

The Impact of Food Insecurity and Hunger on Global Health: Issues for Congress

Tiaji Salaam-Blyther Specialist in Global Health

Charles E. Hanrahan Senior Specialist in Agricultural Policy

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Summary

The United Nations Food and Agriculture Organization (FAO) reports that world food prices spiked dramatically in the first half of 2008 and declined somewhat in the latter part of the year. From June 2007 to June 2008, FAO's food price index increased by 44%, with wheat and rice prices increasing by 90% and maize prices by 35%. The food spikes had negative social and economic impacts, especially in low income and least developed countries. Although food prices have stabilized somewhat, they remain higher than they have been over the past decade. In addition, those who were most affected by the food spikes remain vulnerable to future food crises because of persistent hunger and poverty.

Forecasts indicate that prices will remain higher than the averages of the past decade—though they are projected to continuously ease over the next 10 years. Latest estimates indicate that at the end of 2007, there were 923 million under-nourished people worldwide, nearly 90% of whom were in sub-Saharan Africa and Asia. In 2007, high food prices prevented 75 million people from attaining sufficient quantities of food and forced 100 million into poverty.

Many health experts are concerned about the short- and long-term impacts of fluctuating food prices and inconsistent food supplies. In the period immediately following food price hikes, poor families who are already struggling to feed themselves begin to decrease spending on health and education. Some analysts contend that impoverished families will be less likely to take a sick child to the clinic or a pregnant woman to the hospital, which could increase maternal and child mortality rates. Health experts expect poor parents to remove their children from school to spend their limited funds on more expensive food. High food prices might also threaten efforts to control HIV/AIDS. Women and girls, who are particularly vulnerable during times of food shortages because of their lower social and economic status, inability to inherit land (in some areas), and heightened nutritional needs during pregnancy or lactation, might engage in transactional sex to feed their families. Males might turn to migrant or long-distance transportation work. Relatively high HIV transmission rates among these groups are welldocumented. Malnutrition usually occurs after families can find no other way to cut spending and decrease food intake. The choices people make as they struggle to absorb the shocks of rising food prices affect other social issues, including housing, migration, education, and health. Responses to higher food prices, consequently, require a comprehensive approach which addresses each of these areas.

Since food prices have begun to rise, much of the discussions on how best to improve food security have focused on agriculture and its related issues. While many experts agree that increased investment in agriculture could help to address hunger and poverty, others urge policy makers to simultaneously bolster support for health interventions. Supporters of greater investment in basic health care assert that related programs are a relatively inexpensive way to effectively address hunger-related illnesses in the short- and long-terms. This report analyzes the direct and indirect effects of food insecurity and hunger on global health, reviews elements of the U.S. government response to global hunger, and identifies policy areas that Congress might examine as it debates how best to address the health needs of the millions threatened by high food prices in the 111th Congress.

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Introduction

The United Nations Food and Agriculture Organization (FAO) reports that world food prices increased dramatically in the first half of 2008, and then over the second half, fell by nearly 50% (**Figure 1**).¹ FAO cautions that the recent decline in food prices does not indicate that "the world's food problems have been fixed, neither in the short-run nor with a view to the longer-term challenges."² Those who were most affected by high food prices earlier in the year remain vulnerable for a number of reasons including higher priced food inputs (e.g., fuel, fertilizers, and seeds) that limit the amount of food that poor farmers can produce (both for their own consumption and for sale); poorly functioning infrastructure and roads that inhibit small-scale farmers' access to larger markets; low investments in agriculture that remain low; and climate change that forebodes decreased crop output in some areas, particularly in Africa.

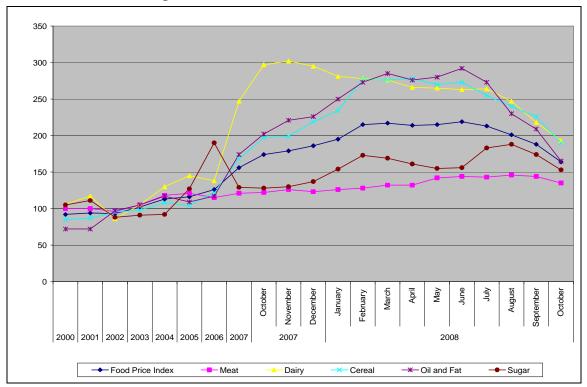


Figure I. FAO Food Price Index: 2000-2008

Source: FAO, Falling Food Prices in Perspective, November 2008.

In the first half of 2008, higher food prices and poor food supplies contributed to social unrest, deepened poverty, and worsened food insecurity, which led to declines in health conditions among millions of people. In July 2008, FAO identified 34 countries that needed help to feed their populations (see **Appendix A**).³ A combination of factors cause food crises, including

 ¹ FAO, *Falling Prices in Perspective*, November 2008, http://www.fao.org/docrep/011/ai474e/ai474e13.htm.
 ² Ibid.

³ The 34 countries are Afghanistan, Bangladesh, Bolivia, Burma, Burundi, Central African Republic, Chad, China, Cote d'Ivoire, Democratic Republic of Congo, Democratic Republic of Korea, East Timor, Eritrea, Ethiopia, Ghana, (continued...)

conflict; natural disasters; cultural and gender dynamics; urbanization; greater use of bioenergy; and changes in incomes, climatic patterns, food prices, and food production.⁴ This report does not explore the causes of food crises, but analyzes how high food prices, food insecurity, and hunger impact the health of people in countries where food prices increased dramatically.

Background on Global Hunger and Food Insecurity

In a 2006 report, FAO estimated that 848 million people in the world were undernourished.⁵ In September 2008, it reported that a number of factors, primarily high food prices, forced 75 million more people into hunger, bringing the total number of undernourished to 923 million in 2007 (**Table 1** and **Figure 2**).⁶ About 90% of the newly hungry were African or Asian.

(Millions of People)					
Region	Number of Ur	ndernourished	Newly Undernourished	Total	
	1990-1992	2001-2003	2007	2001- 2003+2007	
Asia/Pacific	582	542	41	583	
Sub-Saharan Africa	169	212	24	236	
L. America/Caribbean	53	45	6	51	
Middle East/N. Africa	19	33	4	37	
Developed Countries	19	16	0	16	
Total	842	848	75	923	

Table 1. Regional Prevalence of Undernourishment, 1990-2007

Source: FAO, *Hunger on the Rise*, Briefing Paper, September 17, 2008.

^{(...}continued)

Guinea, Guinea-Bissau, Iraq, Kenya, Lesotho, Liberia, Mauritania, Moldova, Nepal, Philippines, Republic of Congo, Sierra Leone, Somalia, Sri Lanka, Sudan, Swaziland, Tajikistan, Uganda, and Zimbabwe.

⁴ For more on the causes of high food prices, see CRS Report RL34478, *Rising Food Prices and Global Food Needs: The U.S. Response*, by (name redacted), and CRS Report RL34474, *High Agricultural Commodity Prices: What Are the Issues*?, by (name redacted).

⁵ FAO, The State of Food Insecurity in the World 2006, p. 8, http://www.fao.org/docrep/009/a0750e/a0750e00.htm.

⁶ FAO, *Hunger on the Rise*, Briefing Paper, September 17, 2008, http://www.fao.org/newsroom/common/ecg/ 1000923/en/hungerfigs.pdf. The World Bank also estimated that by the end of 2008, higher food prices had pushed an additional 44 million into hunger, bringing the total number to 967 million, see World Bank, *Rising Food and Fuel Prices: Addressing the Risks to Future Generations*, October 12, 2008, p. 1,

http://siteresources.worldbank.org/DEVCOMMEXT/Resources/Food-Fuel.pdf?resourceurlname=Food-Fuel.pdf.

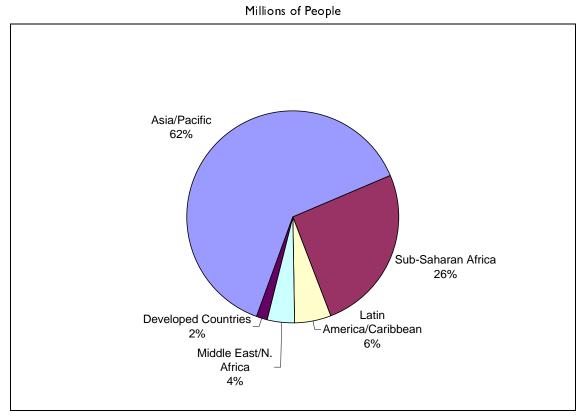


Figure 2. Where the World's Undernourished Were in 2007

Source: FAO, Hunger on the Rise, Briefing Paper, September 17, 2008.

The World Food Program (WFP) contends that even if food prices had not spiked, some 10 million people would die each year from hunger or hunger-related diseases, about half of whom would be children. In addition to those deaths, about 2 billion people are blinded are otherwise afflicted by vitamin and mineral deficiencies.⁷

About 90% of the 10 million annual hunger-related deaths occur among people who are chronically hungry—those who do not consume enough food for sustained periods of time and are most likely to be malnourished as a result.⁸ Malnourished people are more susceptible to a host of diseases and malnourished children are more likely to experience stunted growth, impaired learning, and difficulty in resisting and recovering from illness. Similarly, malnourished adults are often less responsive to medication, less productive, and in the case of women, experience more complications during pregnancy. Acute hunger—accounting for about 10% of hunger-related deaths—is of shorter duration and usually occurs during natural disasters, famines, or conflict.

⁷ The Micronutrient Initiative and United Nations Children's Fund, *Vitamin and Mineral Deficiency: A Global Progress Report*, 2004, p. 30, http://www.micronutrient.org/CMFiles/PubLib/VMd-GPR-English1KWW-3242008-4681.pdf.

⁸ Malnourished people can be underweight, stunted, deficient in essential vitamins and minerals (undernourished) or too fat (obese). Hunger, malnutrition, and undernutrition are used interchangeably in this report. For further explanation of these terms, see WFP website on hunger at

http://www.wfp.org/aboutwfp/introduction/hunger_what.asp?section=1&sub_section=1.

Those who are acutely hungry are more easily identified, as they are often concentrated in a certain area. Drought-induced hunger, for example, might affect a specific population contained in one region; or people fleeing conflict might be concentrated in a refugee camp. The chronically hungry are more widely dispersed and account for about 90% of the undernourished. Higher food prices endanger the acutely hungry, because they lessen the amount of food that can be bought and provided through assistance programs. The chronically hungry will most likely attempt to cope with higher food prices by withdrawing their children from school and forcing them to beg or find employment, decrease their intake of nutritious foods, sell their assets, and ultimately engage in behavior that worsens their health and plunges them deeper into poverty.

Although more people suffer from chronic hunger, press coverage and U.S. foreign assistance largely focus on those who are acutely hungry. In 2007, about 80% of U.S. food aid was targeted at the acutely hungry (**Table 3**).⁹ Beyond food aid, U.S. policy concerns related to food insecurity¹⁰ include broader global health implications.

Direct Health-Related Consequences of High Food Prices and Food Insecurity

Those who are most affected by higher food prices and disrupted food supplies are the impoverished. "In 2005, about 40% of the world's 6.5 billion people lived in poverty, defined by a poverty line of \$2.00 a day in 2005 prices which is the average poverty line found among developing countries. The World Bank estimates that in 2005, 1.4 billion people lived below the average poverty line found in the poorest developing countries (\$1.25 per day) and a further 1.2 billion lived between \$1.25 and \$2.00 per day."¹¹ Poor people struggling to feed themselves and their families tend to survive off of diets that are nutritionally deficient. Once food prices rise, the poor tend to decrease their intake of nutritious foods, such as fruits and vegetables and replace them with food that is more filling but less expensive and nutritious, like roots. These actions make the poor more likely to become malnourished.

Increased Hunger Related Deaths and Susceptibility to Disease

Undernourished people, especially children, are more likely to contract and succumb to disease. FAO asserts that the vast majority of the nearly 10 million children who die each year "would not die if their bodies and immune systems had not been weakened by hunger and malnutrition."¹²

⁹ For more discussion on U.S. food aid, see CRS Report RL34478, *Rising Food Prices and Global Food Needs: The U.S. Response*, by (name redacted), and CRS Report RL34474, *High Agricultural Commodity Prices: What Are the Issues?* by (name redacted).

¹⁰ There are a number of definitions for food security. USAID defines food security as "when all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life." USAID, *Definition of Food Security*, Policy Determination, April 13, 1992, http://www.woid.gov/policy/cd/200/cd10.pdf

http://www.usaid.gov/policy/ads/200/pd19.pdf.

¹¹ E-mail from Martin Ravallion, Senior Research Manager, Poverty Development Research Group, February 17, 2008. Also see Shaohua Chen and Martin Ravallion, *The Developing World Is Poorer Than We Thought, But No Less Successful in the Fight against Poverty*, The World Bank, Policy Research Working Paper 4703, August 2008, http://go.worldbank.org/DPZY24X240.

¹² FAO, *State of Food Insecurity in the World 2005*, 2005, p. 18, http://www.fao.org/docrep/008/a0200e/a0200e00.htm.

According to UNICEF, under-nutrition is the underlying cause of up to half of all deaths among children under five years and about 20% of all maternal deaths.¹³ Analysis of 10 communitybased studies of children under age five found that children who are mildly underweight are about twice as likely to die of infectious diseases as children who are better nourished; and for those who are moderately to severely underweight, the risk of death is five to eight times higher.¹⁴ The studies also indicated that 45% of children who died after contracting measles were malnourished, as were more than 60% of children who died after the onset of severe diarrhea.¹⁵

Indirect Consequences of High Food Prices and Food Insecurity

Some experts are concerned that the impoverished, who were struggling to feed, clothe, and educate their children before prices began to rise, might decrease spending on health and education. Another group of analysts contend that families struggling to feed themselves will be less likely to take a sick child to the clinic or a pregnant woman to the hospital, which could increase maternal and child mortality rates. Health experts expect that when food prices are high, poor parents will remove their children from school to spend their limited funds on food that has become more expensive rather than on school fees. Not only does this interrupt the children's education, but it also increases the likelihood that the children might become further malnourished, because they will not be present to receive school feedings.

Deeper Poverty

While global food prices have moderated recently, they remain higher than they were earlier in the decade. According to the World Bank, high food prices are pushing poor people deeper into poverty across the globe, particularly in countries that import most of their foods and have limited capacity to cushion the shock of high prices. Estimates vary, but there is broad agreement among many groups that millions of people were pushed into poverty by food price increases.¹⁶ These people are widely characterized as "the new faces of hunger." Some experts contend that many more may become impoverished and undernourished because forecasts indicate food supplies may remain insufficient and prices may stay higher than the averages of the past decade¹⁷ though projections indicate they will ease over the next 10 years (**Table 2**).¹⁸

¹³ UNICEF, The State of the World's Children 2008: Child Surival, 2008, pp. 2, p.42,

http://www.unicef.org/publications/files/The_State_of_the_Worlds_Children_2008.pdf. ¹⁴ Ibid.

¹⁵ For more information on how undernutrition affects maternal and child health, see CRS Report, RL Child Survival and Maternal Health: U.S. Agency for International Development's Programs from FY2001 through FY2008, by (name redacted).

¹⁶ The World Bank estimates that high food prices have pushed 100 million more people into poverty. World Bank, World Bank President to G8: "World Entering a Danger Zone," Press Release, July 2, 2008, http://go.worldbank.org/FXVBH85XS0.

¹⁷ See Organization for Economic Cooperation and Development (OECD), Rising Food Prices: Causes, Consequences and Responses, Policy Brief, August 2008, http://www.oecd.org/dataoecd/1/36/41227216.pdf.

¹⁸ World Bank, Double Jeopardy: Responding to High Food and Fuel Prices, Policy Paper presented at G8 Hokkaido-Toyako Summit, July 2, 2008, p. 3,

http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21827681~pagePK:64257043~piPK:437376 (continued...)

Crop	2007	2008	2009	2010	20 5
Maize	39	75	65	55	48
Wheat	54	115	91	66	40
Rice	30	143	108	83	60
Soybeans	19	56	47	39	5
Soybean Oil	36	87	73	60	10
Sugar	33	57	67	76	82

Table 2. Increases in Real and Projected Food Crop Prices Above 2004, July 2008

Source: World Bank, Double Jeopardy: Responding to High Food and Fuel Prices, July 2, 2008.

Notes: Although this table was compiled during the first half of 2008 when prices were higher than in the second half of the year, the table remains useful, because it reflects the projected long-term price changes.

Declines in Agricultural Productivity

Food price increases in 2007 and the first half of 2008 did not equally benefit farmers. According to FAO, industrialized countries benefitted the most from food price spikes and accounted for the bulk of increased food production in 2007 and 2008.¹⁹ In developing countries, food production increased minimally in 2007 and barely in 2008. The majority of poor farmers in developing countries did not benefit from the food price spikes because the higher prices of inputs like fertilizers, seeds, and energy prohibited them from farming.²⁰ Poor subsistence farmers were particularly burdened by higher input prices because they could not benefit from any potential marketable surplus. Other factors that hindered food production in developing countries included export taxes and controls.

Increases in Rural-to-Urban Migration

Even as food prices decline, poor farmers remain vulnerable to poverty and hunger. Lower demand for food, brought on in part by decelerated global economic growth, has led to lower food prices. Reduced prices for food means that farmers collect less for crop output. Poor rural inhabitants are increasingly moving to urban areas in search of better economic opportunities—though natural population growth is the predominant cause of urban population growth, rather than rural-to-urban migration.²¹ Rural-to-urban population shifts leave fewer workers to harvest crops, potentially further exacerbating the problem of inconsistent food supplies.

^{(...}continued)

[~]theSitePK:4607,00.html.

¹⁹ FAO, *Falling Prices in Perspective*, November 2008, http://www.fao.org/docrep/011/ai474e/ai474e13.htm.

²⁰ Ibid.

²¹ Rural-to-urban movement and reclassification of rural areas as urban ones account for an average of 40% of urban growth. See United Nations Population Fund (UNFPA), *State of the World Population 2007: Unleashing to Potential of Urban Growth*, p. 13, http://www.unfpa.org/swp/2007/presskit/pdf/sowp2007_eng.pdf.

When poor farmers move to urban areas, they usually do so with few resources and often seek housing in informal settlements or slums that hold a number of health dangers.²² Slum dwellings are usually characterized by conditions that are overcrowded and have limited or no access to electricity, running water, sewage systems, roads, and other urban services, such as health clinics. Consequently, diseases proliferate in slum environments. Without access to electricity, slum dwellers "rely on traditional biomass fuels for cooking and heating, typically in open fires or low-efficiency stoves with inadequate venting, [which] leads to significant air pollution and causes severe health implications—including acute respiratory infections such as pneumonia, which kill almost 4 million people a year."²³ Poor management of sewerage and solid waste leaves people susceptible to a range of diseases, including cholera, typhoid fever, malaria, and diarrhea—particularly after periods of flooding or heavy rainfall. People living in overcrowded slum conditions are also vulnerable to diseases like tuberculosis (TB), meningitis, and polio.

Urban slum growth is outpacing urban growth in planned areas by a wide margin, particularly in developing countries. The United Nations Human Settlements Program (UNHABITAT) estimates that "in the poorest countries of the world, slums make up between 30% and 70% of urban populations."²⁴ In 2005, an estimated one billion people were living in slums (about 32% of the world's urban population) and some 25 million people are projected to move into slum dwellings each year with the number of slum dwellers predicted to reach two billion by 2030 (about 40% of the world's urban population).²⁵ Slum dwellers make up the majority of the urban population in Africa and Asia. In sub-Saharan Africa, 72% of the region's urban population lives under slum conditions as do 56% in south Asia.²⁶ Despite the growth in urban poor and slum populations, food security programs are concentrated in rural areas.²⁷

Declines in School Attendance

The degree to which rising food prices affect children's access to education depends on families' ability to cope with higher food costs and how long the elevated prices last. If food is temporarily more expensive, families might withdraw children from school until prices decline. If prices remain higher for an extended period, children may be permanently removed from school to forage for food or earn extra income. Children who seek extra money are vulnerable to exploitation, because they have little or no education and/or employable skills. Young children with little education or employable skills can be found shining shoes, begging for money in the streets, bartending, selling food, and often in the case of girls, becoming domestic or sex workers.

²² According to UNHABITAT, a "slum household" is a group of individuals living under the same roof in an urban area who lack one or more of the following: durable housing, sufficient living area, access to improved water, access to sanitation, and secure tenure. In recent years, the term "slum" has come to include the vast informal settlements found in cities in the developing world. In this report and in many other fora, terms such as "slum," "shantytown," "informal settlement," "squatter housing," and "low-income community" are often used interchangeably.

²³ United Nations Commission on Sustainable Development, *Human Settlements: Towards Sustainable Communities*, Backgrounder, April 2004, http://www.un.org/esa/sustdev/csd/csd12/backgrounder_hs.pdf.

²⁴ UNHABITAT, *Tomorrow's Crises Today: The Humanitarian Impact of Urbanization*, 2007, p. 9, http://www.irinnews.org/InDepthMain.aspx?InDepthId=63&ReportId=74973.

²⁵ Ibid, pp. 9 and 10.

²⁶ UNFPA, *State of the World Population 2007: Unleashing the Potential of Urban Growth*, p. 16, http://www.unfpa.org/swp/2007/presskit/pdf/sowp2007_eng.pdf.

²⁷ See for example Daniel Maxwell et al., *Urban Livelihoods and Food and Nutrition Security in Greater Accra, Ghana*, IFPRI, Research Report 112, 2000, http://www.ifpri.org/pubs/abstract/112/rr112.pdf.

Declines in Future Learning and Earning Capacity

Should high food prices force families to decrease the amount and quality of food they provide their children, studies indicate that those children's capacity to learn could be hampered. WFP asserts that "children who survive early nutritional deprivation perform more poorly at school, have lower cognitive capacity and greater poverty in adulthood, and create poorer nutritional conditions for the next generation thus perpetuating the cycle of hunger." Undernutrition during pregnancy and infancy causes the most harm to one's long-term learning capacity, as it is the time when the brain is forming and rapidly developing. Without sufficient nutrients, the brain's structure and size can be irreversibly damaged.

Experts are also learning more about the effects of stunting on learning capacity. Some studies have shown that the earlier and more severe stunting occurs in a child's life the greater the effect is on future cognitive development. Preschool children with stunted growth in Kenya and Mexico were behind their peers in cognitive and behavioral measures.²⁸ WFP estimates that in developing countries, about one-third of children under five years (about 180 million) exhibit stunting, and in the least developed nations, almost half are stunted.

Vitamin and mineral deficiencies during pregnancy and infancy have also been linked with diminished cognitive structures related to learning. Scientists have found that iodine deficiencies have decreased the average IQ of people in over 60 countries between 10 and 15 points.²⁹ Studies have shown that iron deficiencies impair the normal mental development of children and lead to more than 60,000 childbirth deaths each year. The adverse effects of iron deficiency in infancy are irreversible.³⁰

Increases in High-Risk Activity and Vulnerability to HIV/AIDS

The relationship between food security and HIV/AIDS is well-established. Poor nutrition weakens the body's immune system and weakens its ability to fight HIV and a number of HIV-associated opportunistic infections. HIV-positive people with weak immune systems become sick more frequently and develop AIDS more rapidly. Malnutrition increases the viral load in the blood stream, which increases the likelihood that an HIV-positive pregnant woman might transmit HIV to her baby.

If patients are not well nourished, they can suffer significant side effects while taking antiretroviral medication (ARVs), and the drugs can be less effective. Studies have demonstrated that a person with HIV requires 10% to 15% more energy and 50% to 100% more protein a day than a non-infected adult.³¹ Researchers found that patients who were malnourished when they started ARV therapy were six times more likely to die than well-nourished patients.³²

²⁸ WFP, World Hunger Series 2006: Hunger and Learning, 2006, p. 41,

http://www.wfp.org/policies/introduction/other/documents/pdf/World_Hunger_Series_2006_En.pdf. ²⁹ WFP, *World Hunger Series 2006: Hunger and Learning*, 2006, p. 16,

http://www.wfp.org/policies/introduction/other/documents/pdf/World_Hunger_Series_2006_En.pdf.

³⁰ UNICEF, Children and the Millennium Development Goals, December 2007, p. 29,

³¹ USAID, *HIV/AIDS and Nutrition*, Factsheet, February 2003,

³² WFP, *Nutrition and HIV/AIDS: Why Food Matters*, Webpage on HIV/AIDS, (continued...)

 $http://www.unicef.org/worldfitforchildren/files/Children_and_the_MDGs_Final_EN.pdf.$

http://www.usaid.gov/our_work/global_health/aids/TechAreas/nutrition/nutrfactsheet.html.

In Africa, the most affected region, HIV/AIDS prevalence is threatening food security, particularly in rural areas. WFP points out that HIV/AIDS is especially harmful in rural agricultural communities because of their heavy reliance on productive labor. Individuals weakened by HIV/AIDS are unable to farm, and their caretakers often farm less, as people in the advanced stages of AIDS require considerable care.

FAO estimates that food consumption drops by 40% in homes affected by HIV/AIDS, due in large part to a diminished capacity to farm.³³ Lower crop yields within households force families to spend more money on food. In addition to growing less food, HIV-affected households often shift from labor-intensive crops, such as vegetables, to food that is less nutritious and labor-intensive, like roots.

In Africa, HIV-affected urban adults often send children back to their villages of origin or return themselves when they become seriously ill. This practice worsens food security in rural areas, because poor households in rural areas tend to sell their meager assets, which are often cattle or farming tools, to meet the demands of supporting the ill and their dependents.

Women and girls are particularly vulnerable during times of food shortages, because of their lower social and economic status, prohibitions against female land inheritance (in some areas), and heightened nutritional needs during pregnancy or lactation. Impoverished women are also more likely to engage in transactional sex to feed their families, while men might turn to migrant or long-distance transportation work. Relatively high HIV transmission rates among migrant workers are well-documented.

U.S. Responses to the Global Food Crisis

The U.S. government provides international aid to address hunger and malnutrition primarily through the U.S. Agency for International Development (USAID) and the U.S. Department of Agriculture (USDA). The largest component of U.S. assistance targeted at eradicating hunger is provided through humanitarian food assistance.³⁴ In recent years, most U.S. food aid has been allocated to emergency relief. Agricultural commodities provided by the U.S. government to meet emergency needs are mostly donated to WFP or U.S. private voluntary organizations (PVOs), though they may also be provided directly to other countries through bilateral agreements.

Non-emergency food aid or development food aid is provided through PVOs, cooperatives, and intergovernmental organizations (such as WFP). About 70% of food aid that is donated for development efforts is sold or monetized to finance such projects. There is some debate about the efficacy of selling food aid to support development projects. Many PVOs are pleased with monetization. Some PVOs, however, and U.S. trading partners oppose monetization and argue that it can adversely affect local producers and distort commercial markets.³⁵

^{(...}continued)

http://www.wfp.org/food_aid/food_for_hiv/nutrition.asp?section=12&sub_section=2.

³³ FAO, HIV/AIDS, Food Security, and Rural Livelihoods, Factsheet,

http://www.fao.org/worldfoodsummit/english/fsheets/aids.pdf.

³⁴ P.L. 83-480 was enacted in 1954 as the Agricultural Trade Development and Assistance Act and renamed as the Food for Peace Act by P.L. 110-246.

³⁵ For more discussion on this debate, see CRS Report RL34145, *International Food Aid and the 2007 Farm Bill*, by (continued...)

U.S. responses to hunger and undernutrition that are not provided through food aid are implemented by USAID and the Millennium Challenge Corporation (MCC). USAID non-food aid programs are provided through Child Survival and Health Programs and the Initiative to End Hunger in Africa (IEHA), which aims to enhance agricultural productivity. MCC compacts support efforts to eradicate hunger through the agriculture and health sectors.

Humanitarian Food Aid

Title II of the Food for Peace Act (P.L. 480) authorizes USAID to donate U.S. agricultural commodities in emergencies and for development programs in developing countries. According to USAID, "[T]he P.L. 480 Title II development non-emergency food aid program constitutes the single largest source of USAID funding in promoting long-term food security."³⁶ Non-emergency food aid supports agricultural and natural resource management, health and household activities, education programs, and microenterprise and finance projects.

In FY2007, USAID allocated nearly \$1.8 billion (80.5%) of total humanitarian food aid to emergency food relief and \$348 million (19.5%) to development projects (**Table 3**). PVOs monetized just over 74% (\$258 million) of the commodities they received to carry out their development projects in FY2007.

Examples of health and nutrition related food aid projects include health and nutrition monitoring and training for mothers and foster parents in Uganda carried out by World Vision; homestead gardening, vulnerability mapping, emergency preparedness planning, and basic health education services in Bangladesh implemented by Save the Children.

McGovern-Dole International Child Nutrition and School Feeding Program

The McGovern-Dole program provides commodities, cash, and technical assistance to school feeding and other nutrition programs in developing countries. The program is funded at about \$100 million annually, with about half allocated to WFP and half to U.S. Private Voluntary Organizations (PVOs).

Year	Emergency Food Aid		Non-Emergen	cy Food Aid	Tot	al
	Metric Tons (thousands)	U.S. \$ (millions)	Metric Tons (thousands)	U.S. \$ (millions)	Metric Tons (thousands)	U.S. \$ (millions)
FY2002	1015	597	1203	429	2218	1026
FY2003	2330	1260	1012	412	3342	1672
FY2004	1900	6	800	419	2700	1535
FY2005	2170	68	800	385	2970	1553

Table 3. Humanitarian Food Aid: FY2000-FY2007

(...continued)

(name redacted).

³⁶ USAID, International Food Assistance Report 2007, January 2008,

http://www.usaid.gov/our_work/humanitarian_assistance/ffp/fy07_usifar_final.2008.pdf.

Year	Emergency Food Aid		Non-Emergen	cy Food Aid	Το	tal
	Metric Tons (thousands)	U.S. \$ (millions)	Metric Tons (thousands)	U.S. \$ (millions)	Metric Tons (thousands)	U.S. \$ (millions)
FY2006	1700	1158	690	341	2390	499
FY2007	1534	1437	595	348	2 29	1785

Source: USAID, International Food Assistance Report 2007.

Non-Food Aid Hunger Interventions

USAID Child Survival and Health Programs

USAID addresses undernutrition primarily through programs that support micro-nutrient supplementation and fortification, and infant and young child feeding (IYCF).³⁷ USAID concentrates its nutrition efforts on the first two years of life, because poor fetal growth during pregnancy and undernutrition in the first two years of life can lead to irreversible damage that can not be regained in adulthood. Research has demonstrated that preventing severe malnutrition is more effective than attempting to address malnutrition after symptoms are identified.³⁸

Micronutrient Supplementation and Fortification

According to USAID, its supplementation and fortification programs "add vital immune-building micronutrients including zinc, Vitamin A, iron, and iodine to processed foods such as rice and sugar." USAID also funds research on biofortified crops, which could improve the micronutrient content of basic foods, such as maize enhanced with vitamin A, iron, and zinc; beans enhanced with iron and zinc; and sweet potatoes enhanced with vitamin A. Micronutrient supplementation and other USAID nutrition programs are integrated with other interventions, including safe water, hygiene and sanitation. USAID does not, however indicate whether its micronutrient fortification programs are integrated with non-emergency food aid projects that have the same aims.³⁹

Infant and Young Child Feeding

USAID estimates that more than "two-thirds of malnutrition-related infant and child deaths are associated with poor feeding practices during the first two years of life."⁴⁰ According to USAID, "less than one third of infants in most countries are exclusively breastfed during the first six months of life." In communities affected by HIV/AIDS, USAID works with its implementation partners to integrate safe infant feeding practices with programs that prevent mother-to-child HIV

³⁷ Information on USAID's child survival programs was summarized by CRS from USAID's website on nutrition, http://www.usaid.gov/our_work/global_health/nut/.

³⁸ For more discussion on the timing of nutrition interventions, see IFPRI, *Timing is Everything: Preventing Child Undernutrition*, Factsheet, 2008.

³⁹ See the discussion of non-emergency food aid programs in USAID, U.S. International Food Assistance Report 2007.

⁴⁰ Information in this paragraph was summarized by CRS from USAID, *Website on IYCF*,

 $http://www.usaid.gov/our_work/global_health/nut/techareas/childfeeding.html.$

transmission (PMTCT). USAID spends about \$30 million each year on nutrition programs, which include Vitamin A, iodine, food fortification, anemia packages, and zinc.⁴¹

USAID's President's Initiative to End Hunger in Africa (IEHA)

Launched in 2002, IEHA is a multi-year effort to increase agricultural productivity and rural incomes in Ghana, Kenya, Mali, Mozambique, Uganda, and Zambia. IEHA activities are also implemented regionally in East, West, and Southern Africa. IEHA projects focus on raising smallholder producers' productivity and incomes. In Ghana, for example, IEHA activities aim to boost the productivity of the agricultural sector and in Mali, IEHA seeks to promote agribusiness development. USAID considers IEHA to be a critical component of U.S. efforts to reach the United Nations Millennium Development Goal to halve the number of hungry people in Africa and the world by 2015 (discussed below).

In FY2006, USAID made available an estimated \$47 million for IEHA activities. The Government Accountability Office (GAO) in a recent report on food security in Africa estimated that USAID allocated about \$200 million to IEHA in FY2007 to support programs in six countries and three regional missions.⁴² GAO criticized USAID for failing to integrate IEHA activities either with other USAID agricultural development programs or other U.S. development food aid efforts.

Millennium Challenge Corporation

The Millennium Challenge Corporation (MCC) was established in January 2004 to help fulfill the U.S. commitment to the U.N. Millennium Development Goals aimed at reducing poverty, eliminating hunger, and fostering sustainable development. Only those countries that have enabled economic growth through market-oriented, pro-growth policies, good governance and investment of their own resources in health and education can qualify for assistance under the MCC.

MCC activities focus on agricultural development, education, enterprise and private sector development, governance, health, and trade capacity building.⁴³ In some of the countries seriously affected by high food prices, MCC funding dwarfs USAID development assistance. For example, USAID's total development assistance for Ghana in FY2007 was \$15.4 million, of which \$7.6 million was devoted to agriculture. In contrast, the Millennium Challenge Compact with Ghana, signed in 2006, allocated \$241 million to agricultural and rural development investments over five years, or an average \$48 million per year. GAO, urged USAID and MCC to better coordinate their development programs.

⁴¹ Kent Hill, Assistant Administrator of USAID, *Launch of the Lancet's Series on Maternal and Child Under-Nutrition*, Prepared Statement, Washington, DC, January 16, 2008, http://www.useid.gov/pros/(pros/2008/pro/

http://www.usaid.gov/press/speeches/2008/sp080116.html.

⁴² GAO, International Food Security: Insufficient Efforts by Host Governments and Donors Threaten Progress to Halve Hunger in Sub-Saharan Africa By 2015, May 2008, p. 10, http://www.gao.gov/new.items/d08680.pdf.

⁴³ For more information on MCC see CRS Report RL32427, *Millennium Challenge Account*, by (name redacted).

Congressional Responses to the Global Food Crisis

In the 110th Congress, Members held a number of hearings on the global food crisis and introduced several bills that included language to address the problem. Congressional responses to the global food crisis focused primarily on expanding humanitarian food aid with some support for long-term interventions. The Administration supported increased food aid, but it also advocated for funds to purchase food locally, increase food-related development, and boost disaster assistance.⁴⁴ In congressional testimony and statements at a U.N. conference on the global food crisis, officials of the U.S. Department of Agriculture (USDA) and USAID outlined a three-pronged approach by U.S. Government to address the effects of high food prices.⁴⁵ The approach aims to (1) expand humanitarian aid; (2) increase agricultural productivity in at-risk regions; and (3) promote agricultural trade and investment.

Congress made available \$2.25 billion for food aid in FY2008, including \$1.2 billion in regular appropriations, \$200 million from a food aid reserve to purchase agricultural commodities for emergency relief, and \$850 million for commodity donations through FY2008 supplemental appropriations (P.L. 110-252). Congress also included in FY2008 emergency supplemental appropriations \$395 million for emergency food aid, \$200 million for food-related development assistance to be conducted in FY2009, and \$400 million for international disaster relief—\$200 million to be spent in each of FY2008 and FY2009. The \$400 million is intended to support medium-term measures that improve agricultural productivity, alleviate transport and supply chain bottlenecks, and promote market-based systems.⁴⁶ Up to \$50 million of the funds can be used to purchase agricultural commodities in local or regional markets. USAID reportedly intends to use a portion of the funds to restore support for agricultural research that the White House cut from USAID's FY2009 budget. Much of the research would be carried out under the aegis of the Consultative Group on International Agricultural Research (CGIAR), a consortium of international financial institutions, bilateral aid agencies, and foundations that fund 16 agricultural research centers in developing countries.⁴⁷

The Administration requested \$1.24 billion for FY2009 food aid spending. The Senate passed version of FY2009 Foreign Operations Appropriations (S. 3288) and the Senate Report (S.Rept. 110-425) proposal indicated its support for activities that seek to improve food security and reduce global poverty. Funding was to include

⁴⁴ Debate on this issue is discussed further in CRS Report RL33553, *Agricultural Export and Food Aid Programs*, by (name redacted).

⁴⁵ See Ed Schafer, Secretary of Agriculture, World Food Security: The Challenges of Climate Change and Bioenergy, prepared statement at the FAO High-Level Conference on World Food Security, June 3, 2008, http://www.usda.gov/wps/portal/usdahome?contentidonly=true&contentid=2008/06/0144.xml; Henrietta Fore, Director of U.S. Foreign Assistance and Administrator of USAID, U.S. Responses to the Global Food Crisis: New Approaches, prepared statement before the Committee on Foreign Relations, May 14, 2008, http://www.usaid.gov/press/speeches/2008/ ty080514.html; and James Kunder, Acting Deputy Administrator of USAID, U.S. Response to the Global Food Crisis: Humanitarian Assistance and Development Investments, prepared statement before the House Committee on Agriculture, July 16, 2008, http://www.usaid.gov/press/speeches/2008/ty080716.html.

⁴⁶ See USAID, *Global Food Insecurity and Price Increases*, Situation Report No. 1, Fiscal Year (FY) 2008, May 1, 2008, http://www.usaid.gov/our_work/humanitarian_assistance/foodcrisis/documents/050108_foodcrisis_sr1.pdf.

⁴⁷ For more information on CGIAR see [http://www.cgiar.org/].

- \$7 million for a U.S. contribution to the Global Crop Diversity Trust;
- \$29 million for collaborative research support programs;
- up to \$30 million for plant and biotechnology research and development; and
- \$150 million to establish a new USAID-administered account that would "help prevent hunger and malnutrition, and mitigate the political, economic, and social instability caused by such shortages." The Committee directed that the funds be used to "improve crop yields and respond to critical food shortages in developing countries, particularly in Africa and Asia [and] to develop a plan for increasing the number of agriculture specialists in the field commensurate with the need."

International Responses to the Global Food Crisis

Many international organizations advocate greater support for medium- and long-term food security to avert future food crises and lessen the amount of funds needed for emergency food aid. To achieve food security, some experts assert donors must collaborate to reach the Millennium Development Goals (MDGs) and coordinate efforts to combat hunger, alleviate poverty, and improve health.⁴⁸ In September 2000, the United Nations (U.N.) adopted the Millennium Declaration,⁴⁹ which committed U.N. member states to provide resources to reach eight goals by 2015, known as the U.N. Millennium Development Goals (MDGs), which are:

- MDG 1: halve extreme poverty and hunger;
- MDG 2: achieve universal primary education;
- MDG 3: promote gender equality and empower women;
- MDG 4: reduce child mortality by two-thirds;
- MDG 5: reduce maternal mortality by two-thirds;
- MDG 6: combat HIV/AIDS, malaria, and other diseases;
- MDG 7: ensure environmental sustainability (including halve the proportion of people without access to safe drinking water); and
- MDG 8: develop a global partnership for development.

A number of observers agree that advancements in MDGs 2, 4, 5, 6, and 7, are threatened by chronic hunger and persistent poverty (MDG 1). Child mortality, for example, is an outcome of a wide variety of factors, including income and food levels; the nutritional and health status of mothers; and availability of immunizations, oral rehydration therapy, maternal and child health services (including prenatal care), safe drinking water, and basic sanitation. FAO expects only the countries in Latin America and the Caribbean to halve their hungry population by 2015. Prospects of even that success waned, however, when food prices spiked.⁵⁰ FAO maintains that efforts

⁴⁸ See the Website on the Millennium Development Goals at http://www.un.org/millennium/declaration/ares552e.pdf.

⁴⁹ United Nations General Assembly, *United Nations Millennium Declaration*, A/RES/55/2, September 18, 2000, http://www.un.org/millennium/declaration/ares552e.pdf.

⁵⁰ FAO, State of the Food Insecurity in the World, 2006, p.12, ftp://ftp.fao.org/docrep/fao/009/a0750e/a0750e00.pdf.

would need to be ramped up significantly in other areas, especially in sub-Saharan Africa and South Asia, to meet Millennium Development Goals for hunger (**Table 4**).

	Number of U	Indernourish (millions)	ed People	Prevalence of l of	Malnourishm Fpopulation)	ent (percent
Region	1990-1992	2015	MDG Target	1990-1992	2015	MDG Target
Sub-Saharan Africa	170	179	85	35.7	21.1	17.9
Middle East/N. Africa	24	36	12	7.6	7.0	3.8
Latin America/Caribb.	60	41	30	13.4	6.6	6.7
South Asia	291	203	46	25.9	12.1	13.0
East Asia	277	123	39	l 6.5	5.8	8.3
Developing Countries	823	582	412	20.3	10.1	10.2

Table 4. Progress in Halving World's Undernourished

Source: FAO, The State of Food Insecurity in the World 2006.

The High-Level Task Force on the Global Food Security Crisis

On April 28, 2008, U.N. Secretary-General Ban Ki-moon established a High-Level Task Force on the Global Food Security Crisis to promote a unified response to the global food price challenge, including creating and coordinating the implementation of a prioritized plan of action. It is composed of the heads of U.N. specialized agencies, funds and programs, the Bretton Woods institutions—the World Bank and the International Monetary Fund (IMF)—and relevant parts of the U.N. Secretariat. The Director-General of FAO, Jacques Diouf, is Vice-Chairman, and U.N. Under-Secretary General John Holmes is Task Force Coordinator.

The Comprehensive Framework for Action (CFA)

The High-Level Task Force developed a CFA to promote a unified response to the global food crisis.⁵¹ While some elements of the CFA would directly address health problems resulting from higher food prices, most address indirect impacts on health by stressing efforts to increase food supply and reduce poverty. The CFA outlines two sets of actions to promote a comprehensive response to higher food prices. The first set focuses on immediate needs of vulnerable populations. The second set focuses on global food and nutrition security. The CFA proposes meeting immediate needs by: (1) enhancing emergency food assistance, nutrition interventions, and safety nets; (2) boosting smallholder farmer food production; (3) adjusting trade and tax policies;⁵² and (4) managing macroeconomic implications (e.g., assistance with food and fuel

⁵¹ For a complete discussion on CFA and the role that each UN agency plays, see

http://www.un.org/issues/food/taskforce/Documentation/FINAL%20CFA%20July%202008.pdf.

⁵² Among the kinds of trade and tax policy adjustments referred to here are removing restrictions on food exports (continued...)

import bills). For longer-term food security, the CFA calls for (1) expanding social protection systems; (2) sustaining smallholder farmer-led food availability growth; (3) improving international food market accessibility (for example, by trade liberalization or subsidy elimination); and (4) developing an international biofuels consensus.

Roles of International Organizations

The IMF, World Bank, and U.N. agencies play various roles in implementing the CFA and addressing the consequences of food insecurity (See **Appendix A**). The World Food Program (WFP) leads short-term responses related to the provision of emergency food aid and safety net assistance, such as school feeding, food for work, maternal and child health services, and conditional cash transfers or vouchers. In those efforts, it works closely with other organizations like the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO), which focus on feeding school children, pregnant and lactating women, and orphans. FAO and the World Bank support medium-term interventions, such as the purchase of seeds and fertilizers. The IMF facilitates long-term solutions with balance of payments provisions and budget assistance to help adversely affected countries pay food and fuel import bills. The World Bank and IMF also finance social safety net assistance efforts such as school feeding projects and targeted food subsidies. Beyond these immediate and short-term responses, international organizations urge donors to double support for long-term agricultural development, which would increase investments in research and development of agricultural technologies, rural infrastructure, water and irrigation services, extension services, and post-harvest management.

Issues for Congress

Since the noticeable rise in food prices in the first half of 2008, much of the discussions on how best to improve food security have focused on agriculture and its related issues.⁵³ While many experts agree that increased investment in agriculture could help to address hunger and poverty, others urge policy makers to simultaneously bolster support for health interventions. Supporters of greater investment in basic health care assert that related programs are a relatively inexpensive way to effectively address hunger-related illnesses in the short- and long-terms. Others caution that increased investments should be targeted and evidence-based, particularly in light of budgetary constraints.

The 110th Congress held a number of hearings and briefings and introduced legislation to address the global food crisis. As the 110th Congress came to a close, debate began to focus more on supporting sustainable solutions, building capacity, and preventing future food crises. Consensus also seemed to emerge that the United States should increase its investments in agricultural research and development. In the 111th Congress, some observers expect legislation to be introduced and possibly enacted that would increase U.S. support for agricultural development

^{(...}continued)

and/or eliminating export taxes designed to keep food available in local markets, but which have adverse consequences on food importers.

⁵³ For more on U.S. agricultural responses, see CRS Report RL34478, *Rising Food Prices and Global Food Needs: The* U.S. Response, by (name redacted), and CRS Report RL34474, *High Agricultural Commodity Prices: What Are the Issues?* by (name redacted).

and integrated approaches to improving food security. The section below discusses some of the issues the 111th Congress might consider as it views the health needs of the millions threatened by food insecurity.

Support for Nutrition Programs

The majority of those most affected by high food prices are the impoverished who were most likely already struggling to feed, clothe, and shelter themselves before food prices rose precipitously in late 2007 and early 2008. Due to their undernourished condition, this population is also most likely to suffer from preventable and treatable disease that account for 90% of all child deaths in developing countries: acute respiratory infections, diarrhea, malaria, HIV/AIDS, measles, neonatal complications. USAID estimates that an additional \$100 million annually for nutrition interventions could save at least 4 million lives over five years in 15 countries that represent the highest burden of malnutrition.⁵⁴ Similarly, UNICEF estimates that "[p]roven highimpact and cost-effective interventions and practices, if fully implemented, could prevent 63% of childhood [deaths]."⁵⁵ The set of interventions UNICEF asserts could ensure such outcomes include, among others, breastfeeding, vaccinations, zinc and vitamin A supplementation, insecticide-treated mosquito nets, oral rehydration therapy, antibiotic treatment of infection and treatment of malaria. These interventions are considered relatively inexpensive. For example, UNICEF estimates that at the cost of \$600 million, "the lives of some 600,000 children could be saved annually through universal treatment with antibiotics. South Asia and sub-Saharan Africa. where 85% of childhood pneumonia deaths occur, have the lowest treatment costs. Scaling up coverage to universal levels in these regions would cost around \$200 million annually."⁵⁶

Advocates of greater support for nutrition programs assert that the higher funding levels would improve the effectiveness of existing U.S. programs aimed at helping those affected by the global food crisis. The rationale is that by improving the nutritional status of the impoverished (and their mothers) before they become severely malnourished, their likelihood of surviving food crises would increase significantly. The International Food Policy Research Institute and its partners conducted a study of two types of maternal and child health and nutrition programs in Haiti. The study found that the prevalence of undernutrition and its consequences was lower in communities receiving preventative nutritional support than among those receiving aid only after being medically diagnosed as undernourished. Limited funds, however, forces USAID to spend more of its funds on treating the severely malnourished than on preventing malnourishment.

In the 110th Congress, supporters of increased U.S. engagement in global nutrition programs advocated the passage of bills like H.R. 2844, Food Security and Development Act, which would increase resources for malnutrition programs, among other things. The House Foreign Affairs Committee reported out the bill in July 2007. Food security advocates also supported S. 3529, Global Food Security Act, another bill that would boost support for nutrition programs. Neither bill received further action.

⁵⁴ E-mail from Laura Birx, Research and Technical Advisor, Nutrition Division, USAID, November 19, 2008.

⁵⁵ Ban Ki-Moon, Secretary-General of the United Nations, *Children and the Millennium Development Goals: Progress Towards a World Fit for Children*, UNICEF, December 2007, p. 18,

http://www.unicef.org/worldfitforchildren/files/Children_and_the_MDGs_Final_EN.pdf. 56 Ibid.

Ibid.

Infrastructure and Health Capacity in Rural Areas

Functional roads and transportation systems are needed not only to distribute food assistance, but also to help farmers get their produce to market. In many developing countries, only main thoroughfares are paved, while secondary and tertiary roads leading to and from rural areas or smaller cities are difficult to navigate because they are unsealed. The World Bank estimates that only 14% of roads in the Southern African Development Community (SADC)⁵⁷ are paved and only 5% of rural roads in the southern African countries overall are paved.⁵⁸ Unpaved roads must be repaired or rebuilt (if not maintained) every five years, which can become costly.

Some experts contend that "one of the biggest problems associated with food aid has been the inadequacy of African transportation infrastructures for ensuring reliable and equitable food delivery."⁵⁹ Food relief in Sudan and Ethiopia reportedly piled up in capital cities and intermediate points because of poorly maintained roads and transportation systems. Ultimately, these deficiencies complicated or hindered efforts to deliver food to remote rural areas and meant that those living in "remote villages [were] rarely served directly by traditional food aid programs."

Sealed roads can also improve the health of communities. Sealed roads are critical to ensuring access to emergency medical care. Ill-maintained roads can hinder efforts to maintain a regular supply of key medical supplies (such as, medicines, gloves, antiseptics) and can make health work in rural areas less attractive to health providers. The World Bank found in Malawi, for example, an estimated 87% of Malawians live in rural areas, while 96.6% of doctors work in urban health facilities.⁶⁰ Physicians surveyed by the World Bank cited a number of issues that discouraged them from working in rural areas, including insufficient supply of health equipment and the absence of quality professional development opportunities.

Supporters of greater infrastructure investments urge Congress to increase support for MCC, which has invested \$4.2 billion to build infrastructure and increase agricultural productivity in Africa.⁶¹ The projects support key functions like road and bridge construction, port upgrades, improvements in water management and soil conservation, irrigation development, and enhanced land tenure security. Skeptics contend, however, that MCC has not efficiently spent the funds that Congress has appropriated. In the Senate Report (S.Rept. 110-425) to the Senate FY2009 Foreign Operations Appropriations (S. 3288), the Senate Foreign Relations Committee explained that it significantly cut funding for MCC because the corporation was too slow to spend obligated funds.

⁵⁷ SADC Member States are Angola, Botswana, the Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe.

⁵⁸ Mike Pinard, "New Approaches to Sustainable Provision of Low-Volume Sealed Roads: General Introduction," World Bank International Workshop in Bamako, Mali, January 18-19, 2006,

http://www4.worldbank.org/afr/ssatp/Resources/HTML/LVSR/English/Mali/01-LVSR-Wshop-Mali-Jan06-NewApproaches-MPinard.pdf.

⁵⁹ Information in this paragraph was summarized by CRS from Mamadou Baro and Tara Deubel, "Persistent Hunger: Perspectives on Vulnerability, Famine, and Food Security in Sub-Saharan Africa." The Annual Review of Anthropology, 2006: 35:521-538, pp. 532-533.

⁶⁰ World Bank, *Health Workers Needed: Poor Left Without Care in Africa's Rural Areas*, Press Release, February 26, 2008, http://go.worldbank.org/IUY3J2M0A0.

⁶¹ MCC CEO Ambassador John Danilovich, *Infrastructure Networks: New Investments to Build Markets*, Keynote Remarks at U.S.-Africa Agribusiness Forum, June 26, 2008, http://www.mcc.gov/press/speeches/documents/speech-062608-ccachicago.php.

The committee found that although MCC obligated \$6.0 billion of the \$7.5 billion Congress appropriated to the corporation since FY2004, only \$235 million had been spent. The committee called for a temporary cessation of new compact agreements in order to "more effectively evaluate MCC's programs and activities." In its report, the committee explained that concerns about "few tangible results to date" and "analytical errors [that GAO found] regarding MCC impact projections on income and poverty in certain country compacts" led it to cut funding to \$254 million in FY2009, almost \$2 billion less than the requested level of \$2.2 billion and \$1.3 billion less than FY2008 appropriated levels.⁶²

Improving infrastructure in developing countries can be a slow process. When the President's Emergency Plan for AIDS Relief (PEPFAR) was first launched, some observers expressed concern that the Administration was not requesting funds quickly enough to reach the President's \$15 billion goal. Administration officials maintained that it had to first build infrastructure capable of supporting impending funding increases. While some criticisms of PEPFAR remain, many health experts applaud the achievements of PEPFAR, gained in part due to its early investments in health infrastructure.

Health experts urge Congress to support health systems that would enable health providers to address not only HIV/AIDS, but other health issues that plague many poor countries, particularly those related to malnutrition. In the 110th Congress, proponents encouraged Congress to enact the African Health Capacity Investment Act of 2007 (H.R. 3812and S. 805), which would authorize funds to improve health care capacity on the continent and related activities including, training African health care workers, providing incentives to encourage health worker retention, and establishing off-site HIV/AIDS testing and treatment facilities for health care providers.

Efficiency and Coordination of Related U.S. Foreign Assistance Programs

Hunger impacts child and maternal survival, vulnerability to disease, ability to learn, and future income. U.S. efforts to address each of these areas, however, are not always coordinated. Critics of U.S. foreign assistance programs, including its global health efforts, assert that the disjointed manner in which aid programs are implemented minimize their effectiveness. On November 12, 2008, Ambassador Mark Dybul, the U.S. Global AIDS Coordinator, asserted that the United States could reach between 20% and 40% more people with the same amount of funding by improving efficiency and minimizing duplication.⁶³

Debate on how best to improve U.S. international health assistance has ensued. In the 110th Congress, various committees held a number of hearings on the issue and in nearly all of the hearings witnesses and Members alike agreed that reform is necessary.⁶⁴ Health advocates have echoed some of the same concerns that foreign assistance critics have voiced about how programs are carried out. A number of groups have proposed establishing a cabinet level official who would

⁶² For more discussion on MCC, see CRS Report RL32427, *Millennium Challenge Account*, by (name redacted).

⁶³ Ambassador Mark Dybul, "How Will Congress and the Next Administration Sustain Progress on HIV/AIDS, TB, and Malaria in the face of the Global Financial Crisis?," Question and Answer Period at CSIS Event, November 12, 2008, http://www.csis.org/component/option,com_csis_events/task,view/id,1847/.

⁶⁴ For more on foreign assistance reform, see CRS Report RL34243, *Foreign Aid Reform: Issues for Congress and Policy Options*, by (name redacted) and (name redacted).

be tasked with coordinating all global health and development programs.⁶⁵ In the 111th Congress, observers experts expect Congress to continue to consider how to make foreign assistance more efficient and effective.

⁶⁵ See Institute of Medicine, *The U.S. Commitment to Global Health: Recommendations for the New Administration*, National Academy of Sciences, December 2008, http://www.nap.edu/catalog./12506.html; George J. Schieber et al., "Financing Global Health: Mission Unaccomplished," *Health Affairs*, vol. 26, no. 4 (July/August 2007); Nancy Birdsall, editor, *The White House and the World: A Global Development Agenda for the Next U.S. President*, Center for Global Development, August 2008, http://www.cgdev.org/content/publications/detail/16560; and Modernizing Foreign Assistance Network, *New Way, New Day: U.S. Foreign Assistance for the 21st Century*, Policy Proposal, June 1, 2008, http://modernizingforeignassistance.net/documents/newdaynewway.pdf.

Appendix A. Countries Requiring Assistance to Improve Food Security, July 2008

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Country	Key Reasons for Crisis and Vulnerable Populations	Changes in Food Secur Since April 2008		
Philippines	Typhoon	Deteriorating		
Sri Lanka	Conflict	No change		
Tajikistan	Winter crop damage, poor market access, locusts	Deteriorating		
	Widespread Lack of Access			
Afghanistan	Conflict and Insecurity, inadequate rainfall	No change		
Burma	Cyclone	No change		
Dem. Rep. of Korea	Economic constraints and effects of past floods	Deteriorating		
	Exceptional Shortfall in Aggregate Food Production/Supplies			
Iraq	Conflict, insufficient rainfall	Deteriorating		
EUROPE (COUNT	RY)			
	Exceptional Shortfall in Aggregate Food Production/Supp	olies		
Moldova	After effects of 2007 drought	No change		
LATIN AMERICA (1	COUNTRY)			
	Severe Localized Food Insecurity			
Bolivia	Past floods	No change		

Notes: In some countries, an influx of refugees, a concentration of internally displaced persons, or a combinations of crop failure and deep poverty have converged to cause **severe localized food insecurity**.

In countries with **widespread lack of access**, the majority of the population is considered to be unable to procure food from local markets, due to very low incomes, exceptionally high food prices, or the inability to circulate within the country.

Exceptional Shortfall in Aggregate Food Production/Supplies refers to countries in crisis because of crop failure, natural disasters, interruption of imports, disruption of distribution, excessive post-harvest losses, or other supply bottlenecks.

Appendix B. World Food Program Responses to the Global Food Crisis

WFP, which annually provides humanitarian assistance to more than 80 million people in 80 countries, has been in the forefront of the international response to food price increases. WFP uses its commodity and cash resources to address the nutrition, health, and education implications of high food prices in poor countries. WFP depends entirely on voluntary contributions of commodities and cash to fund its feeding programs around the world. In 2007, donor contributions to WFP totaled \$2.8 billion, including \$1.1 billion of commodity food aid contributed by the United States—about 44% of all donor contributions.⁶⁶ The United States provides almost all of its food aid contribution to WFP in the form of U.S. agricultural commodities while other donors provide mainly cash.

To maximize the commodity value of the cash at its disposal and to mitigate the increased commodity and transports costs it faces, WFP has allocated more than 80% of its cash available in 2008 to local and regional purchase of food aid commodities in developing countries.

Local/regional purchases, according to WFP, result in savings on food and transport costs and help local farmers from whom the food was purchased break the cycle of hunger at its root.

In August 2008, WFP announced that it would direct a \$214 million food security assistance package to 14 countries, the Palestinian Territories, and the Horn of Africa, which are seriously affected by high food prices (**Appendix A**).⁶⁷ The package will use commodities and cash to provide food rations to highly vulnerable groups; feed school-aged children; supplement nutritional intake of pregnant women and children; expand food aid to urban areas hardest hit by high food prices; and support small farmers and markets through local food purchase.

The following month, it launched Purchase for Progress (P4P) to help small farmers access markets.⁶⁸ P4P will be launched in 21 countries over the next five years and will work in cooperation with organizations, such as the Alliance for a Green Revolution in Africa (AGRA), who help small farmers improve productivity through the use of improved seeds and farm management techniques. The Bill & Melinda Gates Foundation committed \$66 million to fund pilot P4P projects in 10 countries in Africa, the Howard G. Buffett Foundation committed \$9.1 million, and the government of Belgium contributed \$750,000. WFP expects P4P to significantly increase the incomes of some 350,000 farmers in the pilot projects.

⁶⁶ WFP, 2007 Annual Report, pp. 46 and 47,

http://www.wfp.org/policies/annual_reports/documents/2007_Ann_Rep_English.pdf.

⁶⁷ WFP, *Cash Roll Out to Help Hunger Hot Spots*, Press Release, August 12, 2008, http://www.wfp.org/english/?ModuleID=137&Key=2899.

⁶⁸ Information about P4P was summarized by CRS from WFP, *Purchase for Progress Initiative Launched in New York*, Press Release, September 24, 2008, http://www.wfp.org/english/?ModuleID=137&Key=2942.

Appendix C. UNICEF and WHO Responses to the Global Food Crisis

UNICEF

UNICEF responses focus on: bolstering nutrition security in emergencies; improving the nutritional status of pregnant women; monitoring infant growth rates; supporting infant and child feeding and care; providing micronutrients; meeting the nutritional needs of people living with HIV/AIDS and supporting community-based programs.⁶⁹ During emergencies, UNICEF focuses on preventing death from starvation and disease and reducing malnutrition among the most vulnerable – young children and pregnant and lactating mothers. In that respect, interventions promote breastfeeding, provide therapeutic and supplementary feeding, and feed orphans.

In addition to its ongoing efforts to improve the nutritional status of pregnant women, UNICEF recently launched the Low Birth Weight Prevention Initiative to prevent low birth weight in infants. The program provides multi-micronutrient supplements for pregnant women and is being piloted in 11 countries. UNICEF and its partners also attempt to reach vulnerable children through Learning Plus schools, which identify and deliver a package of services, including school feeding (and take home lunches), HIV/AIDS education, water, sanitation and hygiene education, immunizations, micronutrients, and deworming treatments.⁷⁰

WHO

WHO responses focus on health and nutrition. In that respect, WHO aims to improve health and nutrition surveillance systems; monitor the health and nutritional status of vulnerable populations; and support countries efforts to develop and expand nutrition interventions. Such interventions might include management of severe malnutrition, promotion of exclusive breastfeeding and complementary feeding practices, improving access to micronutrient supplements, delivery of primary health care services, promotion of food hygiene, and improving the supply and access to safe and nutritious foods when distribution channels are disrupted. WHO also supports Member States in designing plans and programs that can mobilize resources through the Consolidated Appeal Process and from the Central Emergency Response Fund (CERF) and other new international windows that are being developed in response to high food prices. WHO created a task force at its headquarters to integrate its programs related to nutrition, health systems, health security and environment, family and community health and health action in crises.⁷¹

⁶⁹ Information on UNICEF's response to high food prices was paraphrased by CRS from UNICEF, *UNICEF in Action*, http://www.unicef.org/nutrition/index_action.html.

⁷⁰ For more information on Learning Plus see UNICEF's website on the initiative at http://www.unicef.org/girlseducation/index_44857.html.

⁷¹ Information on WHO's response to high food prices was paraphrased by CRS from WHO, *WHO and the Global Food Security Crisis: What Will WHO Do?*, http://www.who.int/food_crisis/global_food_crisis/en/index2.html.

Appendix D. Food and Agricultural Organization Responses to the Global Food Crisis

FAO collects, analyzes and disseminates data on agriculture; advises governments on agricultural policy; provides agricultural development assistance; and hosts meetings for policymakers to discuss major food and agriculture issues. FAO also helps severely affected countries monitor local price fluctuations, identify vulnerable groups, and develop effective policy responses.

In June 2008, FAO and other members of the High-Level Task Force held a Food Security Summit in Rome, Italy to mobilize donor support for short-, medium-, and long-term measures to address the global food crisis. Attendees recommended that donors increase support for food aid and safety net programs that address hunger and malnutrition and, when appropriate, purchase commodities locally or regionally. In the short term, the Task Force urged donors to provide aid for agricultural inputs (including support for FAO's ISFP program; in the medium and long terms, increase support for agriculture development; and boost investments in scientific research that could identify improved agricultural technologies and policy approaches. Finally, the Task Force called for continuous monitoring of the world food security situation and for evaluation of strategies to improve it.

At the Food Security Summit, donors indicated a willingness to commit resources for addressing the world food crisis. Donors announced that in 2008 and 2009, they would provide \$18.4 billion in new and existing resources to address the adverse effects of rising food prices. The United States indicated that it would provide \$5 billion in food aid and related assistance over the two years; the World Bank and WFP proclaimed they would each make available \$1.2 billion over the same time period. Others made more extended commitments, with France and the Islamic Development Bank each pledging \$1.5 billion over five years. Donors are expected to provide the funds through existing bilateral and multilateral channels.

In July 2008, FAO announced its Initiative on Soaring Food Prices (ISFP) that aims to help farmers in developing countries boost production and secure the next harvest through improved access to seeds, fertilizers and other inputs.⁷² FAO launched the Initiative with an \$18 million budget in five countries: Burkina Faso, Haiti, Mauritania, Mozambique, and Senegal. The ISFP has since expanded to include 54 countries that will benefit from external financing of seeds, fertilizers, and other agricultural inputs. The aims of ISFP are to (1) increase food production by small farmers who often are net buyers of food; and (2) help farmers produce a food surplus that could be marketed, thereby increasing farmers' incomes and facilitating access to food by rural and urban populations. With the ISFP, FAO hopes to mobilize support of donors, financial institutions, and national governments for financing provision of inputs on a larger scale.

⁷² See FAO, *Initiative on Soaring Food Prices Now Covers 54 Countries*, Press Release, July 9, 2008, http://www.fao.org/newsroom/en/news/2008/1000877/.

Appendix E. Comprehensive Africa Agriculture Development Program Responses to the Global Food Crisis

In June 2002, African Ministers of Agriculture, FAO, and the New Partnership for Africa's Development (NEPAD) launched the Comprehensive Africa Agriculture Development Programme (CAADP)—an African-created plan to improve Africa's agriculture sector, food security, and trade balance.⁷³ The plan is based on four pillars.

- **Improve land management and water control systems** to sustainably increase output and encourage reliable food production. Related activities include enhancing soil fertility and the moisture holding capacity of agricultural soils; expanding irrigation-based farming, and controlling water usage.
- **Improve rural infrastructure and trade-related capacities.** Related activities include investments in roads, storage, markets, packaging and handling systems, and input supply networks to boost countries' capacity to participate in trade negotiations and to meet quality requirements of world trade.
- Increase food supply and reduce hunger. Related activities include expanding access to low-cost technology that can boost food production close to where it is most in need; raise rural incomes; expand employment opportunities; and contribute to crop export growth.
- Enhance agricultural research, technology dissemination and adoption to accelerate gains in productivity.

NEPAD estimates that it will cost nearly \$250 billion to implement the plan by 2015 with African governments providing about half of the funds (**Table E-1**). In July 2003, African Union (AU) Members committed to begin implementing CAADP by allocating at least 10% of their national budgets to agricultural and rural development within five years with the expectation that it would contribute to an agricultural sector growth rate of 6%.⁷⁴ Increased investments would be used to "revitalize the agricultural sector (which includes livestock, forestry and fisheries) through special policies and strategies targeted at small-scale and traditional farmers in rural areas; enabl[e] private sector participation; emphasiz[e] human capacity development; and remov[e] constraints to agricultural production and marketing, including soil fertility, poor water management, inadequate infrastructure, pests and diseases."

The African Union reported in February 2008 that five countries had spent at least 10% of their national budgets on agriculture and 11 countries have seen their in agricultural sector grow by at

⁷³ For more on CAADP, see NEPAD, *Comprehensive Africa Agriculture Development Plan*, November 2002, http://www.fao.org/docrep/005/y6831e/y6831e00.HTM.

⁷⁴ Information in this paragraph was summarized by CRS from African Union, *Declaration on the Fifth WTO Ministerial Conference*, Second Session of the African Union Assembly, July 10-12, 2003, Assembly/AU/Decl.4 (II), http://www.africa-union.org/Official_documents/Decisions_Declarations/Assembly%20final/ Assembly%20%20DECLARATIONS%20%20-%20Maputo%20-%20FINAL5%2008-08-03.pdf

least 6%.⁷⁵ The AU estimates that African governments' spending on agriculture averages 5%, though there are significant variations across countries.⁷⁶

Areas of Investment	Investment by 2015	
	Africa	Total
Land and water	18	37
Rural Infrastructure	44	89
Trade-related capacities for improved market access	I	3
National food security	3	7
Regional food security	I	I
Research and technology	2	5
Operations and maintenance	35	69
Safety nets and emergencies	17	35
Total	121	246

Table E-I. Cost of CAADP Implementation

(U.S. \$ billions)

Source: NEPAD, Comprehensive Africa Agriculture Development Plan, November 2002.

Notes: When NEPAD adds the above figures it totals \$125 billion for Africa and \$251 billion for the grand total. The sums above were calculated by CRS from the data provided.

⁷⁵ African Union, *Progress Report on Implementing the Comprehensive Africa Agriculture Development Program*, Fourth Conference of African Union Ministers of Agriculture, February 26-27, 2008, p. 4, http://www.africaunion.org/root/ua/Conferences/2008/avril/REA/01avr/Experts_CAADP_Progress.pdf.

⁷⁶ Ibid, p. 8.

Appendix F. International Fund for Agricultural Development Responses to the Global Food Crisis

In 1977, the United Nations created International Fund for Agricultural Development (IFAD) in response to a world food crisis in the early 1970s that was precipitated by a global reduction in grain production and stocks and accompanied with widespread drought and famine in sub-Saharan Africa. IFAD makes low-interest loans and grants to developing countries for projects that focus on poverty reduction among rural people.

In response to the current food crisis, IFAD has announced it would support projects in 26 of the countries identified by FAO as suffering from a food crisis. Some \$200 million from existing loans and grants would be made available to purchase seeds, fertilizers, and other inputs that would boost agricultural production. IFAD's contributions are not intended for short- and medium-term interventions and will not be used for emergency relief, food aid, or social safety nets.

The \$200 million is not new funding. It represents balances from existing loan and grant programs that were not spent, but can be immediately disbursed. These funds would be allocated at the request of loan and grant recipients, and would be implemented through existing IFAD-funded projects or in cooperation with others such as the World Bank, FAO, WFP or the regional development banks. In 2007, IFAD loans and grants for development projects totaled \$600 million.

Appendix G. World Bank Responses to the Global Food Crisis

The World Bank works with FAO, WFP, and the IMF to assess the impact of higher food prices on developing countries. In the short-term, World Bank activities focus on safety net assistance and food production. In the medium term, the Bank advises countries facing high food prices; the Bank's long-term plans focus on increasing loans for agricultural development. World Bank loans funded through its International Development Association (IDA) are extended to least developed countries with no interest charges, a 10-year grace period, and can be repaid in 40 years.

Many of the Bank's responses to high food prices focus on school feeding, food for work, conditional cash transfers; and agricultural production.⁷⁷ Under the aegis of its New Deal on Global Food Policy, the Bank has conducted rapid needs assessments in 13 African countries. The Bank has created a Global Food Response Program (GRFP) to speed assistance to the neediest countries. Since September 2008, GRFP has approved and begun disbursing \$137 million in 16 countries. The Bank has earmarked an additional \$429 million for programs in 13 more countries and intends to make available up to \$6 billion in agricultural loans by 2009. This will include a near doubling of lending to Sub-Saharan Africa from \$450 million to \$800 million and to Latin America from \$250 million to \$400 million. The Bank also plans to lend over \$1 billion to south Asia for new agriculture and rural development projects.

In its 2008 World Development Report, the World Bank identified four key elements for a comprehensive approach to fostering long-term agricultural growth in developing countries: (1) extend incentives for increased food production (including the removal of subsidies which disproportionately benefit richer farmers); (2) improve the quality of core public goods, including science (research), infrastructure and human capital; (3) strengthen institutions to facilitate the extension of capital and risk management services to rural farmers, improve property rights, and empower farmers to take collective action; and (4) promote sustainable use of natural resources.

The Bank has proposed three key policy prescriptions to improve food security. First, it urges countries to ease export restrictions. The Bank asserts that export restrictions contribute to higher food prices and impede WFP operations that purchase local/regional foods. The Bank reports that 29 countries put in place export restrictions. Second, the Bank advocates that the United Nations provide WFP with a regular annual appropriation. World Bank President Robert Zoellick argues that voluntary contributions are often ill-timed and insufficient to address chronic and acute hunger. It is unrealistic, according to Zoellick, to assume that WFP could raise the amounts it needs from voluntary donations. Finally, the Bank recommends that the international community consider establishing an internationally coordinated virtual humanitarian strategic reserve system for food emergencies, which would hold financial commitments, not physical stocks.⁷⁸

⁷⁷ For more information, see World Bank Website on the Food Crisis at *Food Crisis: What the World Bank is Doing*, http://www.worldbank.org/html/extdr/foodprices/.

⁷⁸ Robert B. Zoellick, World Bank President, *Export Restrictions Hamper Humanitarian Response, Zoellick Says*, Press Release, July 7, 2008, http://go.worldbank.org/HPX6UET260.

Appendix H. The International Monetary Fund Responses to the Global Food Crisis

In addition to its standard lending practices, IMF provides loans through its Poverty Reduction and Growth Facility (PRGF) to countries impacted by high commodity prices, enabling them to pay for food and fuel import bills.⁷⁹ About 10 countries, mostly in Africa, have raised the possibility of augmenting existing arrangements so as to acquire additional financing to cover the import costs of higher food prices. The IMF is also working with PRGF-eligible countries and with other economies on appropriate responses to higher food prices. The IMF thinks that targeted social assistance is the best initial policy, but that other temporary measures such as tax or tariff cuts on food products, are available supporting measures. Other financing instruments of the IMF also are available to help countries overcome food-related balance of payments strains. IMF also is exploring the use of stand-by arrangements which are intended to help all member countries of the IMF address short-term balance of payments problems.⁸⁰

Some experts caution that these funds should be used carefully, as IMF lending terms are more onerous for developing country borrowers than World Bank-IDA lending terms. IMF loans for countries severely affected by higher food prices carry a 0.5% interest rate that is repayable over 5 ½ to 10 years. The Fund has provided food-related support to Benin, Burkina Faso, Central African Republic, Haiti, Kyrgyz Republic, Madagascar, and signed new financing agreements with Mali and Niger.

Author Contact Information

(name redacted) Specialist in Global Health [redacted]@crs.loc.gov, 7-.... (name redacted) Senior Specialist in Agricultural Policy [redacted]@crs.loc.gov, 7-....

⁷⁹ The Poverty Reduction and Growth Facility (PRGF) is the IMF's low-interest lending facility for low-income countries. PRGF-supported programs are underpinned by comprehensive country-owned poverty reduction strategies. A more detailed explanation of the PRGF is available at http://www.imf.org/external/np/exr/facts/prgf.htm.

⁸⁰ Stand-by arrangements enable countries to rebuild their international reserves; stabilize their currencies; continue paying for imports; and restore conditions for strong economic growth. Unlike development banks, the IMF does not lend for specific projects.

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