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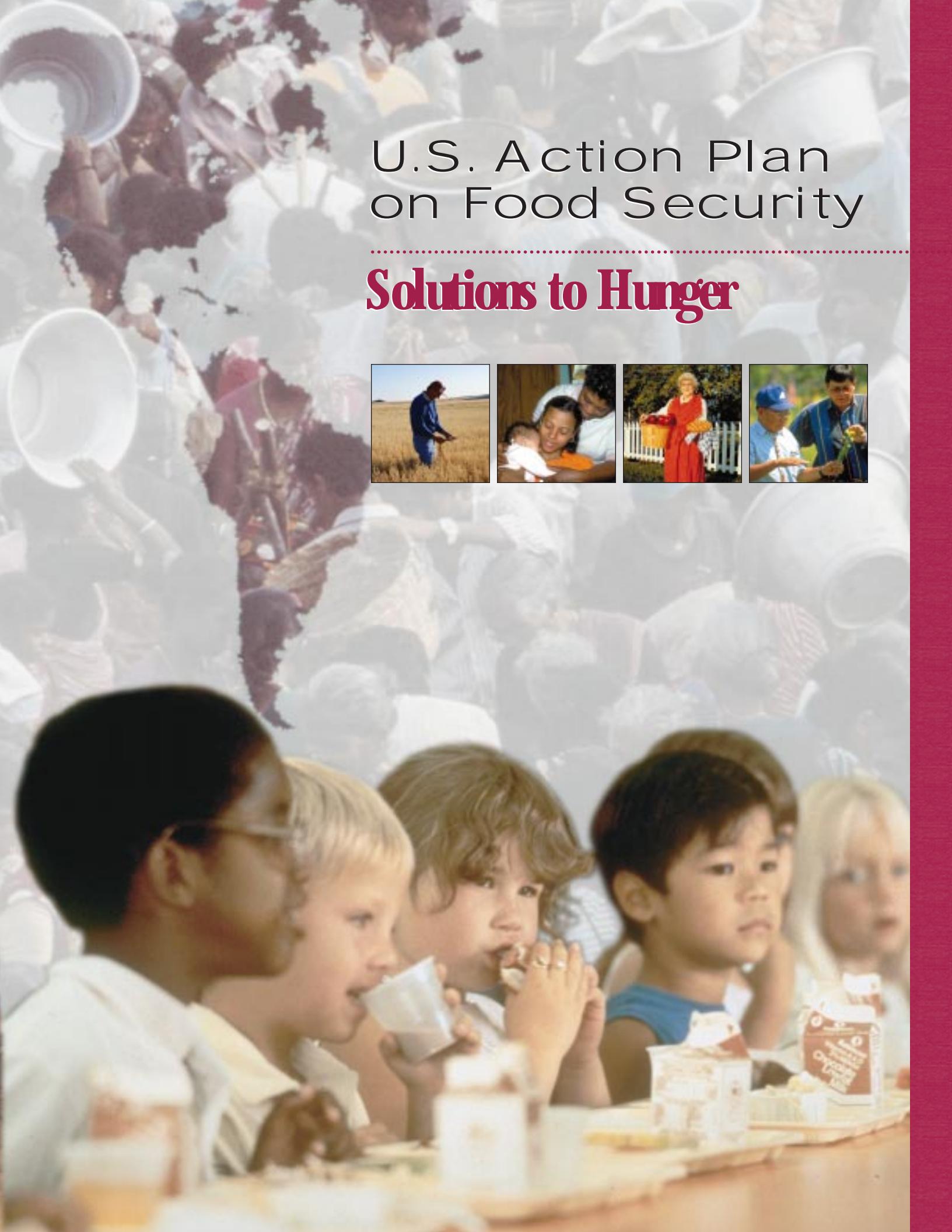
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U.S. Action Plan on Food Security

Solutions to Hunger



This Action Plan is a joint effort of the sub-Cabinet level Interagency Working Group on Food Security (IWG) and the non-governmental Food Security Advisory Committee (FSAC), a subcommittee of the Board for International Food and Agricultural Development. A list of IWG and FSAC members can be found in the appendixes.

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U.S. Action Plan on Food Security

Solutions to Hunger

Table of Contents

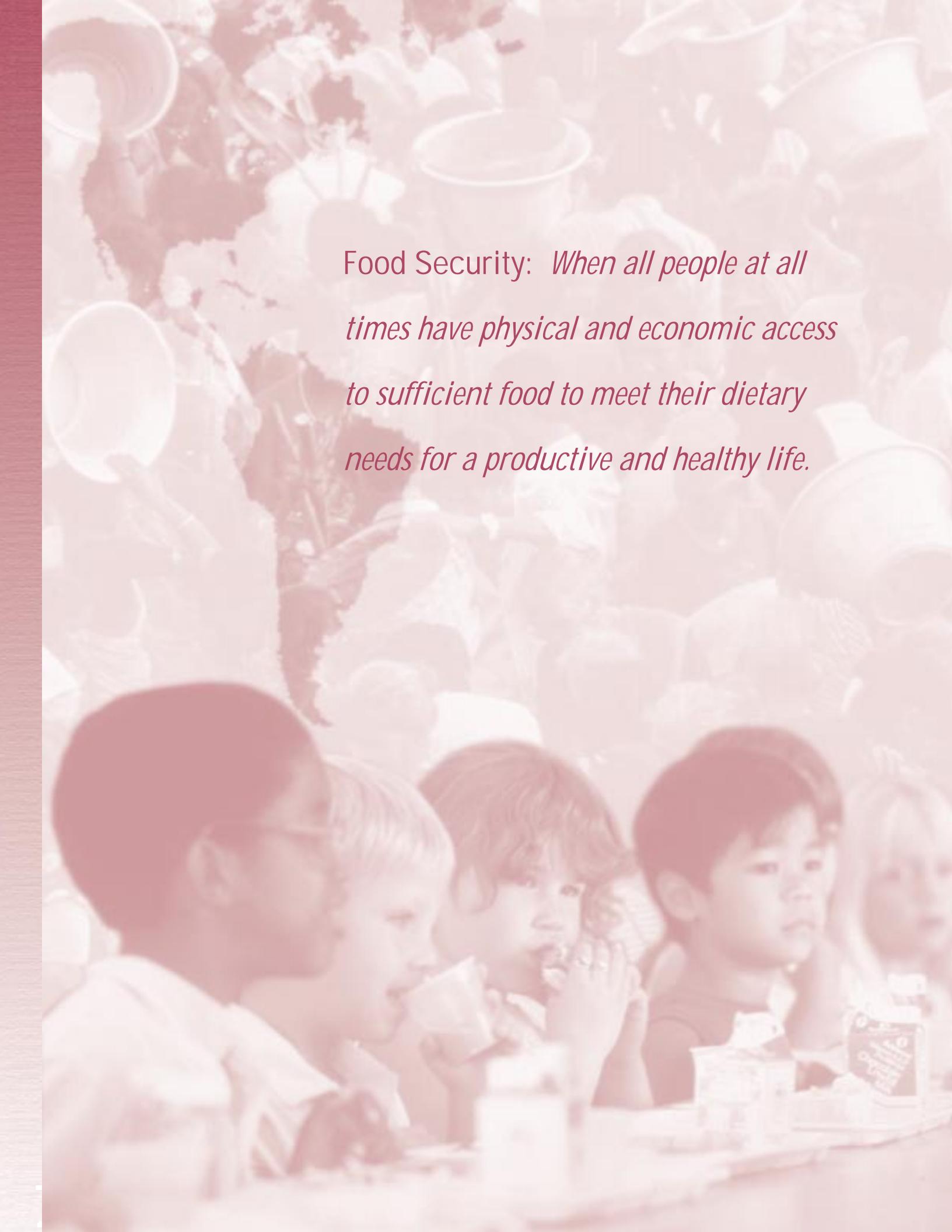
Preface	i
Executive Summary	1
Introduction	5
Chapter 1: Economic Security and Policy Environment	11
Chapter 2: Trade and Investment	19
Chapter 3: Research and Education	23
Chapter 4: Sustainable Food Systems and the Environment	33
Chapter 5: Food Security Safety Net	41
Chapter 6: Information and Mapping	49
Chapter 7: Food and Water Safety	55
Appendix A: A Model for Halving World Hunger	A-1
Appendix B: Approaches to Measuring Food Insecurity	B-1
Appendix C: Glossary	C-1
Appendix D: Acronyms	D-1
Appendix E: Interagency Working Group on Food Security	E-1
Appendix F: Food Security Advisory Committee	F-1

Boxes

1	Hunger at Home	i
2	School Feeding Programs	ii
4	Changing the Politics of Hunger, David Beckmann	6
5	The Right to Food, Food Security Advisory Committee	7
6	Agricultural Development and Food Security, G. Edward Schuh ..	8
7	U.S. Actions to Raise Awareness	9
8	Nutrition	9
2.1	Private Sector Investment Provides Economic Security, Cargill, Inc.	19
2.2	The Food System Approach, U.S. National Center for APEC	20
3.1	Linking Agriculture and Health: A Food Systems Approach, Cornell University	24
3.2	Building Agricultural Capacity in Africa, The Rockefeller Foundation	27
3.3	Sasakawa-Global 2000 Program, The Carter Center	28
3.4	Promising Partners for Sweet Potatoes, Monsanto Company	29
3.5	USAID Creates an East African-Owned Agricultural Technology Agenda	30
4.1	The Sustainable Agriculture Research and Education Program (SARE)	34
4.2	Conserving Marine Resources	35
4.3	The Future of Agriculture	36
4.4	Sustainable Cocoa, Mars, Inc.	38
5.1	Feeding Hungry Children in Houston, Kid-Care, Inc	43
5.2	Monetizing Food Aid, Save the Children	45
7.1	Integrated Pest Management	57
7.2	Health and Sanitation in Ecuador, Rotary International	58

A NOTE ON BOXES

Unless otherwise indicated, the boxes contained in this document do not represent U.S. Government policy. Rather, they contain the views of civil society, represented by the Food Security Advisory Committee, or information on programs related to hunger and food security carried out by private industry, private voluntary organizations, non-governmental organizations, and universities. The boxes are intended to show the diversity of opinion and experience on this complex issue.

A group of people, including children, are sitting around a table eating food from bowls. The scene is set in a simple, possibly outdoor or community setting. The people are of various ages and ethnicities. The food appears to be a simple meal, possibly a soup or stew, served in white bowls. The atmosphere seems casual and communal.

*Food Security: When all people at all
times have physical and economic access
to sufficient food to meet their dietary
needs for a productive and healthy life.*

Preface: The Faces of Hunger

Box 1

Hunger at Home

I was in a soup kitchen one night... when a young mother rushed in with three children—an infant and twin boys.... Her boys were about 4, dressed in rags and bone thin, and they attacked a tray of peanut-butter sandwiches as if they hadn't seen food in a month.... They ate furiously, their eyes darting in all directions as if someone might stop them.

— JOHN GRISHAM, "MY TURN COLUMN: SOMEWHERE FOR EVERYONE," NEWSWEEK FEBRUARY 9, 1998. ALL RIGHTS RESERVED. REPRINTED BY PERMISSION.

Since the first World Food Conference a quarter century ago, global efforts have resulted in a large reduction in the number of chronically undernourished people in developing countries. Many countries owe their success to economic development and increased agricultural production. Despite these improvements, a staggering number of people around the world — more than 800 million — still go to sleep hungry or undernourished each night. This is simply unacceptable. The United Nations Food and Agriculture Organization (FAO) convened the World Food Summit in 1996 to refocus international efforts on eliminating hunger and food insecurity. Even in the United States, where food is plentiful, safe, nutritious, and relatively inexpensive, nearly 12 million households are food insecure, and of these, nearly 4 million are hungry at some point over the course of a year.

The Problem at Home

The vast majority of households in America are food secure. The United States produces an abundance of affordable and nutritious foods. American consumers spend a smaller share of their budget on food than their counterparts around the world.

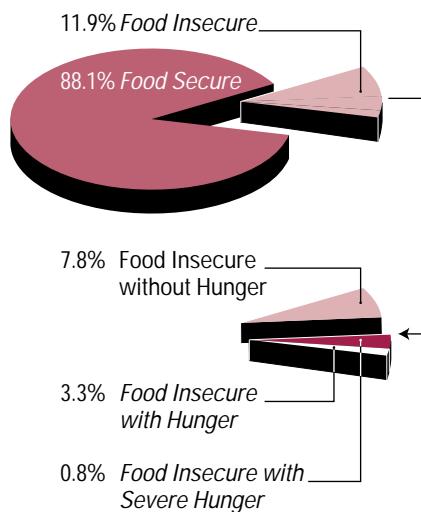
Over the years, American investments in agricultural production, research, and education have increased and improved food production, processing and marketing so much that the United States is more than able to share its bounty with the rest of the world. The United States also imports a wide variety of food from its trading partners. A strong food regulation and inspection system ensures that consumers receive safe food products.

Despite its advantages, the United States confronts nutritional challenges on several fronts. As diseases caused by nutritional deficiencies have become

less common, they have been replaced by diseases related to dietary excesses and imbalances. These diseases, including heart disease, some types of cancer, stroke, and diabetes, are now among the leading causes of illness and death in the United States. They touch the lives of most Americans, and they generate substantial health care costs. These diseases also disproportionately affect the poor.

Despite America's ability to produce more food than it can consume, food insecurity and hunger still exist. A Government survey in 1995 showed that hunger was present at least part of the year among members of 4.2 million American households, or 4.1 percent of all households in the United States. Nearly 20 percent of the hungry households (817,000 of the 4.2 million) had one or more members who experienced severe hunger either through reduced food intake among children (332,000 households) or a prolonged lack of food among adults in households with no children. Of all U.S.

PREVALENCE OF FOOD SECURITY AND HUNGER IN THE UNITED STATES, 1995
(source: USDA, FNCS, "Household Food Security in the United States in 1995: Executive Summary" (September 1997).



School feeding programs
...for thousands of Sacramento children who miss school breakfast and lunch programs, the long, dry summer is spelled h-u-n-g-r-y. To help fill the gap, the city administers a summer lunch program, and children lining up for their box lunches...were enthusiastic diners. 'I like it,' said 9-year-old Rachel... 'They have good food. I like bringing my sister,' she said....

— KATHRYN DOR-PERKINS, "SUMMER BOX LUNCHES HIT THE SPOT: PROGRAM HELPS COVER NUTRITION GAP WHILE SCHOOLS ARE ON BREAK," SACRAMENTO BEE, JULY 23, 1998
 REPRINTED BY PERMISSION

households, 11.9 million, or about 12 percent, were food insecure because of resource constraints.¹

Hunger in less-developed or war-torn nations may be obvious and extreme, but the food insecurity experienced by many Americans is no less real, though it is less overt. Faced with limited resources, one out of six Americans turns to government food assistance programs to achieve a measure of food security. Other Americans respond to food insecurity by skipping meals, substituting less expensive, less nutritious alternatives, or seeking emergency food from soup kitchens or food pantries.

In the United States, those who may be particularly susceptible to food insecurity include:

- ▲ The homeless, who may sleep in the streets or in emergency shelters most of which provide only one daily meal;
- ▲ Poor children, who may fall through the gaps in the service system and whose nutritional needs are critical for growth and development;
- ▲ Some female-headed households, African-American and Hispanic households, and those who live in central city areas;
- ▲ The working poor;
- ▲ Some legal immigrants, subject to eligibility restrictions on food stamps and other assistance;
- ▲ Some single-person households, including able-bodied adults without dependents (ABAWDs) who may lose eligibility for benefits;
- ▲ Some elderly and immunocompromised individuals, who may experience health problems, poverty, and difficulties purchasing, preparing, and eating nutritious foods;
- ▲ Some residents in rural areas and communities;
- ▲ American Indians, Alaska Natives, and others who live in remote areas; and
- ▲ Migrant and seasonal farm workers.

The most important cause of chronic food insecurity is poverty. More than 36 million people (13.8 percent of the American population) or 7.5 million American families (10.8 percent) lived at or below the poverty line in 1995; this percentage has not changed to the present.² Twenty percent of U.S. children live in households with incomes below the poverty line; this is the third highest proportion among developed nations. Poverty and food insecurity vary greatly by race, and although the majority of food-insecure people in the United States are Caucasian, African-American and Hispanic households have higher rates of food insecurity and hunger. In 1993, for example, about 11 percent of Caucasian children, 42 percent of African-American children, and 40 percent of Hispanic children were poor. Among households with children under 18 years old, overall 82.5 percent are food secure; however when disaggregated by race, 84.6 percent of Caucasian households with children are food secure, compared with only 71.8 percent of African-American households and 69.6 percent of Hispanic households. Within those households that are food insecure, 4.3 percent of Caucasian, 10.1 percent of African-American, and 8.8 percent of Hispanic households experience either moderate or severe hunger.³

Significant factors leading to food insecurity in the United States include limited resources and difficulty accessing food. Low incomes, low literacy, certain disabilities, and poor health can all increase the risks of food insecurity and hunger for individuals. Access to food in ways that are socially acceptable can also be limited by lack of transportation, living in remote locations, or lack of accessible food stores. Additionally, some people may feel stigmatized by accepting food assistance.

¹Hamilton, Cook, Thompson, et al., *Household Food Security in the United States in 1995: Summary Report of the Food Security Measurement Project* (Alexandria, VA: USDA, FNCS, September 1997). Please note: these figures do not include the homeless population.

²Figures from 1995 are used to be consistent with the data from the benchmark Household Food Security Survey. The 1996 figures are not significantly different: according to the Census Bureau, in 1996, 36.5 million or 13.7 percent of Americans were poor.

³*Household Food Security in the United States in 1995*, op.cit., p. 48.

The Problem Abroad

Today more than 800 million people are hungry around the world, and that number continues to grow.⁴ Apart from natural disasters, the root causes of food insecurity include: poverty; war and civil strife; inappropriate national policies; inadequate development, transfer, and adaptation of agricultural and other research and technology; barriers to trade; environmental degradation; population growth; gender inequality; cultural insensitivity; and poor health.

To understand the magnitude of the problem of world hunger one has only to consider that:

- ▲ There will be approximately 2.5 billion more people by the year 2025, with a world population exceeding 8 billion;
- ▲ Nearly 1.3 billion people today live on less than \$1 a day;
- ▲ Women and children are particularly vulnerable to hunger. Worldwide, 34,000 children under age five die daily from hunger and preventable diseases—24 children every minute, one every three seconds;

- ▲ 2 billion people live at risk of diseases resulting from deficiencies such as vitamin A, protein, iodine, and iron;
- ▲ Over 50 percent of the populations of Ethiopia, Angola, Mozambique, Haiti, Somalia, and the Central African Republic are hungry;
- ▲ Over 60 percent of the world's hungry reside in seven countries: China, India, Pakistan, Bangladesh, Ethiopia, Nigeria, and Indonesia.

Hunger has many faces—young and old, female and male, poor. It touches more than one-fifth of the world's population and at least 4 percent of the American population. With population growth and decreasing agricultural lands, hunger will likely become an increasing problem unless there is effective action now. ♦

⁴This number represents FAO estimates of the number of undernourished people in the world at the time of the World Food Summit in 1996. The recent economic upheavals in Asia, the earthquakes in Colombia, and hurricanes in Central America may have increased this number. Appendix B explains some of the methodologies used to measure undernutrition and food insecurity.



Executive Summary

Today, more than 800 million people in the world are hungry. At the 1996 World Food Summit, the United States and 185 other countries pledged to reduce the number of undernourished people by half by 2015. The United States adopted an even broader commitment as a domestic goal, and is developing a target for reducing food insecurity in the United States through the Healthy People 2010 Initiative.

The *United States Action Plan on Food Security* outlines the means by which the United States will address the World Food Summit's goals. It is the result of extensive national consultations and represents a range of partnerships between the U.S. Government and civil society—non-governmental and private voluntary organizations, academia, business, and individuals.

The *Plan* identifies the following as priority strategies and actions:

▲ **Encourage a policy environment at home and abroad that enables individuals, households, communities, and nations to attain economic and food security.**

Domestically, the United States will support economic security through jobs and human capital investment and will partner with civil society to achieve economic security for especially vulnerable groups. Internationally, the United States will encourage policy reform that brings about macroeconomic stability and fosters sound, market-oriented economic institutions. The United States will also encourage an enabling policy environment through bilateral and multilateral initiatives, especially in concert with the Organization for Economic Cooperation and Development (OECD) poverty reduction targets, and by implementing the African Food Security Initiative.

▲ Promote continued trade and investment liberalization to benefit all countries.

In the new trade round, scheduled to begin in late 1999, the United States will work with countries to achieve freer trade and to assure that benefits, especially more stable supplies of food and increased incomes, are equitably realized.

▲ Strengthen food security research and educational capacity to expand the productivity and nutritional impact of agriculture and aquaculture and ensure that a broad range of appropriate information and technology reaches producers and consumers.

U.S. efforts will center on generating adequate research to meet future food security needs through private/public partnerships. Efforts will also focus on sharing the results of and improving the impacts of this research, especially in developing countries, through improved extension and linkages that help adapt new technologies to local conditions and meet the needs of producers. Also via public/private partnerships at home and abroad, the U.S. Government and civil society will promote nutrition and basic education, especially for girls and women.

▲ Integrate environmental concerns into food security efforts to assure sustainability.

U.S. domestic and international priorities include developing and implementing flexible, environmentally sensitive agriculture, aquaculture, and land-use policies; enhancing local food systems through grass-roots partnerships with broad participation linking communities, farms, and markets; and addressing global phenomena, especially climate change, that affect the United States and other countries.

▲ Improve and, when possible, extend the food and nutrition assistance safety net, especially those programs targeting vulnerable women and children.

The delivery system provided at home and abroad by non-governmental organization-U.S. Government partnerships is broad and largely effective, but needs improvements in target-

ing and more emphasis on training and achieving effective utilization of food supplies.

▲ **Enhance the U.S. ability to identify food-insecure individuals and populations to make better use of food assistance programs and to provide an improved decisionmaking tool for local authorities in the United States and for governments and communities in developing countries.**

The United States will refine its national survey measures to monitor changes in nutritional status and food security in a welfare-to-work environment. Internationally, the United States will focus on promoting a food insecurity and vulnerability information and mapping system (FIVIMS) and improving—both in details and accessibility—regional and national information systems.

▲ **Assure that food and water production and distribution systems meet public health safety standards as a part of ensuring food security for U.S. and international consumers.**

Implementation of the President's National Food Safety Initiative and related recent Federal initiatives will require development and implementation of preventive controls for food production systems and enhanced surveillance and coordination in controlling foodborne illness. Coordination with all stake-holders is essential to the training and education of food handlers, producers, and consumers to improve the global food safety system. The United States supports the work of the Codex Alimentarius Commission in setting international standards for foods and food safety.

The *Action Plan* is a living document that has been endorsed by the U.S. Government and the federally constituted Food Security Advisory Committee. We invite individuals, local communities, and civil society across the country to join the challenge. ♦♦



Introduction

Hunger amidst plenty is a profound contradiction of our age. Food security is fundamental to individual human dignity, growth, and survival. We all pay for widespread hunger and malnutrition through sacrificed human potential, lost economic opportunity, social tension, violence, and war. Global food security is essential to world peace and national security.

At the World Food Summit in Rome in November 1996, the United States and 185 other countries made a promise to dedicate “our political will and our common and national commitment to achieving food security for all.” The international community set the goal of reducing the number of undernourished people to half the 1996 level by 2015.⁵ The United States adopted an even broader commitment as a domestic goal and is developing a target for reducing food insecurity in the United States through its national Healthy People 2010 Initiative.⁶ To help reach this goal, in January 1999, the U.S. Government began a Community Food Security Initiative.

Where Do We Stand?

The *United States Action Plan on Food Security* is about working through partnerships to empower people. It is the result of extensive national consultations in which the U.S. Government, civil society, business, farmers, international organizations, and individual citizens participated. Within the Federal Government, an Interagency Working Group brings together agencies with domestic and international responsibilities. A federally constituted Food Security Advisory Committee also provided input and guidance in the development of the Plan. There is a consensus that food security is dependent on:

- ▲ adequate food **availability** through agricultural production, imports, and government policies including nutrition safety nets;
- ▲ social, educational, and economic

conditions that enable individuals to gain **access** to food by earning income to buy food and through **community food security activities**; and

- ▲ full **utilization** of food through the presence of adequate diet, safe water, sanitation, education, and health care.

Food insecurity can be either temporary or chronic. The World Food Summit focused on chronic food insecurity. Without action and involvement of all stakeholders to improve the availability, access, and utilization of food, within two decades the number of hungry people will reach almost 1 billion. To prevent this, the strategies contained in this Action Plan draw on the wisdom and experience of the farming community, agribusiness, non-governmental organizations (NGOs) and universities, and the U.S. Government to define affordable, effective intervention methods. These strategies concentrate on the special resources of the American people:

⁵GAO is publishing a report to Congressional Requesters entitled, *Food Security: Factors That Could Affect Progress Toward Meeting World Food Summit Goals*. The report details the ongoing actions of the international community in response to the Summit.

⁶Healthy People 2010 is the U.S. Department of Health and Human Services-led national health promotion and disease prevention initiative that identifies opportunities to improve the health of Americans over the next decade.

CHANGING THE POLITICS OF HUNGER

We could end mass hunger in our richly blessed nation within a couple of years if we really wanted to. The United States could also do much more than it does to help overcome hunger around the world.

On the domestic front, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is one proven—but in my opinion underfunded—way to make sure that little children have enough to eat. Leaders of both our political parties agree that WIC works. Citizen groups such as Bread for the World have been lobbying for decades on behalf of WIC. Yet appropriations for WIC still fall short, so WIC doesn't reach all of the children who need it.

The Africa: Seeds of Hope Act of 1998 will help struggling farmers and other hungry people in Africa. Congress approved it because tens of thousands of Bread for the World members and others insisted that reducing hunger in Africa was important to them.

The key to ending hunger is changing the politics of hunger. Bread for the World is a nation-wide Christian citizen's movement against hunger. Its 44,000 members commit ourselves to urge elected officials to support stronger efforts to reduce hunger. We're working to transform the politics of hunger.

— DAVID BECKMANN, PRESIDENT,
BREAD FOR THE WORLD

- ▲ Productive farmers and producers,
- ▲ NGOs experienced in food delivery, sustainable agriculture, nutrition education, and community participation,
- ▲ A strong private sector, including agribusiness,
- ▲ The academic and research community,
- ▲ Innovators in maternal and child care and the public health community,
- ▲ Leaders in trade and investment liberalization,
- ▲ Worldwide strategic interests, and
- ▲ Citizens who care.

What Should We Do Next?

Although all ongoing and new activities discussed in the Action Plan contribute to the reduction of hunger, the Plan identifies the following as priority areas for the next 5 years:

- ▲ Encouraging a policy environment at home and abroad based on macroeconomic stability and competitive markets that enables individuals, households, communities, and nations to attain economic and food security;
- ▲ Promoting continued trade and investment liberalization to benefit all countries;
- ▲ Strengthening food security research and educational capacity to expand the productivity and nutritional impact of agriculture and aquaculture and to ensure that a broad range of appropriate information and technology reaches producers and consumers;
- ▲ Improving and extending the food assistance safety net, especially targeting vulnerable women and children;
- ▲ Enhancing our ability to identify and target food-insecure populations.

We also need to tailor our efforts, given that the causes of chronic food insecurity differ among different populations. Internationally, food insecurity is

most acute in South Asia and Africa. In South Asia, major causes of food insecurity include low average incomes, poor health due to high population density in a monsoon environment, and the low status of women. Opportunities for lower priced, higher quality food and increased food intake will improve as trade barriers are removed. U.S. programs, accordingly, will focus increasingly on international trade negotiations, food aid targeted to maternal and child health, and women's education. In Africa, problems of food security relate to widespread poverty, low agricultural and fish production, famine, war, civil strife, and deteriorating natural resources. Interventions here will focus on international trade, national policy reform, private sector technology transfer, research to improve productivity and sustainability, and community participation in resource management and political advocacy.

In the United States, food insecurity and hunger are disproportionately a problem of poverty. Households with children, African-American and Hispanic households, households of single unemployed persons, and female-headed, single parent households are more likely to be food insecure than households without children, Caucasian households or male-headed households.⁷ Short-term ways to combat hunger include both food and cash assistance programs (e.g., food stamps, school meals, and the Temporary Assistance for Needy Families Program). These programs reduce but do not eliminate hunger entirely. Longer term interventions include investments in education at all levels and job skills training programs.

Women are central to the success of any food security strategy due to their multiple roles in agricultural production and income generation, as well as their household maintenance and child rearing roles. Increased analytical

⁷Household Food Security in the United States in 1995, op.cit., p. 48.

attention to women's multiple roles, the constraints such roles impose, and the opportunities they afford, will be critical in achieving our World Food Summit goals.

What Is Our Responsibility?

The United States plays a leading role in advancing internationally recognized human rights. It fully subscribes to the Universal Declaration of Human Rights that includes the statement "Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food...."

The United States also promotes food security activities consistent with the principles set out in the 1949 Geneva Conventions. The U.S. Government ratified the International Covenant on Civil and Political Rights and promotes ways for communities and civil society

to shape activities and policies affecting food security better. In addition, the United States has supported several international agreements on the right of access to safe and nutritious food. The U.S. Government understands the term "access" to mean an opportunity to secure food.

The U.S. commitment to food security, however, goes beyond support for international agreements or affirmations. Domestically, the Federal Government, in partnership with the States, local communities, and civil society, has a long history of promoting food security and ending hunger. For 140 years, the U.S. Government has made significant commitments to agricultural research and education through the Land Grant University System. For over six decades, the U.S. Government has operated food assistance programs. Today, the Federal Government runs 15 major domestic food programs at a cost of \$36.5 billion per year. In addition, the States provide a variety of food pro-

Box 5

THE RIGHT TO FOOD

Work is ongoing among private voluntary organizations (PVOs) on a Code of Conduct on the Right to Food to be presented to governments for acceptance. The U.S. Government believes the best route to food security, particularly in the most food-insecure countries, is not through legal instruments, but through adoption of sound policies that expand food production, encourage economic development, and improve access to food.

In contrast, the Advisory Committee and many in civil society reaffirm the conclusion of the 1980 Presidential Commission on World Hunger, which stated that without the right to food, "the protection of other human rights becomes a mockery for those who must spend all their energy merely to maintain life itself." In the Advisory Committee's view, international legal instruments bring pressure to bear on governments to enact and implement appropriate policies and programs. Endorsing the right to food does not oblige governments to provide everyone with three meals a day. Rather, governments must respect everyone's right to have access to adequate food, protect that right from encroachment by others, facilitate opportunities to enjoy that right, and only in the last instance fulfill the right to food for those unable to do so by themselves. The Advisory Committee strongly urges the U.S. Government to support global efforts, in accordance with Objective 7.4 of the World Food Summit Plan of Action, "to better define the rights related to food...and to provide ways to implement and realize these rights...."

—FOOD SECURITY ADVISORY COMMITTEE

grams to those in need. For nearly five decades, the U.S. Government and U.S. private voluntary organizations have provided aid for emergency relief and long-term development in those parts of the world where poverty and hunger are more widespread.

Are We Ready For The Challenge?

A 1995 public opinion study by the University of Maryland⁸ found that an overwhelming majority of Americans are genuinely committed to helping people in need. Although a large majority of those polled felt that the United States spends too much on foreign aid, this view was based on the impression that the United States commits five times more to foreign aid than is actually the case. When informed that foreign aid

constitutes just 1 percent of the Federal budget and that only one-fifth of that 1 percent is focused on sustainable development and humanitarian programs, a strong majority of those polled favored maintaining or increasing aid. Furthermore, aid for agriculture by all donor countries is decreasing. In fiscal year 1997, the United States Government committed \$245 million for agricultural development and \$1.1 billion for P.L. 83-480 food aid. The fiscal year 1992 figures were \$594 million and \$1.62 billion respectively.

The link between world food security and the well-being of Americans is not clear to most Americans. A recent opinion poll found that Americans consider domestic hunger to be one of our most serious national problems. But the extent and causes of hunger, the ways that hunger can be reduced, and mobilizing Americans to act remain challenges.

Box 6

AGRICULTURAL DEVELOPMENT AND FOOD SECURITY

The modernization of agriculture through the introduction of productivity-enhancing technology has a direct effect of raising the incomes of rural people, who make up most of the population of developing countries. Poverty tends to be concentrated disproportionately in rural areas in most countries. Agricultural modernization also has more general effects in the economy, however. The introduction of new technology in the food or subsistence sector lowers the cost of production and eventually leads to a reduction in food prices. This reduction in food prices is equivalent to an increase in income for all consumers. Moreover, the reduction in food prices favors the poor, since they spend a larger share of their budget on food than do middle and upper income groups.

New production technology for cash or export crops has similar, although somewhat different effects. By increasing the competitiveness of these sectors in international markets, it increases foreign exchange earnings for the country. These exchange earnings can be used to finance a higher rate of economic growth, which in turn increases employment and thus improves incomes. Moreover, export commodities tend to be labor-intensive. Thus, the expansion of these sectors increases the demand for unskilled labor and also improves the incomes of the poor.

⁸"Americans and Foreign Aid," University of Maryland, 1995

— G. EDWARD SCHUH, CO-CHAIR OF THE FOOD SECURITY ADVISORY COMMITTEE AND ORVIL AND JANE FREEMAN PROFESSOR OF INTERNATIONAL TRADE AND INVESTMENT POLICY, HUBERT H. HUMPHREY INSTITUTE OF PUBLIC AFFAIRS, UNIVERSITY OF MINNESOTA

⁸"Americans and Foreign Aid," University of Maryland, 1995

U.S. ACTIONS TO RAISE AWARENESS

To promote an awareness and understanding of hunger and food insecurity among Americans, the United States will:

- Conduct a national "Food for All" campaign and help communities (including schools and business groups) formulate their own outreach and awareness campaigns;
- Highlight the linkages among domestic and international agriculture, hunger, food security, and poverty by sharing such information with Congress, the public, and the U.S. agricultural community; boosting awareness of the role of economic, human capital, and agricultural development in alleviating food insecurity and malnutrition; and building more effective outreach efforts and partnerships among government, academia, and agribusiness.

NUTRITION

This Action Plan complements the U.S. Government's earlier *Nutrition Action Themes for the United States*, prepared as a follow up to the International Conference on Nutrition in December 1992. The many strategies and actions identified in that report will help to attain the World Food Summit goals and ensure an integrated approach to improving the availability, access, and utilization of food. We have included some of the overarching themes that are reported in this document. See USDA Center for Nutrition Policy and Promotion, *Nutrition Action Themes* (September 1996) for more details.

What Is Required?

Addressing food security—whether globally or in the United States—requires integrating ongoing efforts with new initiatives. The chapters of the *United States Action Plan on Food Security* address key inputs, identified during the national consultative process, that are needed to achieve food security. The discussion incorporates ongoing successful activities of U.S. stakeholders, a number of specific initiatives, such as the Community Food Security Initiative, and a framework for mobilizing future efforts in these key areas: economic security and policy environment; trade and investment; research and education; sustainable food systems and the environment; community food security and safety nets;

food and nutrition information and mapping; and food and water safety.

The U.S. Government will maintain the Interagency Working Group on Food Security as the focal point within the Executive Branch for its continuing response to the World Food Summit, including identifying issues for the Executive Branch to address in concert with Congress. The Food Security Advisory Committee will also continue to oversee implementation of the Plan and to reflect a broad range of viewpoints and experience. But this effort will require more than government and advisory committee action. To accomplish many of the initiatives and activities described in this plan will require participation and commitment from all sectors of society. There is a vital role for each person, from all areas of American society in the effort to achieve lasting food security. ♦



1

Economic Security and Policy Environment

Both domestically and internationally, food security depends on the creation of an environment—economic, political, and social—that enables individuals to achieve food security. This requires investing in the growth and well-being of individuals through education, job creation, the maintenance of safety nets, and the alleviation of poverty. Economic growth is essential to poverty reduction, and an enabling policy environment is critical to growth and development. The essentials of this environment include sound macroeconomic policies, an open trade and investment climate, elimination of policies that discriminate against the private sector or rural areas and that result in disincentives to agricultural production, and equal participation by all members of society.

Domestic Dimension

1. PRIORITIES

- ▲ **Supporting individual and family economic security through adequate jobs and increased human capital investment and appropriate government policies**
- ▲ **Working in partnership to achieve economic security for vulnerable groups**

2. ISSUES

The U. S. Government employs a set of macroeconomic, sectoral, and social policies that support the general economic and food security of American citizens. Among these are monetary, fiscal, and trade policies promoting strong economic growth and job creation along with low inflation. Welfare reform policies currently under implementation establish strong incentives for welfare recipients to move from welfare to work. Welfare reform policies also represent a fundamental shift

in philosophy toward fiscal federalism in which public funds are transferred in block grants to States along with increased responsibility and authority to implement social programs to encourage work. Such programs empower States while maintaining strict standards and a solid safety net. Social supports to welfare recipients and transitional workers provided by States include support for child care, education and training programs, transportation, and other types of assistance. The Federal Government encourages education through fiscal policies, support of educational reform, and emphasis on early childhood education. The Federal Government also encourages States and tribal organizations to share experience and information regarding implementation of policy reform. Finally, the Federal Government has maintained food assistance and medical insurance programs as social safety nets for many low-income households.

In 1995, 13.8 percent of Americans, including 20.8 percent of all children, lived at or below the Federal poverty

line. By the time they reach 18 years of age, 36 percent of children have spent a portion of their lives in poverty. Many of these children may have experienced periods of food insecurity or hunger, which jeopardize sound growth and healthy development.

Equally important is the need to enhance adults' economic security, particularly as the United States implements welfare reform legislation enacted in 1996. Enhancement of adults' economic security requires innovative intergovernmental and non-governmental action to help unemployed persons find and keep jobs and underemployed, low-income individuals upgrade their skills and jobs. Critically important in this effort are creative approaches that build effective partnerships, incentives, and special transitional supports for those who need them. Of special importance is the need to invest in primary, secondary, post-secondary, and continuing education.

3. DISCUSSION

In August 1996, the 104th Congress enacted, and the President signed into law, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. The Act created the Temporary Assistance for Needy Families Block Grant Program (TANF), which replaces Federal payments under the Aid to Families with Dependent Children program, and the Job Opportunities and Basic Skills Training Program. TANF provides block grants and greater flexibility to the States.

Under TANF, Federal welfare benefits are limited to 5 years per adult participant lifetime, but States may set shorter time periods if they believe this better motivates recipients to train and gain employment. States also determine benefit levels, which services they will fund, and eligibility standards. The law gives States performance bonuses if they move welfare recipients into jobs. Also included are a stronger child support enforcement program, supports for

families moving from welfare to work, and reduced duration of food stamp benefits for able-bodied adults without dependents. States also can exclude some legal immigrants from the TANF program.

As they implement TANF, States and communities are forming new partnerships with civil society. Federal agencies are tracking and evaluating welfare reform measures and other actions for possible modeling, replication, or expansion by States and communities. Of immediate importance is the need to identify and implement successful policies and job creation and expansion programs. Promoting increased dialogue at all levels, especially within and across States, will enhance these efforts. Because the new law widens States' latitude in administering welfare programs, States can be viewed in one sense as laboratories for analysis of the factors that help Americans achieve greater economic security.

4. ACTIONS

To focus on groups at risk for food insecurity, especially children:

▲ The United States⁹ will encourage the use of case-management by States, communities, and employers to address the difficulties many vulnerable groups face in trying to achieve economic security, including, where appropriate, integrated case management across programs.

▲ The United States will assist individuals disabled from work because of health problems, including substance abuse, mental or emotional difficulties, and AIDS.

▲ The United States will partner with States, tribal organizations, and communities to help those at particular risk for food insecurity, especially legal immigrants and others affected by recent changes in Federal welfare and food assistance programs.

▲ The United States will encourage States to ensure that child support award levels are sufficient to meet chil-

⁹Throughout this document the term "United States" refers to all sectors of the country and its population, both governmental and non-governmental.

dren's needs and implement uniform interstate child support laws.

▲ The United States will encourage community- and State-level strategies to prevent teen pregnancies.

To build a solid foundation for learning and enhance access to education:

▲ The United States will create business, community, and other alliances that meet the diverse needs of the student population, decrease drop-out rates, and support at-risk students—particularly those with limited English proficiency, with disabilities, in migrant families, and in schools with large proportions of students living in poverty.

▲ The United States will encourage local businesses and community groups to create and share new ways to boost participation in State school-to-work programs that enhance student achievement and technical skills.

▲ The United States will encourage family, community, and local school district involvement in State efforts to develop and implement challenging academic standards and assessment for all students in core academic subjects.

▲ The United States will develop communications strategies among businesses, community groups, and schools designed to boost enrollment in post-secondary and continuing educational programs and improve access to financial aid and support services connected with such programs.

▲ The U.S. Government will improve coordination of Federal donations of surplus computers and other equipment to schools.

To emphasize job creation and expansion:

▲ The U.S. Government will hire and successfully utilize welfare recipients as an example for business leaders.

▲ The United States will enhance incentives and innovative approaches

for private sector participation in welfare-to-work efforts and expand efforts through partnerships and forums for sharing results.

▲ The United States will encourage civil society to create jobs and training programs for current and former welfare recipients as well as under-skilled and unemployed persons.

▲ The United States will tailor economic development activities for persons living in remote areas.

▲ The U.S. Government, through USDA, will continue to support the rural Empowerment Zones and Enterprise Community (EZ/EC) program, which enables people and institutions in communities with high levels of poverty to conceive and implement plans to provide jobs, services, and community facilities.

To help low-income persons obtain jobs:

▲ The U.S. Government will sustain macroeconomic, sectoral, and social policies to maintain strong growth and job creation and support the general economic security of American citizens.

▲ The U.S. Government will implement social policies establishing strong incentives for replacing welfare with work and encouraging provision of transitional support to persons entering the job market.

▲ The U.S. Government will encourage States to use all available funds for training people for jobs that lead to economic self-reliance.

▲ The U.S. Government will encourage employers to provide job training, skills development, enhanced job opportunities, and other ways to improve self-sufficiency and also ensure adequate income.

▲ The United States will use innovative communications strategies, including community networks and information-sharing strategies, to enhance awareness of community opportunities for jobs and training.

To help people keep jobs, the United States will:

- ▲ Support the development and provision of adequate, convenient, and affordable social services, including child care, health care, public transportation, and training, and foster collaboration, cost-sharing, and information dissemination among small businesses for such programs.
- ▲ Continue to provide special transitional supports to entry-level workers in low-paying jobs.
- ▲ Promote skills development among low-skilled and underemployed workers as they move from welfare to jobs with increasingly greater responsibility.
- ▲ Promote the use of mentors to help improve workers' chances of succeeding in entry-level jobs and progressing to better jobs. Encourage involvement of communities' elderly populations as volunteers and mentors.
- ▲ Expand existing educational programs to include job training, parenting, and other skills.
- ▲ Expand awareness and use of the Earned Income Tax Credit.

International Dimension

1. PRIORITY

- ▲ **Encouraging an enabling policy environment for food security in concert with the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) poverty reduction targets**

2. ISSUES

The World Food Summit recognized that poverty is a major cause of food insecurity in the developing world and that economic growth is essential to poverty eradication. While solutions to poverty and food insecurity are not directly transferable across or within

regions, and must be based on solid region- and country-specific analysis, common ingredients include the creation of a policy environment that will achieve macroeconomic stability and promote the development of legal and economic institutions conducive to economic and food security. To create a stable economy, appropriate policies include low inflation, stable monetary policies, reasonable tax burdens, and balanced national budgets. Appropriate legal and economic institutions include laws of land and tenure, private property and contract enforcement, a fair and impartial judicial system, reform of burdensome regulations, and privatization of state-owned enterprises. Such national policies, in concert with the liberalization of international trade and investment, foster an enabling environment that encourages productivity, innovation and initiative, and that directs resources and investments toward the goal of economic and food security for all.

The World Food Summit recognized that the multifaceted nature of food security necessitates concerted national action and effective international efforts to supplement and reinforce national action. The issues for the United States are how to support and promote a more enabling policy environment, how to ensure that our assistance and policy instruments are appropriate, equitable, and effective in reducing poverty and food insecurity, and how to better coordinate these efforts with other donors.

3. DISCUSSION

The United States recognizes that there is no one world food security problem and will adopt a differentiated strategy to address food security issues with target countries. It stands ready to join in a new kind of partnership with all countries prepared to face the challenge of conquering world hunger and to take the difficult steps necessary

to meet and surmount that challenge. This new partnership will be based on collaboratively determined indicators for measuring local, national, and regional progress. The United States will intensify its dialogue with other donor countries and with international organizations to assure better coordination of policies, self-monitoring, and assistance. The U.S. Government will work in partnership with business and civil society organizations in these joint efforts to increase food security.

The responsibility for food security rests with national governments. The U.S. Position Paper prepared for the World Food Summit contained a comprehensive checklist advocating that national governments:

- Adopt economic policies that facilitate and complement efficient markets, rather than attempting to substitute government action for markets. Government should establish and enforce appropriate protocol and procedures and create and sustain a stable economic environment that is conducive to the full participation of the private sector. Government should also invest in "public good" infrastructure including transportation, communications, education, and social safety nets.
- Provide basic health and sanitary services, maintain basic levels of nutrition, and facilitate voluntary population stabilization.
- Develop institutions and a land tenure system that provide broad and equitable access to land services and incentives for users to protect and invest in the long-term productivity of natural resources.
- Ensure a political system that does not discriminate against women or racial, ethnic, and religious minorities and which fosters political stability without resorting to repressive measures.
- Provide a macroeconomic and trade environment with linkages to global

markets so that long-term changes are transmitted to the domestic economy, thus avoiding macroeconomic imbalances that could induce destabilizing adjustments.

- Foster food, agricultural, and fisheries policies that are consistent with the resource endowment of the country, including the preservation of biological diversity, and supportive of its natural comparative advantage.
- Adopt policies that provide an effective incentive structure for appropriate management of natural resources, including: soil, water, and genetic resource management, including preservation of biological diversity; food, agricultural, forestry, and fisheries policies; and the effective integration of trade and domestic policies.
- Emphasize investment in agricultural research and technical education, international research systems, and policies that facilitate the flow of knowledge and technology among and within countries while protecting intellectual property rights so necessary to proving incentives for private sector research.
- Establish a general development policy that does not discriminate against the agricultural or fishery sectors, nor against rural or coastal areas, and that recognizes that poverty alleviation requires an integrated approach to rural development.
- Combat graft and corruption wherever it exists, especially in the political and economic systems.
- Develop regional and national conflict prevention and resolution mechanisms.

Given the links between poverty and food insecurity, the United States also will encourage national policies that address poverty reduction, women's status, food safety, and income distribution problems. We similarly recognize

the important role infrastructure development plays in food security.

In countries eligible for U.S. Government development assistance programs, recipients that enact appropriate food security policies and that involve all stakeholders in identifying and implementing such policies could be eligible for a greater share of development resources. The selection of focus countries for the 1998 African Food Security Initiative (AFSI) follows this logic. Under the Action Plan, the United States envisions that this concept, and the criteria for measuring it, will be developed collaboratively through the OECD/DAC Poverty Reduction Network and made explicit in a suitable international forum.

To support such a framework, food security information systems will need to be harmonized to measure the effectiveness of programs and reforms. Donors and recipients will need to negotiate a mutually acceptable food security policy framework, criteria for measuring its implementation, and an information tracking system to monitor results. This methodology, in turn, will strengthen the negotiating ability of the net food importing countries in the upcoming trade round.

The United States participates in Paris Club debt reductions for those poor countries that have committed to a sound economic reform program. In fiscal year 1998, the U.S. Government forgave \$338 million worth of debt, at a cost of \$23 million to the U.S. budget. The United States also contributes, through the Paris Club and international financial institutions, to the Highly Indebted Poor Countries Initiative, which provides bilateral and multilateral debt reduction for those severely indebted low-income countries with a track record of serious economic reform. Finally, in assessing international financial institution programs, we will take into account the impact on improving food security.

4. ACTIONS

To achieve improved results from U.S. assistance and reinforce our efforts with other donors:

▲ The U.S. Government will allocate available development assistance funding in collaboration with recipient countries through processes that involve participation of civil society organizations and other stakeholders. In each country, the United States will strive to provide staff with cultural and gender expertise and will seek similar involvement by representatives of the recipient countries. Priority setting will be guided by the precepts emerging from the North-South partners' dialogue within the OECD/DAC Poverty Reduction Network.

▲ The U.S. Government, through USAID, is implementing the AFSI on a pilot basis. The initial five country recipients were selected on the basis of a conducive policy environment and a demonstrated will to achieve food security. The initiative focuses on reducing childhood malnutrition through increasing incomes of poor rural people in three areas: increased agricultural production, improved market efficiency and access, and increased trade and investment in agriculture. Particular attention will be paid to increasing the labor productivity of women in their multiple roles as food producers, food processors, entrepreneurs, and caretakers, and to the promotion of improved nutritional status. Further development of the AFSI will involve USAID's Office of Women in Development in program and policy analysis, design, development, and evaluation.

▲ The U.S. Government will improve coordination of its trade, aid, research and technology transfer, investment guarantees, environmental and geographic information monitoring, and other instruments. It hopes to form a partnership with the private sector and NGOs to achieve this objective.

- ▲ In conjunction with its partners in the OECD/DAC Poverty Reduction Network, the U.S. Government will review ongoing programs and policy initiatives in food-insecure countries not eligible for development assistance—particularly those programs promoting economic reform and trade and investment—to ensure a sounder basis for addressing food security needs.
- ▲ The U.S. Government will better coordinate its assistance efforts with other donors, especially in the OECD, and with the European Union (through the Transatlantic Agenda), the U.S.-Japan Common Agenda, international financial institutions, and other multilateral organizations. As part of this effort, the U.S. Government will work toward defining and supporting those measures called for by the Marrakesh Decision on Measures Concerning the Least-Developed and Net Food Importing Countries (see also Chapter 2).
- ▲ As it is doing in the President's Greater Horn of Africa Initiative (GHAI), the U.S. Government will encourage governments to take responsibility for conflict prevention and resolution, while enhancing the ability of existing international mechanisms to address this area.
- ▲ The U.S. Government will work in conjunction with the governments of the 33 other democracies in the Western Hemisphere to implement the actions agreed to in the Second Summit of the Americas held in Santiago, Chile, in April 1998, which focused on the eradication of poverty in the region and on the reduction of hunger and malnutrition. ♦



2

Trade And Investment

Box 2.1

PRIVATE SECTOR INVESTMENT PROVIDES ECONOMIC SECURITY

Seventy-five miles north of Palembang, Indonesia, in the area known as Sungai Lilin, Cargill is investing in a palm plantation and building a palm oil plant to provide 8,500 villagers with steady income. When the project is complete and the plant is at full production, these villagers will be earning four times the region's minimum wage from the sale of palm fruit, in addition to any wages earned from working in the plant. The project supports the government's urban resettlement efforts to alleviate chronic urban crowding. The villagers working for Cargill have planted more than 1 million trees, including trees on their own land. Production from their own acreage directly nets income to them based on the world market price for palm oil. Sungai Lilin is becoming connected to the world economy. Crude oil from the mill will be sold into Indonesia or Malaysia or beyond. The remaining pulp is a renewable energy source. Cargill depends on the services and harvesting of the villagers, and they rely on Cargill for advice on harvesting and fertilizing. Said one villager, whose family moved from Java, "We had no land in Java. I like it here. We are farmers."

— CARGILL, INCORPORATED

1. PRIORITY

▲ Further liberalizing trade to ensure improved access to food

2. ISSUES

The World Food Summit Plan of Action recognizes that trade and investment are key elements in achieving world food security. Appropriate policies enable the private sector to participate in national markets, a participation that is fundamental to sustainable growth, development of human and physical capital, and food security.

Progressive implementation of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) will generate increasing opportunities for trade expansion, economic growth, and lower food prices to the benefit of many participants. In the new trade round, scheduled to begin in late 1999, the United States will work with countries to achieve freer trade and to assure that its benefits—increased incomes and a stable supply of food—are equitably realized. It is also recognized that some least-developed and net food-importing developing countries may experience short-term negative effects in availability of adequate supplies of basic foodstuffs from external sources on reasonable terms and conditions, including short-term difficulties in financing normal levels of commercial imports of basic foodstuffs. The United States is committed to addressing these special concerns.

Acknowledging the critical importance of increased investment to the

achievement of food security, the World Food Summit's Plan of Action maintains that appropriate national policies are essential to stimulating investment. The international community has a key role in supporting the adoption of national policies that stimulate international and domestic investment and, where necessary, in providing technical and financial assistance to help developing countries and countries with economies in transition achieve food security.

3. DISCUSSION

The United States contributes to global food security in its role as the largest supplier of agricultural commodities to the world market. According to the Food and Agriculture Organization (FAO) of the United Nations, world agricultural trade will be valued at \$270 billion in 1999, and the U.S. share of this total is estimated at about 23 percent. U.S. agricultural exports for fiscal year 1998 reached \$53.6 billion. Additionally, the United States is the third largest agricultural importer in the world. In fiscal year 1998, U.S. agricultural imports reached a record \$37 billion, with more than 50 percent coming from the developing world. Similarly, U.S. forestry and fishery imports totaled \$11 billion in fiscal year 1998, with more than half of this amount originating in developing countries.

To accomplish the Administration's aims, the United States must reaffirm its policies on trade liberalization by adequately funding the International Monetary Fund, securing fast track

THE FOOD SYSTEM APPROACH

Strong voices in the private sector argue that the best way for governments to securely and equitably meet rising food demand and changing consumption patterns is to move toward a “food system” approach that emphasizes removing barriers to international efficiency and cooperation.

Members of a food system would trade food at market prices with non-discriminatory access by all parties. They would cooperate in harmonizing regulatory regimes, developing infrastructure and transferring technology while emphasizing environmental sustainability in food production.

The Asia-Pacific Economic Cooperation (APEC) Business Advisory Council, which directly advises the leaders of 21 Pacific Rim economies, is developing a proposal that APEC become one food system in the near term. The Business and Industry Advisory Committee of the OECD is reviewing a proposal for an “Open and Efficient Global Food System.” This proposal supports an APEC food system as a step in building a global system.

— U.S. NATIONAL CENTER FOR APEC

negotiating authority, and assuring the reliability of U.S. supplies. The United States recognizes that meaningful trade liberalization requires effective financial, information, and government institutions, and it will continue to assist countries in developing the private sector capacity and institutions needed. Trade liberalization and structural adjustment may have short-term negative impacts on women and other vulnerable groups and on nutritional status in rural areas. Further research and analysis are needed to address these concerns. U.S. leadership in promoting intellectual property rights has resulted in significant multilateral and bilateral agreements, but many developing countries continue to lose the enormous contribution biotechnology can make toward alleviating malnutrition and productivity problems because of inadequate intellectual property protection. The U.S. Government will continue to address this issue.

Many businesses, NGOs, and academics would like food, agricultural products, food production inputs, and export guarantee programs to be exempt from all embargos and sanctions. They think that the unpredictability of sanction and embargo policies has undermined the competitiveness of U.S. agriculture and agribusiness by fostering concerns regarding our reliability as a supplier. The result, in their view, has been lost sales and lost markets. They believe that these policies also deny basic necessities to the most vulnerable of society in those nations where sanctions are imposed. The Administration agrees that provision of food and other human necessities should not be used as a tool of foreign policy except under extraordinary circumstances. There will be, however, cases where this general principle will not apply, such as armed conflict or international terrorism, and restrictions may be necessary.

Net private capital flows to developing countries rose sharply from \$43 billion in 1990 to \$184 billion in 1995. Foreign direct investment flows from the United States in 1995 were \$95.5 billion; however, many of the most food-insecure countries receive little of that total. Recognizing the vital contribution that access to the global trade and investment system has made to economic development in Asia and Latin America, the Administration supports passage of the African Growth and Opportunity Act. The Act will emphasize support for sub-Saharan African countries that are making strong efforts in three areas: trade and investment liberalization, investment in human resources, and improved policy management. U.S. Government policies and programs will be refocused to facilitate this initiative.

4. ACTIONS

To further strengthen efforts to assure that trade liberalization benefits are realized by low-income, food-deficit countries (LIFDCs):

▲ The United States is preparing for multilateral agricultural trade negotiations to begin in 1999 to continue the reform process agreed to in the Uruguay Round. Fast track negotiating authority is an important policy tool for the Administration to conduct these negotiations.

▲ In response to the Marrakesh Decision on Measures Concerning the LIFCs, the U.S. Government and other donor governments are renegotiating the Food Aid Convention to expand the list of products eligible for donation and the membership list, and to establish acceptable and feasible minimum food aid levels. (See Chapter 1 for other actions related to the Marrakesh Decision.)

▲ The Administration will seek enactment of the African Growth and Opportunity Act.

▲ The U.S. Government, working in close collaboration with the private sector, will seek to ensure that global trade in biotechnology products is free from non-scientifically based restrictions and protects the rights of privately developed technology while allowing the benefits of this technology to be shared among all countries to enhance food security. It will also seek to counter the use of non-tariff trade barriers that are not in compliance with the Sanitary and Phytosanitary Standards (SPS) Agreement of the World Trade Organization (WTO).

▲ The U.S. Government, through USDA, will expand the Cochran Fellowship Program to additional sub-Saharan African countries. The program helps develop agricultural infrastructure and agribusiness linkages by exposing senior and mid-level specialists and administrators from middle-income countries and emerging markets to U.S. expertise, goods, and services.

▲ The Department of State is incorporating an analysis of new instruments, such as the provisions of the Uruguay Round, into its training of Foreign Service Officers to enable more efficient use of these instruments.

▲ The U.S. Government, through USAID and its partners, will improve the collection of gender disaggregated data and routinely conduct gender analyses to verify that the benefits of trade liberalization are realized and to identify impediments to their full realization. As a part of this process, the Working Group on Women and the Global Economy of the President's Interagency Council on Women will produce a bibliography on the effects of globalization on women.

To catalyze U.S. private investment flows to low-income food-deficit countries:

▲ The U.S. Government will facilitate the establishment, possibly through a consortium of trade associations, of a "one-stop shop" for small- and medium-sized companies to acquire information on government programs to facilitate their business in food-insecure countries.

▲ The U.S. Government, through USDA, will facilitate a forum for leaders of private industry on ways in which businesses can contribute to food security.

▲ As part of its implementation of the Africa: Seeds of Hope Act, the U.S. Government will encourage new investment in African rural development through the Overseas Private Investment Corporation (OPIC).

▲ As part of its implementation of the African Growth and Opportunity Act, the U.S. Government will promote partnerships in agribusiness technology development, agricultural policy and related fields, and promote non-discriminatory access to these economic opportunities and their benefits.

▲ The U.S. Government and agribusiness firms will jointly organize and fund a series of agribusiness opportunity missions to encourage private sector joint ventures and investment in the food and agricultural sectors of targeted low-income, food-deficit countries of sub-Saharan Africa, the former Soviet Union, and Asia.

▲ The U.S. Government will promote public-private sector dialogue on developing sustainable regional and global food supplies in the next century; an example would be a more open food system in the Asia-Pacific region.

▲ The U.S. Government will continue to work toward the creation of a Free Trade Area of the Americas, a process begun at the First Summit of the Americas held in Miami in December 1994 and expected to be completed no later than 2005. ♦



3

Research and Education

Food security tomorrow depends on investment in research and education today. The range of research and educational needs relevant to achieving food security is broad, encompassing many physical, social, and life sciences and addressing agriculture, nutrition, economics, politics, family and gender, and numerous other elements of the food security equation. Knowledge transcends national boundaries. Research conducted in the United States benefits the United States and all other nations that produce food, use natural resources, and feed their populations. Similarly, the development in other countries of new crops or improved crop characteristics and innovations in food production and processing contributes to the productivity of U.S. producers and the welfare of American consumers.

Limited resources and population pressure are global problems that research and education can help solve. But research and innovation need effective education and extension programs to ensure that information can be used by those who need it: farmers, fishers, scientists, consumers/citizens, and policymakers. Information sharing among these groups contributes to the effective transmission and application of research. This chapter discusses some important domestic and international dimensions of food security-related research and education, recognizing that in nearly all cases there are overlapping interests and concerns.

Domestic Dimension

1. PRIORITIES

- ▲ **Generating effective research and investment by public and private partners in diverse research areas vital to the attainment of food security**
- ▲ **Promoting education critical to attaining food and nutrition security by linking research to education: through public/private partnerships, use of consistent messages, and effectively targeted programs**

2. ISSUES

A series of consultations held throughout the United States in 1997-98 led to identification of several key dimensions of food security. Each of these key elements is associated with a number of recommended research efforts and educational outreach activities that could contribute significantly to U.S. ability to achieve food and nutrition security and sustainable food systems. Priority areas identified for research and educational emphasis and referred to in the Actions section below include:

Economic security and human capital development. Expanded research and education on poverty, family economics, education and training, labor markets, economic development in urban and rural areas;

LINKING AGRICULTURE AND HEALTH: A FOOD SYSTEMS APPROACH

We see food security as involving not only access to "food" but, more importantly, access to foods of such composition and diversity as to provide adequate amounts of the many nutrients that people need. The dilemma comes from the fact that existing food systems have not been designed explicitly to provide balanced nutrient output for the support of human health and well-being. For this reason, we, in our Food Systems for Improved Health Program, are keenly interested in ways of bringing nutrition and health outcomes into agricultural research, policies and practices by using holistic, food systems-based approaches to address the linked needs of human health and environmental sustainability.

—CORNELL UNIVERSITY

research to identify and assist economically vulnerable people in becoming more self-reliant; and research to measure status and program impact.

Food and nutrition sciences. Basic and applied nutrition research and education, especially research concerning relationships among physiological and neurological development processes and nutrient intake, and the relationships among hunger, energy balance, obesity, diabetes, and other acute and chronic health conditions along with their economic and social costs. Research on healthy eating, food and resource management, and identification of methods to encourage healthful dietary choices and physical activity patterns, particularly among vulnerable populations. Finally, research to improve nutrition monitoring through improved survey and data collection techniques, measurement, and estimation procedures including longitudinal tracking to elucidate food security dynamics: relationships over time among income, racial and ethnic status, assistance programs, and sporadic, cyclical, and long-term food insecurity.

Food security and nutrition education. Enhanced education related to food and nutrition security includes ways of assisting food-insecure individuals, households, and communities to make the best use of limited resources, practice healthy dietary habits (including breast-feeding), reduce medical costs, and improve the quality of life. Also required is an expansion of public education to encompass the multiple dimensions of food security, including agricultural and nutrition research. Food security and nutrition education contributes to healthful diets; is essential for optimal growth, productivity and well-being; and can also reduce the risks, incidence, and costs associated with many chronic diseases. In keeping with the national commitment to increase the self-reliance of low-income Ameri-

cans, it is important to assist food-insecure Americans to manage food budgets and other household and community resources economically and effectively.

Productivity and sustainability of agricultural and aquacultural food systems and rural communities. The need for basic and applied research (including biotechnology) and education contributing to sustainable food system productivity growth includes research to identify environmentally sensitive agricultural, aquacultural, watershed, and fisheries practices, research to enhance the nutrient profile of foods and to reduce post-harvest food losses, research to identify improved risk management tools in production and marketing, research to assess impacts on food security and rural communities of increasing concentration in farm and agribusiness sectors, and research to understand the influence on food security, system productivity and sustainability of international trade policies, emerging information technologies, and biotechnology. Consultations particularly emphasized the need for research and education to enhance human capital, including the status and capacities of women and the viability of rural communities and small farms, considered important in the context of sustainable agriculture and food systems.

Food and water safety. Research to identify, understand, and mitigate food and water safety hazards from microbiological and chemical sources, improved risk assessment methods, improved food production and handling processes, and culturally appropriate, effective, and sensitive ways to communicate food safety information to different target audiences are priority areas for research and education.

Climate change and mitigation. Research on climate change, global warming, and the impact of climate vari-

ability on crop yields, water resources, and energy demands is called for along with research to identify mitigation strategies and effective educational efforts targeted to achieve them.

3. DISCUSSION

Assuring adequate investment in the wide array of food security-relevant research and education presents a formidable challenge. Despite the benefits it provides, agricultural and fisheries research accounts for a minuscule portion of the U.S. Government research budget. In 1994, U.S. Government agricultural research spending comprised only 2 percent of the \$66.5 billion in total government spending on research and development. That level has remained static since then; the private sector has generated any recent growth in agricultural research spending. Under-investment in research is surprising since the annual rate of return to society from public investment in agricultural research is estimated to exceed 35 percent.

Payoffs from investments in nutrition research also are likely to be high due to the significant links among diet, health, productivity, and medical costs. We know that food insecurity is often characterized by poor food consumption patterns (affecting both the quality and quantity of nutrients) and inferior nutritional status. These in turn contribute to low birth weight babies, slow growth and development of children, and reduced resistance to disease. Nutrition research conducted in the United States by the National Institutes of Health, the Agricultural Research Service, academia, and the private sector is essential to determine the relationship of nutrient intakes and diet to health status and disease risk. For nutrition research, the gap between investment and need appears especially wide. Federal funding of human nutrition research totaled only about \$540 mil-

lion in 1995, while the four leading diet-related causes of death in the United States cost as much as \$250 billion per year in direct health care costs and lost productivity. Cumulative, long-term consequences of chronic food insecurity and under-nutrition on the growth and learning capacity of children, the health and productivity of adults, the stability of families and societies, and migration patterns of refugees worldwide are of the utmost significance and not well understood.

One explanation for the lag in Federal and total investment in most aspects of food security research may be that Americans do not understand the need for it. Few Americans understand the complex nature of food security. Furthermore, although many Americans are aware that people in other countries suffer from hunger, they may not understand why, nor realize the extent of hunger and food insecurity in the United States itself. Any investment in food security research and education should be coupled with investment to enhance public understanding of the extent, causes, and consequences of food insecurity.

4. ACTIONS

To address the overall need for food security-relevant research:

▲ The U.S. Government will utilize research priority-setting processes and sponsorship methods. These methods will address the ongoing need to increase the productivity and economic security of individuals including females, families, communities, and the nation. Priority should be given to research that assists in the elimination of poverty, including that found in rural and remote areas, and disproportionately among female-headed households, and small and minority farmers.

▲ The U.S. Government, led by the U.S. Department of Commerce, USDA, and DHHS, will continue to support public-

sector agricultural, marine, and other food and nutrition related research. This research contributes to the productivity, efficiency, and long-term sustainability of U.S. farms, fisheries, and rural communities. These groups have important roles as major suppliers of food and nutrients to America and the world, as providers of income and rural amenities, and as the guardians of important values related to agrarianism that are important to American society.

▲ The U.S. Government, led by USDA and DHHS, will stimulate research on food systems and nutrition, including identification of the links among agricultural varieties and crop nutrient profiles and between food insecurity, nutritional status, race and ethnicity, health outcomes, and health care costs.

▲ The U.S. Government, led by USDA, will sponsor research studies to enhance access to and performance of food assistance programs for vulnerable individuals and groups including children, the elderly, and the homeless. These may include developing useful indicators of nutrient intake, diet quality, and food security for program targeting and evaluation; identifying barriers to participation; assessing impacts of electronic benefits transfer technology on food security and program participation and stigma; evaluating alternative assistance approaches and methods, including means to assure program integrity.

▲ The United States will support research to improve monitoring and understanding of food security and nutritional status including longitudinal measures of food security in conjunction with income and program participation to reveal dynamic interactions, relationships to cognitive and health outcomes, improved methods for survey sampling, design, data collection, and measurement procedures for high risk groups.

▲ The United States, led by DHHS, USDA, and the Department of Commerce, will generate research on

microbiological and chemical hazards in foods (including marine-based) and water from source to consumption and their health risks including development of cost-effective, rapid assay methods, understanding of pathogen resistance, safety technologies and best management practices including waste management and effluent control, and effective strategies for communicating safety information to relevant groups.

The Joint Institute for Food Safety Research will coordinate planning and priority-setting and will facilitate the translation of research into practice.

▲ The U.S. Government, led by the National Oceanic and Atmospheric Administration (NOAA), will sponsor research on climate change and weather variability. The USDA will sponsor research on the relationship between these phenomena and agricultural and fisheries production systems and practices, crop yields, and water, energy, and other resource uses.

To enhance the overall quality, quantity, and efficiency of conducting food security research, the U.S. Government will:

▲ Adopt research policies to generate the greatest social benefits by providing incentives for complementary research efforts in priority areas by public and private partners.

▲ Conduct or support basic research in agriculture, nutrition, natural resources and life sciences leading to improved productivity, enhanced nutritional and environmental quality, and enhancements in food and water safety.

▲ Implement mechanisms to expand protection for intellectual property rights to encourage privately funded research.

▲ Establish or facilitate cooperative partnerships and research networks to leverage and expand research resources including Cooperative Research and Development Agreements (CRADAs).

BUILDING AGRICULTURAL CAPACITY IN AFRICA

The Forum on Agricultural Resources Husbandry is an African-directed competitive grants program designed to strengthen the capacity of selected African universities to conduct field research and train graduate students in agriculture. The Forum invites proposals from faculty members who have Master of Science students in problem-oriented field research that is explicitly linked to a government agency, a farmer organization or some other user of research results. Proposals undergo peer review by a technical panel and are recommended for funding on a competitive basis by an advisory committee. Participants thus far include 90 students and 34 faculty from eight universities. Through workshops, newsletters, and e-mail networks the participants increasingly are becoming a collaborative African research community.

—THE ROCKEFELLER FOUNDATION

- ▲ Enhance support for competitive grants programs that support food security goals.

To promote food security and nutrition education, the United States will:

- ▲ Sponsor nutrition education research on how to encourage healthy food, nutrition, and physical activity behaviors.
- ▲ Establish a decisionmaking framework for development of public nutrition programs that incorporate information on the dietary choices and health, nutritional, and educational status of vulnerable groups.
- ▲ Encourage public-private cooperation to achieve consistency of dietary messages based on the *Dietary Guidelines for Americans*.
- ▲ Strengthen emphasis on nutrition education, health promotion, and resource management in food assistance programs and target high-risk groups, including immigrants, using social marketing techniques to reach them.
- ▲ Extend use of effective technologies, including the Internet, in nutrition education and promotion.
- ▲ Continue promotion and support of breastfeeding and raise awareness of its benefits among WIC participants, health care providers, and employers.
- ▲ Integrate food recovery, gleaning, and food safety in nutrition education programs. Include this integrated curriculum in food handler training programs and in home economic and life skills education programs.
- ▲ Teach awareness and benefits of agriculture, community gardening, food production, distribution and consumption in nutrition education programs.
- ▲ Strengthen emphasis on direct marketing opportunities for agricultural producers, particularly those located in urban areas, by providing them with information and training material on

integrated marketing strategies into production planning.

To better focus U.S. research efforts:

- ▲ The U.S. Government and the Land Grant and Sea Grant College systems will continue efforts to reduce duplication and strengthen complementarity of the public and private sectors in all areas of research and technology.
- ▲ The U.S. Government will cooperate with States, tribal, and local institutions, including nonprofit organizations, in complementary research efforts.
- ▲ The U.S. Government will encourage research to assess the effectiveness of community food security efforts.

International Dimension

1. PRIORITIES

- ▲ Adapting U.S. private sector expertise to conditions in developing countries
- ▲ Improving the research capacity of U.S. and international institutions and individuals
- ▲ Enhancing human capacity, particularly creating greater educational opportunity for women and girls

2. ISSUES

Improved agricultural and aquacultural productivity will become increasingly critical given current expectations of population and income growth and constraints on water and land. Agricultural research and extension provide the foundation for technological innovation and productivity growth. Government funding for research has been flat. Although private sector agricultural and food research is increasing, it is not necessarily a good substitute for public sector research, especially in terms of transferability to developing country environments.

There is a fundamental linkage between education and food security. Access to and quality of basic education are critical to improving productivity and nutrition and decreasing poverty in developing countries. Additionally, development of indigenous scientists and research institutions is necessary to transfer technology to developing countries and adapt it to local conditions.

For a more meaningful contribution, the United States wants to enhance technology transfer; promote better access to and adaptation of U.S. research; enhance developing country research capacity by building better links with U.S. universities and research institutes and by offering more postgraduate scholarships; improve the partnership between the public sector research system and International Research Centers; work at grass-roots levels to identify problems, solutions, and exchanges of information and practices; increase support for maternal education and health; and promote universal primary education, with a special focus on girls.

3. DISCUSSION

The foundation for an international agricultural research system has been laid. Many multilateral and bilateral activities and organizations facilitate the sharing of developed-country research results and expertise. The U.S. Government, along with OECD donors and other countries, supports a global research system, called the Consultative Group on International Agricultural Research (CGIAR), which encompasses 16 centers.¹⁰ CGIAR covers most areas of food production, resource management, food policy, and improvement of national research systems. Many U.S. university researchers and NGOs, however, would like to see more emphasis on such areas as: market creation; infrastructure and linked markets; implications of income disparity on food security, health, and nutrition; reduction of post-harvest losses; the gender dimensions of resource management and control, and their implications for productivity; household and community food security; and nutritional status.

Box 3.3

SASAKAWA–GLOBAL 2000 PROGRAM

The Carter Center's Global 2000 program was formed to help arrest, in rural areas of developing countries, the downward spiral of poverty, disease, hunger, and social injustice that could seriously threaten economic stability and world peace, as described by the Global 2000 report commission by former U.S. President Jimmy Carter during his administration. In 1986, President Carter, Global 2000, and the Sasakawa Africa Association created Sasakawa-Global 2000 (SG 2000) to contribute to the improvement of the standard of living of people through actions in favor of food self-reliance. SG 2000 has conducted agriculture initiatives in Benin, Burkina Faso, Ethiopia, Eritrea, Ghana, Guinea, Mali, Mozambique, Nigeria, Sudan, Tanzania, Togo, Uganda, and Zambia. Dr. Norman Borlaug, recipient of the 1970 Nobel Peace Prize for work in revolutionizing the agriculture of Asia and Latin America, directs the SG 2000 program. Working with subsistence farmers through national agricultural extension services, SG 2000 programs work closely with the Ministries of Agriculture to develop the best program specific to the area's resources, climate, and needs. Utilizing extension agents and test plots, they demonstrate increased yield through the use of better crop and soil management practices, improved seed varieties, fertilizer use, and proper storage and handling techniques.

—THE CARTER CENTER

¹⁰The following countries are members of the CGIAR: Australia, Austria, Bangladesh, Belgium, Brazil, Canada, China, Colombia, Cote D'Ivoire, Denmark, Egypt, Finland, France, Germany, India, Indonesia, Iran, Ireland, Italy, Japan, Kenya, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Nigeria, Norway, Pakistan, Peru, The Philippines, Portugal, Republic of South Africa, Romania, Russian Federation, Spain, Sweden, Switzerland, Syrian Arab Republic, Thailand, Uganda, United Kingdom, and the United States of America. Additional members include the Ford Foundation, International Development Research Centre, Kellogg Foundation, Rockefeller Foundation, African Development Bank, Arab Fund for Economic and Social Development, Asian Development Bank, European Commission, FAO, Inter-American Development Bank, International Forum on Agricultural Development, United Nations Development Program, United Nations Environment Program, and the World Bank.

Most developing countries have national agricultural research and extension systems in various stages of development and effectiveness. For the most part, these systems are seriously underfunded. U.S. foundations, which spend about \$50 million a year on international research, have been especially active in developing indigenous research capacity. U.S. companies, also, contribute importantly to adapting their advanced technologies to local production. USAID supports nine Collaborative Research Support Programs (CRSPs) to link U.S. agricultural universities to developing country research organizations.

The U.S. system of Land Grant Colleges and Federal research agencies gives the United States a research and outreach system that is a major contributor to the success of U.S. agriculture and fisheries. This system disseminates the research and technology flowing from the U.S. research system as well as provides a method of sharing it. Land Grant Colleges also contribute significantly in the postgraduate education of developing country graduates in agricultural sciences and nutrition.

Basic education, particularly for

Box 3.4

girls and women, contributes directly to food security, improved nutritional status, poverty reduction, and overall household welfare. Gender bias in access to education and training persists in many countries, especially at post-primary levels. USAID, U.S. NGOs, and the Peace Corps are forming partnerships with Ministries of Education, national and local organizations, religious communities, and the private sector to provide greater access to basic education for women and girls and to ensure improved rates of school attendance, retention, and completion. Apart from school, other opportunities to provide education include programs supported by maternal and child health clinics, which offer food, health care, and a host of educational services.

4. ACTIONS

To address the need for continued research:

▲ The U.S. Government will continue its support for public-sector agricultural and other food-related research dedicated to increasing the efficiency, productivity, safety, and long-term viability of U.S. agriculture and fisheries in their role as a major world supplier of food.

PROMISING PARTNERS FOR SWEET POTATOES

The Monsanto Company, the Kenyan Agricultural Research Institute, and the U.S. Agency for International Development (USAID) are collaborating to address production problems for one of the most important crops in Africa...the sweet potato. African yields of this highly nutritious food average half of world levels, due in part to virus infections.

Previously, research and development efforts that have been applied successfully to many temperate-climate crops did not focus on tropical "orphan" crops like the sweet potato. With funding from USAID and Monsanto, Kenyan scientists have developed genetically modified African varieties. At Monsanto labs, testing is underway to evaluate if these plants resist infection by African virus strains.

If successful, this technology could significantly reduce crop losses, which can be as high as 50 percent. Monsanto has granted a royalty-free license for the use of its proprietary technologies needed for improving sweet potatoes in Kenya.

—MONSANTO COMPANY

- ▲ The U.S. Government, through USAID and USDA, will continue to support international agriculture research institutes within CGIAR.
- ▲ The U.S. Government, through USAID, will continue to support international agricultural research through its CRSPs.

To better focus U.S. research efforts:

- ▲ The U.S. Government and the Land Grant and Sea Grant College systems will continue to reduce duplication and strengthen complementarity of the public and private sectors in the conduct of agricultural and fisheries research and technology.
- ▲ The U.S. Government, through USAID, will develop criteria for assessing research programs that include a focus on the gender dimensions of the food security problem and will apply these criteria for future resource allocation.

To expand and strengthen linkages of U.S. resources with the international community:

- ▲ The State Universities and Land Grant Colleges will continue efforts to internationalize curricula, extension programs, and research priorities. This

effort will include formation of effective partnerships with institutions of higher education, extension and research, and marketing organizations, including cooperatives, in developing countries.

- ▲ The U.S. Government, through USAID and USDA, will develop a plan, consistent with the Africa: Seeds of Hope Act, to coordinate the efforts of international agricultural research institutes, U.S. universities and research institutions, and African agricultural, research, and extension agencies.
- ▲ The U.S. Government, through USAID and USDA, will continue to promote exchange of scientists to develop a larger cadre of agricultural and fisheries scientists and educators in developing countries.

▲ The U.S. Government, in collaboration with the State Universities, Land Grant Colleges, Sea Grant University System, and private universities, will make available additional technical and institutional expertise to developing countries.

- ▲ The U.S. Government, through USAID and USDA, will join other interested parties in a public-private partnership to enable the Global Forum for Agricultural Research to share information and technology that will link NGOs, private sector agricultural research

Box 3.5

USAID CREATES AN EAST AFRICAN-OWNED AGRICULTURAL TECHNOLOGY AGENDA

USAID's investments in regional African research networks in East Africa paid off in 1998 with the finalization of a strategy by the partners and directors of the Association for Strengthening Agricultural Research in Eastern and Southern Africa (ASARECA). Supported by USAID's Africa and Global Bureaus for a number of years, four East African networks have had significant impact on speeding the adoption of new varieties and technologies across national frontiers for some time. In 1998, these four networks, together with a number of others, under the auspices of ASARECA, came up with rigorous plans to rationalize research, focus it even more on client and market needs, and integrate the work of international agricultural research centers and universities in the work they were doing. The result is a concentration of resources on the highest priority technical problems in the region and a new alliance of donors, African institutions, U.S. universities, and international research centers to solve the most pressing food problems of East Africa.

organizations, international agricultural and fisheries research centers, developing country national agricultural research systems, and U.S. public agricultural research institutions.

▲ The U.S. Government will support information and mapping systems on food insecurity (see Chapter 6).

To help develop human capacity:

▲ The U.S. Government, through USAID, will implement the President's Africa Education Initiative.

▲ The U.S. Government and U.S. NGOs will increase resources devoted to improving the education of girls and women.

▲ The U.S. Government and U.S. Land Grant Colleges will seek to provide additional postgraduate scholarships for foreign students in agricultural sciences, social sciences, and nutrition.

▲ The U.S. Government will continue to work with the governments of the other 33 democracies in the Western Hemisphere to ensure achievement by 2010 of the commitment to provide universal access to and completion of quality primary education for all children that was made during the First Summit of the Americas. ♦



4

Sustainable Food Systems and the Environment

Sustainable food systems have three interrelated components: environmental health, economic profitability, and social and economic equity. Understanding sustainability entails recognizing the important linkages that affect natural and human resources on the global, regional, and local levels.

In recent years, the interrelationships of the world's natural systems have become increasingly clear. We know that pollution from one country can end up in another country as acid rain or polluted river flows. Climate change is likewise a global phenomenon. Events like El Niño can affect both Californians and Australians significantly. In the same way, all countries have similar struggles to maintain and improve their natural resource base. In some countries the most significant problem may be sustainable use of limited water resources. In other countries it may be prevention of soil erosion or overgrazing, or reclamation of denuded land. Or it may be the removal of marginal lands from cultivation. The United States, because of its size and environmental diversity, faces all these challenges. Similarly, the challenges to the sustainability of human capacity and food systems are global. The strengthening of local communities and rural economies, whether in Alabama or in Mozambique, requires investments in long-term development, credit, and education. Sustainable communities, both human and natural, are essential to long-term food security. Without them, food insecurity today may end in famine tomorrow.

Domestic Dimension

1. PRIORITIES

- ▲ **Implementing environmentally sensitive policies and programs in all sectors**
- ▲ **Promoting conservation and protection of vulnerable ecosystems, including watersheds and coastal zones and soil, water, and air quality**
- ▲ **Enhancing local food systems through partnerships linking communities, farms, and markets**

2. ISSUES

Sustainable, ecologically sound agriculture, aquaculture, and fisheries ensure the ability of farmers and fishers to continue producing food indefinitely and to contribute significantly to sustainable food security. To be sustainable, food production practices and policies must meet the criteria of accepted farming practices, environmental stewardship, and quality of life. Environmentally sensitive policies aim to conserve soils, protect fragile lands, and protect watersheds.

All efforts to simultaneously expand agricultural and fishery productivity, conserve natural resources, maximize the nutritional quality of foods, and ensure the delivery of foods at a reason-

able cost present a major challenge. Agriculture accounts for over 50 percent of U.S. land use, 40 percent of freshwater withdrawals, and 80 percent of freshwater consumption. At the same time, agricultural production and runoff from farmland can pollute surface water and ground water, and harm wildlife and fisheries. To achieve sustainability in agriculture and aquaculture, expanded production must be balanced with the need to protect the environment.

Adding to the challenge are the prospects of global warming and climate change. These climate effects, together with other patterns such as the El Niño and La Niña oceanic and atmospheric effects, need to be studied in order to minimize possible adverse effects on agriculture, fisheries, and other sectors.

3. DISCUSSION

Environmentally sensitive agriculture keeps water clean and potable, builds soil fertility, controls pests with minimal chemical use, minimizes and mitigates adverse impacts of nutrient over-enrich-

ment, and maintains healthy air quality. At the same time, such agriculture makes full use of emerging technologies such as biotechnology that hold promise for increasing productivity as well as improving the nutritional content of foods. Tailored to site-specific requirements, sustainable agriculture satisfies food and fiber demand, enhances environmental quality and the natural resource base, and promotes efficient resource use—without jeopardizing the economic viability of farm and ranch operations or the vitality of the rural community.

Although farming systems vary, common themes and practices emerge among farmers who are using sustainable agricultural practices. These include greater use of on-farm, local, or management resources; restrained use of toxic inputs; resource conservation and pollution abatement; effective marketing, including direct marketing; on-farm research to identify successful approaches; and increased crop and landscape diversity.

Box 4.1

THE SUSTAINABLE AGRICULTURE RESEARCH AND EDUCATION PROGRAM (SARE): WORKING TOWARD AN ENDURING AMERICAN AGRICULTURE

SARE works to increase knowledge about—and help farmers adopt—practices that are economically viable, environmentally sound, and support local communities. To advance this knowledge nationwide, SARE administers a USDA-Cooperative State Research, Education, and Extension Service (CSREES) competitive grants program first authorized by Congress in 1988. Regional administrative councils recommend projects to be funded after proposals go through a technical peer review. These councils are made up of a diverse group of producers, consultants, academics, government staff, and representatives from non-governmental organizations.

Nationally, SARE devotes significant resources to outreach projects including a Professional Development Program and the Sustainable Agriculture Network (SAN), which disseminates information relevant to SARE and sustainable agriculture.

SARE's priorities include boosting profitability for farmers while encouraging environmentally sound practices; protecting natural resources; improving rural life; and enhancing communities.

Box 4.2

CONSERVING MARINE RESOURCES

In California, Commonweal, the Center for Marine Conservation, the Natural Resources Defense Council and the Environmental Defense Fund are working closely with the Pacific Coast Federation of Fisherman's Associations and United Anglers as well as state legislators and local fisher groups to develop a sustainable marine life management system. Reforms will be geared to the best available information, take into consideration the precautionary principle, and provide for a peer review process for key decisions.

Two important issues for the development and implementation of sustainable food production practices encompass: 1) farmland preservation because once land is developed for urban or industrial use, it rarely returns to agriculture; and 2) reduction of non-point-source pollution, because agricultural nutrient runoff can degrade watersheds and coastal waters. Nutrient over-enrichment can also lead to excessive algal growth or blooms that can result in fish kills and the closure of fishing areas. In addition, efforts should continue to protect environmentally sensitive lands and reduce soil erosion.

The "greenhouse effect" demands special attention. Cost-effective policies that help mitigate its causes and resulting climate changes should be explored and implemented where feasible. Over the short term, the adverse effects of weather variability on food production and availability can be moderated by increased use of climate forecasts based on the El Niño-Southern Oscillation phenomena, available up to a year in advance. The international community addressed global warming in the 1997 Kyoto Protocol to the 1992 Climate Change Treaty. The Kyoto Protocol asked 38 industrialized nations to reduce their greenhouse gas emissions to below 1990 levels by the year 2012.

Some development specialists believe that increasing consumer demands for organic and/or locally grown food may create new opportunities for sustainable and/or small-scale agricultural producers and revitalize local economies. Another focus is a national program to build sustainable fisheries in the United States, including prevention of over-fishing, replenishing over-fished stocks, avoiding overcapitalization and bycatch, and preserving fish habitats and environmentally sound aquaculture.

4. ACTIONS

To develop and implement flexible, environmentally sensitive agricultural policies, the United States, led by the USDA, will:

- ▲ Implement programs such as the Conservation Reserve Program (CRP) and the Wetlands Reserve Program (WRP) that protect fragile lands and reduce soil erosion, targeting programs to those lands that are the most environmentally sensitive and yield the greatest environmental benefits.
- ▲ Implement ecosystem and watershed management approaches to USDA policy development and research prioritization as described in the *USDA Ecosystem Approaches Action Plan*.
- ▲ Work with stakeholders to identify ways to minimize and mitigate effects of nutrient over-enrichment.
- ▲ Increase collaboration among government and civil society to strengthen understanding of the role of sustainable agriculture in food security.
- ▲ Develop ways to quantify agricultural sustainability, including indicators and measures of environmental goods and services.

To emphasize farmland protection policies and partnerships with States, tribal organizations, and communities, the United States, led by the USDA, will:

- ▲ Implement and expand on the requirements of the Farmland Protection Policy Act of 1981 and the Farmland Protection Program provisions of the Federal Agriculture Improvement and Reform Act of 1996.
- ▲ Monitor the conversion of farmland to other uses, and work to eliminate policy conflicts among Federal, State, and tribal agencies that can lead to farmland conversion.
- ▲ Support State, tribal, and local government incentives to landowners to retain land in agriculture and keep it affordable to attract new farmers.

THE FUTURE OF AGRICULTURE

The Henry A. Wallace Institute for Alternative Agriculture project is fostering the development of shared visions of what agriculture and food systems might look like in the future. The project will ultimately translate the local and regional visions for the future of our food and agriculture system into policies designed to promote a sustainable agriculture and food system.

To implement policies to mitigate global warming and climate change, the United States, led by the Department of Commerce/NOAA, will:

- ▲ Encourage States to implement incentives and actions to reduce greenhouse gas emissions, such as residential tax credits, home weatherization programs, home energy ratings systems, mortgages for energy-efficient improvements, new home building codes, and retrofits for government buildings.
- ▲ Increase the use of climate forecasts based on the El Niño-Southern Oscillation phenomena to mitigate the effects of these phenomena on crop yields, water resources, and energy demands.

To enhance the development of local food systems, the United States, led by USDA, will:

- ▲ Expand the WIC Farmers' Market Nutrition Program and similar efforts by other agencies that provide fresh fruits and vegetables to low-income households and promote small-scale farms.
- ▲ Begin coordinating the Small Farms Initiative and the Community Food Security Initiative to enhance the links between farmers and communities.
- ▲ Promote farmers' markets and other direct marketing opportunities for small and medium-sized farmers.
- ▲ Expand links among local institutional food services, such as cafeterias and restaurants, school lunch programs, and local sources of food.
- ▲ Encourage the growth of inner-city markets in areas that lack the income to attract and sustain supermarkets.
- ▲ Explore the expansion of Enterprise Zones/Empowerment Communities' rural projects that involve farmers' markets.

To develop a national program to build sustainable fisheries and sustain healthy coasts, the United States, led by the Department of Commerce/NOAA, will:

- ▲ Build sustainable fisheries by: maintaining healthy stocks and rebuilding stocks that have been over-fished through improved assessments and forecasts of fishery resources; managing for sustainable economic growth; ensuring compliance with regulations; addressing bycatch and overcapitalization; and providing research and services for fishery-dependent industries.
- ▲ Promote the development of economically healthy and environmentally sound aquaculture.
- ▲ Sustain healthy coasts by protecting, conserving, and restoring coastal habitats, promoting clean coastal waters, and encouraging well-planned, revitalized coastal communities.

International Dimension

1. PRIORITIES

- ▲ **Implementing the African Food Security Initiative**
- ▲ **Implementing the Africa: Seeds of Hope Act**
- ▲ **Achieving ratification of the Desertification and Biodiversity Treaties**

2. ISSUES

The World Food Summit recognized that sustainability is a key component of food security. The issue for the United States is how to assure that we fully integrate sustainability and environmental concerns into our food security efforts. The sustainability of human capital is an important component of overall sustainability goals. Since the majority of the world's farmers are women, more attention should be given to their situation.

3. DISCUSSION

The United States believes that solutions to the problems in agriculture, aquaculture, and rural development must be linked. We are addressing these issues in terms of developing human capacity, supporting local and regional food production that enables people to feed themselves or purchase food, providing support and assistance to small and resource-poor farms and fisheries, and recognizing the potential of urban agriculture and aquaculture. All these actions are targeted toward feeding hungry people and meeting the food and nutrition needs of food-insecure families. For example, USAID's rural development, enterprise, education, and population programs are specifically designed to promote sustainable development.

The actions listed below indicate guidelines that refocus the context in which the U.S. Government and U.S. civil society assistance programs will operate in the future. As noted in Chapter 1, the U.S. Government's development assistance programs will be increasingly allocated on the basis of performance against transparent results indicators for policy reform, investment promotion, gender equality, and improved food security. While policies are essential to establishing guidelines and creating a platform for change, policies alone will not ensure the security of food for communities and families. Securing food resources in most developing countries is a complex task involving numerous issues: status of environmental resources, the educational level of the people, population pressures, climate, competing economic and market forces, nutritional awareness, the availability of capital, diversified ownership of land and agricultural resources, local storage and processing capabilities as well as the local capacity to plan.

The Africa: Seeds of Hope Act of

1998 focuses on development activities carried out by USAID and its non-governmental partners that pertain to agriculture, small farmers, and microenterprise development, which are critical to reducing hunger and poverty. This Act complements the African Growth and Opportunity Act that the Administration strongly supports, and reinforces the positive messages of President Clinton's trip to Africa in 1998 and the Administration's efforts to focus attention on and build a new partnership with Africa.

Speaking at the United Nations in June 1997, President Clinton announced that the United States will provide at least \$1 billion over the next 5 years to collaborate with developing nations and countries in transition to reduce the threat of climate change. That announcement signaled a renewed U.S. Government commitment to help developing countries to achieve the goals of the U.N. Framework Convention on Climate Change (FCCC). Through a comprehensive program that will use USAID strengths—local presence, focus on local priorities, and experience in reconciling economic development and environmental management goals—the United States will lead the development assistance community toward greater cooperation in promoting an environmentally sound approach to sustainable development.

A broad range of issues need to be considered at the community level if communities and households are to be food secure. Appropriate support should be targeted to this level through locally based initiatives as well as broader institutional change and policy reform. The U.S. Government sponsors programs that help develop the capacities of local communities and rural organizations, including participatory farmer-initiated cooperatives and initiatives focused on alleviating the constraints that face women in access-

SUSTAINABLE COCOA

Chocolate comes from the cocoa tree. The cocoa tree is a rainforest tree that likes to grow in the shade of other trees. Traditionally, cocoa is grown under a shade canopy. The combination of the shade canopy and the cocoa tree understory make traditional cocoa farms appear like small forests. Today, most of the world's chocolate is produced by small farmers.

Mindful of the unique relationship between forest and farmer in the growth, cultivation, and production of cocoa and the dependence of the small cocoa producer on the health of the tropical environment for long-term economic well-being, Mars, Incorporated, provided funding to the Smithsonian Institution to convene the world's first sustainable cocoa workshop in Panama in April 1998.

The Consensus Statement issued at the workshop's conclusion unequivocally acknowledged that "traditional cocoa farming has the potential to be both an important source of sustainable income and a powerful conservation tool." Accordingly, collaborative partnerships between stakeholders and private industry are being formed to promote new environmental and economic opportunities offered by sustainable cocoa production.

— MARS, INCORPORATED

ing and controlling productive resources. The Peace Corps, for example, is addressing food security along with agriculture, health, environment, women in development, microenterprise development, and education.

The U.S. Government also promotes farmer, fisher, and civil society participation in planning and decisionmaking that affect local and regional food systems and agricultural production. Such programs include research and enhanced education and awareness programs in schools and local communities, leadership training, and business entrepreneurship opportunities. U.S. businesses, NGOs, and universities sponsor numerous sustainable agriculture projects.

The United States advocates the following national policies and actions to promote sustainable agriculture, fisheries, and sustainable food systems, with particular attention given to the constraints faced by women who play a focal role in natural resource management, and all aspects of the food system including production, distribution, and consumption:

- Develop human capacity as a central element in sustainability and rural development, including investment in women's productive capacity and removal of the constraints on women's increased productivity.
- Address social, economic, and environmental pressures on food systems.
- Formulate and implement programs that broaden dissemination of sustainable agriculture techniques by the U.S. Government, NGOs, and private industry. Included would be the development and adoption of integrated pest and nutrient management; crop diversification and rotational grazing; use of indigenous species; waste management, pollution prevention, and water quality; and improved and expanded training in sustainable agriculture and aquaculture.

- Promote, develop, and market environmentally sound agricultural and aquacultural technologies, including energy-efficient, low-cost, small-scale equipment and systems, for use by small-scale farmers and fishers in local and regional food systems.
- Improve access to information about appropriate and environmentally sound technology through public-private cooperation, public and private sector technology exchange initiatives, and market mechanisms.
- Support programs, such as the African Soil Fertility Initiative, that promote the conservation and restoration of soils through the application of technologies and economic policies to reverse soil degradation processes and remedy the problems of significant soil erosion.
- Promote and support agricultural policies, including the use of traditional crops and techniques, which have a beneficial impact on agrobiodiversity.
- Develop and improve, through joint public-private efforts, pollution prevention and source-reduction programs for agriculture and aquaculture, including actions to reduce risks to human health and the environment posed by pollution from chemical and toxic substances that persist in the environment.

4. ACTIONS

To support sustainable agricultural and aquacultural systems:

- ▲ The U.S. Government, through USAID, is implementing the African Food Security Initiative (AFSI). (See Chapter 1).
- ▲ The U.S. Government will implement the Africa: Seeds of Hope Act of 1998, which directs increased attention to agriculture and rural development in Africa.
- ▲ The U.S. Government will support information systems that identify food-insecure individuals and populations

and provide needed information to policy makers and service providers. (See Chapter 6).

▲ The U.S. Government, through USAID, will enhance environmental education and outreach to involve NGOs, the private sector, and governments in an effort to promote sustainable development.

▲ The U.S. Government, through USAID, will undertake a climate change initiative that will focus on three objectives:

- Decreasing the rate of growth in net greenhouse gas emissions by reducing emissions from greenhouse gas sources and maintaining or increasing greenhouse gas sinks;
- Increasing developing country and transition country participation in the U.N. FCCC; and
- Decreasing developing and transition country vulnerability to the threats posed by climate change.

▲ The U.S. Government, through the Peace Corps, will assess community-level needs in countries to strengthen local capacities in food security through a framework integrating agriculture, health, environment, women in development, microenterprise development, and education.

▲ The U.S. Government will focus resources on understanding the relationship of household decisionmaking

to women's status, environmental protection, nutritional status, and overall food security. The results will be incorporated into ongoing programs to promote food security.

▲ The U.S. Government will lead an international effort to remove land mines threatening civilians by 2010, with priorities based on socio-economic concerns. The U.S. Government will also continue to develop special programs for returning demined land to economic productivity and for promoting the delivery of food to people and markets.

▲ The U.S. Government, through NOAA, will strengthen efforts to implement the FAO Code of Conduct for Responsible Fisheries and will share U.S. expertise in fishery science and management to help assess the status of international fishery resources and related ecosystems.

▲ The Administration will continue its efforts to achieve Senate ratification of the Desertification Treaty and the Convention on Biological Diversity.

▲ The U.S. Government will continue to support the commitments to sustainable agricultural development agreed to in the Summit Conference on the "Sustainable Development of the Americas" held in Santa Cruz, Bolivia, in December 1996. ♦



5

Food Security Safety Net

Economic opportunity and security are the most important means of achieving food security. However, there are also instances where a food safety net is necessary, such as when food is unavailable from regular market sources because of economic problems, poverty, political and military conflicts, poor health, crop failures, or other reasons. The U.S. food security safety net, both at home and abroad, consists of a network of official government programs, non-governmental organizations (NGOs), and charitable organizations.

In the United States, the food security safety net includes food stamps, school feeding programs, surplus food distribution, food pantries, soup kitchens, home feeding for the elderly and home-bound, and many other efforts. Internationally, the U.S. role in maintaining a food safety net is mainly through emergency food aid and assistance. Increasingly, this food aid is administered by relief and development programs operated by NGOs. In both the domestic and international arenas, the safety net is intended as a short-term intervention in extreme circumstances to prevent hunger and not as a substitute for the regular market system. Food aid is also an efficient and productive way to use the U.S. agricultural bounty and it helps to support local farmers.

Domestic Dimension

1. PRIORITIES

- ▲ **Maintaining and strengthening an effective Federal food assistance safety net**
- ▲ **Enhancing access of vulnerable populations to food through multi-sectoral cooperation**
- ▲ **Strengthening community food security, including promoting food gleaning and recovery and supplemental feeding programs**

2. ISSUES

Recently released USDA estimates from the *Food Security Supplement to the Current Population Survey* indicate that about 12 percent of America's 100 million households experienced some

degree of food insecurity in 1995, with about 4 percent of U.S. households also experiencing reduced food intake and hunger. About 800,000 households included children with reduced food intake and hunger.

The U.S. Government spends about \$36.5 billion annually on domestic food assistance programs, and is committed to further improving the access of all Americans, especially vulnerable populations, to safe, nutritious food. The Federal Government works with States and communities to address community food system needs and to channel often-wasted sources of food to those who need it most. At the same time, the Government recognizes the importance of coupling food assistance with education on topics such as choosing nutritious diets, spending food dollars wisely, and gardening where practical.

It is important that food insecurity in the United States be carefully monitored as policy reforms and some assistance cut-backs are implemented. Recently, food banks and other non-profit organizations that provide emergency food assistance have reported increased demand for their services.

2. DISCUSSION

The U.S. Government has promoted food access and consumer education for more than 60 years, mainly through programs administered by USDA. These programs include the Food Stamp Program, the Child Nutrition Programs, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the Expanded Food and Nutrition Education Program (EFNEP), the Food Distribution Program on Indian Reservations, and other commodity and nutrition programs. In addition, USDA's Fund for Rural America, which has now been cancelled, provided competitive grants to promote gleaning and food recovery in 1997. The Administration has requested \$15 million for fiscal year 2000 to fund community food project grants.

Other Federal agencies also provide food assistance and support food security, often through collaborative efforts. The U.S. Department of the Interior's Bureau of Indian Affairs and its Office of Insular Affairs offer food assistance to American Indians and residents of U.S. Territories. The U.S. Department of Veterans Affairs provides nutritional support services to homeless veterans. At DHHS, programs that support food security, such as the Elderly Nutrition Programs and the Head Start program, are directed by its Administration for Children and Families, Administration on Aging, Indian Health Service, and Health Resources and Services Administration.

In addition to efforts by Federal, State, tribal, and local government agencies, non-profit groups, religious orga-

nizations, individual volunteers and others provide critical links in the domestic food safety net. Groups such as the Christian Relief Service, Second Harvest and its network of food banks, Share Our Strength, Foodchain, the Society of St. Andrews, the Famine Relief Fund, and Feed My People, among many others, provide food and technical assistance to low-income Americans and deepen the network of individuals dedicated to food security in the United States. For example, Second Harvest served approximately 21 million people and distributed 811 million pounds of food worth over \$1 billion in 1995.

Despite the effectiveness of these programs, certain groups continue to experience difficulty accessing the food they need. These groups include:

- The homeless, who may sleep in the streets or in emergency shelters, many of which provide no more than one daily meal. Soup kitchens are a primary source of meals for these persons, but negotiating this system to obtain adequate food can be a formidable, time-consuming task. Moreover, although homeless people are eligible for food stamps, they are extremely limited in their ability to store and prepare food, and very few restaurants accept food stamps.
- The working poor.
- Legal immigrants, many of whom are restricted from food stamp eligibility. In addition, non-working, able-bodied adults without dependents are now subject to time limits on receipt of food stamps.
- Children and adolescents, whose nutritional needs for growth and development are especially critical. Poor children may suffer from the gaps in the current service system. For example, while the National School Lunch Program (NSLP) is widely available, the School Breakfast Program is available in only 70 percent of NSLP schools and the Sum-

FEEDING HUNGRY CHILDREN IN HOUSTON

Kid-Care began in 1984 when Carol and Hurt Porter saw children in their neighborhood eating out of a trash dumpster. The Porters launched their "meals on wheels" program out of their own kitchen. Since its inception, this nationally recognized program has provided over 1 million meals to children in the Houston area. Currently, Kid-Care provides over 20,000 meals a month to children in poverty in Houston. But many more are still going hungry. Kid-Care, Inc. does all of this without government or United Way funding. In recent years, Texas Southern University has become involved in Kid-Care, Inc., through the efforts of Dr. Selina Ahmed and many of her students from the Department of Human Services and Consumer Sciences. They hope someday to help establish a national meals on wheels program for children based on the Kid-Care experience.

mer Food Service Program reaches only 14 percent of NSLP recipients.

- The elderly, who may experience health problems, poverty, and limitations in their ability to purchase, prepare, and ingest nutritious food. These difficulties heighten the risk of experiencing food insecurity. Experts expect this risk to rise significantly as the number of elderly people doubles and the number of those over 85 years of age quadruples by 2050.
- The immunocompromised, who may be at greater risk for infection, or who may be too ill to prepare nutritious food for themselves.
- American Indians and Alaska Natives living in remote locations. Additional obstacles result from high unemployment and high poverty rates. For example, while the 1995 unemployment rate for the entire U.S. population was 5.6 percent, it was 35 percent among American Indians living on or adjacent to reservations. Only 29 percent of those employed American Indians who lived on or near reservations earned annual wages of at least \$9,048.
- Rural populations and those living in remote areas.
- Migrant and seasonal farm workers. Low incomes and difficult working conditions limit the abilities of many in this group to buy and prepare adequate meals. Moreover, migrant labor camps are in rural areas and workers often lack transportation. This can limit their ability to buy varied, reasonably priced foods.

4. ACTIONS

To maintain an adequate food security safety net and enhance access to food for those at risk for food insecurity, the United States, led by USDA and DHHS, will:

- ▲ Work to secure funding for food assistance programs at levels that allow the programs to respond to changing

economic conditions and meet the needs of both the general population and specific special-needs groups. For instance, for fiscal year 2000, the Administration has requested a 33-percent increase in funds for WIC farmers' markets, a \$200 million increase in WIC overall, \$10 million to restore food stamp eligibility for elderly immigrants, and \$13 million for a school breakfast pilot program.

▲ Work to ensure that families leaving the welfare roles, or being diverted from welfare receipt, are aware of their continued eligibility for food assistance programs, and work to remove barriers to their participation in these programs.

▲ Identify ways to improve the current system to overcome food access barriers faced by populations at risk for food insecurity, including the homeless, the working poor, poor children, the elderly, and American Indians, Alaska Natives, and others who live in rural or remote areas.

To encourage State and local community groups to address hunger, food security, and community service needs and to coordinate their efforts, the United States, led by the USDA, will:

▲ Implement the Community Food Security Initiative.

▲ Involve and encourage local anti-hunger groups and multi-sectoral food security councils to help build community capacity to address food insecurity by assessing common needs and combining resources and approaches.

▲ Expand home delivery to the needy through partnerships between private food providers and local food assistance and volunteer organizations. Similarly, consider providing home food delivery programs to serve poor children outside school hours and during summers.

▲ Explore ways to coordinate public and private nutrition services. For

example, co-locate child care services and WIC clinics within subsidized housing projects.

▲ Create mobile farmers' markets to increase access to fresh produce by low-income women and children who live in remote and inner-city areas.

To increase food security, including attaining the national goal of boosting food recovery by 33 percent annually by the year 2000, the United States, led by USDA, will:

▲ Convene annual summits on food security aimed at building partnerships, assessing progress, addressing barriers, and sharing information.

▲ Encourage community-based food security efforts by providing technical assistance, encouraging public-private partnerships, and bringing national attention to such efforts.

▲ Increase public awareness of food waste and the importance of year-round gleaning, especially through USDA's food gleaning hot line (1-800-GLEAN-IT) and the *Citizen's Guide to Food Recovery* and publicize applicable U.S. tax incentives and the Good Samaritan Act to encourage food donations.

▲ Promote volunteer gleaning and food recovery activities.

To launch a community food security initiative designed to focus, coordinate, and multiply Federal efforts to reduce hunger and expand food security, the United States, led by USDA, will:

▲ Conduct a tour headed by the Secretary of Agriculture designed to focus attention on hunger and food insecurity.

▲ Continue to identify ways to reduce the incidence of hunger in the United States, strengthen the nutrition assistance safety net, eliminate the stigma of nutrition program participation, and increase public awareness of hunger here and abroad.

▲ Create a community hunger action kit, transform nutrition assistance into nutrition promotion and health enhancement programs, and expand the WIC Farmers' Market Program.

International Dimension

1. PRIORITIES

▲ Targeting a greater portion of food aid to the most needy in the most chronically food-insecure countries

▲ Developing and incorporating gender-sensitive analysis and policies into food aid programs

▲ Improving the efficiency and effectiveness of food aid programs

2. ISSUES

The World Food Summit encouraged donors to sharpen the focus of their food aid on the most chronically food-insecure countries and regions, provide an appropriate volume of food aid on the basis of need, establish incentives to encourage the best use of food aid, and strive to ensure that food assistance reaches those who have the most responsibility for household food security. The Summit also recognized that emergency food assistance does not lead to and cannot be substituted for sustainable food security.

In the 10 years from 1986 to 1996, worldwide U.S. Government food aid levels fell from 8.3 million tons annually to 3 million tons.¹¹ Global food aid shipments of major donors through the Food Aid Convention (FAC) declined from 11.6 million metric tons in 1990/91 to an estimated level of 5.1 million metric tons in 1996/97. Global food assistance in 1996/97 covered only 6.5 percent of the estimated total food imports of the world's Low-

¹¹During the 1980s, U.S. food aid averaged 6 million metric tons per year. FY1985 and FY1986 were higher due to the Sub-Saharan drought.

Income Food-Deficit Countries (LIFCs). Therefore, a concerted effort is needed to use available food assistance resources efficiently and effectively.

3. DISCUSSION

The U.S. Government is committed to improving its food aid programs by efficiently responding to emergencies and helping food-insecure populations reach the point where they can feed themselves. Food aid is both a flexible resource that can support food security in a variety of ways, and a specialized resource which requires careful consideration of programming circumstances.

Programming decisions are often constrained by the increasing need to respond to complex emergencies. Emergency relief constitutes a growing share of food aid resources while the proportion dedicated to development purposes that help to create long-term food security continues to decline. To the extent possible, the United States will use food aid during complex emergencies, in concert with other initiatives and programs, to address concerns such as conflict prevention and resolution, rehabilitation of infrastructure, and to bridge the relief-to-development continuum.

Box 5.2

Constrained budgets have resulted in sharp cuts in the amount of food assistance provided by major donors, including the United States. The decline in available food aid resources, however, does not signal a reduced need for assistance. On the contrary, the need is expected to double in the next 10 years. Accordingly, food aid must be fully integrated into the national food security plans and priorities of recipient countries and coordinated with other forms of assistance if it is to promote food security. This must include an understanding of the differential constraints and opportunities experienced by men and women in their need for and use of food assistance. The United States will also seek to address other key issues in food aid programming, including non-discriminatory distribution, nutritional impact, and dependency. The U.S. Government will seek to implement a range of actions that tighten the linkage of food aid programs to food security, enhance U.S. emergency humanitarian response capabilities, and strengthen international commitments to food assistance. A number of the actions listed below will be undertaken in collaboration with NGOs, international organizations, and the private sector.

MONETIZING FOOD AID

In Mozambique, Save the Children manages a project which is funded in part through the proceeds of a monetization program managed by a consortium of NGOs which, in addition to Save the Children, includes ADRA, Africare, CARE, Food for the Hungry International, and World Vision. Save the Children's project, located in Nampula Province, seeks to improve the food security of 5,000 families by reconstructing and maintaining 150 kilometers of farm-to-market roads, by raising agricultural production, and by promoting improved diets and health for children. Between 1997 and 2001, the largest portion of this project's cost, over \$5 million, will be made available through the sale of approximately 22,000 metric tons of wheat. Monetization provides Mozambique with an important imported commodity without draining the country's scarce foreign currency reserves. Through regular sales, monetization generates sufficient local currencies to operate large-scale development activities implemented by different NGOs participating in this consortium.

— SAVE THE CHILDREN

An increasingly higher proportion of U.S. food aid—75 percent in 1997 compared with 41 percent in 1990—is being channeled through targeted relief operations and development projects managed by NGOs and international organizations such as the World Food Program, rather than through government-to-government concessional sales/commodity grants for broad-based economic support. The United States is committed to building on these non-governmental partnerships, which are vital to the long-term success of food security programs.

The United States has begun discussions with participating countries through the Inter-Governmental Authority on Development (IGAD) on a code of conduct for food aid in the context of food security for the Horn of Africa. The draft IGAD code highlights the establishment of emergency preparedness and prevention strategies. Similarly, the United States has long supported the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS) and remains committed to improving the application of its Food Aid Charter in promoting West Africa's progress in agriculture and regional food security. The Southern Africa Development Conference (SADC) is also a strong candidate for partnership in discussions on improving food aid practices in that region.

Through the new Transatlantic Agenda with the European Union, the U.S. Government has agreed to jointly assist a number of developing countries in formulating national food security strategies and action plans. These plans include an ongoing analysis and justification of the appropriate role for food assistance. Similar dialogue is now underway through the U.S.-Japan Common Agenda.

Through the Greater Horn of Africa Initiative and similar efforts, the United States is pursuing with its implementing partners the use of food-for-work in

relief and post-emergency settings to support both saving lives and helping to rebuild essential infrastructure.

4. ACTIONS

To maximize the impact, efficiency, and effectiveness of its food assistance programs:

- ▲ The U.S. Government will give priority in its P.L. 83-480 programs to the most food-insecure countries, as well as those that promote market economy, gender equality, and food security policies.
- ▲ The Administration will seek authority to expand grant food aid provisions to cover inland transportation costs for:
 - countries in transition from crisis to development; and
 - least developed, net food importing countries.
- ▲ The United States will support ongoing efforts by the World Food Program and the FAO to develop and implement gender-sensitive analysis and policies in carrying out food assistance programs. The United States will review its own policies and programs to ensure gender consideration.
- ▲ The Administration will implement the Bill Emerson Humanitarian Trust, which strengthens the Food Security Commodity Reserve (FSCR) to better respond to unanticipated emergency needs.
- ▲ The Administration will seek authority to use Export Enhancement Program (EEP) funds uncommitted at the end of the fiscal year to purchase commodities, as appropriate, for replenishment of the Bill Emerson Humanitarian Trust.
- ▲ The U. S. Government will procure and pre-position small quantities of selected commodities in the United States for sudden overseas emergencies.
- ▲ The Administration will exercise, when appropriate, authorities under the Commodity Credit Corporation Charter Act to strengthen the capacity of the United States to respond to growing humanitarian food assistance needs.

To further strengthen coordination, especially at the country and regional levels, on the qualitative aspects of food aid:

- ▲ The U.S. Government will pursue regional and sub-regional food aid codes of conduct to engage food aid recipients with donors in developing preventive mechanisms to mitigate the increasing demands on international food aid, particularly in sub-Saharan Africa. These codes will feature:
 - development of common terms of reference for carrying out joint country food security assessments in order to achieve widespread consensus on individual country food security profiles that incorporate gender analysis;
 - better integration of food aid and other food security related objectives and resources;
 - development of coordinated, gender-integrated strategies for refugees and transition situations in given areas;
 - coordinated distribution to ensure optimum use of logistical resources and commercial networks, in cooperation with local traders and non-governmental organizations.

To implement the 1994 GATT Uruguay Round decision that donor nations will review the level of food aid commitments and their form:

- ▲ The United States is pursuing, in the appropriate international fora, the implementation of the 1994 Marrakesh Agreements and the 1996 Singapore World Trade Organization (WTO) Ministerial, which would consider expanding the list of products eligible for donation and establishing acceptable and feasible minimum levels of food aid. Specifically, the United States will:
 - encourage dialogue on improved, gender-disaggregated information systems and analytical frameworks to monitor the effects of trade liberalization;
 - continue to work with other major food exporting nations to assure reliability of supply to net food importers;
 - seek to ensure that the World Trade Organization is adequately funded;
 - continue to encourage an increase in the number of food aid donors and to broaden the commodity base to include a wider range of foodstuffs. ♦



6

Information and Mapping

Understanding where hunger exists, both geographically and socially, is an essential tool for decision makers. Both domestically and internationally, there is a dearth of information on community-level food insecurity. In developing countries, FAO estimates the prevalence of hunger and undernutrition according to inadequate food energy intake on a per capita basis and inadequate growth of children under the age of five. In the United States, where chronic undernutrition is less than 3 percent by FAO measures, new tools have recently been developed that measure food insecurity specifically.

Domestic Dimension

1. PRIORITY

▲ Monitoring changes in nutritional status and food security in a welfare-to-work environment through refined and comprehensive survey measures

2. ISSUES

Measuring and tracking changes in food insecurity, hunger, and malnutrition are essential to ensuring that actions taken to eliminate these problems are effective. To this end, the United States spends nearly \$155 million each year on the National Nutrition Monitoring and Related Research Program (NNMRRP). This program estimates nutritional and dietary status along with determinants and consequences.

During the past decade, the United States invested in the development of comprehensive measures of food security and hunger. In April 1995, the Food Security Supplement to the Current Population Survey included a series of questions designed to measure these

problems. This survey provides the first objective national estimates of the prevalence of food insecurity in the United States, with and without hunger. However, additional steps are needed to improve the quality and quantity of information gathered.

Gaps in the survey include that it lacks a community-level food security measurement component and does not measure the homeless and those living in shelters or institutions. Better coordination of Federal, State, tribal, and local monitoring activities would also be beneficial. In addition, the data from all surveys should be presented in a form that policymakers and the public can understand. Finally, the monitoring program needs to be refined so that it can track changes in nutritional status and food security in a welfare-to-work environment.

3. DISCUSSION

The NNMRRP, one of the most sophisticated nutrition and food security monitoring systems in the world, is a mosaic of interconnected Federal and State activities that provides information about the dietary, nutritional, and related

health status of people who live in the United States. The program also gathers information about the relationship between diet and health and the factors that affect dietary and nutritional status.

More than 20 Federal Government agencies currently cooperate under a 10-year comprehensive plan to monitor the Nation's dietary, nutritional, and food security status. Their work is coordinated by the Interagency Board for Nutrition Monitoring and Related Research (IBNMRR).

One of the most important products released so far under the NNMRRP is the September 1997 report on the first Food Security Supplement to the U.S. Current Population Survey. This survey measures U.S. food security at four levels:¹²

1. *Food secure*: Households with little or no evidence of food insecurity.
2. *Food insecure without hunger*: Household concerns and adjustments to food management (for example, reduced dietary quality) present evidence of food insecurity, but with little or no reported reduction in quantity of household members' food intake;
3. *Food insecure with hunger*: Households in which adults reduce food intake to the extent that they have experienced hunger. Such reductions are not reported among children in the household; and
4. *Food insecure with severe hunger*: Households in which both children and adults experience hunger.

The survey provides coordinated indicators that capture a range of poverty-linked food insecurity and hunger behaviors. The questions address food expenditures, food assistance program participation, food sufficiency and related concerns, food scarcity, and strategies for coping with food shortages. When viewed together, the answers to such questions help to indicate whether a household experi-

ences hunger and food insecurity.

This survey is the largest of its kind, in terms of number of households surveyed and number of questions asked. It represents a significant first step in providing a comprehensive evaluation of the food security of U.S. households, although continuing improvements are needed.

4. ACTIONS

To refine measures of food security, the United States will:

- ▲ Continue to develop standard indicators and survey instruments related to food consumption, food security, nutritional status, and participation in food assistance and other programs that involve Federal, State, local, and private partners.
- ▲ Develop measures of community food security.
- ▲ Provide leadership in developing an international dialogue on methodologies for measuring and interpreting food insecurity in both developed and developing countries and, where appropriate, urging international agencies to consider adopting U.S. methods for measuring food insecurity.

To monitor changes in nutritional status and food security in a welfare-to-work environment:

- ▲ The United States, led by DHHS and USDA, will regularly track U.S. food security by integrating standard U.S. food security questions into a broad spectrum of national, State, and local surveys, and assure the timeliness of those surveys.
- ▲ The United States will explore expanding through cooperative efforts the survey coverage of high-risk subgroups that are not easily sampled in national surveys, such as the homeless or American Indians living on reservations.
- ▲ Continue the work of the USDA/DHHS-led Welfare Reform, Nutrition, and Data Needs Working Group,

¹²Definitions of food insecurity and hunger can be found in the glossary

whose goals are to identify gaps in data collection systems, encourage use of comparable measures at all levels to assess progress, serve as a repository of nutrition survey efforts related to welfare reform, and foster interagency collaborative research in this area.

To improve Federal, State, tribal, and local coordination:

- ▲ The United States, led by DHHS and USDA, will continue to coordinate nutrition and food security monitoring activities, and make survey instruments and technical assistance available through the IBNMRR's member agencies.
- ▲ The United States will develop appropriate statistical procedures for providing State and local estimates with data gathered from relevant national or State surveys.
- ▲ The United States, led by USDA and DHHS, will encourage civil society to use standard methods to monitor food security, and develop protocols for collecting and aggregating information to increase its usefulness and credibility.
- ▲ The United States, led by USDA and DHHS, will continue work to develop a shorter version of the food security measurement scale for use in surveys with space, time, or financial constraints.

To enhance information for use by the public and policymakers, the United States will:

- ▲ Assess and report on the determinants and health outcomes related to food insecurity.
- ▲ Link survey planning and implementation to information needs, and ensure that monitoring programs provide information to policymakers in a timely manner.
- ▲ Fill major gaps in the coverage and timeliness of the Nation's information on the nutritional status of children and youth.

- ▲ Prepare periodic status reports on U.S. food security and nutritional status through joint efforts of civil society and government.

International Dimension

1. PRIORITY

- ▲ Improving regional and national information systems relevant to food security

2. ISSUES

Existing data systems relating to food insecurity and its causes are inadequate in a number of respects. Many developing countries, particularly in Africa, face multiple problems: data systems that are non-existent or in disrepair; insufficient institutional capacity for policymakers to utilize and analyze data effectively; poor access to technical and market information; insufficient information about women and children as well as other under-represented groups including racial, ethnic, and religious minorities; insufficient information on the effects of trade; agricultural extension systems, that, if they exist, lack close collaborative ties with farmers and the marketplace; and a lack of education and research capacity.

Although there are international information systems that provide early warning for food emergencies, public and private sector decision-makers at the local, national, and regional levels need an adequate information base to identify solutions to structural food insecurity problems and to monitor their implementation. Accurate, timely information is an essential aspect of good governance and economic growth and is a critical decisionmaking tool.

3. DISCUSSION

The *World Food Summit Plan of Action* recognized the constraints that poor access to information poses to global food security. Countries participating in the Summit committed to addressing these constraints, including efforts to "develop...a food insecurity and vulnerability information and mapping system [to] indicate areas and populations...affected by or at risk of hunger and malnutrition, and elements contributing to food insecurity"; to "promote sustainable systems for the dissemination and extension of research results"; and to "strengthen... skills development and extension systems."

FAO and USAID currently operate early warning systems. The United States and several other donors have been working closely with the FAO and other United Nations agencies to establish a functional food insecurity and vulnerability information and mapping system (FIVIMS) which will identify numbers of people at risk of suffering from undernutrition and malnutrition. In addition, USAID is modifying the guidelines for its Collaborative Research Support Programs (CRSPs) to require greater electronic dissemination of results and international academic linkages. USAID is also collaborating with the government of Italy to support the efforts of the Inter-Governmental Authority on Development (IGAD) to design a Regional Integrated Information System for the Countries of the Horn of Africa. The World Bank has launched a Rural Development Initiative that emphasizes giving smallholders access to service, knowledge, and technology, and rehabilitating national information systems.

The recent El Niño event increased awareness of the opportunities for and the value of climate forecasts, leading the developed nations to agree to establish an International Research Institute to work on these issues. For many

years, the National Aeronautics and Space Administration (NASA) has collected several types of Earth-observing satellite data. NASA will make these archives available through the Internet.

4. ACTIONS

To increase the levels of information available on food security:

- ▲ The U.S. Government, through USAID, will work with and through regional and sub-regional institutions and their member states to improve the capacity of their information systems relevant to food security, including their capacity to monitor and measure food insecurity and vulnerability on a disaggregated basis, including specific data on gender, household, local, regional, and minority populations' food security.
- ▲ The U.S. Government will make relevant unclassified satellite and Geographic Information System (GIS) databases available to food-insecure countries, international organizations, and civil society. NASA will make a global archive of vegetation data available through the Internet as part of the Global Pathfinder Continuation project. USAID will work to increase the access of less developed countries to the Internet and NASA data bases.

To improve the ability of decision-makers at the national, international, and donor level:

- ▲ The U.S. Government will join with other countries to support development of FIVIMS that meet the needs of users and generate reliable information for decision-makers at both national and regional levels.
- ▲ The U.S. Government, through USAID, will work toward developing a unified international early warning system with global coverage that is oriented around national early warning systems, including capacity-building in sub-regional organizations. It will also make early warning information more

accessible and useful to private sector users in the developing countries.

▲ Through the International Research Institute (IRI), the U.S. Government will support the enhancement of global early warning information products, with climate forecasts targeted on less-developed-country regions.

▲ The U.S. Government, through USAID, will encourage the Consultative Group on International Agricultural Research (CGIAR) to develop strategic, gender-disaggregated data bases, to convert existing center data holdings into a compatible protocol, and to disseminate both to food-insecure countries. ♦



7

Food and Water Safety

Safe food and water, free from chemical and biological contaminants, are essential for food security. Food- and waterborne diseases are increasingly common. U.S. research on food safety can also be of great usefulness in foreign nations. The U.S. concern about the safety of foreign-produced food stems not only from broad humanitarian concerns, but also from the Government's commitment to maintaining the safety of food imported for consumption in the United States. At the same time, reducing post-harvest losses and improving the reliability of stored food supplies helps avoid significant waste resulting from contamination, infestation, and spoilage, and maximizes the nutritional benefits and amounts available to consumers.

Domestic Dimension

1. PRIORITIES

- ▲ Assuring the safety of domestically produced and imported foods and of water supplies by implementing recent initiatives, involving all stakeholders
- ▲ Educating consumers, preparers, handlers, producers, and transporters of food about ways they can contribute to ensuring the safety of the food supply

2. ISSUES

Safe food and drinking water are essential not only to achieving food security, but to maintaining physical health and economic productivity as well. Although U.S. food and water supplies are among the safest in the world, foodborne illness strikes as many as 33 million Americans each year and results in some 9,000 deaths. Medical costs and productivity losses related to foodborne pathogens are estimated to be as high as \$34.9 billion each year.

Concerns about food and water safety affect all consumers. However, certain groups, such as the homeless, children, the elderly, American Indians, Alaska Natives, immunocompromised individuals, and migrant farm workers may be especially at risk for food- and waterborne illness. Broad prevention strategies, including regulation, education, and research, are critical to ensuring food safety at each step in the food chain.

3. DISCUSSION

Food- and waterborne illnesses result from two types of causes: microbial contamination and acute exposure to harmful substances such as pesticides or other toxic substances. Although concern about these illnesses affects all consumers, certain groups face special obstacles to obtaining safe food and water. These groups include:

- The homeless, who often face unique problems in avoiding food- and waterborne illnesses due to lack of refrigeration, cooking facilities, and wholesome food.

- Children, who are more vulnerable to contaminants for two reasons: their bodies are growing rapidly and they consume proportionately more fruits, vegetables, water, and milk than adults do; developing fetuses may also be affected by toxic chemicals, pathogen infections, and pathogen toxins consumed by their mothers.
- The elderly, especially those affected by degenerative diseases, who may be less able to practice safe food handling and may be less resistant to foodborne illness.
- American Indians and Alaska Natives, who consume proportionately more fish and game than other populations do. Because these food sources may be contaminated by agricultural or industrial pollution, the resulting food safety concerns may increase the risk of food insecurity among these two groups.

Recognition of growth in concern about these public health problems has prompted new efforts to protect consumers from food- and waterborne illnesses. These efforts include:

- **President's Council on Food Safety.** This Council was established in 1998 to develop a comprehensive strategic Federal food safety plan; advise agencies of priority areas for investment in food safety; ensure that Federal agencies annually develop coordinated food safety budgets for submission to the Office of Management and Budget; and ensure that the joint Institute for Food Safety Research establishes a mechanism to guide Federal research efforts toward the highest priority food safety needs.
- **National Food Safety Initiative.** Launched in 1997, this Presidential initiative calls for a nationwide early-warning system for foodborne illness, increased inspections for

major higher-risk foods, and expanded food safety research, training, and education.

- **Food Quality Protection Act of 1996.** This law substantially strengthens the U.S. pesticide regulatory system, and gives both the U.S. Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) unprecedented opportunities to provide greater health and environmental protection to vulnerable groups, especially infants and children. The law establishes a single, health-based standard for all pesticide residues in food, and provides a more complete assessment of potential risks. Included in the law are special protections for potentially sensitive groups, such as infants and children.

- **Safe Drinking Water Act Amendments of 1996.** These changes will assure the continued availability of safe drinking water. The amendments increase State flexibility in addressing water safety problems, allow water treatment systems to make more efficient investments in water treatment and quality, and strengthen EPA's ability to regulate water quality by allowing the agency to factor risk and cost-benefit considerations into setting drinking water standards.

4. ACTIONS

To implement the President's National Food Safety Initiative, the U.S. Government will:

- ▲ Enhance surveillance and build an early warning system to detect and respond to outbreaks of foodborne illness and to collect data to prevent future outbreaks.
- ▲ Improve responses to foodborne illness outbreaks by improving intergovernmental coordination and strengthening State and tribal health agency infrastructure.

Box 7.1**INTEGRATED PEST MANAGEMENT**

Pesticide Action Network works to promote the use of integrated pest management and to advocate government and international financial institution policies that build on integrated pest management methods by holding workshops for farmers, legislators, and consumers.

- ▲ Improve risk assessment to characterize more effectively the nature and magnitude of risks to human health associated with foodborne hazards to help regulators allocate resources appropriately.
- ▲ Formulate new methods for rapid, cost-effective testing for the presence of pathogens in foods, improve scientific understanding of how pathogens develop resistance to treatment, and develop technologies to prevent and control pathogens.
- ▲ Improve food production systems through preventive controls for foods, such as seafood, fruit and vegetable juices, egg products, and produce.

To implement the Food Quality Protection Act (FQPA) of 1996:

- ▲ The U.S. Government, led by EPA, will reassess current pesticide residue limits in accordance with the new, consistent, health-based safety standard and will consider available information on aggregate pesticide exposure from all non-occupational sources.
- ▲ The U.S. Government, led by DHHS and USDA in consultation with EPA, will conduct surveys of dietary exposure to pesticide residues among infants and children.

▲ The U.S. Government, through EPA, will apply the FQPA safety factor, where appropriate, as a way of assuring an extra measure of protection for infants and children in cases where special sensitivity or exposure for these sub-groups is identified.

▲ The U.S. Government, led by EPA in consultation with USDA and DHHS, will publish a yearly "consumer right-to-know" brochure containing information aimed at the general public concerning the risks and benefits of pesticide chemical residues in or on food purchased by consumers, and will distribute it in supermarkets and grocery stores.

▲ The U.S. Government, through EPA, will expedite approval of safer

pesticides and will develop effective but safer crop protection tools for use by American farmers.

To implement the Safe Drinking Water Act Amendments of 1996 and to support related efforts, the United States will:

- ▲ Require local water authorities to provide annual disclosures of the chemicals and bacteria present in drinking water, and improve the 24-hour notification process that takes effect when dangerous contaminants are discovered.
- ▲ Strengthen pollution prevention efforts by assessing threats to and providing funding for State water protection efforts and by enforcing new requirements for State water system capacity development and operator certification programs.
- ▲ Improve badly deteriorating water systems throughout the country and strengthen State drinking water protection programs.
- ▲ Expand the voluntary, cooperative Partnership for Safe Water between EPA, the American Water Works Association, other drinking water organizations, and surface water utilities.

To promote integrated pest management (IPM), the United States, led by USDA and EPA, will:

- ▲ Increase the use of IPM and strategies to significantly reduce the use and potential risks of synthetic chemical pesticides.
- ▲ Achieve USDA's goal of bringing 75 percent of U.S. crop acreage under IPM by 2000.
- ▲ Continue to promote the Pesticide Environmental Stewardship Program (PESP), a public-private partnership in which utilities and grower groups jointly develop and implement programs that reduce pesticide risks and use.

HEALTH AND SANITATION IN ECUADOR

The Rotary Club of Salinas, Ecuador, and the Rotary Clubs of Roseburg, Greater Albany, Sweet Home, and Lebanon in Oregon, USA, conceived and developed a project in response to critical public health needs. With the help of a 3-H Grant from the Rotary Foundation they were able to provide clean drinking water and sanitation for 21 villages (some 4,000 people), develop a public health infrastructure in each participating village, reduce by 20 percent the monthly case rate for severe diarrheal illness, eradicate cholera, and eliminate open dumps and litter-filled ravines.

— ROTARY INTERNATIONAL

To promote food safety education, the United States will:

- ▲ Use the Partnership for Food Safety Education to develop science-based, consumer-oriented messages that promote safe food handling practices. The partners in this effort include the U.S. Departments of Health and Human Services, Agriculture, and Education, along with representatives of State agencies, food industry groups, and consumer groups.
- ▲ Increase collaboration among governmental groups and civil society to identify and change unsafe food-handling practices by targeting handlers throughout the foodchain, especially those who provide food to vulnerable groups.
- ▲ Expand food safety education at each point in the foodchain, including for food preparers.
- ▲ Incorporate food safety education into school curricula and programs.
- ▲ Encourage the establishment of a volunteer-based food safety outreach program aimed at homebound persons.
- ▲ Improve food safety education at veterinary and agricultural colleges, and strengthen programs designed to educate producers, veterinarians, and regulators about proper animal drug use and food quality assurance programs.
- ▲ Increase funding for USDA's Food Safety and Quality National Research Initiative Competitive Grants Program, which supports education to help reduce foodborne illnesses and increase knowledge of food-related risks.

and waterborne diseases pose a serious health threat. Broad strategies need to be pursued to prevent food and water contamination, including regulation and producer and consumer education. All are critical in assuring food and water safety—from production to household preparation and consumption. Contaminated food and drinking water are a major vehicle for cholera and other diseases. Contamination of stored food by rodents, fungi, or bacteria also poses a serious threat to stable food supplies and is a significant source of post-harvest losses in some areas of the world. Additionally, nutrient over-enrichment can result in algal blooms toxic to fish, shell fish, and humans.

3. DISCUSSION

The United States has several different interests in international food and water safety. The first pertains to the safety of foods consumed in the United States and to maintaining appropriate standards for the safety of internationally traded food and water products. The second is a humanitarian concern for the health and well-being of foreign populations and their access to safe and clean food and water. The third is the safety and reliability of stored food supplies, both food aid and local products; this contributes directly to the effectiveness of our foreign assistance and the stability of local food supplies. The loss of stored grain to insects, rodents, and molds is a serious problem, particularly in hot, humid climates such as those that exist in parts of Africa and Asia.

Currently, the U.S. Government has several initiatives and programs to address these issues:

- In 1997, the President announced the National Food Safety Initiative to ensure the safety of the U.S. food supply through the enactment of preventive measures to minimize foodborne illnesses. He directed DHHS, USDA, and EPA to work col-

International Dimension

1. PRIORITY

▲ Supporting the work of the Codex Alimentarius Commission

2. ISSUES

Safe food and water for human consumption are essential requirements for food security. Internationally, food-

laboratively toward improving the safety of fresh fruits and vegetables through good agricultural practices and accelerated research. They are charged with expanding inspection and compliance efforts through science-based applications; enhancing surveillance and investigation to improve outbreak response; accelerating food safety research efforts; improving capacity to estimate risks associated with foodborne hazards; and strengthening coordination and improving efficiency.

- The U.S. Government supports the FAO/World Health Organization (WHO) Codex Alimentarius Commission, which establishes international standards, codes of practice, guidelines, and other instruments relative to food safety, inspection, quality, certification, and labeling. Codex texts have become one of the international benchmarks for trade under the WTO's Sanitary and Phytosanitary Measures (SPS) Agreement.
- USAID, in cooperation with the DHHS/Centers for Disease Control and Prevention, sponsors assistance programs to address food safety and sanitation issues.

4. ACTIONS

To promote food safety in international trade:

▲ The U.S. Government, through DHHS in cooperation with USDA, the Department of State, and the U.S. Trade Representative, will develop technical assistance and targeted programs for domestic and foreign growers and producers to promote good agricultural and manufacturing practices for fresh

fruits and vegetables in order to minimize microbial hazards.

▲ The U.S. Government will continue to support science-based activities in the Codex Alimentarius, Office of International Epizootics, and the International Plant Protection Convention, in order to promote food, plant, and animal safety and fair trade.

▲ The U.S. Government will continue to support and collaborate in international activities, through Codex, WHO, and FAO, to educate growers and consumers about microbial hazards, good agricultural practices, and proper food handling and preparation methods.

In order to assist foreign nations to improve their own food and water safety:

▲ The U.S. Government, through USAID, will continue to support post-harvest interventions, including agribusiness development, which will increase food safety and promote better conservation with reduced losses in quality.

▲ The United States will continue to support the efforts of the Global Water Partnership and international organizations that promote strong national water policies and best practices in water quality management.

▲ The U.S. Government, through USDA in cooperation with other government agencies, will expand its technical assistance to foreign nations to help them meet their WTO obligations on SPS.

▲ The U.S. Government, through USAID, will continue to support the provision of basic health care, water, sanitation, and other services that reduce infectious disease incidence, especially in vulnerable populations. ♦

APPENDIX A

A MODEL FOR HALVING WORLD HUNGER¹

Although many more people are food secure today than at any time this century, the problem of hunger, even in highly developed countries, is persistent. Solutions are expensive, but affordable. Coordination among donors and consistency in approach are critical to the success of any strategy.

In 1996, the U.N. Food and Agriculture Organization (FAO) estimated that an annual investment in the agriculture sector of \$170 billion from public and private sources would be needed to achieve the World Food Summit target of reducing the number of undernourished by half by 2015. This estimate represents a 25-percent increase over current investment levels. To meet the FAO projection, official development assistance (ODA) in agriculture from all donors would need to increase by \$6 billion a year.

As part of the preparation of the *U.S. Action Plan on Food Security*, USAID commissioned a separate study on the projected cost of meeting the World Food Summit target and a strategy for reaching this goal. The study, completed in mid 1998, focused on a potential framework for ODA investments and estimated that the target could be reached with additional global ODA of \$2.6 billion annually, as compared to the FAO's estimate of \$6 billion annually. The purpose of this appendix is to present the analysis and conclusions of the study as a springboard for future work.

THE COST OF MEETING THE WORLD FOOD SUMMIT TARGET

The FAO estimate of the cost of reducing global hunger by half by 2015, based on its "World Agriculture: Towards 2010," presents an economic growth framework. The study estimates that a \$166 billion annual investment from public and private sources is required — \$86 billion in primary agricultural production (including irrigation), \$43 billion in the post-production sector, and \$41 billion in public expenditures in research, extension, and infrastructure (of which \$6 billion would be shifted within existing rates of infrastructure investment from urban to rural areas). The current investment level is approximately \$144 billion — \$77 billion for primary agricultural production, \$34 billion for post-production, and \$30 billion in public expenditures (\$10 billion for research and \$20 for rural infrastructure). Additional investment, primarily public investment and ODA, in the poorest developing countries is needed to meet the Summit target.

The USAID consultant's study establishes a targeted framework for ODA based on the specific causes of chronic undernutrition in several regions and the relative cost effectiveness of development assistance today. Table 1 illustrates the relative costs of selected interventions. The consultant looked at four different investment models: cost minimization; equal distribution of beneficiaries; no progress in policy reform or reduction in the incidence of violent conflict; and equity and geographic balance. Using the last scenario and assuming current donor investment levels of approximately \$60 billion per year until 2015, an additional annual global ODA expenditure of \$2.6 billion would make it possible to reach the World Food Sum-

¹This appendix is based on the findings of a 1998 report commissioned by USAID and prepared by Abt Associates (Stryker and Metzel), entitled, "Meeting the World Food Summit Target".

TABLE 1

The Regional Cost of Reducing Undernutrition (US\$/Person)

Intervention	E/SE Asia	South Asia	SS Africa
Rural Roads	390	1162	249
Agricultural Research	262	75	312
Safe Water	586	236	1021
Targeted Income-Increasing Assistance	571	347	961
Women's Education	114	49	130

mit target. The approximately \$43 billion total over 16 years would be optimally distributed as follows: At the national level, meeting the Summit target would involve preventing or reducing the existing levels of violent conflict that exist today (\$500 million, particularly in Africa), promoting democracy and good governance (\$1.7 billion), and programs in Africa and South Asia that enable governments in all regions to increase the openness of their economic systems and to reduce food tariffs (\$2 billion). At the sectoral level, it would involve investing in agricultural technology transfer, research and extension, and education (\$27.6 billion, especially in sub-Saharan Africa), and rural infrastructure (\$1.2 billion). And, at the household level, it would involve targeted programs for the poor, women's education, and increasing access to safe water (\$10.4 billion, especially in South Asia).

CONSULTANT'S FRAMEWORK

The Geography of Hunger

The greatest numbers of undernourished people are in south, east, and southeast Asia, and sub-Saharan Africa. Food insecurity, measured in terms of availability of kilocalories per capita per day, is most severe in sub-Saharan Africa, followed by South Asia. In all regions, food insecurity is directly related to income – the less money families have, the more food insecure they tend to be.

In South Asia, which has the highest numbers of undernourished in the world, the problem stems in large part from several interrelated factors, including deep poverty among the rural landless and other particularly vulnerable groups, which limits adequate access to food; low education and social status of women, which limits their control over the distribution of food within the household affecting the food security of women and children; and high population density combined with a humid monsoon climate and poor access to safe water and sanitation, which leads to poor health and inhibits the utilization of the food that is available.

In sub-Saharan Africa, hunger is caused by low food availability and poverty, especially in the war-torn and least developed countries. A lack of education and poor health are contributing factors.

East and Southeast Asia enjoy generally high food availability, high per capita real GDP, and low levels of poverty in relation to other regions. Women's education and social status are generally better, and there is greater access to safe water and sanitation. Furthermore, the evidence suggests that undernutrition is decreasing, both absolutely and in relation to the total population. Thus, chronic food insecurity in east Asia is centered in a few countries that have yet to partake fully in the growth process. The recent financial crisis has caused serious transitory food insecurity, but is not expected to have a long-run adverse impact on undernutrition in the region.

In Latin America, the Caribbean, and most other areas of the world, food availability is generally adequate. Per capita income is much higher than in other developing countries, but there are significant pockets of poverty, which may suggest the presence of undernutrition. In addition, while female illiteracy is relatively low within Latin America and the Caribbean, it is quite high in many other areas, indicating the possibility of undernutrition within households.

Levels of Interventions

The different levels at which interventions to alleviate hunger and undernutrition can be undertaken are global, national, sectoral, and household. Some examples are illustrated in Table 3.

TABLE 2:
Level of Investment Impact by Region

Region Investment	East/Southeast Asia	South Asia	War-Torn Sub-Saharan Africa	Rest of Sub-Saharan Africa
Reduced Levels of Conflict				
Increased Levels of Democracy				
Increased Openness of Economy				
Reduced Barriers to Food Trade				
Increased Rural Infrastructure				
Increased Transfer and Development of Agricultural Technology				
Targeted Programs to the Poor (e.g., women's education, access to safe water)				

KEY

- Very Important Impact
- Important Impact
- Somewhat Important Impact
- Some Impact
- Small Impact

At the global level, an important requirement is to produce sufficient food to feed the world's population adequately. It is also important that global markets and other institutions operate effectively to permit food to move reliably from areas of surplus to areas of deficit. This requires a range of international agreements, such as those under the World Trade Organization.

Peace and physical security are essential conditions for productive investments in the agriculture sector, transport of food supplies, and security of food stocks. An emphasis on conflict prevention and resolution is, therefore, important to food security. The economic recovery of countries previously in conflict is a second priority. Research shows that undernutrition resulting from war and civil strife is the most acute in the world and that the costs of dealing with it through emergency food aid are also high.

At the national level, critical interventions include promotion of democracy, especially in rural areas, and the creation of an enabling policy environment for growth, trade, and investment. The promotion of democracy through civil participation and advocacy can be important to creating the conditions for the sustainable use of natural resources, especially collective resources, thereby maintaining the productive capacity of the land. Effective political advocacy also helps ensure that rural populations receive their fair share of infrastructure investment, including roads, irrigation works, schools, health facilities, safe water, and sanitation. All of these factors favorably influence nutrition by improving agricultural productivity, education, and health.

TABLE 3
Interventions to Reduce Undernutrition

WHAT IS NEEDED	HOW TO ACHIEVE IT
<p><i>Global</i></p> <ul style="list-style-type: none"> • Secure access to food in world markets • Conflict prevention and mitigation 	<ul style="list-style-type: none"> • International agreements • Peace and physical security recovery
<p><i>National</i></p> <ul style="list-style-type: none"> • Promote democracy in rural areas • Enabling environment 	<ul style="list-style-type: none"> • Civil participation • Macro, trade, and legal reform
<p><i>Sectoral</i></p> <ul style="list-style-type: none"> • Rural production and marketing infrastructure • Increase farm productivity 	<ul style="list-style-type: none"> • Public investment in roads • Private technology transfer and public agricultural research
<p><i>Household</i></p> <ul style="list-style-type: none"> • Raise entitlement to food • Empower women • Improve rural health conditions 	<ul style="list-style-type: none"> • Targeted food aid • Women's education • Safe water and sanitation

Research has demonstrated that a policy environment open to international trade and investment is critical for higher rates of economic growth. Growth, in turn, has a favorable effect on food availability, women's education, and access to safe water and sanitation, which reduce undernutrition. In addition, countries can benefit by reducing trade taxes and other barriers to food imports, which would result in lower food prices and an increase in real incomes used to purchase food.

At the sectoral level, the two most important types of interventions are investment in productive rural infrastructure and in agricultural research, extension, and education, both of which increase agricultural productivity, and, in turn, raise national income through a multiplier effect. The result is increased food availability, women's education, safe water, sanitation and, consequently, improved nutrition. Alternatively, direct investments in rural health, water, and sanitation will improve the health of the rural population and allow more efficient utilization of existing food.

At the household level, the most effective way to improve nutrition is to direct interventions towards women. One approach, which has been used quite successfully in a number of U.S. P.L. 83-480 Title II food aid programs, is to channel resources through maternal and child health centers. These resources can be monetized to pay not only for health care but also for nutritional education, functional literacy programs, family planning, improved access to safe water and sanitation, and direct income transfers. In addition, some of the aid can be channeled to participants directly in the form of food assistance. Finally, investment in women's education, especially at the secondary school level, has been shown to have important nutritional benefits.

Conclusion

Through a concerted partnership of all nations, it is possible to reach the World Food Summit goal. Unfortunately, if recent trends in official development assistance continue, global undernutrition will increase in absolute terms by 2015. The FAO's and consultants' studies show that viable and affordable strategies exist for achieving the World Food Summit goal that would involve a sustained but modest increase in current development assistance levels.

APPENDIX B

APPROACHES TO MEASURING FOOD INSECURITY

A. Domestic

U.S. MANDATED NATIONAL NUTRITION MONITORING

The United States collects data under a legislatively mandated interagency program known as the National Nutritional Monitoring and Related Research Program (NNMRRP). Key components in this system include: national food supply data and household-based food expenditures; food composition and nutrient data bases; food consumption and nutrient intakes; nutritional status and nutrition-related health status; and knowledge, attitudes, and behavior assessments.

U.S. FOOD SECURITY BASELINE

Most recently, the United States has added a new component to its nutrition monitoring system with the 1997 release of its first national assessment of the prevalence of food security and food insecurity with and without hunger. These measures were developed by the USDA, DHHS, and others, using Department of Census Current Population Survey data. This appraisal is specifically designed to measure the prevalence of household food insecurity and hunger in the U.S. population and is the outgrowth of over a decade of research in this field in the United States. It is anticipated that data will be collected every 18 months, alternating between April and September. A number of other U.S. surveys also measure food insecurity; these include the planned National Food and Nutrition Survey, the National Health and Nutrition Examination Survey, the Census Bureau's Survey of Program Dynamics, and the Department of Education's Early Childhood Longitudinal Study.

B. International

FAO HUNGER MAP METHODOLOGY

The FAO estimates the proportion and number of undernourished persons in countries as a part of its World Food Survey reports. FAO derives a statistical distribution of available food calories based on (1) food balance sheets—data on food production and net imports, minus non-human uses, waste, and food consumption, and population size; and (2) a variance of the distribution of food based on household consumption and expenditure surveys. Then, FAO develops a minimum calorie requirement standard for the average person based on needs for different age groups by sex. The proportion of the population with inadequate food calories is estimated utilizing the cut-off measure identified. This proportion of the population is defined as "chronically undernourished."

FAO's definition of minimum daily food requirements ranges from 1,720 to 1,960 calories and allows for only light physical activity. Using FAO's measures, in 1990-92 there were approximately 840 million chronically undernourished people living in 93 underdeveloped countries.

U.S. DEPARTMENT OF AGRICULTURE, ECONOMIC RESEARCH SERVICE

USDA's Economic Research Service (ERS) produces an annual food security assessment that uses a method similar to FAO's to measure undernutrition. Comparing available food supplies within a country with minimum daily caloric intake standards, it estimates the number of undernourished in select countries. However, ERS sets a higher benchmark than FAO for the minimum amount of food, ranging from 2,000 to 2,100 calories a day. This standard, though higher than FAO's, does not allow for play, work, or any activity other than food gathering. Using this standard, ERS evaluated 58 of the 93 countries that FAO studied, and estimated that in those 58 countries, more than 1 billion people could not meet their nutritional requirements.

WORLD HEALTH ORGANIZATION

The World Health Organization (WHO) uses anthropometric measures (surveys of physical measures like weight, height, and the proportion of the two) to estimate undernutrition. In the 79 developing countries that it surveyed between 1980 and 1992, WHO estimated that 2 in 5 children are stunted, 1 in 3 is underweight, and 1 in 11 is underweight in proportion to height.

APPENDIX C

GLOSSARY

A

Africa: Seeds of Hope Act

Passed by Congress on October 20, 1998, the Act supports sustainable, broad-based agricultural and rural development in sub-Saharan Africa through social and economic development in a way that strengthens and expands market-led economic growth and reduces poverty.

African Food Security Initiative

A U.S. Agency for International Development (USAID)-sponsored initiative to improve child nutrition and increase agricultural income of rural people throughout Africa by increasing agricultural production, increasing small farmers' access to the market, and expanding agricultural trade and investment.

African Growth and Opportunity Act

Introduced into the Senate on May 21, 1997, S. 778 is designed to support economic self-reliance of sub-Saharan African countries that are committed to economic and political reform, market incentives and private sector growth, the eradication of poverty, and the importance of women in economic growth and development. The Act amends the Foreign Assistance Act of 1961 to provide additional program authorities, including assistance to promote democratization and conflict resolution and to allow for increased program flexibility through presidential waivers of requirements. It directs the President to establish a U.S.-Sub-Saharan Africa Trade and Economic Forum, and to establish a U.S.-Sub-Saharan Africa Free Trade Area. It also contains provisions for debt relief and for focusing some OPIC activities on the region.

Aquaculture

The farming of aquatic plants and animals, for instance, trout or sea kelp farming.

Biodiversity

There are three kinds of general biodiversity: habitat diversity, genetic diversity, and species diversity. Frequently, the term refers to maintaining the quality of existing ecosystems through prevention of the destruction of habitats and of the extinction of plant and animal species.

Biotechnology

The application of techniques that allow scientists to modify DNA, the genetic material of living things. In the past, producers used cross-hybridization to alter a plant's genetic makeup. With biotechnology, DNA can be altered directly. In this paper, the term refers to the alteration of DNA in agricultural products to produce a desired effect. These might include resistance to pests and diseases and tolerance for chemical herbicides; improved food processing traits and nutritional content; resistance to adverse soil and weather conditions like salinity or drought; or improved ripening, texture, or flavor.

Bycatch

Fish or other sea creatures caught unintentionally during commercial fishing operations.

C

Chronic Hunger

Long-term hunger caused by endemic problems of availability and access, rather than by temporary emergencies.

Civil Society

The population of a nation and its institutions aside from government and business. These include, but are not limited to, individuals, non-governmental organizations, neighborhood and civic associations, religious groups, voluntary associations, schools, and universities.

B

Bill Emerson Humanitarian Trust

Formerly known as the Food Security Commodity Reserve, but renamed by the Africa: Seeds of Hope Act of 1998, the trust is a reserve of commodities that may include wheat, rice, corn and sorghum. It is intended solely to meet emergency humanitarian food needs in developing countries. The reserve commodities are purchased by the Commodity Credit Corporation.

Collaborative Research Support Program (CRSP)

Created by a 1975 amendment, Title XII, to the Foreign Assistance Act of 1961, the CRSP is a long-term mechanism to encourage and support collaborative research efforts in the areas of international food and agriculture among U.S. Land Grant Universities and developing country National Agricultural Research Systems (NARS), International Agricultural Research Centers, agribusiness, private voluntary organizations (PVOs), academic institutions, private agencies, USAID, and other U.S. Federal agencies. CRSP research is intended to benefit both U.S. and host countries and to strengthen the agricultural sector of developing countries to promote economic growth.

Community Food Security

The availability within a community of adequate food markets, with sufficient quality and quantity of food, and the financial and physical ability of the people in that community to acquire the available food.

Conservation Reserve Program (CRP)

A voluntary U.S. Government program that offers long-term rental payments and cost share assistance to farmers establishing permanent plant and tree cover on environmentally sensitive or erosion-prone agricultural land. The permanent cover reduces soil erosion, improves water quality, and may provide wildlife habitat and timber.

Consultative Group on International Agricultural Research (CGIAR)

CGIAR is an informal association of 57 public and private sector members that supports a network of 16 international agricultural research centers. Its mission is to promote sustainable agriculture for food security in developing countries through research.

D

Desertification

Land degradation in arid, semi-arid, and sub-humid areas resulting from various factors, including climatic variations and human activities.

Development Assistance

Specific economic assistance for the purpose of promoting economic, social, and/or political development.

E

El Niño

A cyclical disruption of the ocean-atmosphere system in the tropical Pacific that has important consequences for global weather, including increased rainfall in the southern United States and Peru, and drought in the western Pacific. El Niño conditions result in a rise in sea surface temperature and a decline in primary productivity, which can affect higher levels of the ocean's foodchain, including commercial fishing.

Extension

The process of disseminating agricultural and natural resource information from government, research, or academic institutions to land users. The term is most commonly associated with the outreach work of the Land Grant Universities to rural communities and farmers.

F

Farmers Market

A market where producers, generally farmers, sell their goods directly to consumers.

Field Gleaning

The collection of remaining crops from farmers' fields that have already been mechanically harvested or from fields where it is not economically profitable for the farmer to harvest.

Food and Agriculture Organization (FAO)

A United Nations organization responsible for issues relating to food and agriculture. The FAO deals with issues ranging from international food aid to agricultural trade and research.

Food for Peace (see P.L. 480)

Food for Progress

This food aid program allows the USDA's Commodity Credit Corporation to provide agricultural commodities on credit or through grants to support developing countries, emerging democracies, and countries that have made commitments to introduce or expand free enterprise elements in their agricultural economies. The commodities come from Title I of Public Law 83-480 (PL-480) or Section 416 (b) of the Agricultural Act of 1949.

Food Insecurity

Life Sciences Research Office (LSRO)² defines food insecurity as when the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain.

Food Insecurity and Vulnerability

Information Mapping System (FIVIMS) An interagency initiative that aims to bring together data from various sources into one information system, reflecting key food-security indicators at the national, regional, and household levels. These systems will indicate the areas and populations affected by or at risk of hunger and malnutrition—the elements contributing to food insecurity. Five basic classes of indicators were recommended for use: income and income sources, food production, food prices, income distribution, and impoverishment.

Food Pantry

A service that collects and distributes unprepared food and grocery products to the needy.

Food Recovery

The collection of wholesome food for distribution to the poor and hungry. This includes field gleaning; perishable food rescue or salvage, the collection of perishable produce from wholesale and retail sources; food rescue, the collection of prepared foods from the food service industry; and nonperishable food collection, the collection of processed foods with long shelf lives.

²Life Sciences Research Office, Federation of American Societies for Experimental Biology, "Core Indicators of Nutritional State for Difficult to Sample Populations," *Journal of Nutrition* (1990) v. 120 (Supplement), pp. 1559-1600.

Food Security

According to the LSRO, food security exists when all people at all times have access to enough food for an active and healthy life. This includes at a minimum 1) the ready availability of nutritionally adequate and safe foods, and 2) the assured ability to acquire acceptable foods in a socially acceptable way (for example, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).

Food Security Advisory Committee

A Federal advisory committee established as a subcommittee of the Board on International Food and Agricultural Development (BIFAD) to provide private sector and civil society support to the Interagency Working Group on Food Security.

Food Security Commodity Reserve (FSCR)

See Bill Emerson Humanitarian Trust.

Framework Convention on Climate Change (FCCC)

A 1992 United Nations agreement in which signatory nations recognized the problem posed by climate change. They also agreed to the objective of stabilizing greenhouse gases in the atmosphere at a level that is not dangerous, and committed to doing this soon enough to ensure that food production is not threatened by changing climates.

G

Greater Horn of Africa Initiative

A Presidential initiative involving a collaborative effort among African states, non-governmental organizations, citizens, the Inter-governmental Authority on Drought and Development, and the international community to address the root causes of food insecurity in Eritrea, Ethiopia, Sudan, Djibouti, Somalia, Kenya, Uganda, Rwanda, Burundi, and Tanzania. The initiative focuses on supporting regional food security strategies, increasing capacity for crisis prevention and response, improving regional collaboration to promote sustainable growth and reduce population growth rates, and implementing regional and national strategies to ensure the transition from crises to sustainable growth.

Green House Effect

The theory that human activity leading to a growing concentration of chlorofluorocarbons in the upper atmosphere will increase global temperatures significantly.

H

Healthy People 2010 Initiative

This U.S. Department of Health and Human Services initiative defines the nation's health agenda and guides policy to promote health and prevent disease. It includes specific objectives with 10-year targets that are monitored over a decade. By identifying the most significant opportunities to improve the health of all Americans, Healthy People helps focus both public and private sector action toward common health improvement goals. Healthy People is data-driven, offering the most current and best scientific knowledge in a format that enables diverse groups to combine their efforts.

Hunger

The uneasy or painful sensation caused by a lack of food. The recurrent and involuntary lack of food. Hunger may produce malnutrition over time. The Community Childhood Hunger Identification Project defines hunger as the mental and physical condition that comes from not eating enough food due to insufficient economic, family, or community resources.

I

Integrated Pest Management

Techniques of limiting the impact of agricultural pests without using harmful agricultural pesticides and chemicals. These techniques might include alternative chemicals, biological controls, such as other insects, cultural practices, or a combination.

Interagency Working Group on Food Security (IWG)

The Interagency Working Group on Food Security is a policy-level working group chaired at the subcabinet level. It was established in 1996 to guide U.S. Government preparations for the World Food Summit. Its mission was extended after the Summit to oversee Summit follow-up and the preparation of the U.S. Action Plan on Food Security.

L

La Niña

La Niña is a cyclical disruption in the ocean-atmosphere system characterized by unusually cold ocean temperatures in the equatorial Pacific. These ocean conditions are just the opposite of those found during El Niño: in La Niña ocean temperatures fall.

Low Income Food Deficit Country (LIFDC)

The FAO defines LIFDCs as nations that are 1) poor—with an annual net per capita income below the level the World Bank uses to determine eligibility for IDA assistance; currently that level is US\$1,505 per person; 2) Net importers of food. In many cases, these nations cannot produce enough food to meet their needs and lack sufficient foreign exchange to purchase food on the international market. Currently, the FAO lists 83 nations as LIFDCs—42 in Africa, 24 in Asia, 7 in Latin America and the Caribbean, 7 in Oceania, and 3 in Europe.

M

Malnutrition

A human condition that results from an excess, imbalance, or deficit of nutrients. It is generally defined as some measurable degree of ill health due to inadequate nutrition that can be prevented or cured by improved nutrition. Malnutrition can include starvation and result in protein deficiency, iodine-deficient goiters, tooth decay, and osteoporosis, and other conditions. It may also include obesity, some types of atherosclerosis, hypertension due to excess sodium, anemias due to lack of iron, folic acid, or vitamin B-12, as well as classic nutritional deficiencies that cause scurvy, beriberi, pellagra, xerophthalmia, and rickets.

Marrakesh Decision

At the conclusion of the Uruguay Round in Marrakesh, Morocco, participating ministers recognized that LIFDCs may experience a lack of adequate supplies of basic food stuffs at reasonable terms and conditions, including short-term financing. They agreed to establish mechanisms to assure that trade liberalization does not adversely affect the availability of food aid, to review the level and form of food aid under the Food Aid Convention of 1986, and to give full consideration to requests from LIFDCs to improve their agricultural productivity and infrastructure.

Monetization

The selling of agricultural commodities, generally given as food aid, to obtain foreign currency, generally for use in U.S. development programs.

N

National Research Initiative (NRI)

The NRI is a competitive grants research program administered by USDA's Cooperative State Research, Education, and Extension Service (CSREES)

Non-Governmental Organization (NGO)

A private sector nonprofit organization. Some NGOs working in international development are accredited by the United Nations or its agencies.

Non-Point Source Pollution

Pollution discharged over a large land area rather than from one specific location. This can be diffuse pollution caused by sediment, nutrients, organic, or toxic substances from land-use activities, which are carried to lakes and streams by surface run-off. Compared with point-source pollution, it is difficult to control and prevent, and is estimated to account for more than half of the water pollution in the United States today.

P

Public Law 83-480 (P.L. 480)

The P.L. 83-480 food aid program authorizes the U.S. Government to provide agricultural commodities overseas under three titles. Each title has different objectives and provides agricultural assistance to countries at different levels of economic development. Title I is administered by USDA, Titles II and III are administered by USAID. The programs are intended to combat hunger and malnutrition, promote equitable and sustainable development, expand international trade, develop and expand export markets for U.S. products, and encourage private enterprise and democracy in developing countries. Title I provides for government-to-government sales of agricultural commodities to developing countries under long-term credit arrangements. Title II provides for the donation of U.S. agricultural commodities by the U.S. Government to meet both emergency and non-emergency humanitarian needs in foreign countries. Title III provides government-to-government grants to support long-term economic development in the least developed countries. Title III grants are provided in the form of agricultural commodities that the recipient country sells in its domestic market, using the revenue of the sales to support economic development programs.

Private Sector

That part of the United States not engaged in governing, or a part of the Federal, State, local, or municipal government. Generally this term refers to businesses and industry.

Private Voluntary Organization (PVO)

A not-for-profit, tax exempt non-governmental organization established and governed by private citizens for the purpose of overseas charitable or development assistance.

S

Sanitary/Phytosanitary Measures (SPS)
International standards for food safety and animal (sanitary) and plant (phytosanitary) health were established in the Agreement on the Application of Sanitary and Phytosanitary Measures as a part of the treaty that established the World Trade Organization on January 1, 1995. These standards are intended to help nations ensure that their consumers are supplied with safe food by maintaining the sovereign right of any government to provide the levels of health protection it deems appropriate, but at the same time, to ensure that these rights are not misused for protectionist purposes and do not result in unnecessary barriers to international trade.

Section 416(b)

This food aid program is part of the Agricultural Act of 1949. It provides for overseas donations of commodities owned by the Commodity Credit Corporation to carry out assistance programs in developing countries and friendly countries.

Soup Kitchen

A center that prepares and serves free hot meals to the hungry. Such centers may also be called community kitchens, hot meal programs, or aggregate meal programs.

W

Sustainable Agriculture

Sustainable agriculture integrates three aims: environmental health, economic profitability, and social and economic equity. In practice, it is an integrated system of plant and animal production that preserves or improves the quality of the environment and the natural resource base, such as soil and water, to ensure its continued productivity; makes the most efficient use of non-renewable resources; integrates, where appropriate, natural biological and ecological cycles and controls such as integrated pest management and inter-cropping; sustains the economic viability of the production operations; and enhances the quality of life for agricultural or aquacultural producers and for society as a whole.

Sustainable Development

Development pursued in a manner that does not damage or deplete the human or physical environment and that ensures through good management that resources will be available for use indefinitely.

Watershed

A region or area over which water flows into a lake, river, reservoir, or stream.

Wetlands Reserve Program (WRP)

A Federal program administered by USDA that provides incentives for farmers and other land users to preserve wetlands and/or remove them from use that might damage them.

WIC Program

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is administered by USDA's Food and Nutrition Service. WIC provides Federal grants to States for supplemental foods, health care referrals, and nutrition education for low-income pregnant, and post-partum women, and to infants and children who are at nutritional risk.

World Trade Organization (WTO)

An intergovernmental organization established in 1995 to implement and enforce the Uruguay Round global trade agreement. The WTO replaced the General Agreement on Tariffs and Trade (GATT).

T

Trade Liberalization

The process of reducing the barriers to trade.

World Food Summit

An international conference called by the FAO in November 1996 to address the continuing global hunger crisis. The commitments made at the Summit form the basis for the U.S. Action Plan on Food Security.

U

Undernutrition

A form of malnutrition resulting from a deficit of nutrients. One of the signs of undernutrition is inadequate growth in children. It is often accompanied by an excessive loss of lean body mass in children and adults.

Uruguay Round

The eighth round of global trade negotiations under the auspices of the General Agreement on Tariffs and Trade (GATT) to reduce tariffs and non-tariff barriers—launched in Uruguay in 1986. The resulting agreement, approved in 1994, established the World Trade Organization, significantly cut industrial and agricultural tariffs, set down new rules for trade in services and agriculture, and added protections for intellectual property.

APPENDIX D

LIST OF ACRONYMS

CGIAR	Consultative Group on International Agricultural Research
CILSS	Permanent Interstate Committee on Drought Control in the Sahel
CRADA	Cooperative Research and Development Agreement
CRP	Conservation Reserve Program
CRSP	Collaborative Research Support Program
CSREES	Cooperative State Research, Education, and Extension Service, USDA
DHHS	United States Department of Health and Human Services
E&T	Employment and training
EEP	Export Enhancement Program
EFNEP	Expanded Food and Nutrition Education Program
EPA	Environmental Protection Agency
FAC	Food Aid Convention
FAO	Food and Agriculture Organization
FCCC	United Nations Framework Convention on Climate Change
FDA	Food and Drug Administration
FIVIMS	Food Insecurity and Vulnerability Information and Mapping System
FSCR	Food Security Commodity Reserve
FY	Fiscal year
GATT	General Agreement on Tariffs and Trade
GHAI	Greater Horn of Africa Initiative
GIS	Geographic Information System
IBNMRR	Interagency Board for Nutrition Monitoring and Related Research
IFAD	International Fund for Agricultural Development
IGAD	Intergovernmental Authority on Development
IPM	Integrated pest management
IRI	International Research Institute
LIFDC	Low-income food deficit country
NASA	National Aeronautics and Space Administration
NGO	Non-governmental organization
NNMRRP	National Nutrition Monitoring and Related Research Program
NOAA	National Oceanic and Atmospheric Administration
NSLP	National School Lunch Program
OECD	Organization for Economic Cooperation and Development
SADC	South African Development Conference
SPS	Sanitary/phytosanitary measures
TANF	Temporary Assistance to Needy Families Block Grant Program
UN	United Nations
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VA	Veterans Administration
WHO	World Health Organization
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children
WRP	Wetlands Reserve Program
WTO	World Trade Organization

APPENDIX E

INTERAGENCY WORKING GROUP ON FOOD SECURITY

	Central Intelligence Agency
	Environmental Protection Agency
<i>Co-chairs</i>	National Intelligence Council
U.S. Agency for International Development	National Security Council
U.S. Department of Agriculture	Office of Management and Budget
U.S. Department of State	Office of Science and Technology Policy
	Office of the U.S. Trade Representative
	Office of the Vice President
	Peace Corps
	U.S. Department of Commerce
	U.S. Department of Defense
	U.S. Department of Education
	U.S. Department of Health and Human Services
	U.S. Department of the Treasury
	U.S. Department of Veterans Affairs

APPENDIX F

FOOD SECURITY ADVISORY COMMITTEE

Co-chairs

G. Edward Schuh

Hubert H. Humphrey Institute of Public Affairs, University of Minnesota

Christine Vladimiroff

Mount Saint Benedict Monastery

Andrew N. Agle

The Carter Center

Selina Ahmed

Texas Southern University

David Beckmann

Bread for the World

Margaret Bogle

USDA, ARS Delta NIRI

John Cady

National Food Processors Association

Ralph Christy

Cornell University

Ada Demb

The Ohio State University

Betsy Faga

North American Millers' Association

Walter P. Falcon

Stanford University

Rick Foster

W. K. Kellogg Foundation

David J. Fredrickson

Minnesota Farmers Union

Cutberto Garza

Cornell University

Miles Goggans

Goggans, Inc.

Richard Gutting, Jr.

National Fisheries Institute

John D. Hardin, Jr.

National Pork Producers Council

Walter A. Hill

Tuskegee University

Charles S. Johnson

Pioneer Hi-Bred International, Inc.

Charles F. MacCormack

Save the Children

Whitney MacMillan

Cargill, Incorporated

Ellen Marshall

United Nations Foundation

P. Howard Massey, Jr.

Virginia Polytechnic Institute and State University

Cheryl Morden

International Center for Research on Women

Ertharin Cousin Moore

Jewel-Osco

Sharyle Patton

Commonweal Sustainable Futures Project

Sherrie Whitekiller Perry

Cherokee Nation

P. Scott Shearer

Farmland Industries, Inc.

Barbara Spangler

American Farm Bureau Federation

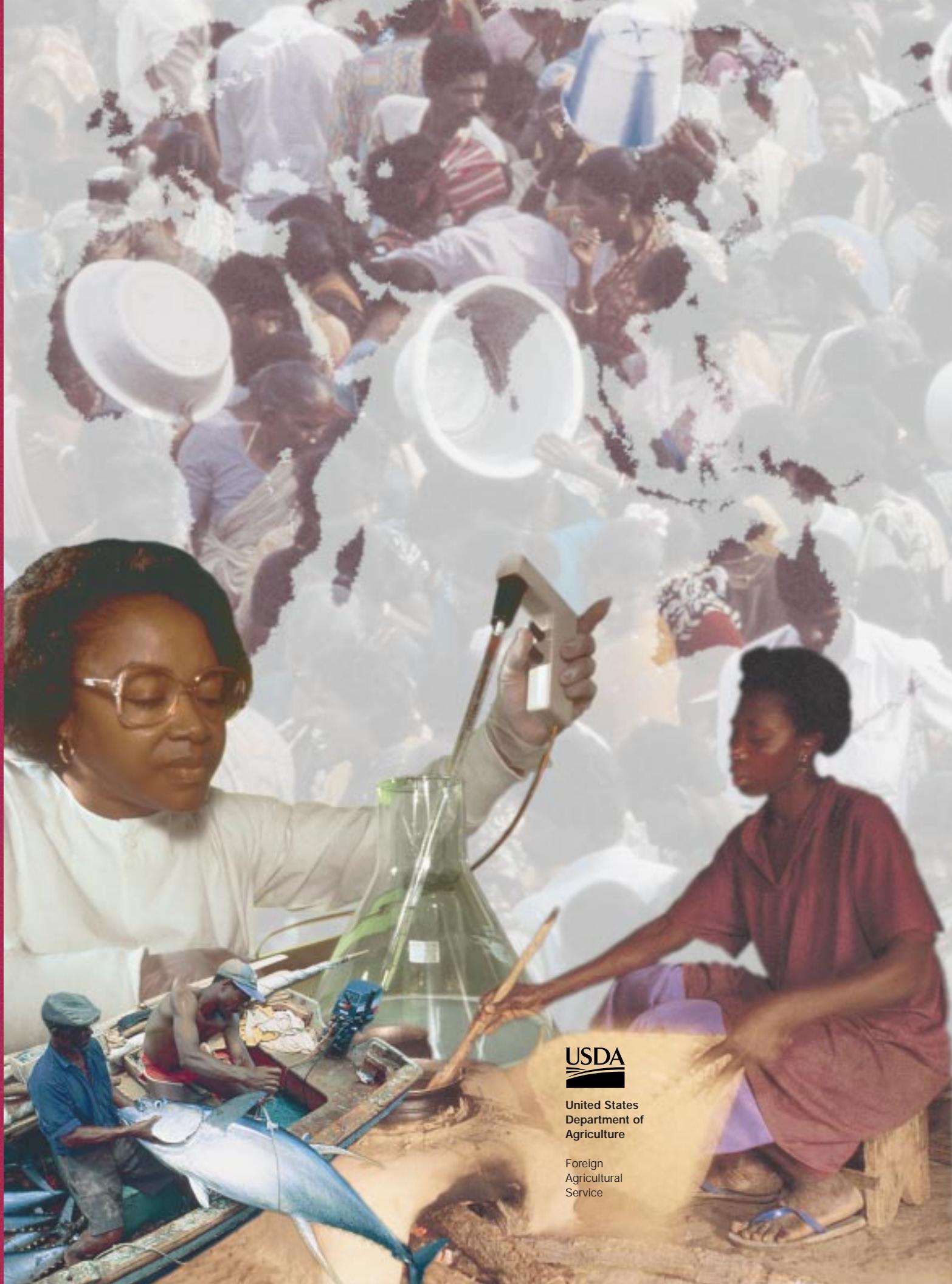
Goro Uehara

University of Hawaii

Notes

Notes





United States
Department of
Agriculture

Foreign
Agricultural
Service