



Walk the Talk

Shenggen Fan



THE WORLD FOOD SYSTEM CONTINUED TO BE IN A VULNERABLE position in 2012. As the 2015 deadline for the Millennium Development Goals approaches, progress toward halving the proportion of people suffering from hunger is not on track. Granted, a number of countries made important and promising changes in food-related policies, and the global community made noteworthy commitments to strengthen aspects of food security. For 2013, however, it will be critical to ensure that the discussions and commitments made in previous years are translated into concrete actions.

Talk about food security in global and regional bodies was abundant in 2012. It was widely agreed at the Rio+20 summit that incorporating environmental sustainability into economic policies and activities offers opportunities for achieving “green growth.” Two goals—Zero Net Land Degradation and the Zero Hunger Challenge—were launched during the event. Much was said during the Group of 20 (G20) and Group of Eight (G8) summits about the need to increase investment in agriculture, especially in research to enhance agricultural productivity and food security, and investment in nutrition to enhance long-term human capital. But there is a need for a mechanism to ensure and monitor actual implementation. New commitments were also made to calm global food price volatility and spikes and to increase transparency in bulk land acquisition deals through the adoption of voluntary guidelines for land investment.

In a landscape full of rhetoric and promises, the on-the-ground reality of implementation and action was mixed. On the one hand, there were several positive developments, often built on the strong base established in recent years. A number of countries in Africa have made noteworthy progress transforming agriculture into a more productive and sustainable sector. Agricultural spending, including investments in agricultural research by emerging economies such as Brazil, China, and India, continued to increase. Donor support to international agricultural research, particularly to CGIAR, maintained momentum after the strong growth of 2011. The private sector further

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enhanced its commitment to global food security through active engagement in the Business 20 (B20) summit and with the G8. Development agencies such as the United States Agency for International Development (USAID), the United Kingdom Department for International Development (DFID), the German Federal Ministry for Economic Cooperation and Development (BMZ), the International Fund for Agricultural Development (IFAD), and the World Bank scaled up their investments in agriculture, food security, and nutrition.¹ Private foundations such as the Bill & Melinda Gates Foundation also continued to play a larger role in international agricultural development in 2012.

On the other hand, progress fell short of previous commitments. Only a handful of African countries met their 10 percent target of agricultural spending as a share of the national budget. Emerging economies and some African countries often used increased agricultural spending to subsidize inputs and outputs, leading to trade distortions; overuse of fertilizer, water, and energy; and the crowding out of productive investments in areas such as agricultural research and development (R&D), irrigation, and rural infrastructure. To protect domestic consumers, several countries continued to use trade export bans, which exacerbate global food price volatility. Global trade in food and agriculture remained protected, and the prospects of reaching any more trade agreements appear remote. The United States and European Union proposed new agricultural policies that could potentially distort world agricultural and food markets, leading to adverse effects on smallholder farmers in developing countries. International negotiations on climate change in December were disappointing, and the agreement made in Cancun, Mexico, in 2011 to decide on an agricultural work program was ignored, with discussion deferred to June 2013.

THE GLOBAL FOOD SYSTEM REMAINED FRAGILE IN 2012

New Numbers, Same Problem

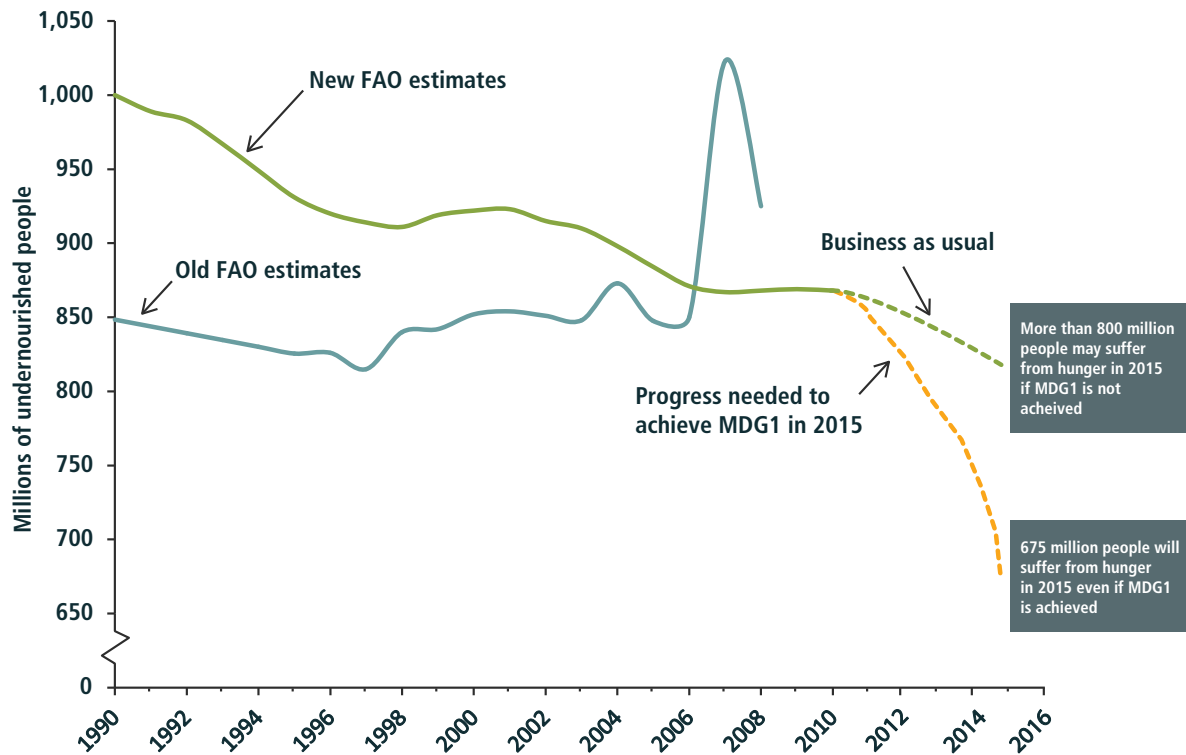
Despite the revision of the methodology and data used by the Food and Agriculture Organization of the United Nations (FAO), the new numbers of hungry people paint only a slightly more optimistic picture of the undernourished population (Figure 1). Older estimates had shown an upward trajectory for world hunger and a spike in 2008 and 2009. The new estimates, however, show that developing countries made significant and constant progress in reducing chronic undernourishment until 2007—when progress slowed—and are closer than previously believed to reaching the Millennium Development Goal of halving the prevalence of undernourishment by 2015. Still, the number of chronically undernourished people remained high, at 870 million in 2010–2012.

Although the new methodology and data are important steps toward obtaining a more comprehensive measure of food security, these numbers also leave much information out. They reflect the quantity of food in people's diets (specifically, kilocalories), but not the quality (that is, vitamins and minerals). It is believed that a large number of people suffer from micronutrient deficiencies ("hidden hunger"), which is not captured by the new measure.

Drought and Volatile Food Prices

The 2012 droughts in Central Asia, Eastern Europe, and the United States led to tighter cereal supplies and, subsequently, a spike in world cereal prices. The year 2012 was the hottest year on record in the United States.² Approximately 80 percent of farmland in the United States was hit by the most severe drought in half a century, with maize and soybeans the most affected.³ Similarly, high temperatures and low rainfall reduced wheat production in Australia, Kazakhstan, Russia, and Ukraine, which are among the top producers and exporters of wheat. Because the most affected regions are also some of the largest producers of key staple crops, the drought will have implications for global food

FIGURE 1 Estimates and projections of undernourished people worldwide, 1990–2015



Sources: Old estimates are from Food and Agriculture Organization of the United Nations (FAO), *The State of Food Insecurity in the World* (Rome, various years); new estimates are from FAO, *The State of Food Insecurity in the World 2012* (Rome, 2012); author's projections are based on data from FAO and the United Nations.

security well into 2013 through upward pressure on food prices. Erratic rains and prolonged dry spells throughout Southern Africa also resulted in declining maize production in Lesotho, South Africa, and southern parts of Malawi, Mozambique, and Zimbabwe. Crop production rebounded in the Sahel region in Africa following the 2011 drought, but closer inspection of the Sahel crisis suggests that current food insecurity there is more a reflection of the region's chronic, long-term vulnerability than the result of a sudden, short-term shock such as a single drought in 2011.⁴ The resilience of chronically vulnerable communities in the region to crisis is weak. People barely had time to recover and rebuild already limited assets after previous droughts before the 2011 drought hit the region.

Drought conditions, together with the continued use of maize for biofuel, contributed to a 25 percent increase in international maize prices between June

and August, with prices reaching record levels in August.⁵ Because maize is used not only for human consumption, but also for livestock feed, higher maize prices led to higher prices for animal-based products, and this increase is predicted to continue in 2013. Similarly, the international price of wheat rose by 32 percent between June and August 2012, although it was still well below 2008 levels. The increase in international cereal prices has proven to be especially problematic for countries that depend on cereal imports, in particular in Central and South America and Central Asia.

Prices for many coarse grains also soared in the Sahel region in 2011 and 2012 owing to a combination of drought, civil unrest, and locust infestation. In Burkina Faso and Mali, millet prices rose by 66 and 63 percent, respectively, compared with 2011; sorghum prices, by 52 and 43 percent; and maize prices, by 21 and 44 percent.⁶ Toward the

2012 FOOD POLICY

ISSUES, ACTIONS & DECISIONS

TOWARD RESILIENCE IN THE SAHEL

Stakeholders create a Global Alliance for Resilience Initiative to help West African nations better cope with future food crises.

June 18

G8 COMMITS TO FOOD AND NUTRITION SECURITY IN AFRICA

G8 members, African countries, and private-sector leaders support the New Alliance for Food Security and Nutrition.

May 19

NIGERIA SETS AMBITIOUS 2030 GOAL

Working with the private sector, the Ministry of Agriculture mobilizes to create an agricultural sector worth \$256 billion.

June 7

CHINA PRIORITIZES INVESTMENT IN AGRICULTURAL SCIENCE

The government's No. 1 Document for 2012 chooses accelerating agricultural science and technological innovation as its theme.

February 1

VOLUNTARY GUIDELINES FOR LAND TENURE ADOPTED

The Committee on World Food Security endorses voluntary guidelines for safeguarding the rights of people to own or access land, forests, and fisheries.

May 11

JANUARY

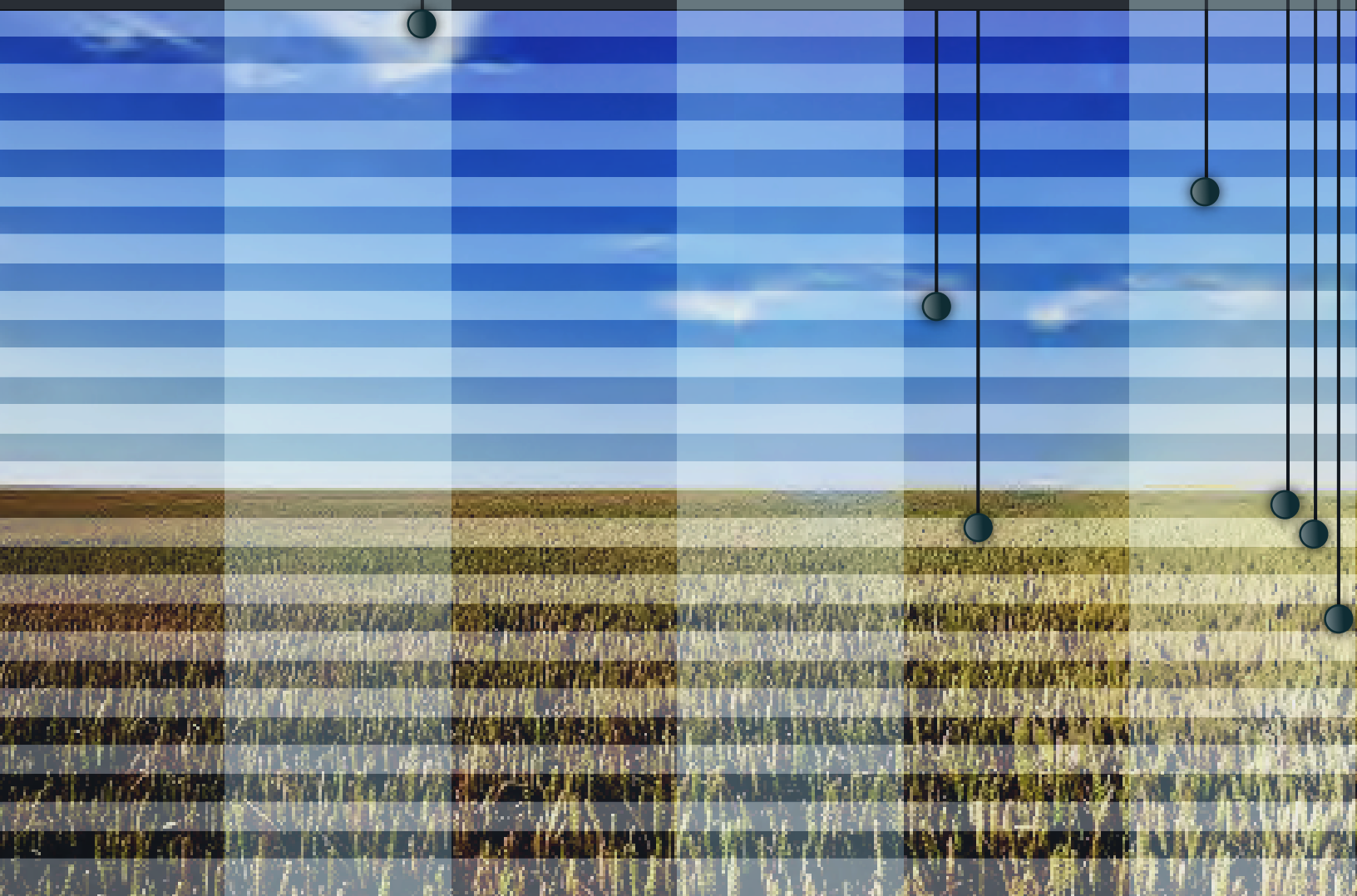
FEBRUARY

MARCH

APRIL

MAY

JUNE



DROP IN US RAINFALL, PEAK IN GLOBAL FOOD PRICES

The worst drought in the United States since the 1950s severely lowers its maize and soybean production and drives up prices on world markets.

August 22

G20 AGREES TO BOOST AGRICULTURAL PRODUCTIVITY

The G20 agrees to promote greater public and private investment in agriculture and technology.

June 19

SUSTAINABLE DEVELOPMENT IS LEFT WANTING AT RIO+20

The UN's Rio+20 Declaration offers strong vision but little direction on how to achieve food security in a green economy.

June 22

NEW LIMITS ON FOOD CROP-BASED BIOFUEL PRODUCTION IN THE EU

To stimulate development of alternative biofuels from nonfood feedstock, the EU proposes to limit global land conversion for food crop-based biofuel production.

October 17

NEW WAY TO CRUNCH THE GLOBAL HUNGER NUMBERS

The Food and Agriculture Organization of the United Nations publishes lower estimate of the number of undernourished people—which remains unacceptably high.

October 9

US FARM BILL EXPIRES

Congress recesses until after the November elections without passing a new farm bill, leaving the agricultural sector up in the air.

September 30

NO WHEAT FROM UKRAINE

Government limits grain exports informally, destabilizing markets.

November 15

UN CONFERENCE EXTENDS KYOTO PROTOCOL TO 2020

Many believe the results of the UN's 18th conference on climate change are inadequate to contain global warming at 2 degrees Celsius.

November 26

JULY

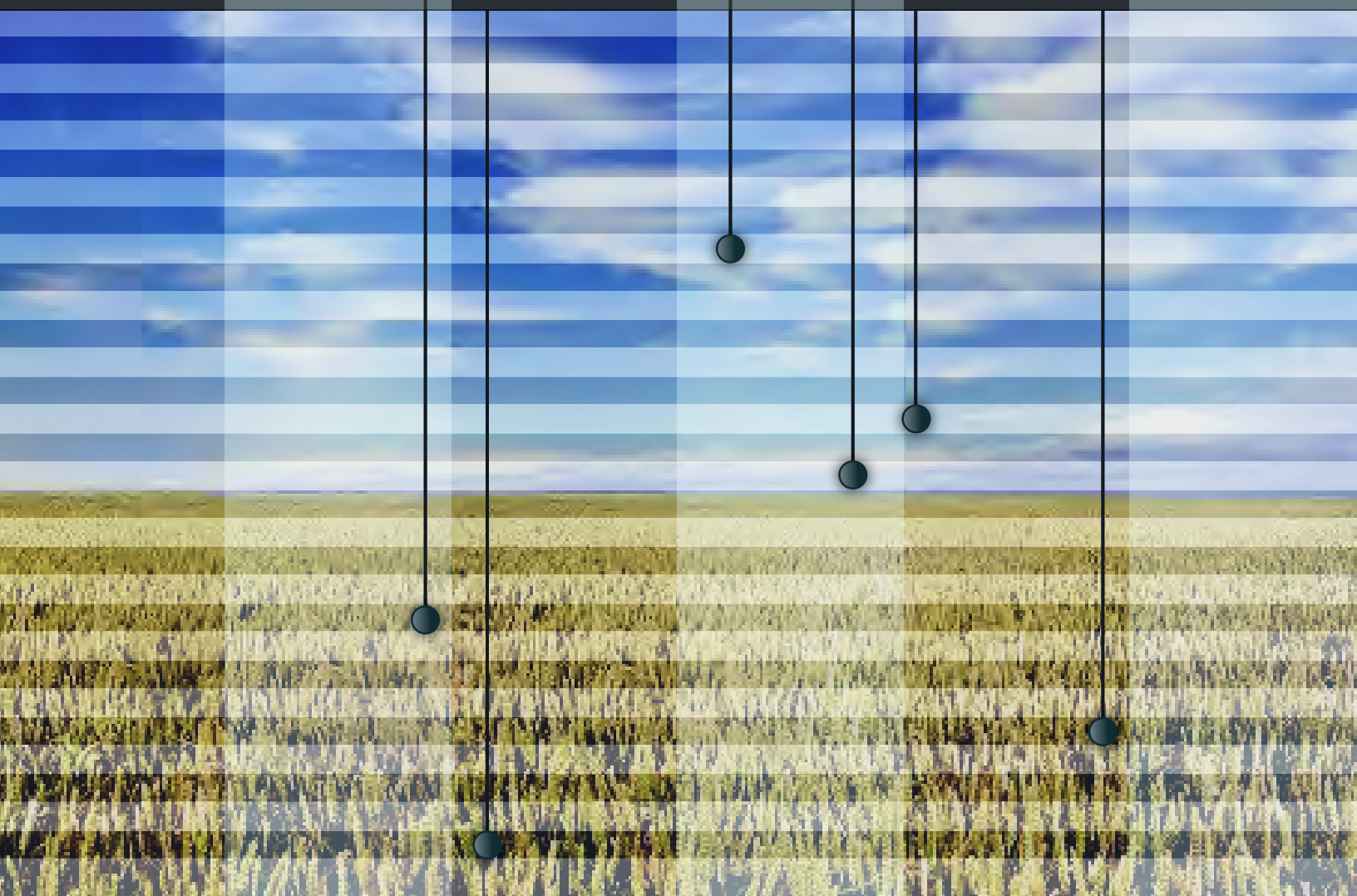
AUGUST

SEPTEMBER

OCTOBER

NOVEMBER

DECEMBER



end of 2012, rising cereal supplies—as a result of increased domestic production and cross-border imports—contributed to a decline in prices from record or near-record levels. Nonetheless, the decline has been small and prices continue to be relatively high because of flooding and political insecurity in the region, threatening the food security of nearly 19 million people.⁷ Similarly, the increase in wheat and maize prices in Southern Africa in 2012 due to low rainfall and international market pressure has contributed to the deterioration in the food security of approximately 1.5 million more people in the region since 2011.

In response to rising grain prices and decreasing production and stocks, a number of countries—including Argentina, Malawi, and Zambia—imposed or maintained restrictions or bans on grain exports. Such restrictions are designed to protect domestic food security during times of reduced food production and higher food prices, but in reality they are often counterproductive and result in market instability and price volatility. International wheat prices increased slightly amid fears that Russia and Ukraine would impose bans on grain exports to protect domestic sellers and buyers, but they soon fell again when both countries ultimately rejected the bans. Some still fear that these two countries will use informal mechanisms, such as increasing administrative barriers and limiting access to infrastructure, to limit exports. In Tanzania, research has shown that maize export bans have had a detrimental effect on the rural poor and agricultural growth,⁸ and in response to this evidence, the Tanzanian government lifted its ban in autumn 2012.

Conflict

Violent conflict—both a cause and a consequence of food insecurity—played a role in a number of countries in 2012. Food security in Central Africa is especially hampered by persistent conflicts that send thousands of internally displaced people and refugees flooding into already strained food systems. An armed conflict in northern Mali, followed by a military coup in the capital, led to the displacement of more than 400,000 people (internally and in neighboring countries), disrupting

trade flows, putting pressure on already limited local food resources, and worsening the precarious and drought-ridden food security situation in neighboring countries created by the poor harvest in 2011.⁹ Renewed violence in the Democratic Republic of Congo resulted in the displacement of approximately 2.2 million people within the country and forced a further 70,000 people to flee to neighboring countries.¹⁰ Furthermore, the Democratic Republic of Congo is also home to more than 100,000 refugees from other conflict-ridden countries in the subregion. Ongoing conflict and low rainfall have also disrupted food security in Somalia, particularly in the southern and central parts of the country.¹¹ All of these conflicts have halted agricultural and livestock production activities, markets, and trade in the affected countries, depriving many poor households of their livelihood and limiting food access and availability.

In the Arab region, civil war in Syria has led to a refugee crisis that is being compounded by a food crisis. In late 2012, the World Food Programme identified about 1.5 million Syrians as being in urgent need of food assistance.¹² Elsewhere in the region, in the aftermath of the Arab Awakening, political and economic recovery has been slow. Food security in Tunisia has stabilized, but because of lower crop production and foreign currency inflows during 2012, the food security situation has worsened in Yemen and to a lesser degree in Egypt and Libya.

Long-Term Drivers of the Global Food System

A number of strong driving forces are exerting pressure on food production, consumption, and markets. For example, rising incomes and rapid urbanization in many developing countries are changing the composition of food demand. Energy markets are having a greater impact on food security thanks to growing biofuel markets and the increasing share of energy in agricultural costs. The recent push for more investment in agricultural R&D may result in advances in agricultural productivity that also have a large impact on food systems.

The implications of these changes for food security will depend heavily on the choices

policymakers make now and in the years ahead. IFPRI's International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT) is a useful way to look at future scenarios under different policies and other conditions. Researchers have used it to look specifically at what could happen to food prices and food security if the world achieves higher agricultural productivity, experiences higher energy prices, or lowers demand for meat. The results show that policy choices that lead to higher energy prices could make food prices even higher and more volatile than they have been in recent years. Cutting developed countries' consumption of livestock products has only small impacts on food security in developing countries. Increasing agricultural productivity, however, by expanding public and private investments would lower food prices, lead to higher agricultural production, and result in greater food security. Changes in the dietary patterns, productivity growth, and energy policies of emerging countries—namely Brazil, China, and India—have an especially large impact on future food security outcomes given the significant roles of these countries as producers and consumers (see Chapter 8 of this report).

DEVELOPMENTS AND OPPORTUNITIES IN 2012

New Sources of Agricultural Growth

After years of stagnation, new evidence in 2012 showed that in many developing countries the transformation of agriculture into a modern, competitive, and productive sector accelerated in recent years. Between 2001 and 2010, world agricultural production grew at an average annual rate of 2.4 percent, close to its historical average growth rate of 2.3 percent a year since the 1970s. Closer inspection reveals that agricultural production entered a period of accelerated growth around 1995, following more than 20 years of gradually decreasing growth rates. At the same time, there has been a global shift in what kind of food is grown and where. Global food production increasingly comes from developing countries and is made up of less cereal grains and more horticultural and oil

crops, a reflection of changes in the types of foods consumers are demanding.

The sources of agricultural growth have changed over the past several decades. Growth in total factor productivity, a measure of output growth that does not come from input growth, accelerated substantially in 2001–2009 compared with the average for 1971–2009 (see Chapter 2). Until the late 1980s, farmers achieved most of the growth by using more inputs such as land, fertilizer, and labor. This input intensification accounted for 90 percent of agricultural growth in the 1960s, 80 percent in the 1970s, and 75 percent in the 1980s. Starting in the 1990s, however, greater use of inputs accounted for less than 20 percent of agricultural growth, while more than 80 percent came from higher total factor productivity—that is, producing more with the same amount of inputs.

Two large developing countries in particular, Brazil and China, have had sustained high growth in total factor productivity over the past two decades. Several other developing regions, including Southeast Asia, West Asia and North Africa, and Latin America and the Caribbean, also registered accelerated total factor productivity growth during the last decade. The major exception is Africa south of the Sahara, where long-run total factor productivity growth has remained below 1 percent a year. Rapid growth in Africa still comes largely from farmers' cultivation of new land and greater use of fertilizers. This situation points to the great potential for Africa to accelerate its growth and transform its agricultural sector through an increase in agricultural productivity.

Investments in agriculture—especially in agricultural research and innovation—have been shown to play an especially important role in raising agricultural productivity, overcoming constraints posed by increasingly scarce resources such as land and water, and improving economic efficiency in the use of fertilizers and pesticides.

Pushing to a Green Economy

The “green economy” movement took a prominent place on the international stage at the United Nations Conference on Sustainable Development in Rio de Janeiro in June. At this event, known as

Rio+20, heads of state were challenged to commit to a concept of a green economy that integrates sustainable development and poverty eradication (see Chapter 3). The resulting declaration, “The Future We Want,” offers a vision of sustainable development and calls for a wide range of actions, including the integration of ecological concerns into overall economic policy and the formulation of sustainable development goals.¹³ Despite the vision presented, the conference did not produce a firm policy roadmap and timeframe. The indicators of commitment and measures of accountability that are needed to realize the vision are also clearly lacking.

During the Rio+20 event, the United Nations secretary-general launched the Zero Hunger Challenge in an ambitious bid to combine hunger reduction with sustainable development efforts. The initiative calls for access to adequate food all year round for all people, the elimination of stunting in children younger than two, the sustainability of all food systems, a 100 percent increase in smallholder productivity and income, and zero loss and waste of food. Similarly, leaders agreed to targets of zero net land degradation by 2030, zero net forest degradation by 2030, and drought preparedness policies in all drought-prone countries by 2020. While these initiatives should be applauded, they need to be accompanied by clear measures, timeframes, and accountability mechanisms to become a reality.

One aspect of the green economy that has increasingly been featured in policy discourse and research is the idea of the bioeconomy—an economy that has moved beyond petroleum and is based on the use of renewable bio-based resources to produce food, health, and industrial products and energy. The bioeconomy includes not only crop agriculture, but also aquaculture, forestry, and biomass production, among many other things. In early 2012, the European Commission presented its bioeconomy strategy and action plan with the objective of increasing investments in bioeconomy research and enhancing the competitiveness of bioeconomy sectors.¹⁴

Gender: From Attention to Action

The year 2012 was marked by significant new attention to the role of gender equality in agricultural

growth and food security. A wealth of recent evidence has shown that agricultural and nonagricultural reforms to increase women’s capacities, engagement, and access to productive resources can improve agricultural performance and food security (see Chapter 4). The World Bank’s *World Development Report 2012* and FAO’s *State of Food and Agriculture 2010–2011*, for example, emphasized women’s important contributions to agriculture in developing countries, highlighting the agricultural productivity gains and nutritional benefits that can be reaped from greater gender equality. Increasing food security requires policies that most efficiently close the gender gap in women’s access to resources and services within and outside of agriculture, including education, extension, technologies, political institutions, and financial services.¹⁵

In response to the evidence, aid donors and developing countries have taken steps in recent years to address gender inequality and the special needs of women in agriculture as part of broad-based food security programs. Until recently, however, measuring the degree to which development programs actually empower women has been difficult. In 2012, to help quantify changes in women’s empowerment and gender equality, IFPRI, USAID, and the Oxford Poverty and Human Development Initiative launched the Women’s Empowerment in Agriculture Index.¹⁶ The index—a tool for monitoring how agricultural development programs affect women’s empowerment and gender equality—is currently used to assess programs under Feed the Future, an initiative led by USAID and executed by various US government agencies in a number of developing countries.

The renewed commitment to gender equality in agriculture can result in improved productivity and food security, but it must first be mainstreamed into policy actions. Agricultural strategies and programs need to be based on a deeper understanding of the similar and different interests of women and men as both consumers and producers within food systems, paying specific attention to the gender gap in access to assets. To achieve this, greater efforts are needed to collect evidence disaggregated by gender that can be used to improve future interventions and keep all actors accountable.

Where the Jobs Are

Unemployment and underemployment have significant social and economic implications. Agricultural development in many developing countries has the potential both to improve food security and to create jobs. However, young people in many developing countries often do not see farming as a viable and lucrative career, and they reject agriculture in favor of jobs in cities. Yet, in order for agriculture to become a technically dynamic and high-productivity sector that contributes to food security, it needs an influx of educated and innovative young labor (see Chapter 5). In turn, a profitable and productive agricultural sector would provide employment opportunities for a growing population of young people and thereby raise both their food production and their incomes. The engagement of young people in the agricultural sector is especially important in Africa, where the manufacturing and services sectors in urban areas cannot fully absorb the burgeoning young population entering the labor force. A growing and diversifying agricultural sector will also fuel the development of the rural nonfarm economy, especially the services sector, which can also play an important role in generating income and employment opportunities for young people by providing the agricultural sector with vital services and goods.

In 2012, several international meetings signaled a greater focus on the goal of increasing young people's employment in agriculture. The "Young People, Farming, and Food" conference, held in Ghana, examined research and policies related to engaging young people in the agrifood sector. The 4th Conference of the African Union Ministers in Charge of Youth, held in Ethiopia, highlighted the need for countries to implement the African Union's strategies for empowering youth and increasing youth-focused investments. The International Fund for Agricultural Development's Farmers' Forum included a special session on youth in agriculture, which proposed increasing youth representation in farmers' organizations, increasing funding for agricultural programs that target youth, and improving young people's access to natural resources, markets, financial services, and knowledge.¹⁷ Some country-level efforts to support young commercial

farmers have also been made. For example, the government of Nigeria has placed a significant emphasis on agriculture in its recently launched Youth Employment Programme and taken significant steps toward launching a Youth Employment in Agriculture Programme, including a consultative workshop, with the goal of creating 1 million jobs for youth by 2015.

Youth employment in agriculture and the non-farm economy can take various forms, including full-time work on existing or new landholdings, small-scale agribusiness such as veterinary services or mechanization services, retail trade, or wage labor on farms or in agricultural processing plants. To support these options, developing countries must make agricultural land, capital, and skills more available to young people and make agricultural development programs more responsive to their needs. Countries must promote innovations in rural financial services and institutions, deregulate land rental markets, provide demand-driven agricultural advisory services, and offer flexible short-term training programs. Additionally, young people in rural areas need to have easy access to the amenities that are available in urban areas, including physical and social infrastructure such as roads, electricity, and education. Agriculture in Africa, for example, needs to be seen not only as an instrument for economic growth and improved food security but also as a major employer of the region's young people. Making agriculture profitable, competitive, and dynamic will not only attract young people, but also benefit the wider society and global community by increasing growth, improving food security, and preserving an increasingly fragile natural environment. To support these efforts, developing countries need to link their existing political commitments to agricultural development and youth employment in order to capture the complementarities of the agricultural and youth agendas.

Extending Support for Rich-Country Farmers

Despite years of calls for an end to high and distortionary payments to farmers in Europe and the United States, no such change occurred in 2012 (see Chapter 6). A new US farm bill was not passed

in 2012; rather, the US Congress extended the previous farm bill for one year, meaning that the issues raised in 2012 will continue to be debated in 2013. The proposed new bill actually increases support for agriculture by replacing the current system of annual fixed payments to farmers with insurance subsidies designed to protect farmers from both annual and multiyear losses. Given the apparent evolution of US farm policy toward greater domestic support for agriculture, this bill could make it more difficult for the United States to build global support for freer trade and less distortionary agricultural policies.¹⁸

The European Commission (EC) has proposed a number of key reforms to its Common Agricultural Policy. Over the past 20 years the Common Agricultural Policy has progressively shifted away from price supports and subsidized exports of surpluses toward direct payments to farmers. The current proposal makes the payments more conditional on farmers' compliance with environmental regulations, requiring farmers to, among other things, diversify crops, maintain existing permanent pastures, and dedicate a minimum amount of land to ecological focus areas. Income transfers to farmers will remain very high (compared with the United States). The proposal also includes measures to help farmers cope with future price crises, albeit to a much lesser degree than in the United States, given that the EC proposes ceilings on any insurance and income stabilization payments to farmers.

Although these support policies are not directly linked to production incentives, they can help farmers maintain or increase their production levels by improving their production capacity. If the support policies raise production in the European Union and the United States, this could potentially distort and undermine agricultural production in other countries and contribute to a risky concentration of agricultural production in just a few countries. These policies could launch the global food system on a slippery slope, where other countries adopt their own distortionary agricultural policies.

At the same time, however, a positive step took place with regard to biofuel policy in Europe. In response to the growing debate over the use of crops for food versus fuel, the EC introduced a

proposal in October 2012 to impose a 5 percent limit on the use of food crop–based biofuels to meet the European Union's 10 percent renewable energy target by 2020. This proposal aims to promote the development of alternative second- and third-generation biofuels, which contribute significantly less to greenhouse gas emissions and do not compete with global food production. In the United States, despite numerous discussions and calls for change in 2012, particularly after the recent drought, little was done to reduce the use of food grains in biofuel production.

Food Policy Developments across Regions and Countries: A Mixed Picture

A number of significant food policy developments took place in all major regions in 2012. Although these changes often received less attention than global initiatives or events, they nonetheless have fundamental impacts on global food security (see Chapter 7).

African agriculture continued along its path of transformation in 2012. From 2006 to 2011, annual agricultural growth was strong in a number of African countries: approximately 12–13 percent in Angola and Liberia; 7 percent in Botswana, Ethiopia, and Malawi; 5 percent in Rwanda; and 4 percent in Ghana and Tanzania.¹⁹ This rapid growth was fueled largely by more investment in agriculture, increased use of fertilizer, and the adoption of high-yielding crop varieties, together with more friendly macroeconomic policies. Poverty rates in these countries have declined, but rates of hunger and malnutrition remain high. And the region is extremely vulnerable to weather shocks and conflict. The 2011–2012 food crisis in the African Sahel region was a testimony to this vulnerability. In response to the crisis, the Global Alliance for Resilience Initiative in the Sahel was launched to protect vulnerable communities through a combination of social safety nets, nutrition programs, emergency food reserves, and assistance with raising people's production and assets. In the long run, however, making the region more resilient and reducing its vulnerability will require raising agricultural productivity through policy reforms and

investments in agricultural research, irrigation, market infrastructure, and institutions.

In South Asia, India's decision to allow foreign direct investment in multibrand retail—such as supermarkets—in 2012 may provide an opportunity to transform the country's private retail sector through increased competition and investments. By potentially cutting out intermediaries and improving storage technologies and transportation, this reform could reduce food prices for poor consumers while offering small farmers better and more profitable market access, thus improving India's food security. However, because the increase in foreign direct investment could also have negative impacts, such as putting small vendors out of business, emphasis needs to be put on the net effects of the reform. Along the same lines, Bangladesh's food security has improved significantly over the past several years because of the government's deliberate policies to increase investment in agriculture, scale up social safety nets, and build national grain stocks for emergency and social safety net purposes. The government has also developed an ambitious vision to substantially reduce hunger and poverty by 2021 and an investment plan to secure the country's food supply. The country was expected to produce record levels of food in 2012, but localized food insecurity persists.

At the same time, there have been some reversals in policy developments in the region. India's Technical Expert Committee recommended a 10-year moratorium on field trials of genetically modified crops, depriving the country of the chance to use these technologies to further enhance yields, nutrition, and resilience against droughts, floods, heat, biotic stresses, and other natural adversaries. The Supreme Court has not yet made a final decision on the moratorium and is currently awaiting a more comprehensive report on genetically modified crops from the committee.

In Nepal, agriculture can play a key role in improving food and nutrition security, but the government's proposal to substantially increase fertilizer subsidies may do more harm than good by crowding out more productive investments—in areas such as R&D, irrigation, and rural infrastructure—and social safety programs. This is especially

problematic and significant in Nepal, which has one of the highest rates of child malnutrition in the world.

In East Asia, the year 2012 was a turning point for China. After many years of near self-sufficiency in major grains (rice, wheat, and maize), China had to import 2–3 million metric tons of rice, 4–5 million metric tons of wheat, and 5–6 million metric tons of maize in 2012, in addition to continuing to import almost 60 million metric tons of soybeans. This shift may lead the country to pursue protective trade policies in the future, with potentially negative implications for farmers in other developing countries and for the global agricultural trade system. A positive development was China's 2012 No. 1 Document, which laid out the government's plan for substantial investment in agricultural R&D in 2012 and beyond. The country's public spending on agriculture is outpacing that of Brazil and India and is on a trajectory approaching that of the United States.

The traditional leader in rice exports—Thailand—exported less rice than India and Vietnam in 2012. Thailand's new policy of guaranteeing farmers' prices at levels well above the market rate pushed up the price of its rice and made it uncompetitive, leading to a reduction in its rice exports and an increase in government rice stocks. Although the policy pushed international rice prices slightly higher, the impact was largely neutralized by strong competition and increased rice exports from India on the heels of the Indian government's removal of restrictions on certain types of rice exports in 2011.²⁰ Myanmar took steps toward increasing its rice exports by undertaking agricultural reforms, creating an agricultural bank, and supporting seed production companies. If the right policies are adopted, the country has the potential to become a major food exporter in the region.

Latin America and the Caribbean produced an increasing share of the world's agricultural output in 2012 compared with previous years. Although extreme weather may have reduced 2012 grain production, meat production was projected to increase. Public agricultural investment has increased in Latin America in recent years, but most of

this increase has taken place in just a few countries. Investment in smaller, poorer countries has declined. It is also worth noting that Latin America has a dual role to play both as a large exporter of agricultural and food products and as a provider of environmental goods, such as rainforests with rich biodiversity. In 2012, intense debate between Brazilian farmers and environmentalists over the

use of the Amazon rainforest continued. Brazil has successfully developed a rapidly growing and robust sugarcane-based ethanol industry over the past several decades, and now the government and private sector in Brazil are working to replicate this success with the development of biodiesel production from palm oil. This expansion will undoubtedly mean that biofuel production will continue to have an important impact on biodiversity and global food security.

The Arab world is one of the few regions where hunger levels have increased in recent years. Economic growth in the region has been persistently slow, and child malnutrition is high. To address food insecurity, governments have mostly continued the policies adopted during the 2008 global food crisis and the 2010–2011 uprisings, such as increased public sector wages and subsidies for fuel and food—policies that are often poorly targeted and that strain already stretched public budgets. Yet some Arab countries also initiated longer-term policies and investments in 2012 designed to improve food security, such as reforming food subsidies (Jordan, Sudan, and Tunisia), increasing grain reserves (the Gulf Cooperation Council²¹), and setting up a committee to monitor food prices and availability (Saudi Arabia).

What to Watch for in 2013

- ▶ Where will agriculture, food security, and nutrition be positioned in the post-2015 development agenda, and how will they be accounted for if the green economy moves from concept to reality?
- ▶ How effective will the international development community be in strengthening the resilience of the global food system to shocks and emergencies? Will we see improvements in the early-warning and food security information systems in developing countries?
- ▶ To what extent will climate change be taken more seriously at intergovernmental forums? Will binding commitments come forth?
- ▶ How will economic uncertainties in the United States and the European Union influence the quantity and quality of their foreign assistance policies? And what will be the impact of their new agricultural policies on food security in developing countries?
- ▶ Will China continue to increase its grain imports, or will there be additional institutional innovations to transform its agricultural sector?
- ▶ Will India's food security bill and large-scale programs such as direct cash transfers improve its food and nutrition security?
- ▶ Can the continued conflicts in the Arab World and Africa be contained, or will further unrest shake the regions and affect food security?
- ▶ How will the private sector, in particular multinational food companies, engage in addressing malnutrition—both undernutrition and obesity—in developing countries?
- ▶ With major changes on the environmentalist front regarding the use of genetically modified organisms in agriculture, will there be a significant shift in Europe's acceptance levels with potential positive outcomes for global food security?
- ▶ How will increased information sharing—through the open access movement and the soaring use of mobile devices—affect agriculture and rural development?

OUTLOOK FOR 2013

Many of the factors that have caused today's vulnerable food security will remain in 2013. Poor countries and poor people will continue to be hard hit by a number of ongoing economic and environmental shocks, such as natural disasters, conflicts, and the lingering volatility of food prices. Given the likelihood of such shocks, there is an urgent need to build the resilience of global and national food systems as well as of poor households and people. This means developing strategies and policies that help individuals, communities, regions, and countries cope with and recover from shocks and achieve food security, health, and well-being. Social systems and ecosystems should be made resilient to both natural disasters and human-induced crises, both sudden and slow moving. Dry areas deserve special attention as they are home to half of the world's poor and hungry people, and climate

change will make them even more vulnerable. International dialogues, such as the World Economic Forum, the G8, and the G20, must be used as platforms to develop this concept, propose policy options, and formulate concrete commitments and actions to reduce poor people's vulnerability to food and nutrition insecurity and enhance their capacity for long-term growth.

The nexus among agriculture, nutrition, and health, and the nexus among food, water, and energy have been promoted separately for the past several years, including at the "Bonn 2011 Conference: The Water, Energy, and Food Security Nexus" and IFPRI's 2011 conference "Leveraging Agriculture for Improving Nutrition and Health." The agenda for 2013 must bring all of these themes together. Although trade-offs exist among agriculture, nutrition and health, and environmental sustainability, it is important to explore and develop triple-win solutions. Measurable goals should thus include both environmental sustainability and nutrition in addition to agricultural growth and food security and should have clear timelines and phases. Efforts to protect and promote human health should go hand in hand with efforts to improve the health of livestock, crops, and ecosystems. To build up evidence on triple-win mechanisms, indicators must be developed to track and evaluate the food security implications of green economy strategies, policies, and investments. Many conferences on nutrition will take place in 2013 and 2014, such as the Joint FAO/World Health Organization International Conference on Nutrition. These discussions should take an integrated approach to tackling the challenge of malnutrition, including establishing targeted safety nets, reshaping agricultural policies and practices to promote nutrition, reducing food waste and losses, promoting sustainable and healthy diets, and increasing the coverage of clean drinking water and sanitation.

Greater technical and financial support should continue to be allocated toward establishing national institutions to design, implement, monitor, and evaluate food security programs, initiatives, and policies. Asian experiences have shown that returns from this type of support are high, and many countries have committed resources

Much was said during the G20 and G8 summits about the need to increase investment in agriculture and food security. But there is a need for a mechanism to ensure and monitor actual implementation.

and initiated policies to support food security and poverty reduction. The greatest challenge they face is the lack of capacity in implementing these programs, initiatives, and policies. The G8, which is under the leadership of the United Kingdom in 2013, must fulfill the commitments made in L'Aquila, Italy, in 2009 and support the implementation of country and regional agricultural strategies and plans through country-led coordination processes. In a welcome development, Ireland has put hunger high on the agenda of its European Union presidency during the first half of 2013.

Finally, in 2013 and beyond, the conversation will continue on the Millennium Development Goals and their successors. Past progress, while inadequate in many ways, has shown that cutting food insecurity—sometimes dramatically—is possible. There will also be a push to integrate environmental sustainability goals into the post-2015 development agenda. While development goals should strive for environmental sustainability, poor people must be the center of the post-2015 development agenda. The focus of food policies should shift from cutting hunger toward eliminating it completely—within a clear timeframe and with mechanisms for holding countries, international institutions, and other relevant actors accountable for meeting this goal.

The global development community has been busy talking about overcoming hunger and malnutrition for long enough. Now it is time to walk the talk by turning the discussions and promises into actions. ■