with the aim of enhancing its effectiveness in galvanizing political will and developing technical solutions for the alleviation of chronic hunger and food insecurity. By helping to coordinate the actions of all relevant stakeholders, and by being empowered to become more effective, the reformed Committee has the potential to generate momentum for timely, integrated, sustainable and effective responses to the challenges of food security. It could become a key component of a global partnership for agriculture, food security and nutrition.

Initiatives to revitalize the global governance of world food security should consider past experiences and ongoing global changes. Civil society has become more prominent in the public debates that influence policy and shape public opinion at the national, regional and global levels, and it has also become more involved in the affairs of the UN. Moreover, the world economy, including food systems, has become more interconnected and globalized, with a shock in one country now reverberating across the globe more than it would have done in the 1970s. Non-governmental organizations, farmers' organizations and the private sector should be engaged in policy and programme design to remedy the negative effects of such economic shocks.

To ensure a more effective and efficient global agriculture, food and nutrition system, the governance of world food security must:

- provide science-based analysis and advocacy concerning the key determinants and possible evolution of food security;
- help coordinate and strengthen international, regional and national strategies, policies and programmes for sustainable agriculture and food security;
- promote actions that encourage investment in agriculture while maintaining focus on equitable, broad-based sharing of resources;
- strengthen coherence among food security policies and related issues such as climate change, environmental sustainability and natural resource management;
- monitor progress and the results of past and present policy measures, as well as the effectiveness and efficiency of resource mobilization; and
- influence governments and other key stakeholders to commit themselves to clearly defined, time-bound goals and actions to eradicate hunger and food insecurity and to develop ways to monitor these goals.

In the wake of the food crisis, countries that have begun implementing the right to food, such as Brazil (see box on the right to food in Brazil), have demonstrated the value of participatory coordination mechanisms. These include the National Council of Food and Nutrition Security, targeted safety nets such as the *Bolsa Familia* programme, transparent and accountable programmes such as the school-feeding programme, and empowered citizens.

Food security is a function not only of production and market access, but also of the environment created by economic and political institutions at all levels. These institutions can facilitate or obstruct people's access to essential livelihood assets. Understanding governance structures and institutional contexts is crucial for addressing food security as a policy issue that cuts across several sectors and has multiple dimensions. It is now well recognized that the institutional set-up and the processes that allow interactions among stakeholders are critical factors for success or failure when formulating, implementing and monitoring policies, strategies and programmes.

Because of their close link to the current economic crisis, the global food crisis and the commitment to address its structural causes should remain at the top of the international political agenda. In addition to preventing past mistakes from being repeated, the right to food and good governance will ensure that food systems, along with social, economic and political systems, will be set up at all levels with the overarching objective of promoting the well-being of humanity and the dignity of every human being.

Technical annex

TABLE 1

Prevalence of undernourishment and progress towards the World Food Summit (WFS)[1] and the Millennium Development Goal (MDG)[2] targets in developing countries[3]

WORLD Region/subregion/ country [undernourishment category]	Total population	Number of people undernourished				Progress in number towards WFS	WFS trend	Proportion of undernourished in total population				Progress in prevalence towards MDG	MDG trend
	2004–06 (millions)	1990–92	1995–97 (millions)	2000–02	2004–06	target = 0.5*	1990–92 to 2004–06	1990–92	1995–97 (%)	2000–02	2004–06	target = 0.5**	1990–92 to 2004–06
WORLD	**6 483.3**	**845.3**	**824.9**	**856.8**	**872.9**	**1.0**	▲	**16**	**14**	**14**	**13**	**0.9**	▼
Developed countries	**1 269.5**	**19.1**	**21.4**	**18.7**	**15.2**	**0.8**	▼	**–**	**–**	**–**	**–**	**na**	**na**
Developing countries	**5 213.8**	**826.2**	**803.5**	**838.0**	**857.7**	**1.0**	▲	**20**	**18**	**17**	**16**	**0.8**	▼
ASIA AND THE PACIFIC* **	**3 518.7**	**585.7**	**528.5**	**552.1**	**566.2**	**1.0**	▼	**20**	**17**	**16**	**16**	**0.8**	▼
East Asia	**1 394.5**	**183.3**	**152.0**	**141.7**	**136.3**	**0.7**	▼	**15**	**12**	**10**	**10**	**0.7**	▼
China [3]	1 320.5	177.8	143.7	132.5	127.4	0.7	▼	15	12	10	10	0.6	▼
Dem. People's Rep. of Korea [4]	23.6	4.2	6.7	8.0	7.5	1.8	▲	21	31	34	32	1.5	▲
Mongolia [4]	2.6	0.7	1.0	0.6	0.7	1.1	◀▶	30	40	25	29	1.0	▼
Republic of Korea [1]	47.9	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Southeast Asia	**551.9**	**105.7**	**88.6**	**93.9**	**84.7**	**0.8**	▼	**24**	**18**	**18**	**15**	**0.6**	▼
Cambodia [4]	14.0	3.8	4.8	3.5	3.5	0.9	▼	38	41	27	25	0.7	▼
Indonesia [3]	226.1	34.5	26.7	36.9	36.7	1.1	▲	19	13	17	16	0.9	▼
Lao People's Dem. Rep. [3]	5.7	1.1	1.3	1.2	1.0	0.9	▼	27	26	22	19	0.7	▼
Malaysia [1]	25.7	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Myanmar [3]	48.0	18.1	14.8	12.2	8.3	0.5	▼	44	34	26	17	0.4	▼
Philippines [3]	84.6	13.3	12.8	13.4	12.7	1.0	▼	21	18	17	15	0.7	▼
Thailand [3]	63.0	15.7	12.3	12.4	10.7	0.7	▼	29	21	20	17	0.6	▼
Viet Nam [3]	85.0	18.7	15.6	13.8	11.2	0.6	▼	28	21	17	13	0.5	▼
South Asia	**1 492.0**	**286.1**	**278.3**	**302.8**	**336.6**	**1.2**	▲	**25**	**22**	**22**	**23**	**0.9**	▼
Bangladesh [4]	153.3	41.6	51.4	40.1	40.2	1.0	▼	36	40	28	26	0.7	▼
India [4]	1 134.4	210.2	193.5	223.0	251.5	1.2	▲	24	20	21	22	0.9	▼
Nepal [3]	27.1	4.0	5.3	4.7	4.2	1.0	▲	21	24	19	16	0.8	▼
Pakistan [4]	158.1	25.7	23.7	31.3	36.5	1.4	▲	22	18	21	23	1.0	▲
Sri Lanka [4]	19.1	4.6	4.4	3.8	4.1	0.9	▼	27	24	20	21	0.8	▼
Central Asia	**58.4**	**4.0**	**4.7**	**9.3**	**5.8**	**1.4**	▲	**8**	**9**	**17**	**10**	**1.3**	▲
Kazakhstan [1]	15.2	ns	ns	1.1	ns	na	na	–	–	8	–	na	na
Kyrgyzstan [1]	5.2	0.8	0.6	ns	ns	na	na	17	13	–	–	na	na
Tajikistan [4]	6.6	1.8	2.4	3.4	1.7	0.9	▼	34	42	54	26	0.8	▼
Turkmenistan [2]	4.8	0.3	0.4	0.3	0.3	0.9	◀▶	9	9	7	6	0.7	▼
Uzbekistan [3]	26.6	1.0	1.1	4.2	3.4	3.5	▲	5	5	17	13	2.8	▲
Western Asia	**15.8**	**6.1**	**4.4**	**3.5**	**2.1**	**0.3**	▼	**38**	**27**	**22**	**13**	**0.4**	▼
Armenia [4]	3.0	1.6	1.1	0.9	0.7	0.4	▼	46	34	30	23	0.5	▼
Azerbaijan [3]	8.4	2.0	2.1	1.6	0.9	0.4	▼	27	27	19	11	0.4	▼
Georgia [3]	4.5	2.5	1.2	1.0	0.6	0.2	▼	47	24	21	12	0.3	▼
LATIN AMERICA AND THE CARIBBEAN	**551.1**	**52.6**	**51.8**	**49.4**	**45.3**	**0.9**	▼	**12**	**11**	**9**	**8**	**0.7**	▼
North and Central America	**143.6**	**9.3**	**10.2**	**9.3**	**9.0**	**1.0**	▼	**8**	**8**	**7**	**6**	**0.8**	▼
Costa Rica [1]	4.3	ns	ns	ns	ns	na	na	–	–	–	–	na	na
El Salvador [3]	6.7	0.5	0.6	0.6	0.7	1.4	▲	9	11	9	10	1.1	▲
Guatemala [3]	12.7	1.3	1.7	2.0	2.1	1.6	▲	14	17	17	16	1.2	▲
Honduras [3]	6.8	1.0	0.9	0.8	0.8	0.9	▼	19	16	13	12	0.6	▼
Mexico [1]	104.3	ns	4.3	ns	ns	na	na	–	5	–	–	na	na
Nicaragua [4]	5.5	2.2	1.9	1.4	1.2	0.5	▼	52	40	27	21	0.4	▼

TABLE 1

Prevalence of undernourishment and progress towards the World Food Summit (WFS)[1] and the Millennium Development Goal (MDG)[2] targets in developing countries[3]

WORLD Region/subregion/ country [undernourishment category]	Total population	Number of people undernourished				Progress in number towards WFS	WFS trend	Proportion of undernourished in total population				Progress in prevalence towards MDG	MDG trend
	2004–06	1990–92	1995–97	2000–02	2004–06	target = 0.5*	1990–92 to 2004–06	1990–92	1995–97	2000–02	2004–06	target = 0.5**	1990–92 to 2004–06
	(millions)	(millions)						(%)					
Panama [3]	3.2	0.4	0.6	0.6	0.6	1.3	▲	18	20	19	17	1.0	▼
The Caribbean	**34.0**	**7.5**	**8.6**	**7.2**	**7.8**	**1.0**	▲	**26**	**28**	**22**	**23**	**0.9**	▼
Cuba [1]	11.3	0.6	1.5	ns	ns	na	na	5	14	–	–	na	na
Dominican Republic [4]	9.5	2.0	2.0	2.1	2.0	1.0	◀▶	27	24	23	21	0.8	▼
Haiti [5]	9.3	4.5	4.8	4.6	5.4	1.2	▲	63	60	53	58	0.9	▼
Jamaica [2]	2.7	0.3	0.2	0.1	0.1	0.5	▼	11	7	5	5	0.4	▼
Trinidad and Tobago [3]	1.3	0.1	0.2	0.1	0.1	1.0	◀▶	11	13	11	10	0.9	▼
South America	**373.5**	**35.8**	**33.0**	**32.9**	**28.5**	**0.8**	▼	**12**	**10**	**9**	**8**	**0.6**	▼
Argentina [1]	38.8	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Bolivia (Plurinational State of) [4]	9.2	1.6	1.5	1.7	2.1	1.3	▲	24	20	20	23	1.0	▼
Brazil [2]	186.8	15.8	15.6	16.6	11.9	0.7	▼	10	10	9	6	0.6	▼
Chile [1]	16.3	0.9	ns	ns	ns	na	na	7	–	–	–	na	na
Colombia [3]	44.9	5.2	4.2	4.2	4.3	0.8	▼	15	11	10	10	0.7	▼
Ecuador [3]	13.1	2.5	2.0	2.3	1.7	0.7	▼	24	17	19	13	0.5	▼
Guyana [2]	0.7	0.1	0.1	0.0	0.0	0.3	▼	18	10	5	6	0.3	▼
Paraguay [3]	5.9	0.7	0.5	0.6	0.7	1.0	◀▶	16	11	11	12	0.7	▼
Peru [3]	27.3	6.1	4.9	3.2	3.6	0.6	▼	28	20	12	13	0.5	▼
Suriname [2]	0.5	0.0	0.0	0.0	0.0	0.7	◀▶	11	8	8	7	0.6	▼
Uruguay [1]	3.3	0.2	ns	ns	ns	na	na	5	–	–	–	na	na
Venezuela (Bolivarian Rep. of) [3]	26.7	2.1	3.1	3.3	3.1	1.5	▲	10	14	13	12	1.1	▲
NEAR EAST AND NORTH AFRICA* **	**427.7**	**19.1**	**29.6**	**31.6**	**33.8**	**1.8**	▲	**6**	**8**	**8**	**8**	**1.3**	▲
Near East	**275.5**	**15.0**	**25.3**	**27.1**	**29.0**	**1.9**	▲	**7**	**11**	**11**	**11**	**1.4**	▲
Iran (Islamic Republic of) [1]	69.5	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Jordan [1]	5.5	ns	0.2	0.2	ns	na	na	–	5	5	–	na	na
Kuwait [1]	2.7	0.4	0.1	ns	ns	na	na	20	5	–	–	na	na
Lebanon [1]	4.0	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Saudi Arabia [1]	23.6	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Syrian Arab Republic [1]	18.9	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Turkey [1]	73.0	ns	ns	ns	ns	na	na	–	–	–	–	na	na
United Arab Emirates [1]	4.1	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Yemen [4]	21.1	3.8	5.0	5.7	6.7	1.8	▲	30	31	30	32	1.1	▲
North Africa	**152.2**	**4.0**	**4.3**	**4.5**	**4.9**	**1.2**	▲	**–**	**–**	**–**	**–**	**na**	**na**
Algeria [1]	32.9	ns	1.5	1.4	ns	na	na	–	5	5	–	na	na
Egypt [1]	72.9	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Libyan Arab Jamahiriya [1]	5.9	ns	ns	ns	ns	na	na	–	–	–	–	na	na
Morocco [1]	30.5	1.2	1.4	1.4	ns	na	na	5	5	5	–	na	na
Tunisia [1]	10.1	ns	ns	ns	ns	na	na	–	–	–	–	na	na
SUB-SAHARAN AFRICA* **	**716.3**	**168.8**	**193.6**	**205.0**	**212.3**	**1.3**	▲	**34**	**34**	**32**	**30**	**0.9**	▼
Central Africa	**95.8**	**22.0**	**38.4**	**47.3**	**54.3**	**2.5**	▲	**34**	**51**	**55**	**57**	**1.7**	▲
Cameroon [4]	17.8	4.3	5.1	4.4	4.0	0.9	▼	34	35	27	23	0.7	▼
Central African Rep. [5]	4.2	1.4	1.8	1.7	1.7	1.2	▲	47	50	44	41	0.9	▼

TABLE 1

Prevalence of undernourishment and progress towards the World Food Summit (WFS)[1] and the Millennium Development Goal (MDG)[2] targets in developing countries[3]

WORLD Region/subregion/ country [undernourishment category]	Total population	Number of people undernourished				Progress in number towards WFS	WFS trend	Proportion of undernourished in total population				Progress in prevalence towards MDG	MDG trend
	2004–06 (millions)	1990–92	1995–97 (millions)	2000–02	2004–06	target = 0.5*	1990–92 to 2004–06	1990–92	1995–97 (%)	2000–02	2004–06	target = 0.5**	1990–92 to 2004–06
Chad [5]	10.1	3.7	3.8	3.7	3.9	1.0	▲	59	51	42	38	0.6	▼
Congo [4]	3.6	1.0	1.2	0.8	0.8	0.8	▼	40	43	26	21	0.5	▼
Democratic Rep. of the Congo [5]	58.8	11.4	26.5	36.6	43.9	3.8	▲	29	57	70	75	2.6	▲
Gabon [1]	1.3	0.0	ns	ns	ns	na	na	5	–	–	–	na	na
East Africa	**248.8**	**77.2**	**85.7**	**83.4**	**86.5**	**1.1**	▲	**45**	**44**	**37**	**35**	**0.8**	▼
Burundi [5]	7.9	2.6	3.6	4.2	4.9	1.9	▲	44	57	62	63	1.4	▲
Eritrea**** [5]	4.5	2.1	2.1	2.7	3.0	1.4	▲	67	64	70	66	1.0	▼
Ethiopia**** [5]	79.0	37.5	39.5	35.3	34.6	0.9	▼	71	64	50	44	0.6	▼
Kenya [4]	35.6	8.0	8.4	9.7	10.8	1.3	▲	33	30	30	30	0.9	▼
Rwanda [5]	9.3	3.2	3.3	3.3	3.7	1.2	▲	45	56	39	40	0.9	▼
Sudan [4]	36.9	8.3	7.2	7.5	7.5	0.9	▼	31	24	22	20	0.7	▼
Uganda [3]	29.0	3.6	5.1	4.1	4.4	1.2	▲	19	23	16	15	0.8	▼
United Republic of Tanzania [5]	38.5	7.4	12.1	12.5	13.6	1.8	▲	28	40	36	35	1.3	▲
Southern Africa	**101.3**	**32.4**	**35.8**	**36.5**	**36.7**	**1.1**	▲	**45**	**43**	**39**	**36**	**0.8**	▼
Angola [5]	16.1	7.2	7.3	7.4	7.1	1.0	▼	66	58	52	44	0.7	▼
Botswana [4]	1.8	0.3	0.4	0.5	0.5	1.7	▲	20	24	27	26	1.3	▲
Lesotho [3]	2.0	0.2	0.2	0.3	0.3	1.2	▲	15	13	14	15	1.0	◀▶
Madagascar [5]	18.6	3.9	5.4	6.1	6.6	1.7	▲	32	37	37	35	1.1	▲
Malawi [4]	13.2	4.3	3.7	3.5	3.8	0.9	▼	45	36	29	29	0.7	▼
Mauritius [2]	1.2	0.1	0.1	0.1	0.1	1.0	◀▶	7	6	5	6	0.9	▼
Mozambique [5]	20.5	8.2	8.6	7.9	7.5	0.9	▼	59	52	42	37	0.6	▼
Namibia [3]	2.0	0.4	0.5	0.4	0.4	0.9	◀▶	29	29	21	19	0.6	▼
Swaziland [3]	1.1	0.1	0.2	0.2	0.2	1.8	▲	12	20	17	18	1.5	▲
Zambia [5]	11.5	3.3	3.9	4.8	5.2	1.5	▲	40	41	45	45	1.1	▲
Zimbabwe [5]	13.1	4.3	5.5	5.5	5.1	1.2	▲	40	46	43	39	1.0	▼
West Africa	**270.4**	**37.3**	**33.8**	**37.7**	**34.7**	**0.9**	▼	**20**	**16**	**15**	**13**	**0.6**	▼
Benin [3]	8.5	1.5	1.7	1.6	1.6	1.1	▲	28	26	22	19	0.7	▼
Burkina Faso [2]	13.9	1.3	1.3	1.6	1.3	1.0	◀▶	14	12	13	9	0.7	▼
Côte d'Ivoire [3]	18.6	2.0	2.4	2.7	2.5	1.3	▲	15	16	15	14	0.9	▼
Gambia [4]	1.6	0.2	0.4	0.4	0.5	2.3	▲	20	31	29	29	1.4	▲
Ghana [2]	22.5	5.4	3.0	2.5	1.7	0.3	▼	34	16	12	8	0.2	▼
Guinea [3]	9.0	1.2	1.3	1.5	1.5	1.3	▲	19	18	18	16	0.9	▼
Liberia [5]	3.5	0.6	0.9	1.3	1.3	2.1	▲	30	39	43	38	1.3	▲
Mali [3]	11.6	1.1	1.3	1.3	1.2	1.1	▲	14	15	12	10	0.7	▼
Mauritania [2]	3.0	0.2	0.2	0.2	0.2	1.2	◀▶	10	8	7	8	0.8	▼
Niger [4]	13.3	3.1	3.8	3.7	3.8	1.2	▲	38	40	32	28	0.7	▼
Nigeria [2]	141.4	14.7	10.8	12.8	11.3	0.8	▼	15	10	10	8	0.5	▼
Senegal [4]	11.8	2.3	3.0	3.4	2.9	1.3	▲	28	32	32	25	0.9	▼
Sierra Leone [5]	5.6	1.9	1.8	2.4	2.5	1.4	▲	45	43	51	46	1.0	▲
Togo [5]	6.2	1.8	1.8	2.3	2.3	1.2	▲	45	39	41	37	0.8	▼

Notes: Please see inside back flap.

TABLE 2

Selected food and financial indicators in developing countries, classified by region

Region/subregion/ country [undernourishment category]	DES[1] per capita	Workers' remittances and compensation of employees, received[2]	Official development assistance[3]	Foreign direct investment, net (BoP, current US$)[4]	Current account balance[5]	Total reserves[6]	Cash surplus/ deficit[7]	Net food trade
	2004–06 (kcal/day)	2007 (% of GDP)	2006 (% of GDP)	2003–07 (% of GDP)	2006 (% of GDP)	2006 (in months)	2006 (% of GDP)	2006 (% of GDP)
ASIA AND THE PACIFIC								
East Asia								
China [3]	2 980	1.1	0.0	2.4	9.4	14.5	–1.6[b]	0.6
Dem. People's Rep. of Korea [4]	2 160	na	na	na	na	na	na	na
Mongolia [4]	2 210	5.0	6.4	7.4	7.0	6.2	–0.4[a]	–3.8
Republic of Korea [1]	3 040	0.1	na	–0.3	0.6	7.4	0.7[b]	–0.8
Southeast Asia								
Cambodia [4]	2 180	4.2	7.3	5.9	–4.7	2.9	–1.7	–3.1
Indonesia [3]	2 450	1.5	0.4	0.4	3.0	4.6	–1.1[e]	1.0
Lao People's Dem. Rep. [3]	2 330	0.0	10.7	na	–4.7[d]	3.0[d]	na	–2.4
Malaysia [1]	2 870	1.0	0.2	0.3	16.3	6.2	–4.3[a]	2.2
Myanmar [3]	2 420	na	na	na	na	3.9	–1.8[b]	na
Philippines [3]	2 510	11.6	0.5	0.9	5.0	4.3	–1.3	–1.0
Thailand [3]	2 510	0.7	–0.1	3.6	1.1	5.1	1.9	2.8
Viet Nam [3]	2 680	7.9[c]	3.0	5.1	–0.3	3.2	na	1.5
South Asia								
Bangladesh [4]	2 240	9.5	2.0	0.9	1.9	2.6	–0.7[e]	–3.4
India [4]	2 330	3.1	0.2	0.5	–1.0	8.8	–2.7	0.1
Nepal [3]	2 420	15.5	5.8	0.0	1.7	6.7[b]	–1.6	–1.7
Pakistan [4]	2 330	4.2	1.7	2.3	–5.3	4.0	–4.2	–0.6
Sri Lanka [4]	2 350	8.1	2.8	1.1	–4.7	2.9	–6.9	–3.5
Central Asia								
Kazakhstan [1]	3 190	0.2	0.2	7.4	–2.4	5.3	1.6	–0.4
Kyrgyzstan [1]	3 110	19.0	11.0	4.5	–10.0	4.2	–0.6	–3.9
Tajikistan [4]	2 180	45.5	8.5	7.0	–0.8	1.0	–6.6[e]	–9.0
Turkmenistan [2]	2 770	na	0.2	na	na	na	na	–0.8
Uzbekistan [3]	2 470	na	0.9	na	na	na	na	0.0
Western Asia								
Armenia [4]	2 290	9.0	3.3	6.4	–1.8	4.4	–0.3	–3.2
Azerbaijan [3]	2 580	4.4	1.0	–1.4	17.7	2.7	na	–0.9
Georgia [3]	2 500	6.8	4.7	12.0	–14.9	2.4	1.6	–5.2
LATIN AMERICA AND THE CARIBBEAN								
North and Central America								
Costa Rica [1]	2 800	2.3	0.1	3.6	–4.8	2.9	1.2	5.1
El Salvador [3]	2 520	18.4	0.8	1.6	–4.6	2.5	–3.2	–2.6
Guatemala [3]	2 270	10.6	1.6	0.8	–5.3	3.6	–2.0	0.6
Honduras [3]	2 600	24.5	5.5	3.3	–1.8	4.9	–1.1	–1.9
Mexico [1]	3 260	3.0	0.0	2.0	–0.2	3.1	na	–0.4
Nicaragua [4]	2 370	12.1	13.8	5.0	–16.1	2.7	0.1	0.3
Panama [3]	2 380	0.8	0.2	9.1	–3.2	1.1	0.9[d]	0.2
The Caribbean								
Cuba [1]	3 290	na	na	na	na	na	na	na
Dominican Republic [4]	2 300	9.3	0.2	4.4	–4.0	1.6	–1.2	–0.8

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Region/subregion/ country [undernourishment category]	DES[1] per capita	Workers' remittances and compensation of employees, received[2]	Official development assistance[3]	Foreign direct investment, net (BoP, current US$)[4]	Current account balance[5]	Total reserves[6]	Cash surplus/ deficit[7]	Net food trade
	2004–06 (kcal/day)	2007 (% of GDP)	2006 (% of GDP)	2003–07 (% of GDP)	2006 (% of GDP)	2006 (in months)	2006 (% of GDP)	2006 (% of GDP)
Haiti [5]	1 830	20.0	11.7	1.2	0.0	1.5	na	–7.6
Jamaica [2]	2 810	19.4	0.4	6.6	–11.7	3.4	0.3	–3.4
Trinidad and Tobago [3]	2 770	0.4	0.1	7.4	23.8[b]	8.4[b]	6.1[b]	–1.2
South America								
Argentina [1]	3 010	0.2	0.1	1.7	3.6	7.3	–0.5[e]	6.2
Bolivia (Plurinational State of) [4]	2 160	6.6	5.1	0.6	11.5	9.5	12.2	1.2
Brazil [2]	3 090	0.3	0.0	1.1	1.3	6.7	na	2.1
Chile [1]	2 990	0.0	0.1	4.7	4.7	3.5	7.7	2.6
Colombia [3]	2 680	3.0	0.7	3.8	–2.3	4.9	–3.9	0.2
Ecuador [3]	2 340	6.9	0.5	1.7	3.6	1.5	na	3.2
Guyana [2]	2 830	23.5	19.0	6.8	–12.3	3.2	na	12.5
Paraguay [3]	2 580	3.2	0.6	0.9	–2.3	3.1	1.2	11.7
Peru [3]	2 490	1.9	0.5	2.7	2.8	7.8	–0.8[b]	–0.1
Suriname [2]	2 720	6.2	3.0	–5.6	5.2	2.1	–2.7[a]	–3.2
Uruguay [1]	2 930	0.4	0.1	4.6	–1.9	5.3	–0.9	8.9
Venezuela (Bolivarian Rep. of) [3]	2 480	0.1	0.0	–0.2	14.7	9.3	2.2[b]	–1.2
NEAR EAST AND NORTH AFRICA								
Near East								
Iran (Islamic Republic of) [1]	3 100	0.5	0.1	na	na	na	3.2	–0.1
Jordan [1]	2 880	22.7	4.1	12.1	–13.5	6.2	–3.9	–5.2
Kuwait [1]	3 100	na	0.0	–3.5	49.9	6.6	21.3	–1.5
Lebanon [1]	3 170	24.4	3.1	12.0	–4.8	11.4	–8.5[e]	–3.9
Saudi Arabia [1]	3 070	na	0.0	0.0	27.8	3.2	na	–1.9
Syrian Arab Republic [1]	3 010	2.2	0.1	1.3	2.8	na	na	1.7
Turkey [1]	3 350	0.2	0.1	1.6	–6.2	4.9	1.9	0.5
United Arab Emirates [1]	2 960	na	na	na	na	na	na	na
Yemen [4]	2 010	6.1	1.5	1.3	1.1	9.7	na	–5.9
North Africa								
Algeria [1]	3 100	1.6	0.2	na	na	na	13.6	–3.0
Egypt [1]	3 300	6.0	0.8	4.2	2.5	7.4	–5.8	–2.3
Libyan Arab Jamahiriya [1]	3 020	na	0.1	1.6	44.6	40.2	na	–1.9
Morocco [1]	3 190	9.0	1.6	2.9	2.8	9.2	–1.8	–0.9
Tunisia [1]	3 270	5.0	1.4	4.3	–2.0	4.5	–2.7	0.6
SUB-SAHARAN AFRICA								
Central Africa								
Cameroon [4]	2 240	0.8	9.4	1.2	–3.9[e]	2.2[e]	na	–0.7
Central African Republic [5]	1 920	na	9.1	na	na	na	–0.5[e]	–0.5
Chad [5]	1 990	na	4.5	na	na	na	na	0.4
Congo [4]	2 340	0.1	3.3	5.9	14.8[b]	2.2[b]	6.4[a]	–2.6
Democratic Republic of the Congo [5]	1 510	0.2	24.1	na	na	na	–0.1[d]	–4.9
Gabon [1]	2 800	0.1	0.3	3.1	12.9[e]	1.7[e]	na	–2.3

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Region/subregion/ country [undernourishment category]	DES[1] per capita	Workers' remittances and compensation of employees, received[2]	Official development assistance[3]	Foreign direct investment, net (BoP, current US$)[4]	Current account balance[5]	Total reserves[6]	Cash surplus/ deficit[7]	Net food trade
	2004–06 (kcal/day)	2007 (% of GDP)	2006 (% of GDP)	2003–07 (% of GDP)	2006 (% of GDP)	2006 (in months)	2006 (% of GDP)	2006 (% of GDP)
East Africa								
Burundi [5]	1 630	0.0	45.9	0.0	–14.9	3.4	na	–6.6
Eritrea [5]	1 560	na	11.9	na	na	na	na	–3.8
Ethiopia [5]	1 840	2.0	12.8	1.5	–11.8	1.9	–7.6[f]	–0.7
Kenya [4]	2 060	5.4	4.1	0.2	–2.3	3.5	1.5[b]	–0.7
Rwanda [5]	1 940	1.9	20.4	1.0	–6.3	6.8	na	–2.2
Sudan [4]	2 300	3.7	5.7	7.2	–13.0	1.7	na	–1.7
Uganda [3]	2 370	7.2	16.3	4.1	–3.4	6.3	–2.0	–2.8
United Republic of Tanzania [5]	2 000	0.1	12.9	3.0	–10.2	5.1	na	–2.5
Southern Africa								
Angola [5]	1 900	na	0.4	2.3	23.7	4.6	na	–2.1
Botswana [4]	2 210	1.2	0.6	3.5	17.6	20.2	na	–0.5
Lesotho [3]	2 440	28.7	4.8	7.4	4.5	5.3	4.1[b]	–3.1
Madagascar [5]	2 030	0.1	13.7	0.9	–11.0[b]	2.7[b]	9.9	–1.5
Malawi [4]	2 140	0.0	21.1	na	–7.5[f]	2.4[f]	na	–0.2
Mauritius [2]	2 880	2.9	0.3	0.6	–9.6	3.1	–3	0.6
Mozambique [5]	2 090	1.3	23.6	3.3	–9.3	3.6	na	–2.8
Namibia [3]	2 310	0.2	2.2	4.7	16.2	1.6	–6.8[a]	–1
Swaziland [3]	2 330	na	1.2	0.0	3.5	1.8	–2.7[a]	4.4
Zambia [5]	1 890	0.5	13.1	6.8	1.2	2.0	–2.8	–0.8
Zimbabwe [5]	2 060	0.0	11.0[b]	na	na	na	na	na
West Africa								
Benin [3]	2 300	4.1	8.1	1.2	–5.3[b]	6.6[b]	0.3	–7.3
Burkina Faso [2]	2 640	0.7	15.1	na	na	na	–6.1	–2.7
Côte d'Ivoire [3]	2 530	0.9	1.5	1.8	2.8	2.5	–1.4	10.2
Gambia [4]	2 140	6.9	14.5	11.2	–12.8	4.0	na	–24.7
Ghana [2]	2 740	0.8	9.2	1.9	–8.2	3.2	–29[e]	5.1
Guinea [3]	2 550	3.0	5.1	2.1	–4.1[e]	1.4[e]	na	–5.8
Liberia [5]	2 040	94.5	43.8	na	–22.5	1.4	na	–22.5
Mali [3]	2 580	3.3	14.1	2.5	–3.9	4.7	32.1	–2.9
Mauritania [2]	2 800	0.1	7.0	na	na	na	na	–9.5
Niger [4]	2 140	1.9	11.2	0.6	–9.4[b]	2.7[b]	na	–3.9
Nigeria [2]	2 650	6.7	7.8	1.7	21.6[b]	10.7[b]	na	–1.4
Senegal [4]	2 180	8.5	8.9	0.6	na	na	–2.1[d]	–6.6
Sierra Leone [5]	1 930	9.4	25.6	4.3	–7.1	4.5	–2.5[e]	–6.1
Togo [5]	2 030	8.4	3.5	3.1	–21.4[b]	1.5[b]	–0.1	–8.2

Notes: Please see inside back flap.

NOTES

FAO data sources used in this report include the following:

- *FAOSTAT* is an online multilingual database currently containing over 1 million time-series records from over 210 countries and territories covering statistics on agriculture, nutrition, fisheries, forestry, food aid, land use and population and is available at: http://faostat.fao.org/default.aspx
- The *GIEWS National Basic Food prices data and analysis tool* contains monthly data on domestic food prices in a broad range of countries around the world and is available at: http://www.fao.org/giews/pricetool/
- The RIGA (Rural Income Generating Activities) database contains internationally comparable data on rural household income sources using data from existing household living standards surveys and is available at: http://www.fao.org/es/ESA/riga/english/index_en.htm

1 Throughout this publication, "economic crisis" is used to refer to general global economic conditions in 2008 and 2009, including both recession and the financial crisis. "Food crisis" refers to the period in 2006–08 that saw the prices of almost all major food commodities (as well as the cost of fuel) increase to levels that were unaffordable for a great number of the world's poor.

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2009

The State of
Food Insecurity in the World

Economic crises – impacts and lessons learned

The State of Food Insecurity in the World 2009 presents the latest statistics on global undernourishment and concludes that structural problems of underinvestment have impeded progress toward the World Food Summit goal and the first Millennium Development Goal hunger reduction target. This disappointing state of affairs has been exacerbated by first the food crisis and now the global economic crisis that, together, have increased the number of undernourished people in the world to more than one billion for the first time since 1970.

The report describes the transmission channels through which the economic crisis has affected developing countries and presents a series of country case studies that show how the poor are struggling to cope with a severe shock that is not of their own making. This crisis is different from the crises developing countries have experienced in the past, because it is affecting the entire world simultaneously, because it comes on top of a food crisis that has already strained the coping mechanisms of the poor, and because developing countries today are more integrated into the global economy than in past decades.

In the context of the enormous financial pressures faced by governments, the twin-track approach remains an effective way to address growing levels of hunger in the world. Stepping up investment in the agriculture sector, especially for public goods, will be critical if hunger is to be eradicated. In addition, safety nets designed to protect the most poor and food-insecure are an essential complement to such investment because the poorest should be given the opportunity to feed themselves now, even if the full impact of longer-term investment has not yet been realized.

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NOTES for Table - 1

1 World Food Summit goal: halve, between 1990–92 and 2015, the number of undernourished people.
2 Millennium Development Goal 1, target 1C: halve, between 1990 and 2015, the proportion of people who suffer from hunger. Indicator 1.9: Proportion of population below minimum level of dietary energy consumption (undernourishment).
3 Latest report period refers to 2004–06 estimates, and baseline refers to 1990–92. For countries that did not exist in the baseline period, the 1990–92 proportion of undernourished is based on 1993–95 and the number of undernourished is based on their 1990–92 population and this proportion.

Countries revise their official statistics regularly for the past as well as the latest reported period. The same holds for population data of the United Nations. Whenever this happens, FAO revises its estimates of undernourishment accordingly. Therefore, users are advised to refer to changes in estimates over time only within the same edition of *The State of Food Insecurity in the World* and refrain from comparing data published in editions for different years.

Figures following country names refer to the prevalence categories (proportion of the population undernourished in 2004–06):
[1] < 5 percent undernourished
[2] 5–9 percent undernourished
[3] 10–19 percent undernourished
[4] 20–34 percent undernourished
[5] ≥ 35 percent undernourished

Developing countries for which there were insufficient data are not listed in the table.

* Ratio current/baseline number of undernourished – ratio for WFS target = 0.5.
** Ratio current/baseline prevalence of undernourished – ratio for MDG target = 0.5.
*** Although not listed separately, provisional estimates for Afghanistan and Iraq (Near East and North Africa), Papua New Guinea (Asia and the Pacific) and Somalia (East Africa) have been included in the relevant regional aggregates. Developed countries have been included in world estimates.
**** Eritrea and Ethiopia were not separate entities in 1990–92, but estimates of the number and proportion of undernourished in the former People's Democratic Republic of Ethiopia are included in regional and subregional aggregates for that period.

KEY
– Proportion less than 5 percent of undernourished.
na Not applicable.
0.0 Zero or less than half the unit shown.
ns Not statistically significant.

SOURCES
Total population: United Nations, Department of Economic and Social Affairs, Population Division. 2007. *World population prospects: the 2006 revision.* New York, USA.
Undernourishment: FAO estimates.

NOTES for Table - 2

1 DES = dietary energy supply available for human consumption.
2 The data reported in this column include workers' remittances, compensation of employees and migrants' transfers.
3 Net official development assistance (ODA) consists of disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions, and by non-DAC countries to promote economic development and welfare in countries and territories in the DAC list of ODA recipients. It includes loans with a grant element of at least 25 percent (calculated at a rate of discount of 10 percent).
4 Foreign direct investment (FDI) is net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, re-investment of earnings, other long-term capital and short-term capital as shown in the balance of payments (BoP). Figures shown represent the average for 2003–07. This series shows total net FDI, that is, net FDI in the reporting economy from foreign sources minus net FDI by the reporting economy to the rest of the world. Data are in current US dollars.
5 Current account balance is the sum of net exports of goods and services, net income and net current transfers.
6 Total reserves comprise holdings of monetary gold, special drawing rights, reserves of International Monetary Fund (IMF) members held by the IMF, and holdings of foreign exchange under the control of monetary authorities. The gold component of these reserves is valued at year-end (31 December) London prices. This item shows reserves expressed in terms of the number of months of imports of goods and services that could be paid for.
7 Cash surplus or deficit is revenue (including grants) minus expense, minus net acquisition of non-financial assets. In the 1986 government finance statistics (GFS), manual non-financial assets were included under revenue and expenditure in gross terms. This cash surplus or deficit is closest to the earlier overall budget balance (missing is lending minus repayments, which is now a financing item under net acquisition of financial assets).

Figures following country names refer to the prevalence categories (proportion of the population undernourished in 2004–06):
[1] < 5 percent undernourished
[2] 5–9 percent undernourished
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[4] 20–34 percent undernourished
[5] ≥ 35 percent undernourished

Afghanistan and Iraq (Near East and North Africa), Papua New Guinea (Asia and the Pacific) and Somalia (East Africa) are not listed separately.

KEY
a 2003
b 2005
c 2006
d 2001
e 2004
f 2002
na Not available

SOURCES
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