



INTERNATIONAL FOOD POLICY  
RESEARCH INSTITUTE  
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# 2011 GLOBAL HUNGER INDEX

## THE CHALLENGE OF HUNGER

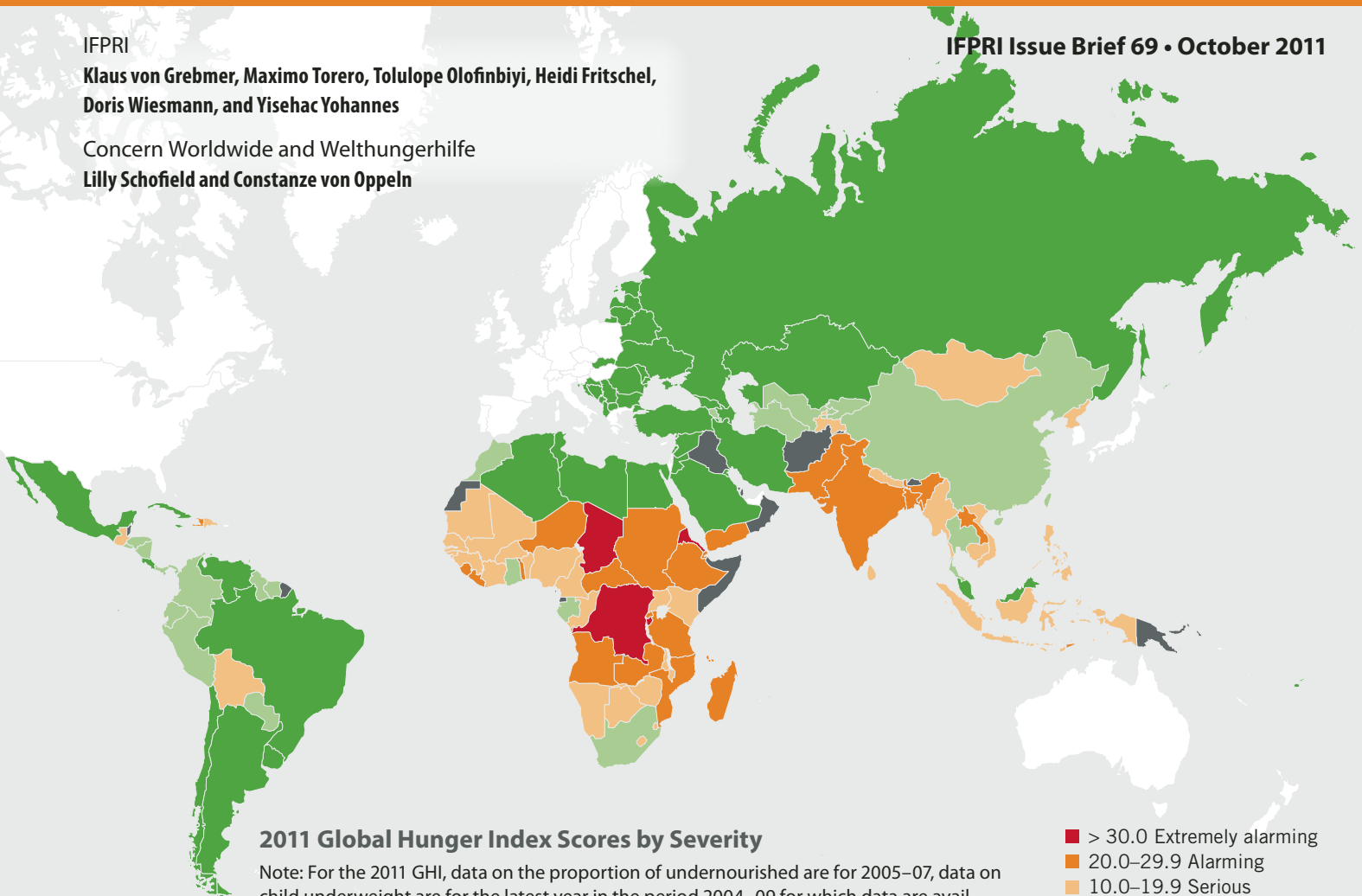
### *Taming Price Spikes and Excessive Food Price Volatility*

IFPRI

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#### 2011 Global Hunger Index Scores by Severity

Note: For the 2011 GHI, data on the proportion of undernourished are for 2005–07, data on child underweight are for the latest year in the period 2004–09 for which data are available, and data on child mortality are for 2009. GHI scores were not calculated for countries for which data were not available and for certain countries with very small populations.

- > 30.0 Extremely alarming
- 20.0–29.9 Alarming
- 10.0–19.9 Serious
- 5.0–9.9 Moderate
- < 4.9 Low
- No data
- Industrialized country

**T**he 2011 Global Hunger Index (GHI) report—the sixth in an annual series—presents a multidimensional measure of global, regional, and national hunger. It shows that although the world has made some progress in reducing hunger, the proportion of hungry people remains high. The 2011 GHI has improved by slightly more than one-quarter over the 1990 GHI, but globally, hunger remains at a level categorized as “serious.” In addition to presenting the 2011 GHI scores, the report examines the issue of price spikes and excessive food price volatility, which have significant effects on poor and hungry people.

## THE GLOBAL HUNGER INDEX

The GHI combines three equally weighted indicators in one index number: the proportion of people who are undernourished, the prevalence of underweight in children younger than age five, and the mortality rate of children younger than age five. Data on these indicators come from the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO), the United Nations Children’s Fund (UNICEF), various national demographic and health surveys, and IFPRI estimates. The 2011 GHI is calculated for 122 countries for which data on the three components are available and reflects data from 2004 to 2009—the most recent global data available on the three GHI components.

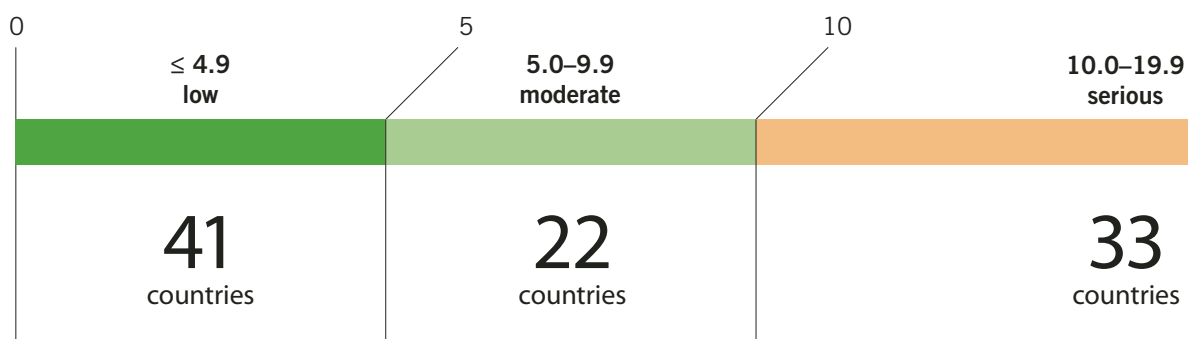
The GHI ranks countries on a 100-point scale, with 0 being the best score (no hunger) and 100 being the worst,

although neither of these extremes is reached in practice. Values less than 5.0 reflect low hunger, values between 5.0 and 9.9 reflect moderate hunger, values between 10.0 and 19.9 indicate a serious level of hunger, values between 20.0 and 29.9 are alarming, and values of 30.0 or greater are extremely alarming.

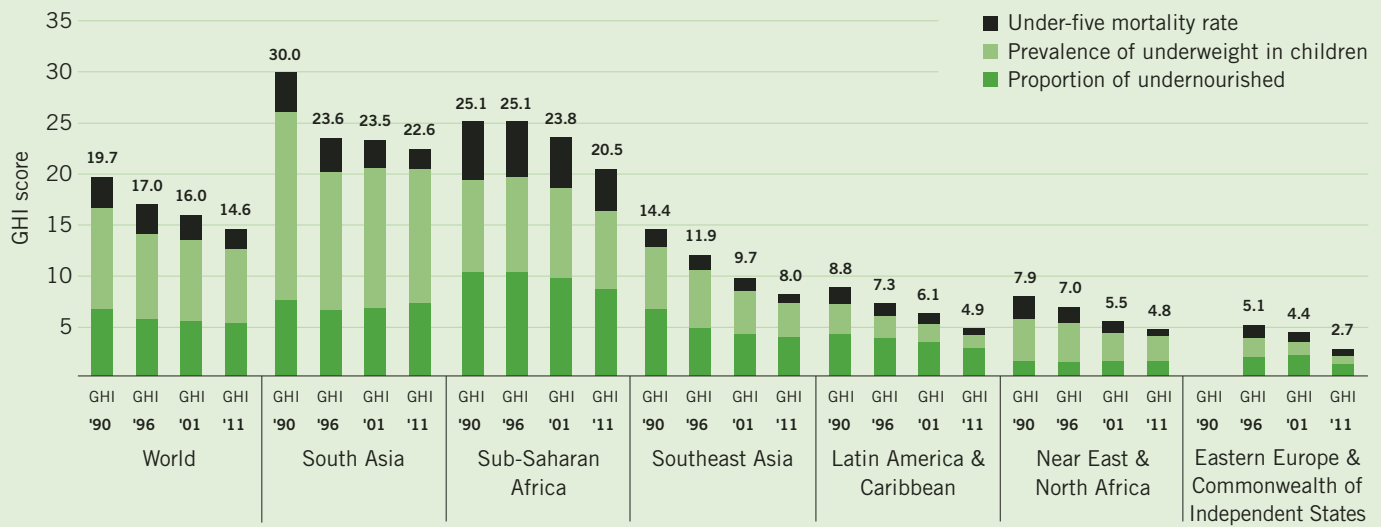
## RANKING AND TRENDS

Global hunger has declined since 1990, but not dramatically. Although the number of undernourished people was on the rise from the mid-1990s until 2009, the proportion of undernourished people in the world has declined slightly during the past decade. The 2011 GHI fell by 26 percent from the 1990 GHI, from a score of 19.7 to 14.6 (see Figure 1). This progress was driven mainly by reductions in the proportion of children younger than the age of five who are underweight.

**Global Hunger Index**



**Figure 1—Contribution of components to 1990 GHI, 1996 GHI, 2001 GHI, and 2011 GHI**



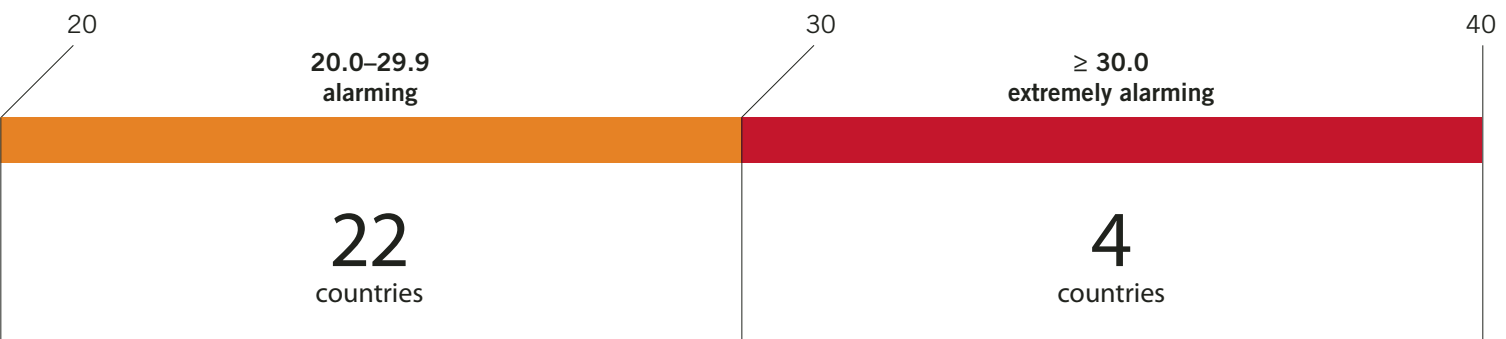
Notes: For the 1990 GHI, data on the proportion of undernourished are for 1990–92; data on child underweight are for the year closest to 1990 in the period 1988–92 for which data are available; and data on child mortality are for 1990. For the 1996 GHI, data on the proportion of undernourished are for 1995–97; data on child underweight are for the year closest to 1996 in the period 1994–98 for which data are available; and data on child mortality are for 1996. For the 2001 GHI, data on the proportion of undernourished are for 2000–02; data on child underweight are for the year closest to 2001 in the period 1999–2003 for which data are available; and data on child mortality are for 2001. For the 2011 GHI, data on the proportion of undernourished are for 2005–07, data on child underweight are for the latest year in the period 2004–09 for which data are available, and data on child mortality are for 2009.

Global averages mask dramatic differences among regions and countries. The 2011 GHI scores for South Asia and Sub-Saharan Africa remain alarming, whereas scores are low for Latin America and the Caribbean, the Near East and North Africa, and Eastern Europe and the Commonwealth of Independent States.

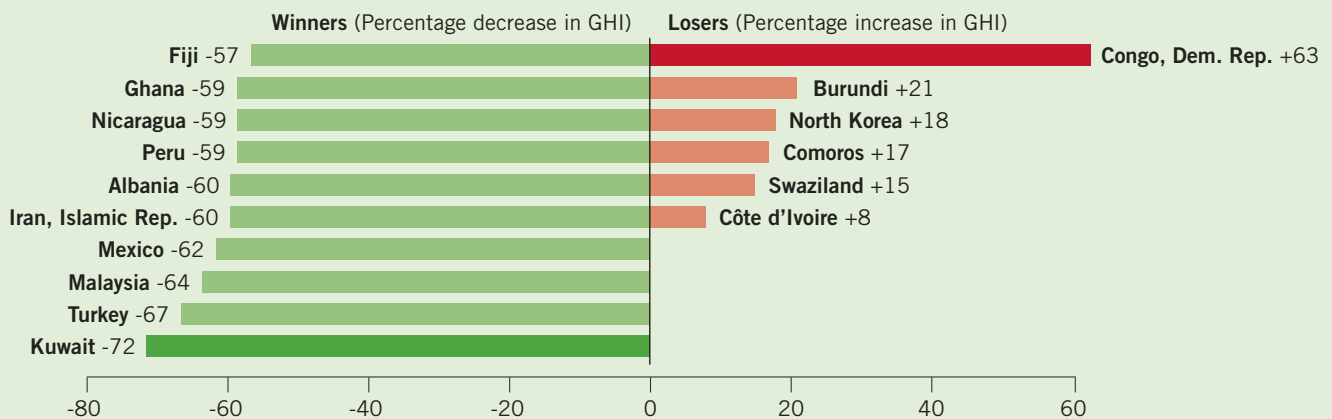
All regions, however, made progress. The 2011 GHI score fell by 18 percent in Sub-Saharan Africa compared with the 1990 score, by 25 percent in South Asia, and by 39 percent in the Near East and North Africa. In Southeast Asia, as well as in Latin America and the Caribbean, the GHI score declined by 44 percent (although the score was already rather low in Latin America and the Caribbean). In Eastern Europe and the Commonwealth of Independent States, the 2011 GHI score fell by 47 percent compared with the 1996 score.

Although South Asia reduced its score by more than 6 points between 1990 and 1996—mainly through a large reduction in underweight in children—this fast progress could not be maintained. Since 2001 South Asia has lowered its GHI score by only 1 point despite strong economic growth. The proportion of undernourished has even risen by 2 percentage points since 1995–97. Social inequality and the low nutritional, educational, and social status of women, which are major causes of child undernutrition in this region, have impeded improvements in the GHI score.

Though Sub-Saharan Africa made less progress than South Asia after 1990, it has caught up since the turn of the millennium. Large-scale civil wars of the 1990s and 2000s ended, and political stability improved in former conflict countries. Economic growth resumed on the continent, and



**Figure 2—GHI winners and losers from 1990 GHI to 2011 GHI**



Note: Countries with both 1990 GHI and 2011 GHI scores of less than five are excluded.

advances in the fight against HIV and AIDS contributed to reducing child mortality in the countries most affected by the epidemic. Nonetheless, the GHI score for the region is alarming. Although the crisis in the Horn of Africa occurring at the time of writing is not reflected in the 2011 GHI, it shows that achievements in food security remain fragile in parts of Africa and that vulnerability to shocks is still quite high.

From the 1990 GHI to the 2011 GHI, 15 countries were able to reduce their scores by 50 percent or more. Only one country in Sub-Saharan Africa—Ghana—is among the 10 best performers in improving their GHI scores since 1990 (see Figure 2). Kuwait's seemingly remarkable progress in reducing hunger is due mainly to its unusually high level in 1990. The second-best performer, Turkey, reduced hunger by cutting the prevalence of child underweight by almost two-thirds and child mortality by more than three-quarters, while keeping levels of undernourishment low. Overall, between the 1990 and the 2011 GHI, 19 countries moved out of the bottom two categories—extremely alarming and alarming.

Among the six countries in which the hunger situation worsened, the Democratic Republic of Congo stands out. There, the GHI score rose by about 63 percent from the 1990 GHI to the 2011 GHI. Conflict and political instability have increased hunger in the country, as well as in Burundi, the Comoros, and Côte d'Ivoire. With the transition toward peace and political stabilization in the Democratic Republic of Congo and Burundi around 2002–03, these two countries have begun to slowly recover from decades of economic decline, but hunger is still extremely alarming in both countries.

## Concepts of Hunger

The terminology used to refer to different concepts of hunger can be confusing. "Hunger" is usually understood to refer to the discomfort associated with lack of food. The FAO defines it specifically as consumption of fewer than about 1,800 kilocalories a day—the minimum that most people require to live a healthy and productive life. The term "undernutrition" signifies deficiencies in energy, protein, essential vitamins and minerals, or any or all of these. Undernutrition is the result of inadequate intake of food—in terms of either quantity or quality—or poor utilization of nutrients due to infections or other illnesses, or a combination of these two factors. "Malnutrition" refers more broadly to both undernutrition (problems of deficiencies) and overnutrition (consumption of too many calories in relation to requirements, with or without low intake of micronutrient-rich foods). Both conditions contribute to poor health. Here, "hunger" refers to the Global Hunger Index, based on the three indicators described.

# FOOD PRICE SPIKES AND EXCESSIVE PRICE VOLATILITY

In recent years world food markets have been characterized by rising and more volatile prices. This situation has serious implications for poor and hungry people, who have little capacity to adjust to price spikes and rapid shifts. Price increases and volatility have arisen for three main reasons. First, in the face of high oil prices, many countries are setting mandates for biofuel production, and this rising demand for fuel crops places new pressures on agricultural markets and magnifies the tension between supply and demand. Second, extreme weather events played a role in raising food prices and fueling price volatility in 2007–08 and in 2010, and climate change is expected to lead to increasing frequency and severity of extreme weather events. Third, the volume of

trading of agricultural commodity futures has increased significantly since 2008. Speculation in wheat, maize, rice, and soybeans may have contributed to both the increases in and the volatility of food prices, because speculators normally make short-term investments. As they swarm into a market, they exacerbate the initial increase in price, and when they flee a market, they contribute to a fall in prices.

These three factors are exacerbated by highly concentrated export markets that leave the world's staple food importers dependent on just a few countries, a historically low level of grain reserves, and a lack of timely information about the world food system that could help prevent over-reaction to moderate shifts in supply and demand.

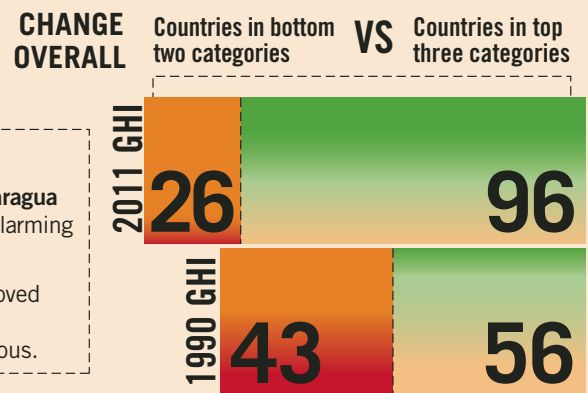
Price increases and price volatility have been shown to cut into poor households' spending on a range of essential goods and services and to reduce the calories they consume. Increases can also affect poor people's nutrition by

## Hunger since 1990

**WHO MOVED?** Since 1990, 19 countries have moved out of the bottom two categories – alarming and extremely alarming – and 10 out of the bottom. In the 2011 GHI, 26 countries remain in the two most severe GHI hunger categories, compared with 43 in the 1990 GHI.

**MOVING UP**

- Ghana and Nicaragua** improved from alarming to moderate.
- Cambodia** improved from extremely alarming to serious.



### CHANGE AMONG THE WORST OFF

<b>SERIOUS</b>	Benin	Guinea	Mali	Nepal	↑ <b>16</b> countries moved from alarming to serious
	Burkina Faso	Guinea-Bissau	Mauritania	Nigeria	
	Cameroon	Kenya	Myanmar	Sri Lanka	
	Congo, Rep.	Malawi	Namibia	Vietnam	
<b>ALARMING</b>	Angola	India	↑ <b>10</b> countries moved from extremely alarming to alarming		
	Bangladesh	Mozambique			
	Djibouti	Niger			
	Ethiopia	Sierra Leone			
	Haiti	Yemen, Rep.			
<b>EXTREMELY ALARMING</b>	↓ <b>1</b> country moved from alarming to extremely alarming		Dem. Rep. of Congo		

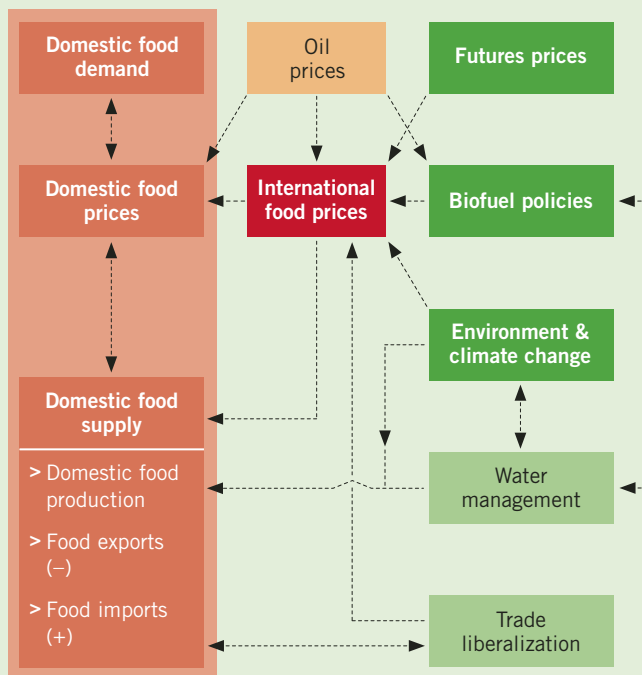
**PERSISTENT HUNGER**

**DRC** was the only country to drop from alarming to extremely alarming.

**Burundi and Chad** are the only two countries that have not moved out of the extremely alarming category.

Note: This box shows only countries for which data are available to calculate 1990 and 2011 GHI scores.

**Figure 3—Key factors behind the increase in agricultural commodity prices and price volatility**



Source: Maximo Torero.

Note: Because of their impact on transportation and input costs, oil prices directly affect domestic and international food prices. They also indirectly affect international food prices by altering the competitiveness of biofuel production. Similarly, biofuel policies influence water management by creating competition between biofuel production and food production for access to water.

causing them to shift to cheaper, lower-quality, and less-micronutrient-dense foods. The coping mechanisms that poor households use ultimately determine the severity of the impact of high food prices on their livelihoods and on the well-being of their members in the short, medium, and long term. Similarly, households' access to social safety nets and other social protection schemes are also a key determinant of the level of suffering they experience. Safety nets in many countries still reach only a small proportion of the poorest population.

## POLICY RECOMMENDATIONS

Food prices will always fluctuate in response to shifts in supply and demand, but excessive volatility in food prices greatly complicates efforts to reduce hunger among the world's poorest people and among food producers themselves. Food price spikes lead to economic difficulties for

the poor, generate political turmoil in many countries, and can undermine confidence in global grain markets. Most important, excessive price fluctuations can harm the poor and result in long-term damage, especially among young children (for whom poor nutrition during the thousand days between conception and the child's second birthday can have irreversible consequences) and pregnant and lactating women. A global solution that prevents price spikes and excessive price volatility in food markets may be costly, but given the human cost of food price crises, it will have large positive net returns.

To address the problem of price spikes and excessive volatility and its impacts on those living in poverty, a range of actions is required. The key drivers of food price volatility—increased biofuel production, increased speculation, and climate change—must be tackled comprehensively. Conditions that exacerbate volatility—concentrated export markets, low grain reserves, and lack of market information—must also be addressed. Last but not least, those living the reality of poverty and hunger on a daily basis must be buffered from the effects of volatility. Proposed actions include the following:

**Revise biofuel policies.** All distortive policies, such as biofuel subsidies and mandates, should be removed or minimized. In addition, the focus of policies should shift toward promoting small-scale production and use of second-generation biofuels at the community level, as well as the use of by-products from existing industries to provide electricity for off-grid villages, given their current lack of access.

**Regulate financial activity in food markets.** To reduce incentives for excessive speculation in food commodities, three measures are needed: stronger reporting requirements for commodity exchange transactions, increased capital deposit requirements, and stricter position and price limits.

**Adapt to and mitigate extreme weather and climate change.** Innovations are needed to help safeguard smallholders against weather-related income shocks, and countries must implement low-carbon development strategies. It is imperative that an international climate agreement is reached.

**Balance global export market structures through the promotion of pro-poor agricultural growth.** It is essential to increase and diversify global productivity and production in order to raise the number of countries that export staple foods. Even if current food insecurity is not primarily a matter of insufficient supplies at the global level, the poor suffer from the effects of export markets that are highly concentrated.

**Build up food reserves.** Well-coordinated international food reserves can effectively mitigate price spikes and





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volatility by making stocks available when supplies are tight and ensuring that small and net-importing countries can get access to food. In addition, national food reserves can act as an emergency mechanism to satisfy the needs of the most vulnerable.

**Share information on food markets.** Information on the current situation and outlook for global agriculture shapes expectations about future prices and allows markets to function more efficiently. A lack of reliable and up-to-date information regarding food supply, demand, stocks, and export availability has contributed to recent price volatility.

**Establish national social protection systems.** Sustainable protection of the poorest people against income shocks requires the development of nationally

owned and institutionalized social protection systems. Social protection has the potential to support improvements in maternal and early childhood nutrition, especially when linked with complementary services, but social protection can also go beyond protecting consumption. When social protection systems are of sufficient duration and value, and especially when they are linked to complementary services such as skills development and financial services, they can promote improved livelihoods and enable participants to invest in productive assets and livelihood strategies with greater returns.

**Improve emergency preparedness.** National governments and international agencies must adopt policies to protect the most vulnerable populations. Emergency

agencies typically respond to natural disasters and complex humanitarian emergencies, but not to slow-onset disasters such as food price crises. This situation needs to change.

**Invest in smallholder farmers and sustainable and climate-adaptive agriculture.** After serious neglect in past decades, both national governments and international donors need to increase investments in agriculture. To improve resilience, farmers need access to inputs backed by appropriate financing channels, knowledge transfer through extension services, support for crop diversification, natural resource management, and improved rural and regional market infrastructure.

**Foster and support nonfarm income opportunities in rural areas, and improve livelihood options for the poor in urban areas.** Support to agriculture needs to be embedded in broader rural development efforts: farmers producing solely for subsistence without additional income opportunities will remain vulnerable to weather and price shocks. Improving resilience also involves fostering nonfarm income opportunities in rural areas and establishing an environment in which nonfarm activities can thrive.

**Strengthen basic service provision at all levels.** The human capital of those living in poverty—whether urban slum dwellers or rural smallholder farmers—is dangerously compromised by poor access to basic services, including healthcare, education, sanitation, and potable

water. These services are not just the right of individuals, but the means of building their capacity to pursue sustainable livelihoods.

## CONCLUSION

Higher and more volatile prices appear to be here to stay for some time. It is clear that even though many of the world's poor live in rural areas and are engaged in agricultural production, the price spikes and volatility that have recently occurred in food markets have generally left them worse off. The poorest people bear the heaviest burden from price spikes and swings. In addition to understanding the factors contributing to this situation, it is crucial to take steps to moderate food price volatility and to help the most vulnerable people achieve food and nutrition security.

### For more information, see the full report:

von Grebmer, K., M. Torero, T. Olofinbiyi, H. Fritschel, D. Wiesmann, Y. Yohannes, L. Schofield, and Constanze von Oppeln. 2011. *2011 Global Hunger Index: The Challenge of Hunger: Taming Price Spikes and Excessive Food Price Volatility*. Bonn, Washington, DC, and Dublin: Welthungerhilfe, International Food Policy Research Institute (IFPRI), and Concern Worldwide. Also available at <http://dx.doi.org/10.2499/9780896299344ENGLISH2011>.

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