

From Famine to Food Security

Lessons for Building Resilient Food Systems

Suresh Chandra Babu and Paul Dorosh

Armed conflict combined with prolonged drought has put about 20 million people at risk of starvation and death in Somalia, South Sudan, Yemen, and northern Nigeria. The international development and aid communities are caught between the enormity of the humanitarian crisis, which demands an estimated US\$4.4 billion to address, and the lack of resources forthcoming from donors.

Food crises, famine-like conditions, and famines recur with regularity in many developing countries (see Box 1 for definitions of terms). Although the current famines can be largely attributed to conflicts, chronic food insecurity also threatens several other African countries. For example, 6.7 million people were affected by Malawi's largest food crisis in decades in 2016–2017, and the country remains vulnerable to weather extremes that could create food emergencies (World Bank 2017). In Kenya, food security has deteriorated since the end of 2016 and half of its 47 counties face food shortages (Chatterjee and Mengistu 2017).

How do countries prepare to prevent shocks—natural and man-made—from generating food crises? What does it take to break the cycle of chronic food insecurity and build resilient food systems? How have some countries managed to prevent drought from leading to famine? In this brief, we document lessons for building resilient food systems to prevent future famines.

SUCCESS STORIES IN FAMINE PREVENTION

Remarkable achievements in breaking the cycle of recurrent crises, most notably in Bangladesh and Ethiopia, point to promising solutions for other developing countries. Bangladesh and Ethiopia both were chronically food insecure and frequently threatened by famine three to four decades ago but have made considerable progress through investments in availability and access to food and nutrition. In Bangladesh, stunting (low height-for-age) among children under five years old fell from 72 percent in the early 1990s to 36 percent by 2015; and in Ethiopia, stunting rates fell from 57 percent in the early 2000s to 40 percent by 2015 (World Bank). Poverty rates also dropped substantially in these countries. In Bangladesh, the percentage of people living below \$1.90 per day fell from 44.2 percent in 1991 to 18.5 percent in 2010. In Ethiopia, the poverty rate declined from 55.3 percent in 2000 to 33.5 percent in 2011 (World Bank).

BASIC DEFINITIONS OF FOOD SECURITY TERMS

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 (FAO-World Food Summit 1996).

Food crisis refers to a “condition when the rates of hunger and malnutrition rise sharply at local, national, or global levels. They are far more likely among populations already suffering from prolonged hunger and malnutrition. A food crisis is usually set off by a shock to either supply or demand for food and often involves a sudden spike in food prices” (Timmer 2009).

Famine is declared when “at least 20 percent of households in an area face extreme food shortages with a limited ability to cope; acute malnutrition rates exceed 30 percent; and the death rate exceeds two persons per day per 10,000 persons” (UN 2011).

Resilient food system is a food system that has capacity to withstand a shock, to absorb the effects of the shock, and to recover from the shock to its normal or an even better state in terms of any lost food security (Tendall et al. 2015).

Forty years ago, Bangladesh was deemed an “international basket case” by the then-US ambassador U. Alexis Johnson, in view of the country's high levels of poverty, widespread malnutrition, and the catastrophic famine of the early 1970s. A short but brutal war of independence with (West) Pakistan in 1971 followed years of underinvestment in the economy in general, including in agriculture, roads, and public services. Successive poor monsoon-season rice crops in 1973 and 1974 severely reduced overall rice production. With the country desperately short of foreign exchange and international prices at record levels, government commercial food imports were limited. Food aid supplemented the country's meager supplies, but per capita availability of grain nonetheless fell sharply (del Ninno et al. 2002).

Large-scale public investments in agricultural research, extension, and rural roads, combined with private investments in small-scale irrigation and increased availability of improved seeds and chemical fertilizer in the following decades led to substantial gains in the availability of food, which helped stabilize food prices. Equally important, tens of millions of smallholder households

shared in the gains from higher yields and production, increasing their incomes and access to food (Ahmed et al. 2000). Rural nonfarm and urban incomes also rose due in part to the effects of increased spending by farm households. Moreover, the government of Bangladesh, using both domestic resources and food aid, provided food to needy households through well-targeted food-for-work and food-for-education programs. And in recent years, programs for maternal and child health education have contributed to substantial improvements in nutrition for children.

Ethiopia has also made major strides since the famines of the early 1970s and 1984. By combining public investments in agricultural research and extension, promotion of fertilizer use, and expansion of the road network, the country has sharply increased its cereal production (Dorosh and Rashid 2012). Since the early 2000s, Ethiopia's Productive Safety Net Program (PSNP) has largely replaced annual appeals for emergency food aid with a well-targeted system of transfers of food and/or cash to needy households, linked to a work requirement for able-bodied individuals. Recently, PSNP has been expanded to address the nutritional needs of mothers and children through maternal education and other nutrition programs.

Policy changes have also played a crucial role in enhancing Ethiopia's food security. Government restrictions on transport of grain across regional boundaries by private sector traders worsened the 1984 famine (Webb and von Braun 1994). In contrast, in 2016, following substantial market liberalization in the 1990s, private sector flows of maize from western Ethiopia helped stabilize prices in the drought-affected eastern highlands. Government commercial imports of wheat, combined with increased transfers of wheat through PSNP, also contributed to increased availability of grain. These medium-term investments and short-run policy measures likely prevented a major food crisis in Ethiopia in 2016.

ADDRESSING TODAY'S FAMINE AND FOOD INSECURITY

Enhancing food security in vulnerable regions of the world will require a multifaceted set of public and private investments, sound policies, and targeted interventions for vulnerable households.

Food aid and targeted relief programs are badly needed in the short term. Of the people currently facing food shortages, an estimated 4.9 million live in South Sudan, where a famine was officially declared in February 2017. Malnutrition levels in South Sudan were already high before the current drought: 31 percent of children under five were stunted; 23 percent were wasted (low weight-for-height) (FAO and WFP). The recent drought and civil war have only exacerbated the problem.

In the longer term, although much of South Sudan receives little rainfall, the country has significant potential to increase cereal production, especially in the southern regions where annual rainfall is highest. Currently, only 5 percent of the country's

arable land is cultivated (Dorosh, Rashid, and van Asselt 2016). In neighboring Ethiopia, rapid expansion of agricultural extension services, provision of improved seeds, and increased fertilizer availability contributed to large increases in production. Once peace-building begins, similar policies could boost agricultural production in South Sudan, provided complementary investments are made in rural roads and related infrastructure.

Food aid and development assistance provided by multilateral and bilateral donors played an important role in the achievements of both Bangladesh and Ethiopia and will be crucial for improving food security and economic growth in countries currently facing food security crises. But the historical examples provide strong evidence that the long-term commitment of national governments to rural development and food security is important as well. In both Bangladesh and Ethiopia, the key to success has been the development of resilient food systems that reduce the vulnerability of populations to food crises and famines when a shock hits.

MOVING QUICKLY FROM FAMINE RELIEF TO RESILIENCE

The lessons learned from Bangladesh and Ethiopia can be used to develop relief measures that also build food-system resiliency. Resilient food systems can withstand stresses and, in conjunction with relief interventions, can provide critical access to food and prevent stressed areas from becoming vulnerable to food crises and famine.

Food-system resilience is simply the capacity to bounce back to normal or even higher levels of food supply after a shock from man-made or natural disasters. Low resilience makes countries highly vulnerable to food crises when a shock hits. In the countries currently facing famine, malnutrition, hunger, and poverty levels were already high. While the political economy of each country is different, low resilience left them all vulnerable to famine induced by drought and armed conflict.

Building resilience against natural disasters such as drought can improve food security, as shown by Ethiopia and Bangladesh. Droughts that induce the displacement of people often result in large-scale land desiccation and degradation, further inhibiting production of and access to food. Resilient food systems that can support communities suffering through droughts can also help maintain healthy ecosystems capable of bouncing back from weather stress (Leal Filho 2017). For example, when maize crops fail due to drought, farmers can quickly plant short-duration sweet potato to increase food availability in their communities. Resilient food systems can also provide improved access to food from local sources during times of conflict, which is critical because transport of external food aid in conflict zones is often obstructed by warring parties.

Policy makers are increasingly adopting this paradigm shift toward resilience, given the lessons of the last 40 years as well as growing concerns about climate change and disruptions in weather patterns. Responses to food crises and famine are beginning to incorporate resilience-building measures along with other

long-term development objectives into relief efforts. Experience shows that unless national response systems promote resilience in meeting natural and man-made shocks, they will always be “fire-fighting.” Emergency resources will be repeatedly diverted to address annual cycles of drought and related disasters and to rebuild national food systems, while countries lose ground on long-term development. Based on the cases we have looked at, it is urgent that such investments focus not just on relief and then rapid development, but also on making communities and their food systems resilient. Saving lives through emergency assistance must come first in the affected regions, but the next steps must sow the seeds for a more durable development process.

RESILIENCE BUILDING AS PART OF FAMINE RELIEF AND RESPONSE

Countries from Niger in West Africa to Somalia in East Africa are facing drought-induced food crises, and throughout the region farming communities that depend on crops and livestock for survival have become highly vulnerable to food and nutrition insecurity. While restoring peace is essential, all these countries need immediate food aid and related assistance to rebuild livelihoods. Building the resilience of communities through investments in policy systems, institutions, and food systems will help them cope with recurrent drought-induced shocks and put them on a long-term development path.

The current emergencies offer an opportunity to strengthen national capacities to protect vulnerable populations both in the immediate and the long term. We outline approaches to building resilience under three broad categories.

Policy system resilience: The effectiveness of a country’s national policy system in identifying drought-related challenges and developing intervention strategies is critical to resilience. A policy system designed for resilience will be responsive and capable of managing the emergency, including short-term and long-term interventions. Actors in the policy process will be able to develop common goals to address food emergencies and balance these goals with long-term development strategies. Such balancing in Ethiopia over the past 20 years has built a policy system that is able to manage impending drought-related disasters while also investing in development. For example, the PSNP that helped vulnerable communities ward off hunger also helped to build local infrastructure for sustainable development. Investments in national policy institutions, such as the Ethiopian Development Research Institute and the Ethiopian Economic Association, helped to put food-policy debates related to emergency and long-term development on the national policy agenda (Renkow and Slade 2013).

In Bangladesh, continuous engagement of government policy makers with high-quality food-policy analysis contributed to reducing inefficiencies in the food-distribution system. Changes included removing the village food-ration system (Babu 2000) and introducing the food-for-education program to provide wheat and rice to school-going children, which helped to build long-term

human capital by increasing enrollment and retention of children in schools (Ahmed and Babu 2009).

Identifying and strengthening the weaker elements of the policy-making process can build policy-making systems that are responsive and accountable. Due to a lack of policy process capacity in the countries currently at risk, their responses to emerging disasters are often inadequate. Strengthening these systems could simplify and shorten the decision-making process and result in swifter action. Involving multiple sectors in the policy process, including agriculture, health, nutrition, water, sanitation, and finance, can also expand the impact of disaster responses.

Coordination of humanitarian responses moves swiftly when organized at the highest level—under the president’s or prime minister’s office—as it was in Bangladesh and Ethiopia. Such coordinating mechanisms help create an enabling policy environment for national-level consultations on the type of drought responses needed, strategies and interventions, and financing mechanisms, as well as monitoring and review of the impact of responses.

Institutional resilience: Existing national and local institutions are inadequate to address the complexity of challenges arising from drought and conflict, particularly in the context of long-term development needs. Institutions promote resilience when they have adequate capacity to anticipate, plan, and act effectively to prevent an impending crisis, manage the present crisis, and rebuild to a higher level post crisis. Such institutions move smoothly and swiftly from relief to long-term development by managing disruptions from the crisis and leading effective design, adoption, and implementation of interventions for famine prevention and recovery. For example, an effective famine early warning system combined with national statistical capacity is fundamental to quickly collecting, processing, and analyzing data. In Bangladesh, continuous investments in strengthening the food-policy monitoring unit in the Ministry of Food played a critical role in improving monitoring of the country’s food situation and supporting development of strategies to reduce the effects of variations in food prices and production (Babu 2000). In Ethiopia, investments made in the analytical capacity of institutions such as the Central Statistics Agency improved real-time monitoring of poverty and vulnerability for policy making (Graham et al. 2012). In countries where such capacity exists, the assessment of food-aid requirements, estimation of the number of people affected, and development of delivery mechanisms for aid are carried out quickly, without suffering delays while external teams develop the necessary information. The current crisis should be an opportunity to strengthen the capacity of local institutions to carry out vulnerability measurement, mapping, and analysis that can improve coordination of responses and future preparedness.

Developments in information and communications technology, such as mobile banking, provide opportunities for effective targeting and swift transfer of cash resources to vulnerable groups (CSR-Asia 2014). Cash transfers to remote areas can promote trade in goods and services, helping to build resilient local markets and creating demand for basic commodities during normal times,

which becomes vital for functioning of markets during future crises. Brazil's Bolsa Família program is a good example of this approach: cash transfers to the poor in remote areas through the program increased demand for basic goods and services, which was met by newly emerged private traders and marketing channels, thus building the resilience of markets for poor communities (da Silva et al. 2010).

During conflict, however, key institutions such as agricultural research and extension systems are likely to function poorly or fall apart. Sustaining local institutions, such as the local presence of national extension systems, and using them effectively during response and recovery stages may help build their resilience. Further, such institutions can be useful both for aid distribution during an emergency and for implementation of social safety nets during normal times. Bangladesh used schools to deliver food to vulnerable groups through the food-for-education program in normal years while focusing development investments on other infrastructure. And recent humanitarian intervention strategies in Ethiopia focused on how local institutions meant for long-term development could be used effectively for emergency responses (MOA 2012).

Food system resilience: Strong and resilient food systems can help to reduce the impacts of drought on food and nutrition security. Countries that have built resilient food systems are better able to prevent famines. For example, the Ethiopian government, while protecting vulnerable groups through PSNP, also invested in service delivery systems to share knowledge on innovations in farming, such as agricultural extension and advisory services, and in provision of modern inputs such as high-yielding seed varieties and chemical fertilizers. This investment increased the access of farmers to modern inputs and improved crop productivity and resilience.

External assistance for the countries hit by drought should focus on combining emergency help with creation of asset-building opportunities. Such approaches, along with the emergency supply of inputs for crops and animals, rehabilitation of land and water

resources, and micro-irrigation, can help in both the short and long run to build communities' capacity to cope with droughts. Strengthening the capacity of communities to assess their own conditions and opportunities and engaging them in developing options for building food-system resilience may also contribute to preventing famines (USAID 2012).

On a final note, famine prevention and drought responses should extend beyond country borders, as clusters of countries are often affected and intercountry displacement of people is common. International and bilateral organizations have been effective in helping governments with famine early-warning information and in coordinating food security and nutrition interventions, but in the long-run have often failed to build regional institutions to support resilience. How the current emergency is handled will have larger implications for the success of regional commitments such as the Malabo Declaration on agricultural transformation and the UN Sustainable Development Goals.

MOVING FORWARD

Although triggered by frequent droughts, the famine-like conditions faced by African countries are largely preventable, with the exception of war-ravaged areas. Restoring peace in South Sudan, Somalia, and other drought-affected regions should open the door to new investments and sound government policies that can help these countries achieve progress in food security and long-term development. Countries with effective mechanisms for resilience have managed to reduce the adverse effects of drought on vulnerable populations. Yet adequate commitment, internal and external, to sustainable solutions has not been forthcoming to address the looming hunger and loss of livelihoods and lives in several affected countries. Even with political will and higher levels of international support, the needed local capacity to respond is missing. Lessons from past efforts show that building this resilience capacity can help these famine-prone countries achieve food security and prevent future famines.

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