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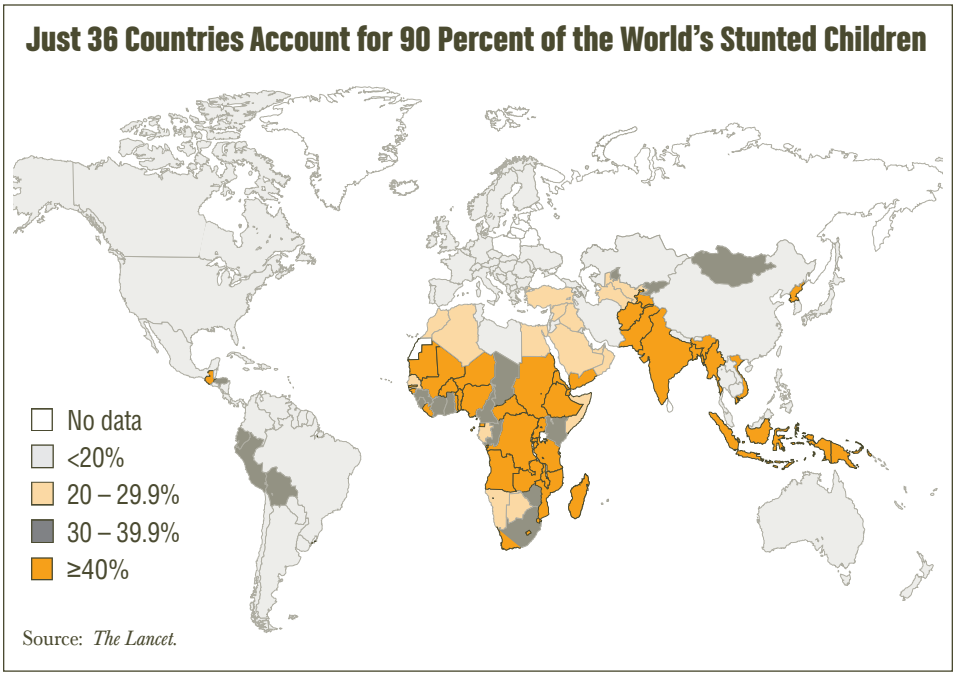
New Hope for Malnourished Mothers and Children

by Eric Muñoz



Key Points

- The scope of malnutrition is staggering. Women and young children are the hardest hit. In many countries child malnutrition rates are steadily rising.
- For children suffering malnutrition the effects will be long-term, even intergenerational. Malnutrition impairs physical growth and cognitive development.
- In countries with high levels of childhood malnutrition, the economic loss can be as high as 2-3 percent of GDP.
- New evidence shows that interventions to prevent and treat malnutrition of women and children from conception through the first two years of life can save millions of lives and ensure that children grow up to be healthy, strong, productive adults.
- As the United States embarks on a new global food security initiative, nutrition must be a central component. Evidence-based nutrition interventions must be scaled up and nutrition must be integrated into programs to improve agriculture and food security.

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Abstract

Many developing countries have had success in reducing malnutrition. But malnutrition remains pervasive and, in many countries, comes at a very high cost. Each year, millions of children die from malnutrition; millions more suffer ill health and face long-term physical and cognitive impairment, leading to lost productivity. The period between conception and the first two years in a child's life are critical. The Obama administration's initiative to fight hunger offers an opportunity to improve nutrition of mothers and children around the world. In addition to the focus on increasing agricultural productivity and raising rural incomes, the administration should scale up nutrition interventions and integrate nutrition into its development programming. It should use improvements in maternal and child nutrition as a key indicator of success. It should support country-led strategies, coordinate with other donors and ensure that U.S. actions and policies do not undermine nutrition objectives.

If there is one positive result of the spike in food prices that occurred in 2008, it is the renewed emphasis on agriculture and rural development in developing countries. President Obama has made fighting hunger in the United States and around the world a top priority of his administration. He has helped to convince other wealthy nations that they have a role to play as well. At the G-8 summit in July 2009, leaders agreed to invest $20 billion over the next three years to increase agricultural productivity in developing countries, help farmers earn more money for the food they grow, and improve food security.[1]

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Renewed attention to agriculture and food security must also include maternal and child nutrition as a top development priority. Providing good nutrition early in children's lives can help them grow up to be stronger, healthier adults, better able to contribute to their households, communities, and countries. Yet preventing and treating malnutrition currently receives little attention, support, or investment.

The scope of malnutrition is staggering. Hundreds of millions of young children face hunger and malnutrition every day. Malnourished mothers are more likely to die during childbirth or give birth to undernourished babies who are also at increased risk of death. In 2008, nearly 9 million children died before they reached their fifth birthday.[2] One-third of early childhood deaths are the direct or indirect result of malnutrition.[3] Children who survive early childhood malnutrition suffer irreversible harm—including poor physical growth, compromised immune function, and impaired cognitive abilities.[4]

When countries do focus on nutrition, however, dramatic improvements are possible. In the United States, the importance of child nutrition became clear in the 1940s when hundreds of thousands of military recruits were turned down for service because they were undernourished and in poor health.[5] In response, the government introduced programs to reduce hunger, including school breakfast and lunch, the Food Stamp Program, and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC).[6] In 2008, nearly half of all infants born in the United States received WIC benefits, which include nutritious food and referrals to health and social services.[7]

In other countries, millions of mothers and children are now seeing rapid progress in nutrition. In Mexico, over the last decade and a half, the Oportunidades program has been providing pregnant women and mothers of young children (up to age three) with cash assistance and selected nutritious foods, on condition that the children are regularly seen by a doctor. As a result of the program, malnutrition among young children has dropped 17 percent.[8]

U.S. foreign assistance supports many activities that make a difference for hungry children. Humanitarian assistance helps feed children and put them on a path to good health. Food aid programs are increasingly focused on preventing malnutrition. U.S.-funded global health programs target key micronutrient deficiencies, provide nutritious food to people with HIV, and offer assistance to developing countries interested in expanding their nutrition efforts.

Basic Definitions

Malnutrition is literally "Bad Nutrition." It is also referred to as undernutrition or undernourishment. Malnutrition is not having enough nourishing food with adequate amounts of protein, vitamins, minerals, and calories to support physical and mental growth and development. Scientifically, malnutrition is measured in four ways:

Micronutrient malnutrition: deficiencies of essential micronutrients needed for physical and mental growth, development, and health.

Weight–for–age: where the weight of a child or infant is compared with the weight of a well-nourished child of that age and sex. Malnutrition leads to numbers indicating an **"underweight"** status.

Height–for–age: where the height of a child or infant is compared with the height of a well-nourished child of the same age and sex. Malnutrition results in **"stunting."**

Weight–for–height: comparison used to reveal acute malnutrition or "wasting." Severe Acute Malnutrition or **SAM** is a weight-for-height measurement of 70 percent or less.

A comprehensive approach to preventing and treating malnutrition means expanding programs to the scale needed and linking current U.S. nutrition activities with broader investments in related sectors, including agriculture, food security, and rural infrastructure. Focusing on nutrition is one of the best investments the United States and the international community can make to reduce hunger and poverty and promote development.

Nutrition is Critical for Development

The first two years of life are a critical window of opportunity to make sure children live healthy, productive lives. A long-term study in Guatemala following individuals from infancy into adulthood provides some of the best evidence yet of the economic benefits of good nutrition.[9]

In 1969, young Guatemalan children in two communities were chosen to participate in a nutrition supplementation program that provided them with a nutritious drink twice a day. One group of children received a drink called *Fresco*, the other a drink called *Atole*, which contained more calories and protein than *Fresco*.

The nutrition intervention had a profound impact. Those who received *Atole* grew on average an additional 2.4 centimeters taller than those who received *Fresco*. This small difference resulted in a 20 percent reduction in severe stunting in the *Atole* group. Virtually no reduction in stunting was found for children who received *Fresco*.[10] Follow-up monitoring of the children in these two communities 25 years later showed that individuals who received *Atole* had a greater likelihood of completing primary and some secondary school, higher scores on reading comprehension and cognitive tests, and, among women, completion of more grades in school.[11]

The impact of greater height and more schooling in the *Atole* group has economic consequences as well. As adults, children who received *Atole* during the first two years of life earned an average of $870 more annually than individuals who received *Fresco*. In a country where annual per capita income is just $2,440, this represents a significant gain for adults who were properly nourished in childhood.[12] In Guatemala and other countries where malnutrition persists, the economic loss can be as high as 2 to 3 percent of GDP.[13] These direct costs are compounded by indirect costs—for example, from increased healthcare expenses and lost labor hours resulting from increased susceptibility to illness.

Malnutrition Remains Pervasive

The dual crises of high food prices and a deep economic recession in the last few years have reversed progress against hunger. In many countries, child malnutrition rates are

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steadily rising. For children suffering malnutrition, the effects will be long-term, even intergenerational. A woman who has been malnourished in childhood is likely to deliver a smaller baby with poor fetal growth and a greater likelihood of suffering stunting.[14]

A number of factors, including poverty, contribute to malnutrition. During the first six months of life, breast milk contains all of the nutrients a growing infant needs to maintain health, but exclusive breastfeeding rates remain very low. In a survey of 82 developing countries, less than 50 percent of mothers exclusively breastfed their children. Suboptimal breastfeeding results in the death of 1.4 million young children each year.[15]

Healthy children become malnourished if they do not get enough to eat or if they eat food of limited nutritional value, as often happens when diets consist mainly of a staple grain such as corn or rice. Poor diets are themselves often the result of poverty or lack of availability of food. Save the Children found that at average wages, a rural family of five in Ethiopia would have to work for four months simply to be able to afford one month's worth of healthy food.[16] In Niger and other countries, severe malnutrition increases during the so-called hunger season before crops are harvested.[17] (See Fig. 1 on next page)

Even if food availability is not a barrier, mothers may not have good information about what, how much or how often

often to feed their children. In these situations, providing women with basic nutrition education is critical for the health of young children. In other instances family or cultural dynamics or labor demands may keep mothers from being able to provide adequate care. In Burkina Faso, for example, one study showed that young children whose mother's also work are more likely to be malnourished than mother's who do not work.[18]

Compounding poor diets, the water children drink may be unclean and living conditions unsanitary. In these settings, exposure to disease is common. Malnutrition impairs immune function, putting children at increased risk of becoming ill. In turn, illness can prolong and deepen malnutrition as diseases such as diarrhea keep children from being able to digest the food they eat.

Deficiencies of essential micronutrients represent the most common form of malnutrition, affecting roughly 2 billion people, with especially severe consequences for pregnant women and young children.[18] Vitamin A deficiency can cause blindness. Zinc deficiency impairs immune function. Iodine deficiency hinders brain development and lowers cognitive capacity. Iron deficiency impairs children's motor development and increases the risk women face in giving birth. Anemia resulting from inadequate iron intake is associated with approximately 130,000 maternal deaths annually.[19] Together, deficiencies of these nutrients—Vitamin A, iron, iodine, and zinc—are responsible for 10 percent of all deaths of children under five as well as much of the physical and cognitive impairment of children living in developing countries.[20]

Around the world, 178 million children under five are stunted.[21] Of all stunted children, 90 percent live in just 36 countries, most of them in sub-Saharan Africa and South and Central Asia.[22] The remaining 10 percent of stunted children live in countries where 20 to 30 percent of the under-five population is stunted.

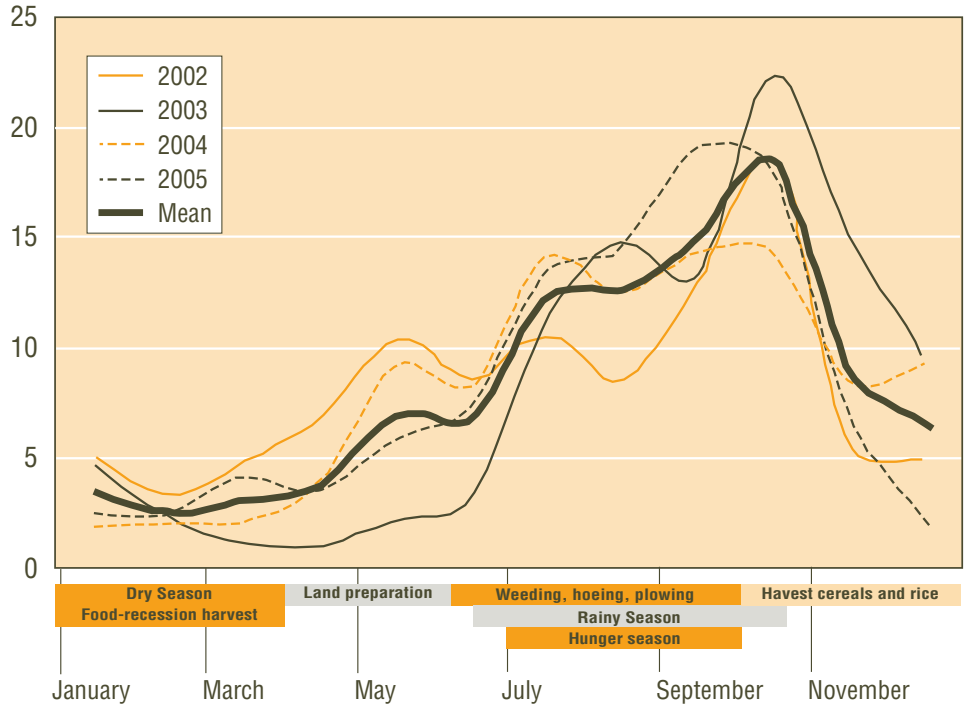
Today, 55 million children are wasted—they weigh less than they should given their height—with at least 19 million of them exhibiting severe wasting, meaning they are on the verge of death.[23] Often associated with war or famine, the prevalence of wasting is nevertheless high even in some stable countries such as India.

Rapid Progress is Possible

The extent of malnutrition and the huge toll it takes on the health of mothers and children and the economic development of communities and countries can be depressing. But there is strong evidence that a concerted effort could eliminate this terrible condition. Thailand has reduced child malnutrition by 75 percent over two decades.[24] The Thai government has undertaken a program of nutrition education and growth monitoring, vitamin and mineral supplementation, promotion of nutritious foods such as fish and legumes, and food distribution to severely malnourished children. Community health workers, nurses, and doctors have been trained to deliver these key interventions. These activities are coordinated with other efforts to reduce poverty and improve living conditions—for example, increasing food production and improving access to clean water and sanitation.[25]

There are many lessons to be learned from Thailand's efforts, but two are especially worth noting. First, the country designed a comprehensive strategy that

Figure 1: Seasonal Hunger Takes a Toll on Nutrition



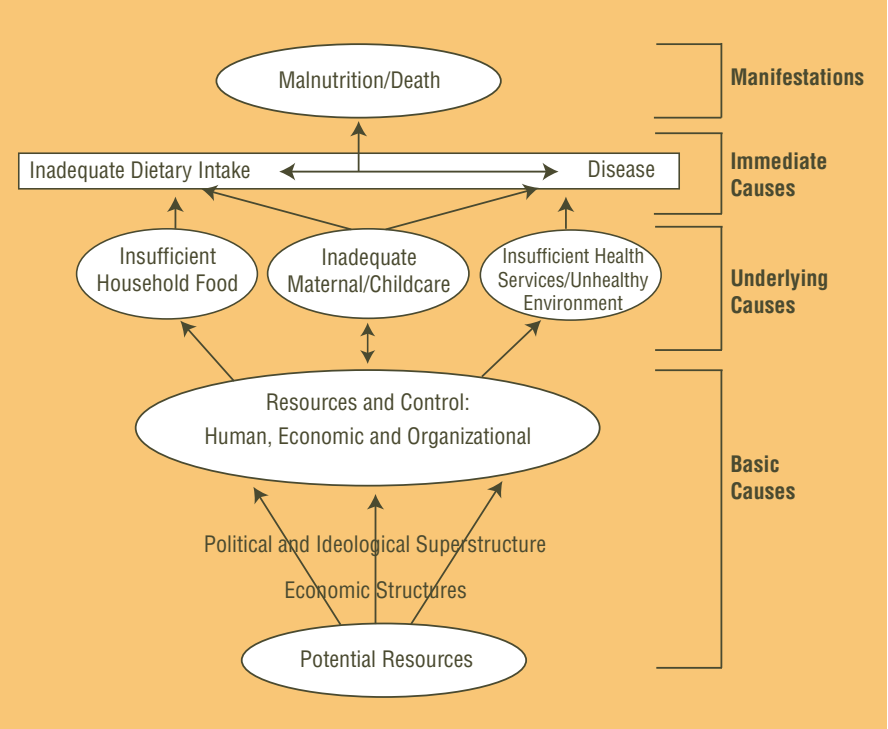
In Niger, the aid group Medicins Sans Frontieres documented the seasonal nature of hunger. Annual admissions to therapeutic feeding centers accelerates between June and October when crops have been planted and are awaiting harvest.

Source: Adapted from Medecins Sans Frontieres and FEWS.

made nutrition a top development priority. The strategy was supported at the highest levels of government. The Deputy Prime Minister, given overall responsibility for leading the program, encouraged cooperation and coordination across many different government departments, including the Ministries of Public Health, Education, and Agriculture.[26] Despite the ministries' different ways of operating, areas of expertise, and political and legal mandates, the government managed to promote a "whole of government" approach to improving nutrition.

Second, the Thai government committed substantial financial resources to the program but welcomed contributions from other donors, including UNICEF and the United States. Outside contributions increased the technical capacity of the Thai government and encouraged the integration of nutrition in programs spanning multiple government ministries.[27]

Figure 2: Framework for Understanding the Causes of Malnutrition



Source: UNICEF.

A recent review in the British medical journal *The Lancet* provides strong evidence that the nutrition interventions undertaken in Thailand can work in other countries with high rates of malnutrition as well.[28] These interventions are:

- Providing micronutrients, including iodine and iron folate for pregnant women and iodine, zinc, and vitamin A for infants and young children;
- Promoting exclusive breastfeeding for infants 0-6 months of age;
- Empowering women and caregivers to improve feeding practices and working with communities to adopt these practices;
- Providing nutritionally appropriate food in food insecure settings to ensure mothers and children have access to healthy food;
- Improving sanitation and hygiene practices and facilities, including access to clean water;
- Providing treatment for illnesses, including diarrhea, malaria, and respiratory infections;
- Treating severe acute malnutrition.

The Lancet study shows that these interventions can make a tremendous difference in the lives of mothers and children around the world. They should be adopted and combined with efforts to address the underlying factors that allow malnutrition to persist. Poverty and food insecurity are primary factors that cause malnutrition, but other important factors include overstretched, understaffed health care services; pervasive discrimination and gender inequality; and lack of education. (See figure 2.) To address these factors, nutrition should be integrated into the development plans of every country, and governments should ensure that nutrition work is coordinated across ministries and sectors.

Tensions between different approaches—for example, whether to scale up one nutrition intervention versus another, or whether to improve agriculture instead of focusing directly on nutrition—cannot continue to get in the way of efforts to make progress. In fact, these are false choices; improving nutrition will require efforts to raise incomes and reduce hunger and poverty as well as to invest in specific nutrition interventions. Given the long-term consequences of malnutrition, there is an urgent need to act quickly and comprehensively.

Ultimately, the goal of nutrition programs should be to empower families with the resources and knowledge needed to prevent malnutrition and raise healthy well-nourished children. This will not happen overnight, but countries as disparate as Mexico and Thailand are showing that it is possible.

Bringing Interventions to Scale

Reaching mothers and young children with critical health and nutrition interventions will require sustained commitments and cooperation among the many international partners who have a role in promoting development. It will also require new financial commitments. The World Bank estimates that the cost of scaling up essential nutrition interventions, including expanding upon those identified in *The Lancet*, is $11.8 billion annually.[29] Of this amount, it is expected that $1.5 billion would be covered through household expenditures on improved food products (such as iodized salt). The remainder, $10.3 billion, would need to come from public sources.

Over the past decade, international development assistance has more than doubled, but funding to address malnutrition remains modest. Based on data reported by major aid donors and excluding multilateral assistance from the World Bank and others, spending on basic nutrition activities totaled just $439 million over the four years between 2002 and 2007. This was less than one percent of all bilateral development assistance.[30]

In the United States, funding for international nutrition programs is scattered across a number of agencies and programs. Most nutrition programming occurs through the maternal child health program within the Global Health Bureau at the U.S. Agency for International Development (USAID). Initiatives include micronutrient supplementation, food fortification, and programs to treat infectious diseases that contribute to malnutrition. The flagship nutrition program, the Infant and Young Child Nutrition Project (IYCN), provides technical and financial assistance for programs designed to deliver essential nutrition messages, such as the importance of exclusive breastfeeding, timely introduction of complementary food to maintain the weight gain of growing children, and appropriate care practices for children who are ill.[31]

Some nutrition activities are supported through U.S. food aid. The majority of food aid is used in emergencies, but recent changes to food aid programs have sharpened the focus on addressing malnutrition in non-disaster-affected communities fighting chronic malnutrition. The Preventing Malnutrition for Children Under 2 Approach (PM2A) for food aid was recently tested in Haiti and is being implemented in several other countries.[32] Programs based on this model seek to prevent malnutrition by providing food assistance to all young children living in targeted communities.

The U.S. food aid budget in 2008 totaled approximately $2.9 billion, the majority of which was distributed in emergencies although not necessarily targeted for the treatment of malnutrition.[33] Non-emergency food aid amounted to approximately $354 million (excluding the

U.S. FOOD AID: An Asset for Improved Nutrition?

Over the past decade, the United States has provided about half of all the food aid delivered to hungry and poor people around the world.[39] Much of this aid alleviates immediate suffering, but it comes at a high cost. Current regulations require U.S. food aid to be purchased in the United States and shipped on U.S.-flagged ships. These requirements add significant expense to food aid programs. For every dollar allocated to food aid, up to 60 cents goes to pay for packing and shipping costs.[40]

An additional concern about U.S. food aid is that current food aid commodities do not meet the nutritional needs of women and young children. In 2007, wheat and sorghum accounted for more than half of all U.S. food aid donations.[41] Unfortified and unprocessed, these and other basic grains do not contain the nutrients, vitamins, and minerals needed by mothers and young children.

Two other commonly provided commodities—Corn Soy Blend and Wheat Soy Blend—are little better. These fortified blended foods were developed in the 1960s, when much less was known about the unique nutritional needs of expectant and new mothers and their children.[42] The World Food Program (WFP) recognizes that, as currently formulated, these fortified blended foods are the least preferred option for use in programs targeting young children.

As efforts are made to better target food aid programs to address maternal and child malnutrition, it is critical to ensure that much more of each food aid dollar reaches intended beneficiaries and that food aid commodities meet the unique nutritional needs of women and young children.[43]

Expanding the local and regional purchase (LRP) of food aid presents new opportunities for using food aid in nutrition programs while also stimulating agricultural production. The current focus of LRP programs is on supporting local farmers, fostering agriculture markets, and improving the efficiency of U.S. food aid by avoiding shipping costs. Current programs do not emphasize sourcing nutritionally appropriate foods that avoid the problems associated with bulk commodities shipped from the United States. More work is needed to align LRP programs with positive nutritional outcomes.

USAID

McGovern-Dole School Feeding Program). Of this amount, approximately 66 percent was sold on markets to generate cash for development activities.[34] Little information is available about how much of the non-emergency food aid was used for nutrition programs.

The President's Emergency Program for AIDS Relief (PEPFAR) also addresses nutrition concerns to improve the effectiveness of anti-retroviral medications among some program participants. Nutrition counseling and food by prescription are provided to malnourished people living with HIV. Additionally, PEPFAR provides nutritional support (assessment, counseling, and food when needed) as part of the continuum of care for orphans and vulnerable children.[35] Of PEPFAR's large annual budget (approximately $5 billion in 2008) about 10 percent is directed toward care for orphans and vulnerable children, and only a portion of this budget is used to address malnutrition.[36]

If spending within maternal and child health programs (which includes funding for IYCN) is any indication, total commitments for nutrition are small. In 2008, $447 million was directed at achieving maternal and child health objectives, of which reducing malnutrition is just one component.[37] Clearly, this is a modest investment, particularly considering that U.S. poverty-focused development assistance amounted to $15.4 billion in 2008.[38]

Linking Agriculture, Food Security, and Nutrition

In 2008, food riots focused media attention on increased hunger among urban populations. Still, the vast majority of people suffering from hunger and malnutrition live in rural areas and earn a living through farming. Improvements in agriculture can help enhance food security and nutrition. For example, higher yields and better storage capacity can increase the amount of food available to households, ending cycles of seasonal hunger where food shortages lead to malnutrition. Planting crops high in micronutrients can lead to diversified diets, ensuring that children get essential micronutrients. Increasing the capacity to process foods locally and to fortify commonly consumed foods (salt, soy sauce, wheat, corn) can ensure that basic foods contain the vitamins and minerals young children need to grow up healthy and strong.

In Bangladesh, a USAID-supported program encouraged women to grow small home gardens in order to increase family fruit and vegetable production and consumption. Along with seeds and other inputs, the program provided practical information about farming and nutrition education. Household consumption of foods rich in vitamin A increased, and in turn, the incidence of night blindness—an indicator of vitamin A deficiency—decreased. In addition to increased dietary diversity, women earned on average $4 more per month from the sale of fruits and vegetables. This additional income was used to further improve diets and household living conditions.[44]

Celia Escudero Espadas

As the Bangladesh example demonstrates, strengthening the linkages among agriculture, food security, and nutrition will not come without specifically focusing attention on the roles of women as caregivers and as farmers. Agriculture programs designed to raise incomes, for example, must also address barriers to women's control over financial and productive resources. Projects to expand the kinds of crops being grown must also provide mothers with information about how to feed children a diversified diet and why it is important. Recent pledges to increase international funding for agriculture after years of neglect present an opportunity to further explore the link between agriculture and nutrition and to try new approaches.

It is also critical to ensure that new efforts to promote agriculture do no harm. Efforts to increase income by promoting the cultivation of cash crops such as coffee or cotton may actually lead to a worsening of household nutrition, especially if it leads to a greater demand for female labor without returning income women can use to buy food or other important household items. Incorporating nutrition analysis into agriculture programs can help to

avoid such inadvertent negative consequences. Gender and environmental analyses have become a standard part of program design and evaluation and perhaps provide useful models for incorporating nutrition analysis into other sectoral investments.

A stronger focus on nutrition can have substantial positive results in other areas as well, including education, especially for girls, and programs to strengthen and protect the rights of women. The point is that sustained improvements in nutrition over time will require addressing both the immediate and underlying causes of malnutrition.

The Millennium Challenge Corporation's Investments in Agriculture: A Missed Opportunity for Nutrition?

The Millennium Challenge Corporation (MCC), with its substantial investments in agriculture and food security, could play a role in supporting nutrition outcomes, but to date it has not. Currently, maternal and child malnutrition rates are not used in the selection criteria to determine eligibility for MCC programming, nor have nutrition interventions or objectives been incorporated into the country compacts that guide investment decisions or into the evaluations that gauge program success.[45] While the MCC is focused on poverty reduction through economic growth, its operations currently do not seem to recognize the impact of nutrition as both a cause and outcome of chronic poverty. It is also not clear that MCC is coordinating with other aid agencies on nutrition issues to improve the effectiveness of its investments.

Coordinating Action Around a Shared Agenda

Few developing country governments have made fighting malnutrition a development priority. The connections between good nutrition for children and improved economic growth and development are not well understood. Maternal and child malnutrition is also often a problem of the politically powerless. Bilateral and multilateral donors haven't given the issue much attention either. The many international agencies, research institutions, aid organizations, and others with a stake in nutrition have been variously described as "weak and dysfunctional" and the collaboration and integration among them as "broken."[46]

Country-owned and -led strategies to address malnutrition are critically needed. A country-led strategy is more likely to have the political will needed to ensure cooperation among different ministries and sustained financial commitment over time. Country-driven strategies also provide a coordinating mechanism around which donors can collaborate—an improvement over the fragmentation and project-oriented approach that characterize many aid donors, the United States included. In Burkina Faso, the government has created a National Nutrition Plan to guide policies and programs. Accompanying the Plan is a National Coordination Group for Nutrition which serves as a platform for coordinating the activities of government ministries, relief and development organization, and donors.

The success of Brazil's anti-hunger campaign is the result of both high-level government leadership and strong civil society participation. Upon taking office, President Lula made fighting hunger and malnutrition a top priority of his administration. The creation of a National Food and Nutritional Security Policy was made possible through "participatory food and nutritional security policymaking" with a strong role for civil society groups.[47] Implementation of the strategy is the responsibility of the Ministry of Social Development and Hunger Eradication, an agency created during the Lula administration.

Among the safety net programs administered by the new ministry is a conditional cash transfer program aimed at improving the health and nutrition of pregnant and new mothers and young children. With the World Bank and other donors' support, the maternal and child health program has helped to improve dietary diversity and food security in the poorer northern region of the country. Nutrition and growth indicators suggest that children in the program are benefiting.[48]

Even when national governments are committed, designing and implementing country-led programs is easier said than done. Many governments lack the capacity needed to design robust cross-sectoral programs that place nutrition within a broader development plan. Building up a cadre of technical experts, as in the case of Thailand, is critical to reaching consensus and developing and implementing a set of policies and interventions that will have the greatest impact in reducing malnutrition.[49]

The need for consensus, collaboration, and capacity extends to donors as well. In order to better support country-led initiatives, major development institutions such as the World Bank, the World Food Program, the Food and Agricultural Organization, the World Health Organization, and UNICEF need to reach agreement on major policy messages for nutrition, build technical capacity within their respective organizations, establish an agenda for research, and coordinate activities at the international level and within developing countries.[50] The World Bank, USAID, and partners are in the process of developing a global action plan for nutrition, a first step in this direction.[51]

Coordination of strategies and action is also needed within and among the departments and agencies that deliver U.S. assistance. In a 2008 report to Congress, USAID set an am-

bitious goal in its Maternal and Child Health (MCH) Program: to reduce child malnutrition by an average of 15 percent in at least 10 countries by 2013. If this goal is reached, it could improve the lives of approximately 14 million children.[52] Achieving this goal will require substantial resources but also coordinated action. However, the MCH nutrition goals are not shared by other USAID programs that work on nutrition. This is less because other agencies and offices do not support the goal than because there is no overarching strategy that identifies how nutrition programming can be integrated into other programs and what are the priority interventions, target countries, and community-based delivery mechanisms. Without such a strategy, each agency or office is left to design its own program with little assurance that programs are working in a complementary fashion.

The Obama administration's call for a renewed focus on food security is promoting precisely such a strategy. The initiative aims to build a broad-based strategy agreed upon by the different agencies involved in food and nutrition security. Going one step further, the administration could designate a single office, point person, and staff to coordinate food security activities. Two recent initiatives advanced by NGO coalitions, the *Roadmap to End Global Hunger* and the *Emergency Presidential Initiative for the World's Children*, have both called for a high-level coordinator to oversee child nutrition among other activities.[53]

Among U.S. aid programs, the lack of strategic vision is not unique to nutrition or even food security. In fact, an overarching development strategy to guide all U.S. foreign assistance is sorely needed. Reducing hunger and poverty, and improving nutrition and health, should be at the center of a new U.S. development strategy.

A Way Forward on Nutrition

For too long, malnutrition has been overlooked in international efforts to promote development. This is true of donors that have failed to invest money, time, and energy in effective nutrition programs and of developing country governments that have not made fighting malnutrition a priority. Given the impact of malnutrition on economic and human development, this has been a costly oversight.

As the United States embarks on a new global food security initiative, nutrition must be a central component. The United States has the opportunity to lead an international agenda for action on nutrition. This should:

Focus on what works: Evidence-based interventions identified in *The Lancet* should be scaled up in all countries where malnutrition persists. Delivery strategies for these interventions need to be designed to meet country conditions. Scaling up these key interventions in the 36 countries where 90 percent of stunted children live could reduce deaths of children under age two by nearly 25 percent.[54]

Invest resources to bring interventions to scale: Bringing *The Lancet* interventions to scale will require substantial new investments since the resources dedicated to nutrition are currently small. Funding for direct nutrition interventions must be increased. The announcement of substantial new commitments for agriculture and food security, made at the G-8 summit in L'Aquila, Italy, in June 2009, presents an important opportunity to increase spending on key nutrition programs.

Margaret W. Nea

Link investments in agriculture and food security with nutrition: Recent commitments to increase agricultural productivity are important. The ultimate goal of this effort should be improved food security and nutrition. Increasing agricultural productivity will mean little if it does not lead to improved nutrition for the millions of children around the world who cannot get enough calories, protein, vitamins, and minerals for healthy growth and development.

Use improvements in maternal and child nutrition as a key indicator of progress: Addressing the immediate causes and consequences of malnutrition must be made part of broader efforts to tackle the underlying factors that allow malnutrition to persist. Given the complex links among health, environment, social protection, education, agriculture, and nutrition, the nutritional status of mothers and children is an excellent indicator for measuring progress or lack of progress in development efforts. The weight and height of children under five years old are

widely accepted, standardized, and powerful measures of nutrition impact.

Coordinate action around country-led strategies: From Burkina Faso to Guatemala, many countries are designing comprehensive food and nutrition security plans to guide investments and interventions. Developing countries should be supported in their efforts to design national strategies with assurance that international donors will provide sustained support. These strategies should base action on evidence and include space and flexibility to adjust policies and program designs based on new information gained from research and experimentation. For their part, international donors, the United States included, must coordinate their aid activities to ensure that long-term and appropriate aid resources are available.

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Build capacity and consensus for action: Improving the technical and institutional capacity of national governments will ensure that countries have the information and ability needed. Without trained professionals to design and implement nutrition interventions, programs will not be sustainable. A network of experts can also help communicate best practices and success stories in nutrition and contribute to building a policy framework at the national and international levels. Assisting in the design of training curricula, supporting postsecondary educational opportunities, and facilitating international cooperation and communication among nutrition experts is critical to building capacity and achieving greater consistency among efforts to improve nutrition.

Ensure coherence across development activities and other developed country policies. There are many U.S. policies outside development that can impact nutrition. Trade and agriculture policies that hurt smallholder farmers in developing countries, for example, can increase or perpetuate poverty. Intellectual property rights that restrict access to needed technologies can make it more difficult to pursue key health interventions. The United States must take a "whole of government" approach to its global nutrition, food security, and agriculture development objectives.

New evidence about what works makes it clear that we can substantially reduce malnutrition, especially during pregnancy and in the early years of life. Not only would more children survive infancy, but by preventing or aggressively treating malnutrition during the first two years of life, these children would grow up to be healthier, more productive adults. What is needed is concerted global attention and action along with sustained commitment of resources.

As the world struggles to recover from the devastating impact of the food and financial crisis, renewed commitments to investment in agriculture and food security present an opportunity to tackle maternal and child malnutrition. This opportunity should not be wasted. Both from a moral and an economic standpoint, this may be the best time for the world to focus on the enormous price that the international community pays by failing to address malnutrition.

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