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# Reducing the Risk of Food and Nutrition Insecurity among Vulnerable Populations

Vulnerable populations are minimally resilient to shocks, whether caused by humans or natural disasters. Emerging threats and new trends—such as climate change, population growth, aging societies, urbanization, infectious as well as noncommunicable diseases, and environmental degradation—are bound to aggravate the consequences of shocks on already vulnerable populations by triggering damage, loss, and displacement. Such threats pose an additional hurdle to the stated policy objective of the international community to eradicate hunger and malnutrition.

Urgent action is needed to reduce the vulnerability of poor people, particularly regarding food and nutrition insecurity. Although relief initiatives and emergency appeals attract more donor attention, building resilience is equally important for reducing the impact and severity of shocks. Indeed, long-term investments in such measures can be highly cost-effective and have a profound impact in terms of saving lives and securing livelihoods when disasters strike. Managing food price volatility is also important in decreasing poor people's vulnerability, but that subject is discussed elsewhere.<sup>1</sup>

## Vulnerability and Global Food and Nutrition Security

Food and nutrition security are achieved when (1) enough nutritious food is available where it is needed, (2) it is accessible and affordable to those who need it, (3) it is utilized properly so that sufficient nourishment is received upon consumption, and (4) all of these conditions are stable over time. Despite progress toward global food and nutrition security in the past two decades, almost one billion people remain undernourished, and deficiencies in vitamins and minerals, which can increase morbidity and mortality among the billions of people who suffer from this "hidden" hunger, persist worldwide. Given these various forms of malnutrition, the hunger situation in many developing countries remains serious, compromising both individual productivity and economic growth.<sup>2</sup>

Vulnerability can be viewed as the extent to which households and individuals can be negatively affected by an external shock, from either the physical or socioeconomic environment. Poor people are the least able to prepare for or adjust to such changes, and the lack of capacity to manage risks and cope with shocks is a key determinant

of their vulnerability. The vulnerable population comprises diverse subcategories, such as agricultural smallholders, the landless, displaced persons, female-headed households, pregnant women, children, orphans, the elderly, and health-impaired populations. This diversity requires different channels for assisting different subgroups at times of crisis, as well as different modalities of enhancing their resilience. With regard to food and nutrition security, vulnerability exists when shocks compromise the sustainable availability, accessibility, or utilization of the food supply. Understanding what affects food and nutrition security is critical to effectively protecting vulnerable groups.

The costs of shocks extend beyond short-term impacts. As malnutrition affects people's physical health, it can directly reduce their capacity to work and to engage in more productive and innovative activities that could help produce food and generate income. Moreover, its negative impact on the cognitive development of children affects their educational outcomes and future earning potential. When recurrent disasters result in an erosion of productive assets that cannot readily be replaced, vulnerable populations remain weak and unable to resist future shocks.

Climate change will further increase the vulnerability of poor people and compromise food security. Research from the International Food Policy Research Institute shows that developing countries can be expected to suffer most from the effects of climate change and may bear up to 80 percent of its costs. According to projections, by 2050 climate change may reduce average daily calorie availability per capita and general well-being below current levels and could increase the number of malnourished children by about 20 percent.<sup>3</sup> Smallholders and their families are especially vulnerable to climate change.

Many of the recent humanitarian crises—including food shortages, droughts, and floods—are either recurring or of long duration, and therefore receive limited media coverage. This invisibility undermines the efforts of governments and humanitarian organizations to find the necessary relief resources. Most agencies, caught in a cycle of responding to disasters that cost lives, destroy livelihoods, and threaten national stability, are unable to address the longer-term problem of chronic hunger and malnutrition, which would require political, economic, legal, and social innovation, as well as systemic change.<sup>4</sup>

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## The Challenges for Reducing Vulnerability to Food Insecurity

While short-term interventions in the aftermath of a crisis are crucial to maintain food and nutrition security, there is also a clear need for development investments to help poor and vulnerable groups build capacity, manage shocks, and develop resilience to future shocks. Yet donor funding for disaster prevention and enhanced resilience remains low. While official development assistance to agriculture has seen a substantial increase in 2010 (the last year for which data are available), it remained at just 6 percent of the total (Table 1). Other measures to enhance resilience are being taken to address food price spikes and volatility and increase attention on social protection.<sup>5</sup> Nevertheless, nearly 80 percent of people in the world's poorest countries still lack effective safety-net coverage.<sup>6</sup>

Both global and national actors are currently scaling up investments in agriculture, food security initiatives, and social protection systems—not least in response to the food price crises of recent years. These responses are often of a short-term nature, however; the long-term view needed for resilience-building has been lacking, although there is increasing attention to longer term perspectives in the past few years.<sup>7</sup> To the extent that short-term interventions can help protect the assets and savings of the poor, who would otherwise be more vulnerable to subsequent shocks, these efforts represent important first steps.

In developing countries themselves, the focus is shifting to longer term aspects of food security. Emerging economies such as Brazil, China, and India are expanding their investments in agriculture and social protection, while African countries are making commitments under the Comprehensive Africa Agriculture Development Programme to develop agriculture and food security investment plans.

Yet, breaking the cycle of hunger and food assistance will also require focusing on disaster prevention and resilience building in vulnerable populations. Scaling up investments in disaster-risk reduction makes economic sense, as they have higher returns than either relief operations or the provision of humanitarian assistance in the aftermath of disaster. Such efforts have shown, by one account, internal rates of return ranging from 20 to 50 percent.<sup>8</sup> Mechanisms that enhance poor people's resilience to shocks also have the potential to increase their productivity and overall economic growth, by helping to

create productive assets for individuals, households, or communities and by protecting them when shocks occur.

Other avenues to serve the long-term needs of vulnerable groups include creating the legal and administrative infrastructures that facilitate the expansion of social safety nets, which also help build resilience to economic crises. Depending on the context, programs like cash transfers, food stamps, in-kind transfers of food, work-for-food, and nutrition education campaigns can help raise household income and consumption. Social safety nets need to be incorporated into national social protection agendas and risk-management strategies.

Mainstreaming risk reduction, resilience enhancement, and food security requires incorporating these efforts into the preparedness, relief, recovery, and development policies of all stakeholders, including local communities, nongovernmental organizations, national governments, and humanitarian and development agencies. Ensuring mutual learning and collaboration among these partners is vital to advance a coherent and coordinated reduction of risks. The relevant global, regional, and national platforms present opportunities to advocate for a risk-reduction agenda. Internationally agreed targets for disaster reduction should be established, and appropriate tools to measure the progress and impact of these efforts should be developed. Risk assessments and cost-benefit analyses relating to specific projects can produce insights for policymakers.

Finally, prediction and monitoring of natural disasters, extreme weather events, and price volatility are crucial tools for reducing vulnerability. Advance warning enables individuals, civil society organizations, governments, and international organizations to take necessary actions to reduce people's exposure to risk while preparing for effective responses and recovery. At-risk populations may have developed coping strategies based on local knowledge of their environment, socioeconomic situation, and livelihood strategies. Nevertheless, community-based early warning and monitoring systems, as well as modern methods of disaster prediction and hazard mitigation, can play a critical role in saving lives and livelihoods by allowing populations to better understand the risks they face.<sup>9</sup> Therefore, forecast and response capacities must be strengthened and the dissemination of early warnings must be improved, both globally and locally.

TABLE 1 Official development assistance from OECD countries (US\$ millions, current prices)

|  | 2006          | 2007          | 2008           | 2009           | 2010           |
|--|---------------|---------------|----------------|----------------|----------------|
| Agriculture, forestry, and fishing       | 2,806         | 4,352         | 4,978          | 4,930          | 6,584          |
| Food aid and food security assistance    | 939           | 1,086         | 1,551          | 1,510          | 1,373          |
| Humanitarian aid                         |               |               |                |                |                |
| Emergency response                       | 6,095         | 6,314         | 8,075          | 8,018          | 9,351          |
| Reconstruction relief and rehabilitation | 543           | 727           | 660            | 689            | 762            |
| Disaster prevention and preparedness     | 49            | 159           | 275            | 445            | 322            |
| Other development assistance             | 88,704        | 81,182        | 100,596        | 89,371         | 99,218         |
| <b>Total development assistance</b>      | <b>99,136</b> | <b>93,820</b> | <b>116,134</b> | <b>104,963</b> | <b>117,609</b> |

Source: OECD. 2012. "ODA by Sector." Development Database on Aid from DAC Members. Updated April 4. [www.oecd.org/document/33/0,2340,en\\_2649\\_34447\\_36661793\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/33/0,2340,en_2649_34447_36661793_1_1_1_1,00.html).

## Scaling up Successes and Exploring Innovations

Smallholder families account for a large share of vulnerable and food insecure populations. To help poor farmers reduce and manage the risks that come with farming, a range of measures are currently being evaluated. Measures that have already been shown effective can be used to build resilience against agricultural shocks, provided that smallholder access to the necessary related products and services is facilitated. Such measures include investments in technologies and practices that reduce yield variability; access to financial services and insurance schemes; and policies that help mitigate and adapt to climate change. For instance, investments in the development and dissemination of disease-resistant crop varieties have helped reduce the vulnerability of smallholders to devastating crop losses and have accordingly improved food and nutrition security.<sup>10</sup>

More general resilience-building measures, like social safety net programs, help reduce the vulnerability of many poor groups. Ethiopia's Productive Safety Net Programme is widely recognized as holding great potential for helping the poor; farm households that benefit from this program and receive agricultural support are more likely to be food secure as well as more enterprising. Brazil's Bolsa Família is another example of a successful consolidation of previously scattered initiatives, to provide an integrated package of education, nutrition, and health services to the poor.<sup>11</sup>

## Recommendations

In order to reduce the risks of food and nutrition insecurity among vulnerable populations, rural and urban poor people must have access to instruments that not only help them manage risks and respond to shocks in the short term, but that also improve their resilience and promote their food security in the long run. Accordingly, governments, donors, and the private sector must develop and scale up approaches that are specifically adapted to the needs of vulnerable populations.

### Improve data and information to predict and respond to disasters in a timely manner.

Better early warning systems are needed at regional and country levels. Such systems should provide timely information on the meteorological, natural, health, and security developments that can present increased food and nutrition risks to poor and vulnerable populations. These systems should coordinate the data and information provided by the diverse mix of actors typically involved in on-the-ground data collection—national governments, nongovernmental organizations, and donors. Such systems are not sufficient on their own, however, as demonstrated by the ad hoc responses to the food crisis in the Horn of Africa in 2011. Early warnings must be supported by a coordinated strategic plan that triggers specific actions when an alert is given.

### Build resilience among smallholders.

Investments designed to reduce smallholders' vulnerability to food and nutrition insecurity and increase their coping capacities should be developed and scaled up. These investments must translate into tools and services adapted to the specific types of risks and shocks faced by vulnerable people. Agricultural market risks and shocks can be reduced through promoting access to key services such as insurance and finance. Equally important, however, are investments to enhance food productivity in the long run. Such investments include increased research and development spending to develop crop varieties resistant to abiotic stresses, as well as stronger livestock breeds; diversification of crop production, horizontally and vertically; improved input use; and introduction of alternative farm-management practices. Also, nonfarm employment and remittances can help diversify incomes of farm households and build resilience.

### Scale up social safety nets.

Better-targeted social safety nets are urgently needed to protect vulnerable groups, especially women and children. Where appropriate, productive social safety nets can ensure the livelihoods of poor people in rural and urban areas.

- **Risk reduction actions** include cross-sectoral social protection initiatives that enhance the capacity of poor people to build productive assets.
- **Coping support strategies** include temporary disaster relief and food aid.
- **Consolidated programs** that integrate education, nutrition, and health services to the poor can help address risks while building resilience among vulnerable populations.

### Enhance coordination between global donors and local actors.

In order to maximize the benefits and reach of disaster prevention and relief interventions, platforms for constructive policy dialogue need to be established and strengthened at the global, regional, and local levels to promote mainstreaming and action-oriented planning. A single framework is essential to integrate relief interventions with relevant initiatives in agricultural development and food and nutrition security, and to enhance knowledge about ways to combine disaster risk reduction with support for food security, nutrition, and livelihoods. Greater technical and financial resources should be allocated for the research, design, implementation, monitoring, and evaluation of policies related to vulnerability and food and nutrition security, as well as for capacity building at the local level; these findings will be essential to implementing large-scale reforms and to scaling up related policies. In addition, aid organizations should seek a global consensus on aid financing that allows a certain percentage of aid money and donations to be used for resilience building, as an essential corollary to relief efforts.

- 1 K. von Grebmer, M. Torero, T. Olofinbiyi, H. Fritschel, D. Wiesmann, Y. Yohannes, L. Schofield, et al., *2011 Global Hunger Index: The Challenge of Hunger* (Bonn; Washington, DC; Dublin: Deutsche Welthungerhilfe, International Food Policy Research Institute, Concern Worldwide, 2011), <http://dx.doi.org/10.2499/9780896299344ENGI2011>.
- 2 von Grebmer et al., *2011 Global Hunger Index*.
- 3 G. Nelson, M. W. Rosegrant, A. Palazzo, I. Gray, C. Ingersoll, R. Robertson, S. Tokgoz, et al., *Food Security, Farming, and Climate Change to 2050: Scenarios, Results, Policy Options* (Washington, DC: International Food Policy Research Institute, 2010), <http://dx.doi.org/10.2499/9780896291867>.
- 4 IFRC, *World Disasters Report 2011: Focus on Hunger and Malnutrition* (Geneva: International Federation of Red Cross and Red Crescent Societies, 2011), [www.ifrc.org/publications-and-reports/world-disasters-report/wdr2011](http://www.ifrc.org/publications-and-reports/world-disasters-report/wdr2011).
- 5 von Grebmer et al., *2011 Global Hunger Index*.
- 6 World Bank, "3 out of 5 People in Developing Countries Lack Safety Nets," Press Release 2012/380/HDN (Washington, DC: World Bank, 2012), <http://go.worldbank.org/WLLWYOACY0>.
- 7 P. Abbott, "Foreign Assistance and the Food Crisis of 2007-08," WIDER Working Paper 2012/19 (Helsinki: World Institute for Development Economics Research of the United Nations University, 2012), [www.wider.unu.edu/publications/working-papers/2012/en\\_GB/wp2012-019](http://www.wider.unu.edu/publications/working-papers/2012/en_GB/wp2012-019).
- 8 DFID, *Reducing the Risk of Disasters: Helping to Achieve Sustainable Poverty Reduction in a Vulnerable World* (London: Department for International Development, 2006), [www.dfid.gov.uk/pubs/files/disaster-risk-reduction-policy.pdf](http://www.dfid.gov.uk/pubs/files/disaster-risk-reduction-policy.pdf).
- 9 IFRC, *World Disasters Report 2009: Focus on Early Warning, Early Action* (Geneva: International Federation of Red Cross and Red Crescent Societies, 2009), [www.ifrc.org/en/publications-and-reports/world-disasters-report/previous-issues](http://www.ifrc.org/en/publications-and-reports/world-disasters-report/previous-issues).
- 10 D. J. Spielman, and R. Pandya-Lorch, *Millions Fed: Proven Successes in Agricultural Development* (Washington, DC: International Food Policy Research Institute, 2009), <http://dx.doi.org/10.2499/9780896296619BK>; R. Vargas Hill and M. Torero (eds), *Innovations in Insuring the Poor* (Washington, DC: International Food Policy Research Institute, 2009), <http://dx.doi.org/10.2499/0896296652>.
- 11 M. Grosh, C. del Ninno, E. Tesliuc, and A. Ouerghi, *For Protection and Promotion: The Design and Implementation of Effective Safety Nets* (Washington, DC: World Bank, 2008), <http://go.worldbank.org/V09KTATEPO>; J. A. Elder, C. Andrews, C. Costella, A. Kryeziu, J. Loureiro, R. Quintana, and R. Yemtsov, *South-South Learning Forum 2011: Building Resilient Safety Nets* (Washington, DC: World Bank, 2011) <http://go.worldbank.org/UT603A18C0>.

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