USAID
FROM THE AMERICAN PEOPLE

INITIATIVE TO END HUNGER IN AFRICA

ANNUAL REPORT 2008

TACKLING THE ROOT CAUSES OF FOOD INSECURITY

This report was prepared with support from the U.S. Agency for International Development
through IARC Food Security and Crisis Mitigation II, Grant # EEM-G-00-04-00013

INITIATIVE TO END HUNGER IN AFRICA

ANNUAL REPORT 2008

TACKLING THE ROOT CAUSES OF FOOD INSECURITY

BACKGROUND

In 2008, Sub-Saharan Africa was the focal point of the crisis as a rapid rise in staple food prices drew international attention to the fragility of global food security. Globally, the majority of the countries experiencing food security crises and related demonstrations were in Africa, where a third of Africans suffer from malnutrition and over 120 million Africans—Africa's 'ultra poor'—suffer chronic hunger.

In response, USAID put into action an integrated program that targeted both the immediate consequences and the underlying causes of the food crisis. One component was urgent measures to address high food prices through agriculture and trade programs that built on and expanded the foundation laid by the Initiative to End Hunger in Africa (IEHA) over the past five years. IEHA's focus on smallholder-based agricultural systems and their linkages to markets is essential to the sustainable reduction of hunger in Africa. The Initiative is designed to rapidly increase agricultural growth, rural incomes, and food production by deploying new production and processing technologies; improving the efficiency of trade and market systems; building the capacity of community and producer organizations; and integrating the vulnerable into development processes.

IEHA continues Africa Bureau's long-standing commitment to accelerating agricultural productivity growth. In the early 1990s the Bureau reinvested in productivity-enhancing African agricultural research and convinced other donors to do the same. Since that time, agricultural productivity has shown significant annual increases. Under IEHA, Africa Bureau reoriented its efforts in productivity toward staple foods, which make up the bulk of African diets and are subject to both acute price increases (such as in 2008) and long-term and structural inflationary pressures. With IEHA's assistance more than 1.3 million farmers adopted new technology in 2008, and 546,487 hectares of land were brought under new technology or improved management practices.

Building on IEHA's investments to link producers to markets—where IEHA producers in FY 2008 sold $152 million in agricultural product—USAID is undertaking a number of actions to promote intra-regional trade. Reducing barriers to trade and linking producers to markets enables the private sector to play a direct role in delivering staple foods to areas with chronic hunger. IEHA has facilitated intra-regional trade of more than $225 million every year since 2005. In 2008, the value of intra-regional trade reached $250 million; maize exports within East Africa were a major contributor, reaching $189 million.

High staple food prices have not ended. In West Africa there was an above-average harvest in 2008/2009, but cereal prices did not decrease as much or for as long as would be expected. The effects of continuing high staple food prices on Africans are potentially devastating. To purchase food, poor families may reduce long-term investments (like expenditures on education), reducing their long-term economic opportunities. Poor farmers may be forced to sell land, cattle or other productive assets. With deteriorating terms of trade, declining balance of payments, reduced export revenues, increasing import bills and possible inflationary effects, African governments have far less flexibility to respond. Through IEHA and other initiatives that will build upon it, the US Government remains committed to the rural poor in Sub-Saharan Africa.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

4C	Common Code for the Coffee Community
AATF	African Agricultural Technology Foundation
ACF	Agricultural Consultative Forum
ACTESA	Alliance for Common Trade in Eastern and Southern Africa
AfDB	African Development Bank
AFSTA	African Seed Trade Association
AGOA	African Growth and Opportunity Act
AGRA	Alliance for a Green Revolution in Africa
APEP	Agricultural Productivity Enhancement Program
APHIS	USDA/Animal and Plant Health Inspection Service
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASNAPP	Africa Agribusiness in Sustainable Natural African Plant Products
ASPSII	Agricultural Sector Program Support, Phase II
ATP	Agribusiness and Trade Promotion program
AU	African Union
BDS	business development services
C3P	Crop Crisis Control Project
CAADP	Comprehensive Africa Agriculture Development Program
C.A.F.E.	Coffee and Farmer Equity
CBO	community-based organization
CCA	U.S. Corporate Council on Africa
CERAAS	*Centre d'Etude Régional pour l'Amélioration de l'Adaptation*
CGIAR	Consultative Group on International Agricultural Research
CIDA	Canadian International Development Agency
CILSS	*Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel* (French abbreviation for Permanent Interstate Committee for Drought Control in the Sahel)
CIMMYT	*Centro Internacional de Mejoramiento de Maiz y Trigo* (Spanish abbreviation for International Maize and Wheat Improvement Center)
CN	*Cadre Nationale de Biosécurité* (French abbreviation for National Framework for Biosafety)
CNFA	Citizens' Network for Foreign Affairs
COMESA	Common Market for Eastern and Southern Africa
CORAF/WECARD	West and Central African Council for Agricultural Research and Development (both English and French abbreviation)
CRS	Catholic Relief Services
CRSP	Collaborative Research Support Program

CTA	Technical Centre for Agricultural and Rural Cooperation
DA	Development Assistance
DANIDA	Danish International Development Agency
DC	Depot Committee
DCA	Development Credit Authority
DFID	United Kingdom's Department for International Development
DRC	Democratic Republic of the Congo
DREAM	Dynamic Research Evaluation for Management (IFPRI simulation model)
EAC	East African Community
EAFCA	Eastern African Fine Coffees Association
EAGC	East Africa Grain Council
EAS COM	East Africa Seed Committee
ECOWAS	Economic Community of West African States
EGAT	Bureau for Economic Growth, Agriculture, and Trade (USAID)
EGAT/AG	Bureau for Economic Growth, Agriculture, and Trade/Office of Agriculture (USAID)
EGAT/ESP	Bureau for Economic Growth, Office of Environment and Science Policy (USAID)
ESASA	East and Southern Africa Seed Alliance
EurepGAP	Euro-Retailer Produce Working Group Good Agricultural Practices
FAAP	Framework for African Agricultural Productivity
FAFS	Framework for African Food Security
FAGE	Federation of Associations of Ghanaian Exporters
FANRPAN	Food, Agriculture, and Natural Resource Policy Analysis Network
FAO	Food and Agriculture Organization (of the United Nations)
FARA	Forum for Agricultural Research in Africa
FAS	USDA/Foreign Agricultural Service
FASDEP	Food and Agriculture Sector Development Program
FFS	farmer field school
FFP	Food for Peace (USAID office)
FTF	farmer-to-farmer
G-8	Group of Eight (Canada, France, Germany, Italy, Japan, Russia, UK, and US)
GAO	Government Accountability Office
GAPI	Global Alliance for Performance Improvement
GDA	global development alliance
GDP	Gross Domestic Product
GDPRD	Global Donor Platform for Rural Development
GFSR	Global Food Security Response
GITC	Ghana International Trade Commission
GIS	geographic information system
Global GAP	Global Good Agricultural Practices (formerly EurepGAP)
GMO	genetically modified organism
GoM	Government of Mozambique

GSB	Ghana Standards Board
HACCP	Hazard Analysis Critical Control Point
HP AI	highly pathogenic avian influenza
HVI	household vulnerability index
ICRISAT	International Crops Research Institute for Semi-Arid Tropics
ICT	Information and Communication Technology
IDA	International Disaster Assistance
IDRC	International Development Research Centre
IDPs	internally displaced persons
IEHA	Initiative to End Hunger in Africa
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policyand Research Institute
IIAM	National Institute for Agricultural Research (Mozambique, Portuguese abbreviation)
IITA	International Institute of Tropical Agriculture
ILRI	International Livestock Research Institute
INIBAP	International Network for the Improvement of Banana and Plantain
INSAH	*L'Institute du Sahel* (French abbreviation for a special institute of CILSS)
IR	intermediate result
IPM	Integrated Pest Management
KARI	Kenya Agricultural Research Institute
LI	legislative instrument
MASIP	Malawi Agricultural Sector Investment Plan
MATEP	Market Access, Trade, and Enabling Policies (project)
MDG	Millennium Development Goal
M&E	monitoring and evaluation
MOU	memorandum of understanding
MSU	Michigan State University
MYAPs	Multi-Year Action Plans
NAC	National Cotton Advisory Committee
NARS	national agricultural research system
NARO	National Agricultural Research Organisation (Uganda)
NEPAD	New Partnership for Africa's Development
ODA	overseas development assistance
OECD	Organisation for Economic Cooperation and Development
PBS	Program for Biosafety Systems
PCC	Policy Coordinating Committee
PFID	Partnership for Food Industry Development
PIVA	Partner Institutional Viability Assessment
PO	producer organization
PROFIT	Production, Finance, and Improved Technology (project)
PSOM	Program for Cooperation with Emerging Markets (Dutch abbreviation)

PPP	public-private partnership
PPP	purchasing power parity
PVO	private voluntary organization
QPM	quality protein maize
RA	Rainforest Alliance
RATES	Regional Agricultural Trade Expansion Support (project)
RATIN	Regional Agricultural Trade Intelligence Network
REC	regional economic community
RELPA	Regional Enhanced Livelihoods in Pastoral Areas (project)
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SADC	Southern African Development Community
SAF	Strategic Activities Fund
SAKSS	Strategic Analysis and Knowledge Support System
SIDA	Swedish International Development Agency
SME	small and medium-sized enterprises
SMS	Short Message Services
SO	strategic objective
SoN	Source of Nile fish farm
SPEG	Sea Freight Pineapple Exporters of Ghana
SPS	sanitary and phytosanitary standards
SRO	sub-regional organization
SSA	Sub-Saharan Africa
STCP	Sustainable Tree Crops Program
SWAp	sector-wide approach
TA	technical assistance
TFP	total factor productivity
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USAID/AFR/SD	USAID, Africa Bureau, Office of Sustainable Development
USAID/SA	USAID/Southern Africa
USAID/WA	USAID/ West Africa
USG	United States Government
VAT	value-added tax
WAEMU	West African Economic and Monetary Union, also UEMOA (French abbreviation)
WASA	West Africa Seed Alliance
WHO	World Health Organization
WDR	World Development Report
WFP	World Food Programme
WTO	World Trade Organization

EXECUTIVE SUMMARY

Kadiatou Traoré has traded potatoes in southern Mali for 20 years, purchasing potatoes from wholesalers and farmers and reselling them in the local market. Selling 5,000 pounds of potatoes monthly with a working capital of approximately $200, this widow was living hand-to-mouth as she struggled to take care of her family and pay for her children's school. In 2007, life got better for Traoré when she received a $700 loan facilitated by a United States Agency for International Development's (USAID) project. The loan enabled her to purchase nearly 9,000 pounds of potatoes per month — almost double her previous inventory. With higher volumes, she now exports her potatoes to neighboring West African countries, where the price she receives is twice that from local sales. In 2008, the project helped Traoré obtain another loan. Now, with approximately $1,700 in loans in addition to the capital she has built, Traoré is selling an average of 35,200 pounds a month. The project, which is one small part of USAID's Initiative to End Hunger in Africa (IEHA), helped Traoré move from a small, local market to the international arena.

Traoré is just one of 12.6 million people who benefited from the Initiative to End Hunger in Africa (IEHA) in 2008. A response by the United States Agency for Development (USAID) to meet one of the greatest challenges of our time—alleviating hunger driven by pervasive poverty in Africa – IEHA is one of the United States' most cost-effective and successful initiatives in Africa.

Reaching more than 2.6 million households, of which 704,287 were vulnerable households, IEHA assistance improved food security in 2008 as it worked toward transforming Africa's agricultural sector. In 2008 attendance at IEHA training totaled 2.5 million—1.77 million male and 0.74 million female. The work of IEHA helped 1.3 million farmers bring 546,487 hectares of land under new technology in 2008. More than $40 million in credit was issued. And, since 2005, IEHA has facilitated intraregional trade of more than $225 million every year.

IEHA's framework, focus, and results provide the foundation for USAID's Global Food Security Response (GFSR), which seeks to address the root causes of the food crisis. These efforts are improving incomes and directly contributing to reductions in poverty and hunger for Traoré and millions of others. The challenge now is to build global partnerships that can translate these successes into sustained broad-based improvements in African food security and poverty reduction.

BACKGROUND

Under the leadership of the USAID, IEHA has enabled the U.S. Government to meet its G-8 commitments to support implementation of the Comprehensive Africa Agriculture Development Program (CAADP). The most ambitious agricultural reform effort ever undertaken in Africa, CAADP was endorsed in 2003 by African heads of state and government under the auspices of the New Partnership for Africa's Development (NEPAD).

In 2005, USAID committed to providing an estimated $200 million per year for five years, through IEHA, to support CAADP. IEHA has explicitly designed its programs to align with and support the CAADP goal of 6 percent annual agricultural growth, which is in line with IEHA's strategic objective of rapidly increasing agricultural growth and rural incomes in Sub-Saharan Africa to reduce both poverty and hunger. IEHA investments harness the power of new agricultural production and processing technologies; improve the efficiency of agricultural trade and market systems; build the capacity of community and producer-based organizations; and integrate vulnerable groups and countries into sustainable development processes.

IEHA's focus is on rural smallholders who are poor but have the capacity to improve their situation. Programs that target smallholder-based agricultural growth give the hungry access to food by both raising their incomes and reducing the price of food. This effort is especially significant in Africa because three-quarters of the continent's malnourished children live in households that depend on small farms for their livelihoods. Increased rural income also has positive effects on poverty throughout the economy.

In 2008 IEHA was active in seven countries (Ghana, Kenya, Mali, Malawi, Mozambique, Uganda, and Zambia) and three subregions (West, East, and Southern Africa). These countries are leaders in policy reform, public investment, and government commitment to agricultural growth and poverty reduction. They are representative of the key economic and agricultural characteristics of their regions and have the greatest potential for rapidly influencing regional agricultural productivity and economic growth through trade and technology diffusion.

IEHA's work in these countries took place within the context of a global food crisis, during which rapid increases in the real prices of food in 2007 and the first half of 2008 threatened the immediate food security and nutritional status of more than 100 million poor individuals, including 30 million or more in Sub-Saharan Africa. With high rates of poverty, malnutrition, hunger, and food insecurity, Africa is exceptionally vulnerable to rapid increases in food prices. A typical African family spends between 50 and 70 percent of its budget on staple foods. Surging food prices push households into poverty, pull children from school, and leave illness untreated. Less prominent but equally far-reaching this time are the concerns that the causes and consequences of the food crisis are structural forces that will place long-term upward pressure on food prices and jeopardize the health and well-being of another generation of Africans.

In May 2008 the U.S. Government announced its response, which will mitigate the immediate effects and address the underlying causes of the global food crisis. In June 2008 Congress appropriated supplemental resources for this Global Food Security Response (GFSR). In the face of the food crisis, urgent actions were undertaken for fast-impact food production and marketing programs in key geographic areas. These actions included regional and national efforts to make staple food markets work better; as a result the poor will have greater access

to food, and increased private investment will sustain agricultural growth and build resilience to economic shocks.

GFSR builds on the foundations of IEHA to address Africa's increasing food insecurity. It will link producers to markets and connect food-surplus with food-deficit areas by reducing constraints in trade corridors. GFSR investments are aligned with country-identified priorities and seek to better integrate humanitarian and development assistance. The Response expands IEHA to include Ethiopia, Liberia, Niger, Nigeria, Rwanda, and Senegal.

HUNGER, POVERTY, AND AGRICULTURE IN AFRICA

The soaring food prices in 2007–08 had a detrimental effect on efforts to reduce global hunger and poverty. An estimated 963 million people worldwide were undernourished in 2008, representing an additional 40 million from the previous year. In Sub-Saharan Africa, more than 200 million people, about one-third of the population, continue to experience chronic hunger. While the percentage of the population in Sub-Saharan Africa that is undernourished has decreased since the mid-1990s, the total number of people suffering from hunger there has increased. Similarly, the percentage of people living in poverty in Sub-Saharan Africa has decreased slightly, from 55 percent in 1990 to 50 percent in 2005, while the total number of poor has increased.

If these trends continue, Sub-Saharan Africa will not achieve the first Millennium Development Goal of halving poverty and hunger by 2015 (MDG 1). Some countries, however, are on track to meet MDG 1, including Ghana, Uganda, and Mozambique, which have all seen significant reductions in poverty and malnutrition rates. Other countries in Sub-Saharan Africa also have reduced poverty and malnutrition, but at slower rates.

HUNGER, INCOME, AND POVERTY IN THE IEHA COUNTRIES: A MIXED PICTURE

IEHA countries are generally showing positive trends in hunger, income, and poverty. Ghana, in particular, has seen increased incomes and significant and steady reductions in hunger and poverty. Political stability, macroeconomic reforms, debt relief, development aid, and a high price for its main agricultural export, cocoa, have all been factors in its success. In contrast, Zambia has experienced more volatility and setbacks. Hunger levels have remained persistently high. Although poverty rates dropped and incomes increased from 1993 to 1998, by 2003 they returned to previous levels. Economic growth during this time was based on high prices for its main export of copper, which does not tend to affect the agriculture-based income of most of the population. Only in the past few years has Zambia begun to show improved incomes and slight reductions in hunger, although the current economic crisis could undermine this trend.

Mozambique has seen the largest reduction of hunger in Africa. Although hunger is still fairly high—about 40 percent of Mozambique's population is considered undernourished—the country is on a positive path and experiencing a steady rise in incomes. Similar results occurred in Uganda and Malawi, although Malawi is not likely to achieve MDG 1. Mali, after seeing a rise in hunger in the early 1990s, began to reverse the trend later in the decade but has not yet reached previous levels.

Trends in Kenya have been mixed. Increases in incomes have not been accompanied by similar

decreases in poverty. In spite of Kenya's high per capita agricultural gross domestic product (GDP), it has made limited progress in reducing hunger and, among the IEHA countries, has the largest number of hungry.

PERFORMANCE OF THE AGRICULTURAL SECTOR: GROUNDS FOR CAUTIOUS OPTIMISM

Economic and agricultural growth in Sub-Saharan Africa in 2008 was affected by two major factors—the spike in food and energy prices that occurred in the first half of the year and the global financial crisis that grew worse over the course of the year. Economic growth for 2008 is estimated to have dropped to 4.8 percent from an annual average of 6 percent in 2005–07. According to the World Bank, growth will likely decline to an estimated 1.0 percent in 2009, then rise to 3.7 percent in 2010.

Agricultural growth in Sub-Saharan Africa dropped from a high of 5.8 percent in 2005 to 3.5 percent in 2006. Preliminary figures for 2007 show a recovery, with a rate of 6.5 percent expected. Global cereal harvests in 2008 reached record levels, but the gains occurred mostly in developed countries. Cereal production in Africa increased only slightly, from about 143 million tons in 2006 to an estimated 148 million tons in 2008.

At the country level, Kenya, Uganda, Mali, and Ghana maintained agricultural growth of around 5–6 percent in 2006 and are expected to have maintained or achieved even higher rates in 2007. Malawi and Mozambique recovered from poor agricultural performances in 2005, posting rates of about 12 and 9 percent in 2006, respectively. Zambia has been a poor performer in the past five years, with a steadily declining rate of overall growth from a high of 5 percent in 2003 to less than 2 percent expected for 2007.

Mozambique has most consistently achieved the CAADP agricultural growth target of 6 percent, reaching it in four out of the past five years. Among the IEHA countries, only Malawi and Zambia have not achieved a steady growth rate at or above the CAADP target of 6 percent over the period 2005 to 2007. In total, 14 out of 42 countries in Sub-Saharan Africa have achieved this goal over the same period.

IEHA ACHIEVEMENTS AND RESULTS

MONITORING IEHA OUTPUT AND IMPACT

USAID has developed a comprehensive monitoring and evaluation system to track IEHA results. Each IEHA operating unit in Sub-Saharan Africa reports on a set of common indicators developed to track the performance of IEHA-related investments. The indicators include measures of both output (IEHA activities) and impact (results on the ground).

In 11 out of the 12 output indictors in 2008, IEHA exceeded its targets. The initiative reached 12.6 million beneficiaries in more than 2.6 million African households, including more than 720,000 vulnerable households. Attendance in training was 2.5 million, a nearly 50-percent increase over 2007. Women's attendance in training exceeded 740,000, and nearly 2,000 women's associations received assistance. IEHA helped more than 16,800 producers' organizations and associations to better serve their smallholder and private sector members. In 2008, IEHA programs and implementers formed 385 new public-private partnerships.

At the end of 2008, IEHA was also on track to achieve its targets for key results on the ground. Smallholders sold more than $150 million worth of commodities in the domestic market. The value

of international trade in targeted agricultural products was $1.2 billion, and intra-regional trade was $250 million. Beneficiaries obtained more than $40 million in credit, and about 460,000 enterprises accessed business development services. Overall, IEHA achieved 117 percent of its targets.

2008 COUNTRY RESULTS IN FOUR AREAS OF IMPACT

IEHA had a successful year in each of its main areas of impact:

- increasing agricultural productivity and production;
- increasing trade in agricultural products, especially regional trade in food staples;
- promoting sound market-based principles for agriculture; and
- assisting the vulnerable and accelerating the participation of the ultra-poor in rural growth.

Increasing Agricultural Productivity and Production. Increasing agricultural productivity in Sub-Saharan Africa is critical to improving both income security and food security. In 2008 IEHA made available 626 new technologies to help boost productivity. At the same time another 334 technologies were undergoing research and 359 were being field tested. Highlights from 2008 include the following.

- **Ghana.** An improved variety of maize was disseminated through 281 demonstration sites, and 24,702 farmers were trained. The new variety led to the doubling of per-acre revenues and profits.
- **Mali.** A technology transfer package combining high-yielding seeds and production practices led 2008 sorghum yields to double on average from the previous year; and a three-fold increase in the number of farmers adopting these new technologies is anticipated within two years.
- **Uganda.** The USAID technology transfer model has made it easier for corporate partners and associated farmers to meet various certification programs, such as those for fair trade and social equity, which can offer enormous financial benefits to farmers.
- **West Africa.** The Sustainable Tree Crops Program helped participating cocoa producers boost their profits per hectare by 53 percent from 2007 to 2008. Overall it is estimated that the 12,000 cocoa farmers trained from October 1, 2006 to September 30, 2008 increased their gross returns in the 2007/08 harvest by $5.5 million, or 38 percent, as a result of program efforts.

Strengthening Value Chains to Increase Regional Trade in Food Staples. IEHA projects are in the field every day, helping producers, processors, and exporters to become more efficient and to meet the standards set by domestic and international markets. In 2008, 53 new firms were officially certified to meet these stringent international standards, bringing the total number of firms that have been certified under IEHA to 290. Highlights from 2008 include the following.

- **Ghana.** A Geographic Information System (GIS) database was created to link more than 8,000 farmers to exporters and processors, greatly improving traceability of products and allowing for certification for export to Europe and organic certification.
- **West Africa.** In 2008, more than 1,700 farmers certified by the Rainforest Alliance produced approximately 8,000 tons of cocoa, generating about $10.7 million in revenue. This is up from $1.4 million in revenue for 355 certified farmers in 2007. The 1,200 tons of certified cocoa sold to Kraft through cooperatives earned farmers a premium of $240,000 in 2008.

- **Southern Africa.** Improved, low-cost cassava-processing equipment, including solar driers, has greatly speeded processing and allowed farmers in eight countries to take advantage of market opportunities in areas like paper making and flour production.
- **Mozambique.** Orange-fleshed sweet potato is increasingly viewed as a cash crop. In trials, processors have found that they can use up to 38 percent sweet potato flour in bread making to reduce costly wheat imports and still achieve high consumer acceptance.

Promoting Sound Market-Based Principles for Agriculture. A policy environment that is free of distortions and promotes competition is critical for smallholders to increase their productivity and enter new markets. In 2008 IEHA facilitated policy reforms that improved the enabling environment for smallholders and agriculture-based enterprises by removing key constraints and creating real opportunities. Some specific country examples of IEHA's 2008 accomplishments in promoting sound policy include the following.

- **Malawi.** In 2008 USAID helped the Government of Malawi draft, present, and successfully legislate a bill permitting commercialization of appropriate genetically modified (GM) crops. The bill also strengthens the capacity of the National Biosafety Committee to draft science-based GM policy and approve implementation of GM trials.
- **Zambia.** The Government is currently considering a recommendation from the Agricultural Consultative Forum, a nonpartisan think tank, to move from the current government tendering for fertilizer imports and distribution by cooperatives to an approach that more carefully targets discount vouchers to specific groups of farmers who can redeem the vouchers at private agro-dealers.
- **Southern Africa.** New work by the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) is using a Human Vulnerability Index to help categorize households and identify the sources of their vulnerability. Armed with this knowledge, governments can better target development assistance to help particular households reduce vulnerability.
- **West Africa.** The *Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS)* promotes the adoption of seed production and trade regulations in the Economic Community of West African States (ECOWAS) region. In 2008 the ECOWAS member states adopted regional seed regulations, and nine of the CILSS countries engaged in policy analysis and moved toward ultimate adoption of national seed regulations.

Assisting the Vulnerable and Accelerating the Participation of the Ultra-Poor in Rural Growth. IEHA is helping both smallholders with limited assets and those who are highly vulnerable due to food shortages, civil conflict, and illness, by increasing their productivity and linking them to markets. Here are some examples of USAID's successes in 2008.

- **Uganda.** In northern Uganda, agricultural productivity activities focused on reducing food insecurity for internally displaced persons and other populations affected by the 22-year civil conflict. Food for Peace development interventions aimed to boost agricultural yields and reduce storage losses by increasing the use of improved production and post-harvest handling technologies and practices.
- **Southern Africa.** Over the past three years, FANRPAN has improved policymakers' understanding of the use of vouchers as a tool to help vulnerable households meet their input requirements through commercial markets.

- **West Africa.** CILSS continues to coordinate the food security early warning system in 17 countries that alerts donors and national programs to the levels of food insecurity in different areas.

STRONG RESULTS FOR IEHA'S FIRST FIVE YEARS

IEHA has been investing in Sub-Saharan Africa for five years, and its results have increased dramatically in that time, affecting millions of beneficiaries.

- Rural individuals benefiting from IEHA increased from 1.6 million in 2004 to 12.6 million people in 2008.
- Agriculture-related firms benefiting from IEHA projects increased from 656 to 10,088.
- Training attendance totaled 5.55 million, of which 3.68 million was male and 1.87 million was female.
- A total of 16,867 producer organizations, water user associations, trade and business associations, and community-based organizations received assistance in 2008, up from 4,280 in 2004. The number of women's organizations assisted during 2008 reached 1,967 compared with 53 in 2004.

These investments have resulted in significant impact on the ground:

- The value of intraregional trade reached $250 million in 2008. Maize exports within East Africa—a major contributor to intraregional trade—reached $189 million. Cotton, seed, dairy, and horticultural products were other important commodities in intra-regional trade.
- Producers sold $152 million in agricultural products, including staple foods, in domestic markets in 2008—more than double the amount sold in 2005.
- A total of 546,487 hectares of land were brought under new technology in 2008, up from 97,439 in 2005. More than 1.3 million farmers adopted new technology in 2008, compared with about 225,000 in 2005.
- Over the past four years (2005–08), more than $87 million in credit to beneficiaries was facilitated. IEHA worked on both sides—helping farmers and businesses to become creditworthy and helping banks to better assess credit risk.

KEYS TO IEHA SUCCESSES TO DATE

IEHA has performed strongly in raising smallholder productivity, improving the policy environment, and increasing agricultural trade over the past five years. A number of key actions by the Initiative have made these results possible during the 2004–2008 period.

Making the Case for Agriculture. Since the launch of IEHA, the Initiative has provided intellectual leadership in agricultural policy and directed investments to focus countries committed to policy reform, public investment, agricultural growth, and poverty reduction. IEHA also has helped mobilize the resources of African governments, international development agencies, private sector investors, civil society, universities, and a broad range of interest groups that provide support for African development.

Promoting a Coordinated Approach to Relief and Development. IEHA has worked to bring a comprehensive, coordinated approach to country and regional programs, including a better alignment of humanitarian assistance programs with development programs. The Food for Peace program now has a single strategic objective—reducing the food insecurity of vulnerable populations—rather than separate strategic objectives for emergency (relief) and non-emergency (development) programs.

Providing Technical Leadership in Agriculture. Donors, African regional organizations, and countries are benefiting from IEHA's development and support of the Regional Strategic Analysis and Knowledge Support System, an Africa-wide network that provides analysis, data, and tools to promote evidence-based decision making. USAID has also provided technical leadership in African capacity building to ensure that African institutions, rather than donors, lead the process and establish the priorities for agricultural development.

Giving Strategic Guidance Along with Flexibility in Programming. IEHA has recognized that agricultural investments must be focused and that regional investments are needed to complement country-level efforts. IEHA's experience also shows that focus countries, regional platforms, and Washington need to coordinate their efforts in order to obtain program synergies. One of IEHA's many strengths has been that funding comes not only with overall strategic guidance, but also with the flexibility to align programs with country-identified priorities.

Building African Capacity. IEHA's commitment to capacity building is at the core of its programs. To increase smallholder productivity, improve the policy environment, and increase external trade, IEHA helps to develop the capacity of producer and exporter associations, agribusinesses and related firms, research systems and networks, national and local governments, and universities. The Initiative also has built regional and national-level capacity for policy analysis and dialogue. It is boosting capacity to manage food contamination risk and building the capacity of women in agricultural production.

Promoting Informed Stakeholder Dialogues to Improve Policy. Policies are critical to making markets work for smallholders, moving staple foods from food-surplus to food-deficit areas, managing agricultural research to improve the productivity of smallholders, and reducing regional barriers to the movement of key inputs. IEHA has emphasized improving national and regional policies to ensure a conducive environment for agricultural transformation.

Creating Synergy between Bilateral and Regional Programs. In the past regional and bilateral USAID programs developed their strategies independently. As a result the focus and objectives of different programs ranged widely. IEHA has coordinated these bilateral and regional programs to take advantage of opportunities, promote spillover of benefits, and avert disasters while promoting agricultural growth.

Identifying High-Priority Commodities. IEHA has focused its agricultural productivity investments on traditional and nontraditional export and staple food commodities that have the potential to raise incomes and attract private investment, and lend themselves to smallholder production and technical innovation. IEHA programs continue to promote increased productivity and smallholder profits in both cash and staple food commodities, but the emphasis has moved toward staple commodities.

CONCLUSION

Agricultural transformation is key to creating wealth, and thereby reducing poverty and hunger, in Africa. IEHA's five years of work in Sub-Saharan Africa have helped to bring about such a transformation by enhancing the productivity of smallholder-based agriculture, improving the policy and institutional environment, and increasing agricultural trade, with the ultimate goals of expanding economic growth, reducing poverty, and eliminating hunger. The United States has committed to continuing IEHA's success through the Global Food Security Response, which will give millions of Africans – the hungry, the poor and the vulnerable – hope for transforming their lives.

1. INTRODUCTION

The 2008 food crisis was defined most prominently by the rapid increases in the price of food in 2007 and the first half of 2008, which threatened the immediate food security and nutritional status of more than 100 million poor throughout the world, 30 million or more in Sub-Saharan Africa. With high rates of poverty, malnutrition, hunger, and food insecurity, Africa is exceptionally vulnerable. A typical African family spends between 50 and 70 percent of its budget on staple foods. Surging food prices push households into poverty, pull children from school, and leave illness untreated. The causes and consequences of the food crisis are structural forces that are likely to place long-term upward pressure on food prices and jeopardize the health and well-being of another generation of Africans.

USAID AFRICA PHOTO LIBRARY

Malawi: Chili peppers grown for export.

In May 2008 the United States Government (USG) announced a response to mitigate the immediate impacts and address the underlying causes of the recent increase in global food prices. In June 2008 Congress appropriated supplemental resources for the Global Food Security Response (GFSR) to address the root causes of the food crisis. A primary focus of the supplement was to improve staple food systems. In the face of higher food prices, urgent actions were taken for fast-impact food production and marketing programs in key geographic areas. These actions included regional and national efforts to make staple food markets work better; as a result the poor will have greater access to food, and increased private investment will sustain agricultural growth and build resilience to economic shocks.

The GFSR builds on the Initiative to End Hunger in Africa (IEHA) to address Africa's increasing food insecurity. IEHA's focus is on smallholders, those farm households in rural areas who are poor and have the capacity to improve their situation. Most of these smallholders are net food purchasers. IEHA programs promoting agricultural growth improve smallholders' access to food by raising their agricultural productivity, which increases incomes and produces food surpluses. IEHA supports efforts that:

- meet the needs of the vulnerable, especially the persistently poor and hungry;
- harness science and technology to support smallholders and to stimulate investment in the agricultural sector;

- exploit the power of markets, especially regional markets, to create regional growth and to stimulate private investment in agribusiness; and
- improve economic governance and build global partnerships that can effectively create the conditions for agriculture to flourish.

The GFSR deepens IEHA's work. It will link producers to markets and link food staple-deficit areas to surplus areas. It will align investments with country-identified priorities and better integrate humanitarian and development assistance. The GFSR offers developing countries a way to make the policy and public investment decisions necessary to promote sustainable growth and become food-secure.

The GFSR embodies critical shifts in USG policy. In Africa, the Response:

- integrates development and emergency aid to reduce the likelihood, and alleviate the severity, of potential future emergencies;
- retains an emphasis on agricultural productivity but places new importance on the targeted development of inclusive, staple food markets;
- emphasizes commercial markets and private-public partnerships;
- takes a regional perspective on food security challenges, coordinating local investments and activities, including local and regional procurement, and reducing barriers in trade corridors;
- targets support to those countries that make tangible investments and policy changes to support the agenda of the Comprehensive Africa Agriculture Development Program (CAADP);
- brings together diverse donors, national governments, private sector partners and other stakeholders in a single cohesive and directed response, the CAADP compact.

BUILDING ON IEHA PARTNERSHIPS WITH AFRICA

In implementing the GFSR in Africa, the USG continues its strong partnership with Africans and their governments. IEHA partners with committed African leaders, their governments, and regional organizations to work and invest in support of a smallholder-oriented, agricultural growth strategy. The notable feature of this partnership is the African Union New Partnership for Africa's Development (AU/NEPAD)'s CAADP, a framework for collaboration and prioritized investments designed and committed to by African leaders and their governments. CAADP is the largest, most ambitious agricultural reform process ever undertaken in Africa.

African countries implementing CAADP take stock of current agricultural investments, undertake an analysis to identify agricultural growth options and then draft a CAADP Compact that is presented at a multi-stakeholder round table and finalized with the signing of a country CAADP Compact. The CAADP Compact specifies the long-term investment commitments of the country for agricultural growth and development. To date, only Rwanda has a Country Compact. Six countries are still at relatively early stages of the process, but 13 countries are drafting country CAADP compacts, another 11 countries are engaged in the stocktaking exercise to identify investment options, and three countries have reached the stage of cabinet endorsement of CAADP plans (see Chapter 7 for full details).

IEHA 2008 INVESTMENTS

IEHA's goal in Sub-Saharan Africa is to cut hunger and poverty in half by 2015, the first Millennium Development Goal (MDG), by increasing rural incomes (see Figure 1.1.) To accomplish this, the Initiative seeks to:

- enhance the productivity of agricultural smallholders by expanding the development, dissemination, and use of new technology and enhancing human and institutional capacity for technology development, dissemination, and management;
- improve the policy environment for smallholder-based agriculture by enhancing human and institutional capacity for policy formulation and implementation; and
- increase agricultural trade by enhancing competitiveness of smallholder-based agriculture and enhancing agricultural market infrastructure, institutions, and trade capacity.

IEHA's total funding reached $125.7 million in FY 2008 (Table 1.1). Of that total, $47.1 million came from the U.S. Government's FY

FIGURE 1.1: IEHA OBJECTIVE AND KEY RESULTS

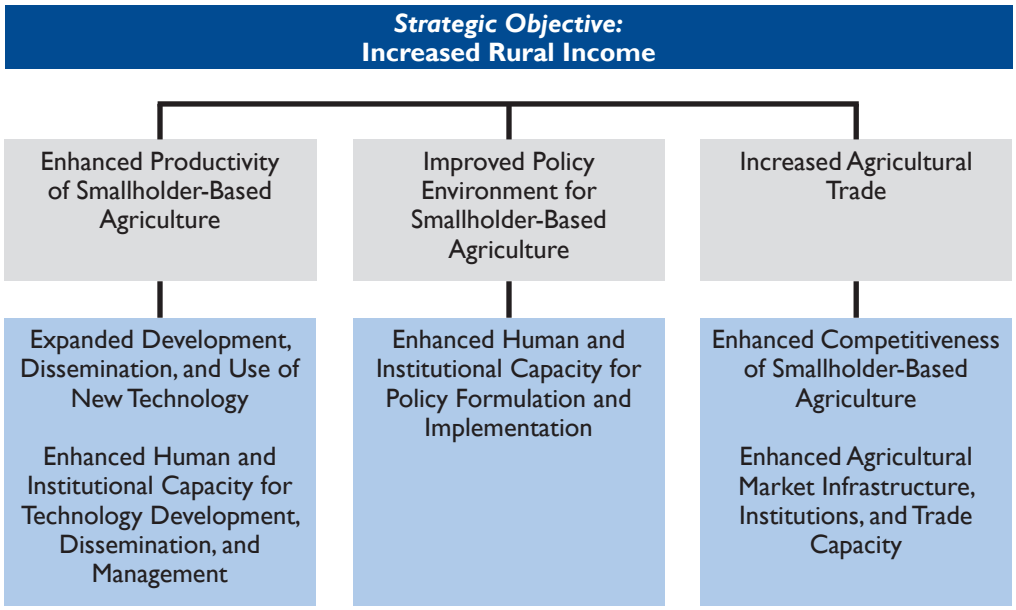


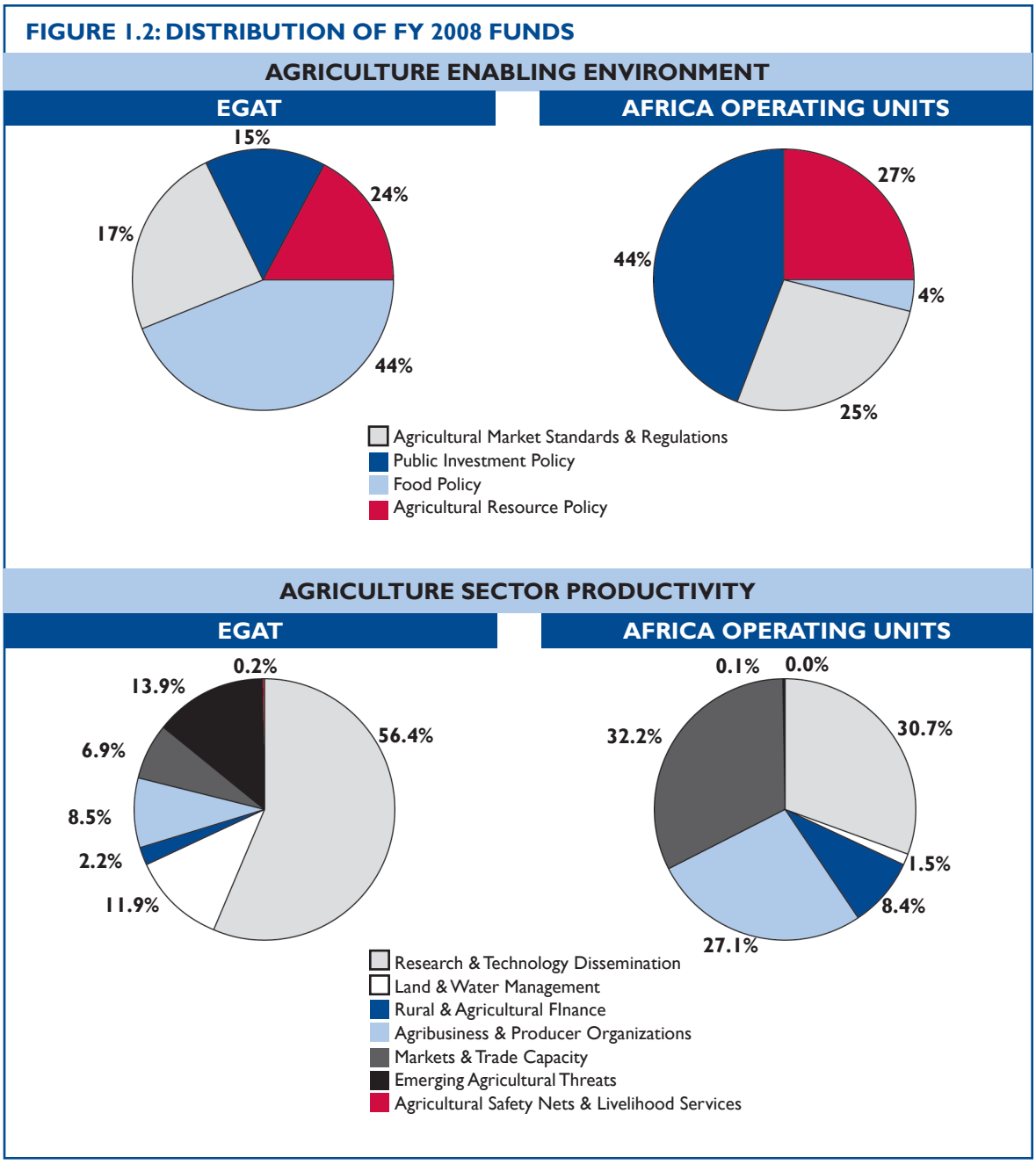
TABLE 1.1 IEHA FUNDING (Millions of Dollars)

Fiscal Year	Development Assistance	P.L. 480 Title II	Famine Fund	Total
2003	26.5	NA	NA	26.5
2004	67.5	NA	NA	67.5
2005	67.9	NA	5.0	72.9
2006	75.5	100.0	19.8	195.3
2007	72.1	100.0	19.8	191.9
2008	47.1	63.1	15.5	125.7

2008 Development Assistance Account. All of these funds were obligated and supported field implementation of IEHA programs.

Figure 1.2 shows how funds were expended on IEHA programs by the Elements and Subelements of the Foreign Assistance Framework. The Bureau for Economic Growth, Agriculture, and Trade (EGAT) charts show funds programmed by EGAT in support of IEHA; the Africa Charts show the use of IEHA funds by USAID Africa operating units.

FIGURE 1.2: DISTRIBUTION OF FY 2008 FUNDS



In 2008 IEHA was active in seven countries (Ghana, Kenya, Malawi, Mali, Mozambique, Uganda, and Zambia) and three Sub-regions (West, East, and Southern Africa). (See Figure 1.3) These countries are leaders in policy reform, public investment, and government commitment to agricultural growth and poverty reduction. They are representative of the key economic and agricultural characteristics of their regions. They also have the greatest potential for rapidly influencing regional agricultural productivity and economic growth through trade and technology diffusion.

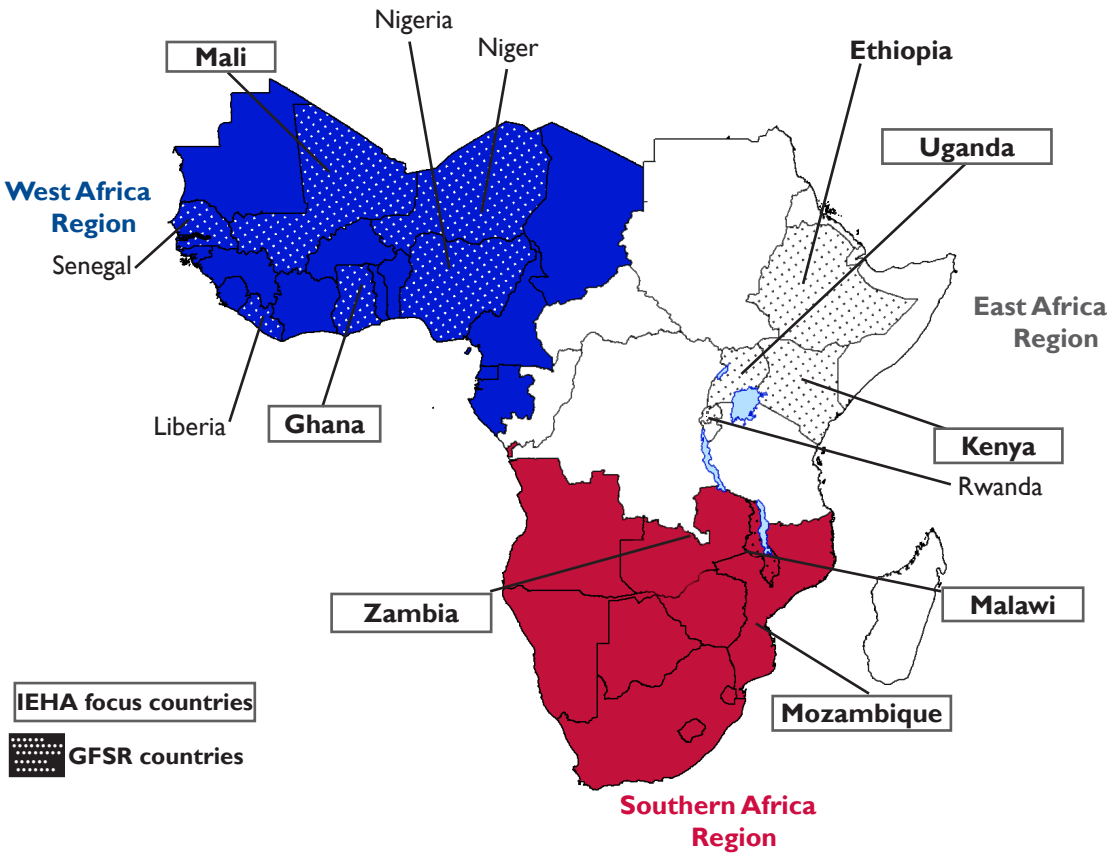
IEHA BUILDS CAPACITY…

A key component in achieving IEHA results is building African capacity. Institutional and human capacity development are critical to increasing food production and strengthening trade capacity, which in turn leads to increased staple food trade.

Over the past five years, as a result of USG assistance:

- The number of agriculture-related firms that benefited from IEHA increased from 656 in FY 2004 to 10,088 in FY 2008.

FIGURE 1.3: FY 2008 INITIATIVE TO END HUNGER AND GLOBAL FOOD SECURITY RESPONSE COUNTRIES



- Training attendance was 5.55 million, of which 3.68 million were male and 1.87 million were female.
- A total of 16,867 producer organizations, water user associations, trade and business associations and community-based organizations were assisted in FY 2008. This was up from 4,280 in FY 2004. The number of women's organizations assisted during FY 2008 reached 1,967; in FY 2004, 53 were assisted.

...AND GETS RESULTS

- A total of 546,487 hectares of land was brought under new technology in FY 2008, up from 97,439 in FY 2005. More than 1.3 million farmers adopted new technology in FY 2008 compared to about 225,000 in FY 2005.
- A total of $40.8 million of credit was made available in FY 2008. Over the past four years of IEHA (FY 2005-FY 2008), more than $87 million in credit to beneficiaries was facilitated.
- Producers sold $152 million in agricultural products, including staple foods, in domestic markets in FY 2008. This is more than double the amount sold in FY 2005.
- In 2008, the value of intra-regional trade reached $250 million. Maize exports within East Africa were a major contributor to intra-regional trade, reaching $189 million. Cotton, seed, dairy and horticultural products were other important commodities in intra-regional trade. IEHA has facilitated intra-regional trade of more than $225 million every year since 2005.

Overall, the number of rural individuals benefiting from IEHA increased from 1.6 million in FY 2004 to 12.6 million people in FY 2008.

OVERVIEW OF REPORT

This report comprises eight chapters and three annexes. Chapter 2 is a summary of IEHA accomplishments against its targets. Chapter 3 takes a look at IEHA at the end of its fifth year of implementation, presenting both FY 2008 accomplishments and results over the past five years. Chapter 4 examines the causes and consequences of the current food security challenge and the U.S. response. Chapter 5 examines how African economies are being transformed through staples-led growth. Chapter 6 reviews the importance of regional market integration to the IEHA strategy for cutting hunger and poverty. Chapter 7 provides an update of progress under CAADP and how the USG is supporting CAADP. Finally, Chapter 8 details progress in meeting MDG and CAADP goals, and identifies emerging challenges and opportunities.

The three annexes provide more detail on IEHA's partners, its monitoring and evaluation system, and the programs of its operating units.

2. IEHA FY 2008 INVESTMENTS CONTINUE TO MEET TARGETS

USAID's comprehensive monitoring and evaluation system for the Initiative to End Hunger Africa (IEHA) provides a coherent and consistent approach to strategic planning and results reporting. Each IEHA operating unit reports on a set of common indicators developed to track the performance of IEHA-related investments. The indicators include measures of both outputs and impacts. Operating units surpassing 100 percent of the targets are regarded as exceeding targets. Those meeting 90%-100% of the targets are regarded as on track. Those meeting 70%-90% of targets are viewed as making progress but needing improvement, and those meeting less than 70% of targets are viewed as failing.

MEETING TARGETS FOR KEY OUTPUTS

In FY 2008 the overall performance of IEHA operating units with respect to all output indicators was at or above target levels (Table 2.1).

TABLE 2.1 ACHIEVEMENT OF OUTPUT* TARGETS, BY OPERATING UNITS, FY 2008

Operating Unit	Number of Indicators for Which Targets Met or Exceeded	Average Percentage of FY 2008 Target Achieved
East Africa	4	112%**
Southern Africa	10	125%
West Africa	7	558%
Ghana	7	152%
Kenya	12	201%
Malawi	10	111%
Mali	8	141%
Mozambique	12	130%
Uganda	7	97%
Zambia	12	254%

Source: FY 2008 annual monitoring report of IEHA operating units.

* See Table 2.2 for specific outputs.

** Average Percentage of Target Achieved is the simple average of the percentage achieved for all of the output indicators for which target data and actual performance data were submitted.

Regional and bilateral operating units report on slightly different sets of output indicators.

Table 2.2 summarizes IEHA FY 2008 accomplishments. The Initiative reached 12.6 million beneficiaries in 2008 in more than 2.6 million African households, including nearly 705,000 vulnerable households.[1] Attendance in training was 2.5 million, a nearly 50% increase over 2007. Women's attendance in training exceeded 730,000, and nearly 2,000 women's associations were assisted. IEHA helped more than 16,800 other producers' organizations and associations to better serve their smallholder and private sector members. Through IEHA's technical assistance programs, 626 new technologies were made available for transfer. Meanwhile, 334 new technologies were under research, and 359 were undergoing field-testing in the pipeline.

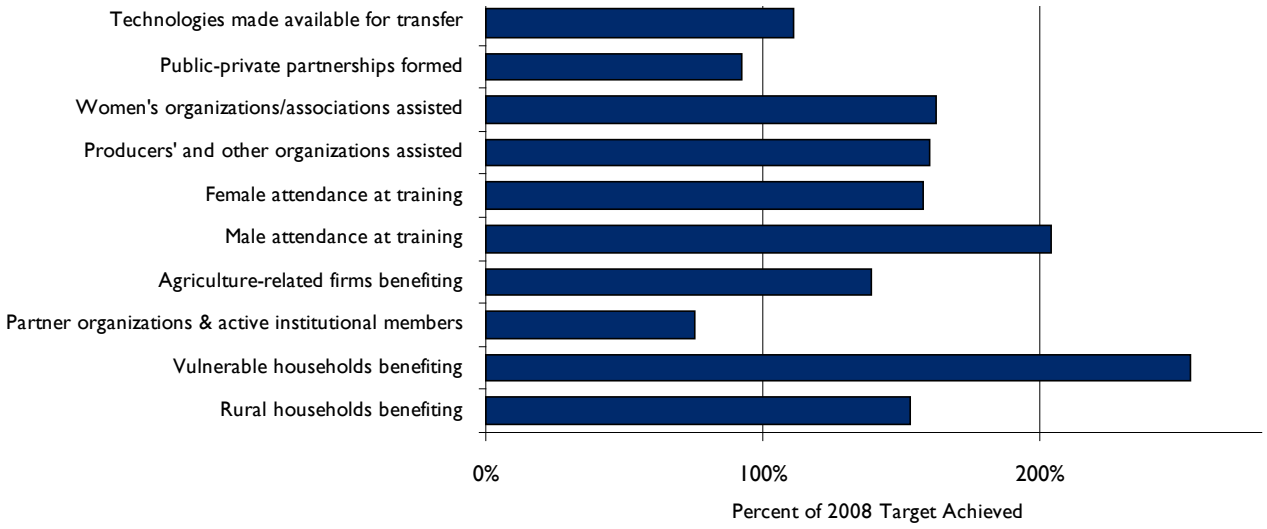
TABLE 2.2 OUTPUT LEVELS AND ACHIEVEMENT OF TARGETS, ALL IEHA OPERATING UNITS, FY 2008

Output Indicator	FY 2008 Target	FY 2008 Actual	Percent of Target Achieved*
Number of rural households benefiting directly from interventions	1,637,247	2,639,778	153%
Number of vulnerable households benefiting directly from interventions	267,891	704,287	254%
Number of partner organizations and active institutional members of those partner organizations	845	460	75%
Number of agriculture-related firms benefiting directly from interventions	6,479	10,088	139%
Attendance by male individuals in training	835,918	1,772,224	204%
Attendance by female individuals in training	446,595	737,657	158%
Number of producers' organizations, water users' associations, trade and business associations, and community-based organizations assisted	9,677	16,867	160%
Number of women's organizations/associations assisted	1,102	1,967	162%
Number of public-private partnerships formed	350	385	93%
Number of new technologies or management practices under research	269	334	109%
Number of new technologies or management practices under field testing	254	359	118%
Number of technologies made available for transfer	530	626	111%

Source: FY 2008 annual monitoring report of IEHA operating units
*Percent of Target Achieved is calculated using target data and actual performance data from each IEHA operating unit. If an Implementing Partner did not submit a target, then that Partner's "actual performance" was excluded from the calculation. The data under "FY 2008 Target" and "FY 2008 Actual" are the complete totals of all data submitted by the Implementing Partner to an IEHA operating unit.

[1] Vulnerable households are defined at the country level by individual USAID operating units. The criteria may include households at high risk from extreme poverty, civil conflict, AIDS, chronic food insecurity, or other factors.

FIGURE 2.1: ACHIEVEMENT OF OUTPUT TARGETS, ALL IEHA OPERATING UNITS, FY 2008



Source: Table 2.2

In 2008, IEHA programs and implementers formed 385 new public-private partnerships.

IEHA as a whole met 11 of its 12 targets for key outputs. Achievement of overall targets ranged from 75% to 254% (Figure 2.1).

From the reporting provided by all IEHA operating units and partners, USAID concludes that IEHA was successful in 2008 in field activities and in the coordination of Initiative-wide actions that are expected to produce the targeted impacts on income, poverty and hunger.

MEETING TARGETS FOR KEY RESULTS

At the end of FY 2008, IEHA was on track to achieve its key results. Table 2.3 summarizes the performance of IEHA country missions in reporting on common performance indicators. Three of the seven country missions (Ghana, Kenya, and Mali) provided reporting on all the performance indicators shown, and Uganda and Zambia reported on all but one. A total of 28 commodities were reported using the productivity measure of gross margin per hectare, of which three missions met or exceeded targets on 11 commodities (one in Ghana, three in Mali and seven in Uganda). Impact in terms of the value of international trade was measured for 22 reported commodities. In intra-regional trade, a total of 16 commodities were reported. Of the seven bilateral missions, all except Malawi and Mozambique reported on progress in policy reform.

TABLE 2.3 ACHIEVEMENT OF TARGETS FOR INTERMEDIATE RESULTS, IEHA COUNTRY OPERATING UNITS, FY 2008

Intermediate Results, Indicator(s), and Target Categories	Total	Ghana	Kenya	Malawi	Mali	Mozambique	Uganda	Zambia
Intermediate Result 1: Enhanced Productivity of Smallholder-Based Agriculture								
Indicator: Gross margin per hectare or per animal								
Number of bilateral operating units reporting on this indicator	4	1	1	0	1	0	1	0
Number of commodities reported	16*	3	4	0	3	0	7	0
Number of commodities for which target met/exceeded	11	1	a	a	3	a	7	a
Expanded Development, Dissemination, and Use of New Technology (by country)								
Indicator: Adoption of targeted technologies (area)								
Number of bilateral operating units reporting on this indicator	7	1	1	1	1	1	1	1
Number of indicators for which target met/exceeded	1	0	0	0	0	0	0	0
Indicator: Adoption of targeted technologies (farmers)								
Number of bilateral operating units reporting on this indicator	7	1	1	1	1	1	1	1
Number of indicators for which target met/exceeded	4	1	1	0	0	1	1	0
Indicator: Adopting new technologies (processors)								
Number of bilateral operating units reporting on this indicator	3	0	0	1	1	0	1	0
Number of indicators for which targets met/exceeded	1	a	a	a	a	a	a	a
Intermediate Result 2: Improved Policy Environment for Smallholder-Based Agriculture								
Indicator: Policy reform (milestones)								
Number of policies reported	49	24	10	0	2	0	7	6
Number of policies for which target met/exceeded	17	12	a	a	2	a	1	2

TABLE 2.3 CONTINUED

Intermediate Results, Indicator(s), and Target Categories	Total	Ghana	Kenya	Malawi	Mali	Mozambique	Uganda	Zambia
Intermediate Result 3: Increased Agricultural Trade								
Indicator: Agricultural trade (targeted commodities, international)								
Number of bilateral operating units reporting on this indicator	7	1	1	1	1	1	1	1
Number of commodities reported	22*	4	3	1	1	2	5	10
Number of commodities for which target met/exceeded	3	2	a	a	a	1	0	a
Indicator: Agricultural trade (targeted commodities, intra-regional)								
Number of bilateral operating units reporting on this indicator	5	0	1	0	1	1	1	1
Number of commodities reported	16*	0	1	0	2	3	1	10
Number of commodities for which target met/exceeded	3	a	1	a	1	a	1	a
Enhanced Competitiveness of Smallholder-Based Agriculture								
Indicator: Purchases from smallholders (domestic trade, targeted commodities)								
Number of commodities reported	36*	9	4	0	5	5	9	10
Number of indicators for which target met/exceeded	12	8	1	a	a	a	3	a
Enhanced Agricultural Market Infrastructure, Institutions, and Trade Capacity								
Indicator: Value of credit beneficiaries								
Number of bilateral operating units reporting on this indicator	4	0	1	0	1	1	0	1
Number of indicators for which target met/exceeded	2	a	1	a	0	0	a	1
Indicator: Number of enterprises accessing Business Development Services								
Number of bilateral operating units reporting on this indicator	4	1	1	0	0	1	0	1
Number of indicators for which target met/exceeded	3	1	1	a	a	0	a	1
Indicator: Number of firms achieving International standards								
Number of bilateral operating units reporting on this indicator	4	1	1	0	1	0	0	1
Number of indicators for which target met/exceeded	1	0	a	a	a	a	a	1

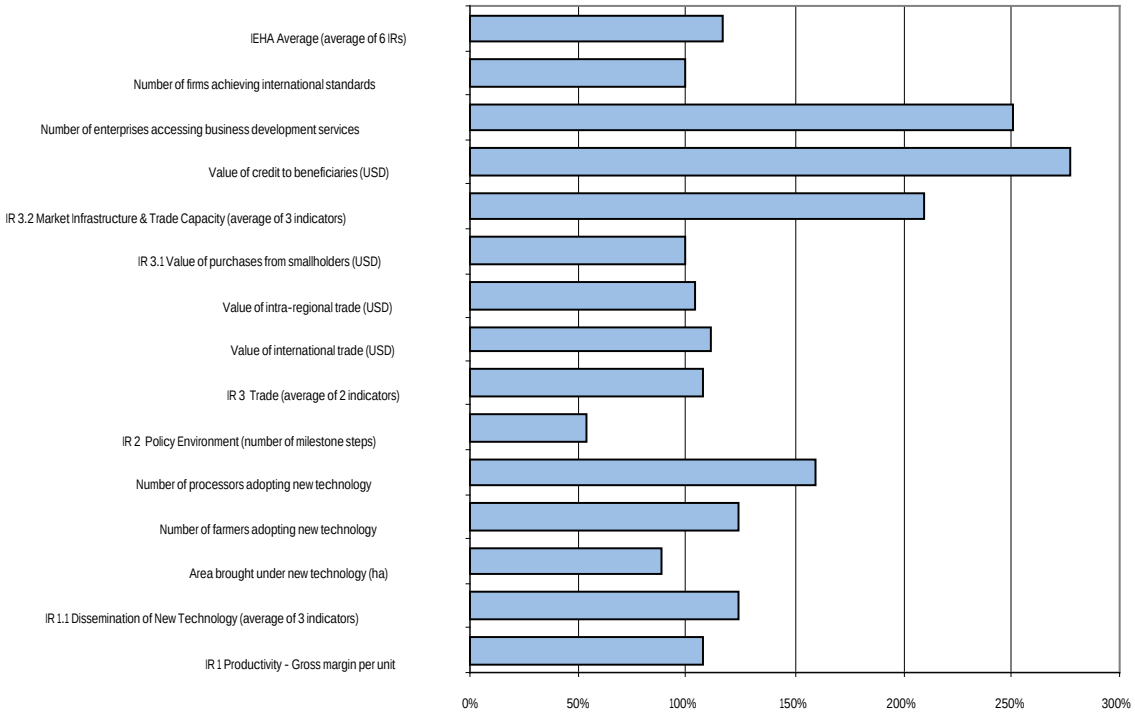
Source: FY 2008 annual monitoring report of IEHA operating units
a - Target(s) not reported
*Some commodities were reported by more than one operating unit

IEHA helped more than 1.3 million farmers bring about 550,000 hectares under new technology, and 57 processors employed new technology during 2008. Smallholders sold more than $150 million worth of commodities in the domestic market. The value of international trade in targeted agricultural products was $1.2 billion, and intra-regional trade was $250 million. Beneficiaries accessed over $40 million in credit and about 460,000 enterprises accessed business development services.

In the area of improvement of the policy environment, 140 policies in total were pursued and 70 (50%) met target. In 35 cases, policy reforms were adopted, and in 17 cases, the new policies were implemented.

Overall, IEHA achieved 117% of its targets (Figure 2.2).

FIGURE 2.2: PERCENT OF TARGET ACHIEVED ON IEHA INTERMEDIATE RESULTS INDICATORS, FY 2008



Source: Table 2.4

TABLE 2.4 LEVELS OF INTERMEDIATE RESULTS AND ACHIEVEMENT OF TARGETS, ALL IEHA OPERATING UNITS, FY 2008

Intermediate Result and Indicator(s)	FY 2008 Target	FY 2008 Actual	Percentage of Fiscal Year Target Achieved*
Intermediate Result 1 Productivity (Gross margin per hectare or per animal)			108%
Dissemination of New Technology			124%
Area brought under new technology (hectares)	157,495	546,487	88%
Number of farmers adopting new technology	695,790	1,311,901	124%
Number of processors adopting new technology	5	57	160%
Intermediate Result 2 Policy Environment (number of milestone steps)		176	54%
Intermediate Result 3 Trade			107%
Value of international trade (US dollars)	111,829,695	1,231,682,447	111%
Value of intra-regional trade (US dollars)	157,945,115	250,015,876	104%
Competitiveness - Value of purchase from smallholders (USD)	101,351,864	151,863,635	99%
Market Infrastructure & Trade Capacity			210%
Value of credit to beneficiaries (US dollars)	14,664,890	40,777,594	278%
Number of enterprises accessing business development services	150,210	459,199	251%
Number of firms achieving international standards	2	53	100%
IEHA Average			117%

Source: FY 2008 annual monitoring report of IEHA operating units
*Percent of Target Achieved is calculated using target and actual performance data from each IEHA operating unit. If an operating unit did not submit a target, then that unit's "actual" was excluded from the calculation. However, the data under "FY 2008 Target" and "FY 2008 Actual" are the complete totals of all data submitted.
Intermediate Result 1: Percent of target achieved is simple average of individual commodity gross margins.
Dissemination of New Technology and Market Infrastructure and Trade Capacity: Overall percent of target achieved is calculated as simple average of target achieved for each indicator.
Overall percent of target achieved is calculated as simple average of target achieved for each indicator.
IEHA Average: Calculated as simple average of all Intermediate Results.

Finally, Table 2.5 shows IEHA's accomplishments in meeting its targets over the past three years. Overall, and in general, targets were met or exceeded.

TABLE 2.5 ACHIEVEMENT OF INTERMEDIATE RESULTS (IRS), FY 2006-2008

Intermediate Result and Indicator(s)	Percentage of Fiscal Year Target Achieved*		
	FY 2006	FY 2007	FY 2008
Intermediate Result 1 Productivity (Gross margin per hectare or per animal)	123%	131%	108%
Dissemination of New Technology	275%	98%	124%
Area brought under new technology (hectares)	495%	86%	88%
Number of farmers adopting new technology	189%	98%	124%
Number of processors adopting new technology	142%	111%	160%
Intermediate Result 2 Policy Environment (number of milestone steps)	76%	45%	54%
Intermediate Result 3 Trade	132%	69%	107%
Value of international trade (US dollars)	145%	82%	111%
Value of intra-regional trade (US dollars)	119%	56%	104%
Competitiveness - Value of purchase from smallholders (USD)	282%	128%	99%
Market Infrastructure & Trade Capacity	118%	104%	210%
Value of credit to beneficiaries (US dollars)	144%	72%	278%
Number of enterprises accessing business development services	122%	144%	251%
Number of firms achieving international standards	87%	95%	100%
IEHA Average	168%	96%	117%

Source: Table 2.4, and FY 2006 and FY 2007 IEHA Annual Reports
* See notes to Table 2.4

3. IEHA MADE THE CASE FOR AGRICULTURE AND RESULTS FOLLOWED

Over its five years,[1] the Initiative to End Hunger in Africa (IEHA) has provided technical leadership in agriculture that:

- promoted a coordinated approach to humanitarian and development assistance;
- provided strategic guidance with programming flexibility;
- built country, regional, and continent-wide capacity to support its objectives;
- promoted informed dialogue among stakeholders to improve policy;
- developed synergy between bilateral and regional programs; and
- implemented evidence-based programming.

This chapter reviews IEHA's FY 2008 results and its accumulated accomplishments over the past five years.

OVERVIEW OF IEHA RESULTS

IEHA is achieving sustained results. The Tegemeo Institute's biennial household income survey in Kenya (completed in November 2008), for instance, established that: 1) average productivity increased by 13% for maize and 15% for dairy products between 2006 and 2008; 2) average household income increased in the medium- and high-potential areas (where USAID programs are focused) by 14% between 2006 and 2008; and 3) female-headed households grew their incomes more (19.4%) than male-headed households (13.9%).

A few examples of IEHA's success over the past five years follow. The number of rural

A. FLEURET

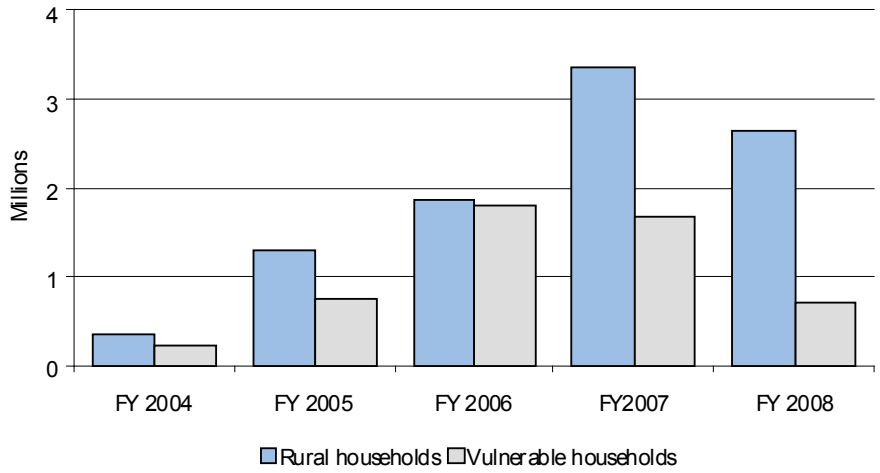
USAID is helping farmers' organizations, like this group in Kano, Nigeria, to plant higher-yielding crops. These women have boosted their incomes by increasing their production of sorghum.

[1] IEHA was launched in July 2002. In FY 2003, IEHA operating units developed implementation plans, undertook analysis, designed programs and funded some quick start-up actions. Comprehensive performance data are available for FYs 2004 through 2008.

households benefiting from IEHA (Figure 3.1) increased from 353,586 rural households in FY 2004 to over 2.6 million in FY 2008 while the number of vulnerable households benefiting increased from 225,386 in FY 2004 to 704,287 in FY 2008. The drop in the number of rural and vulnerable households benefiting between FY 2007 and FY 2008 is a direct result in the FY 2008 decline in the IEHA and agriculture budgets.

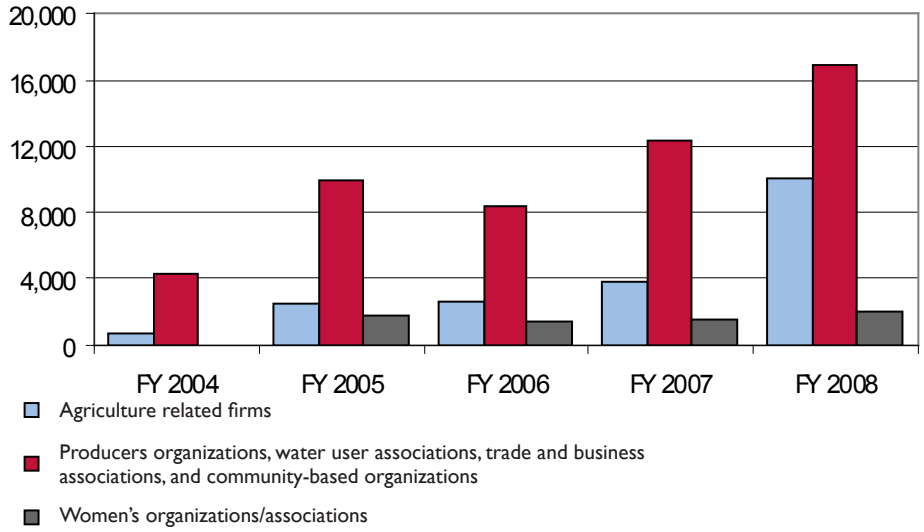
The number of agriculture-related firms benefiting from IEHA projects (Figure 3.2) increased from 656 in FY 2004 to 10,088 in FY 2008. A total of 16,867 producer organizations, water user associations, trade and business associations and community-based organizations were assisted in FY 2008, up from 4,280 in FY 2004; and the number of women's organizations assisted during FY 2008 reached 1,967, up from 53 assisted in FY 2004 (Figure 3.2).

FIGURE 3.1: NUMBERS OF RURAL AND VULNERABLE HOUSEHOLDS BENEFITING FROM IEHA ASSISTANCE, FY 2004 – FY 2008



Source: Annual monitoring reports by IEHA operating units.

FIGURE 3.2: NUMBERS OF FIRMS AND ASSOCIATIONS BENEFITING FROM IEHA ASSISTANCE, FY 2004 – FY 2008



Source: Annual monitoring reports by IEHA operating units.

TABLE 3.1 ATTENDANCE AT TRAINING BY SEX, FY 2004 – FY 2008

Indicator	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change 2005-2008
Male attendance at training	138,359	342,696	381,007	1,046,770	1,772,224	417%
Female attendance at training	67,363	219,926	209,210	641,181	737,657	235%

Source: Annual monitoring reports by IEHA operating units.
*Percent of Target Achieved is calculated using target data and actual performance data from each IEHA operating unit. If an Implementing Partner did not submit a target, then that Partner's "actual performance" was excluded from the calculation. The data under "FY 2008 Target" and "FY 2008 Actual" are the complete totals of all data submitted by the Partner to an IEHA operating unit.

Attendance in IEHA training over the five years was 5.55 million, of which 3.68 million was male attendance and 1.87 million was female attendance.

KEY IEHA ACTIONS (FY 2004 – FY 2008) THAT MADE RESULTS POSSIBLE[2]

IEHA is much more than a source of funds for agricultural development in SSA. Over the past five years, IEHA has provided:

- a strategic vision with sufficient flexibility to accommodate country plans;
- coordination among bilateral, regional and centrally managed programs;
- integration of relief and development programs and practices;
- technical leadership and advocacy for agriculture in global fora; and
- a sustained effort to build African capacity and ensure dialog with African stakeholders.

IEHA HELPED MAKE THE CASE FOR AGRICULTURE

The Initiative to End Hunger in Africa originated in the global recognition that hunger in Africa is one of the most significant development challenges facing the world. The Initiative:

- embodied the commitment of the U.S. Government (USG) to agricultural development in Africa; and
- increased United States' efforts to reduce the number of impoverished and malnourished people in Africa by more than 25%.

Over its five years, the relative stability and reliability of IEHA funding has helped maintain both a minimum level of effort by, and the credibility of, the USG as a development partner in agriculture. Since its beginning, the Initiative has provided leadership in agricultural policy and programming. It has supported the development of analytical tools to identify: the best approaches to achieving growth through market and trade opportunities; lead commodities; and public investment priorities. IEHA has invested in countries that are regional leaders in policy reform, public investment and government commitment to agricultural growth and poverty reduction. These countries have the greatest potential for rapidly influencing regional agricultural productivity and economic growth through technology diffusion and trade.

IEHA also helped mobilize the resources of African governments, international development agencies, private sector investors, civil society, universities and a broad range of interest groups that provide support for African development.

[2] Many of the themes in this section are derived from interviews conducted with USAID senior staff and key development partner staff who have been working on IEHA for the past four or five years.

The analytical tools to identify public investment priorities have been used by Africans to inform their Comprehensive Africa Agriculture Development Program (CAADP) processes. The USG has used the tools to guide the development of the Global Food Security Response (GFSR) and to prioritize GFSR investment areas.

IEHA PROMOTED A MORE COORDINATED APPROACH TO RELIEF AND DEVELOPMENT

African countries are often subject to natural disasters and conflicts that wreak havoc on rural communities and increase poverty and hunger. The USG and other donors have dedicated substantial sums to addressing immediate needs and mitigating the effects of these humanitarian crises. The sums expended have greatly exceeded the funds available for development programs that address the root causes of these emergencies and strengthen African country and regional capacity to respond. IEHA has worked to address this gap, bringing a comprehensive, coordinated approach to country and regional programs. This has resulted in better alignment between humanitarian and development programs.

A number of steps have been taken to integrate chronically vulnerable households into the development process, including:

- establishing clear and direct lines of communications from USAID/Washington Food for Peace (FFP) Office and Africa Bureau to USAID operating units and partners on improving IEHA and FFP development program integration;
- requiring that FFP's Multi-Year Action Plans (MYAPs) demonstrate integration with IEHA strategic objectives in country;
- raising awareness in the donor community and Washington of the linkages between HIV/AIDS and agricultural development, and the work of non-government organizations (NGOs) in this area; and
- developing a new five-year strategic plan for the P.L. 480 Title II Emergency and Development Programs (approved in FY 2005).

Food for Peace's new strategy has a single strategic objective: Food Insecurity of Vulnerable Populations Reduced. The previous strategy had separate strategic objectives for emergency (relief) and non-emergency (development) programs. On the ground, vulnerable populations—the primary target of Title II activities—often receive assistance from both development and relief programs in the same place at the same time. The division of the earlier strategic framework into separate objectives for relief and development did not support addressing the root causes of food insecurity.

USAID/Zambia has implemented this comprehensive approach, recognizing that the constraints of vulnerable households are often different from those of other rural households. In the agricultural productivity program, account was taken of the labor constraints of households headed by children, women and the elderly. The list of potential priority crops was reviewed considering these households' labor constraints. Based on the review, the program added a second commodity, cassava, whose production is less labor-intensive than maize. Because maize is preferred over cassava, Zambians were less inclined to produce cassava. By producing both crops, however, Zambia is becoming more food-secure.

IEHA PROVIDED TECHNICAL LEADERSHIPIN AGRICULTURE

Both the 2005 Paris Declaration on Aid Effectiveness and the African Union's New Partnership for African Development (AU/NEPAD) CAADP call for country ownership and donor coordination to minimize duplication and maximize investments in projects and programs identified as high

priorities by the host country and its development partners through processes such as the CAADP Country Roundtables. With IEHA, USAID has been one of a small number of donors providing leadership to these processes. IEHA builds on USAID's operational philosophy of on-the-ground design and management of projects. IEHA's model of development follows a common strategic framework that emphasizes not just productivity but also the importance of strengthening local and regional market capacity and linking smallholder producers to these markets. The IEHA model has taken hold in Sub-Saharan Africa and the donor community.

Donors, African regional organizations and countries are benefiting from IEHA's conceptualization, development and support of an African-wide analytical network: the Regional Strategic Analysis and Knowledge Support System (ReSAKSS). ReSAKSS was established to provide analysis, data and tools to promote evidence-based decision-making, improve awareness of the role of agriculture for development in Africa, promote dialogue, and facilitate the review processes associated with CAADP. Now supported by a multi-donor consortium, ReSAKSS has helped to strengthen the ongoing policy dialogues at the highest level to influence the future strategic directions of African agricultural growth, poverty reduction and rural development.

USAID has provided technical leadership in African capacity building to ensure that African institutions, rather than donors, lead the process and establish the priorities for agricultural development. As part of IEHA, USAID/East Africa has worked with other donors[3] to strengthen the capacity of the

K. BURNS

A rice processing facility's research lab in Uganda

Association for Strengthening Agricultural Research in East and Central Africa[4] (ASARECA) to organize collective action regionally to support increased productivity and competitiveness of smallholder farmers. The first steps undertaken were identifying clear areas of regional comparative advantage, developing a ten-year strategic plan, and strengthening the capacity of the ASARECA Secretariat to plan and oversee implementation of regional research activities. Systems for research planning, monitoring and evaluation, procurement and grant management, financial management, among others, have been brought up to international standards. To align with CAADP, ASARECA enlarged its Board to include representatives of farmers' groups, extension organizations, the private sector, and universities as well as representatives of the Common Market for Eastern and Central Africa (COMESA) and the Consultative Group for International Agricultural Research (CGIAR). Donors now support ASARECA's own program and systems rather than developing and funding separate projects with the Association.

3 The donor group includes USAID, the World Bank, the United Kingdom's Department for International Development (DFID), the European Union, the Canadian International Development Agency (CIDA), the International Development Research Centre (IDRC), the African Development Bank, the International Fund for Agricultural Development (IFAD), and the Swedish International Development Agency (SIDA).

4 The association works with public research, extension and education institutions and their partners in Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania, and Uganda.

IEHA PROVIDED STRATEGIC GUIDANCE AND FLEXIBILITY IN PROGRAMMING

IEHA established a "new way" of investing in agricultural growth to reduce poverty and hunger in Africa. The Initiative recognized that agricultural investments must be focused, not scattershot, and that tough choices on the allocation of efforts and resources were required. Regional investments were needed to complement country-level efforts in order to spread the benefits of the Initiative beyond the focus countries. Finally, when countries, regional platforms and Washington work closely together, they can obtain program synergies.

The concept of "focusing" has three inter-related dimensions:

- focus countries – those that are leaders in policy reform, public investment and government commitment to agricultural growth and poverty reduction;
- focus sub-regional strategies and programs - those likeliest to create the conditions for spillover of innovations and spread benefits across countries; and
- focus goods and services – those offering the greatest potential for raising rural incomes through agricultural production and off-farm enterprise development.

The IEHA guidance provided an investment framework and called for country and regional IEHA action plans to be built around six focal themes for maximum coordinated impact:

1. disseminating scientific and technological applications that harness the power of new technology and management practices;
2. improving the efficiency of agricultural trade and market systems;
3. building the capacity of community- and producer-based organizations;
4. developing human capital, infrastructure, and institutions;
5. integrating vulnerable groups and countries in transition into sustainable development processes; and
6. undertaking appropriate environmental management.

IEHA funding came with both common structure and guidance and the flexibility to align programs with country-identified priorities, enabling operating units to tailor their programs to local needs and opportunities. Analysis from ReSAKSS and other groups identified, for each country, the key commodities that could enhance agriculture-led economic growth. Based on country analytics, some operating units focused on cash crops that presented income-earning opportunities for smallholders, while others supported the development of staple-food value chains. Some operating units looked to non-African export markets for increases in smallholder income, while others found economic growth opportunities in domestic and regional markets.

IEHA BUILT AFRICAN CAPACITY

USAID recognized that the sustainability of African economic growth resides with African leaders and governments, farmer organizations, the higher education community, agricultural research organizations, the private sector, and civil society. This broad participation requires capacity building at all levels, which takes time and expertise to develop. It cannot be accomplished as a "turnkey" process.

- Enhanced capacity leads to improved efficiency and effectiveness, evidence-based policies, and sustainable results.
- Improved capacity builds host country ownership, which has been said to be the key to sustainable development.[5]

[5]Peter McPherson, "Transforming Food Security and Agricultural Development in Sub-Saharan Africa: A US-African Forum on Improving the Effectiveness of US Assistance and Investments in Challenging Economic Times," Partnership to Cut Hunger and Poverty in Africa, February 23-24, 2009, Washington DC.

IEHA's commitment to capacity building is at the core of its programs. To increase smallholder productivity, improve the policy environment, and increase access to markets and trade, IEHA helps to develop the capacity of producer and exporter associations, agribusinesses and related firms, research systems and networks, national and local governments, and universities. Women are often an important target of these capacity building efforts.

Building African Regional Policy Capacity. Through technical assistance, grant support and institutional mentoring for the past four years, USAID/Southern Africa has built the capacity of the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) to research, formulate and advocate for improved agricultural policies that foster increased intra-regional trade, increased crop diversification, improved access to markets and market information systems, and improved market standards. USAID has strengthened the institutional capacity of the FANRPAN secretariat and the country units in Angola, Malawi, Mozambique, South Africa, and Zambia for policy research and promoted regional harmonization of policies. Now, with support from the United Kingdom's Department for International Development (DFID) and the Forum for Agricultural Research in Africa (FARA), FANRPAN has the opportunity to strengthen FANRPAN units in all 12 Southern Africa Development Community (SADC) countries.

Buying bananas in the market in Mozambique

UNKNOWN

The Partner Institutional Viability Assessment (PIVA) tool was used to assess the capacities of the secretariat and existing or newly appointed country node hosting institutions, identify areas needing attention and set targets in organizational capacity improvements. FANRPAN has made remarkable progress towards the targets set during the baseline assessment. Notable achievements have been in the following areas:

- constitution reviewed and endorsed at the annual general meeting in September 2007, and board appointed;
- website and newsletters for information dissemination in place;
- human resources and financial management systems developed and implemented;
- medium-term program and financing strategies launched at the Annual Stakeholder Policy Dialogue held in Lusaka, Zambia, in September 2007; and
- formal links with COMESA, four governments, seven international organizations and CGIAR centers, SACAU (a regional farmer organization), two private sector organizations, one international and seven regional universities and four civil society organizations established.

Building African Country Policy Capacity. IEHA has supported Michigan State University (MSU) projects in Kenya, Malawi, Mali, Mozambique, and Zambia. The goal is to integrate agricultural policy analysis findings into national policy dialogues and programs. In Zambia, the Agricultural Consultative Forum (ACF), a nonpartisan think tank, was established to promote evidence-based private-public sector dialogue and stakeholder participation in the development, implementation, monitoring and evaluation of agricultural sector policies and programs. In collaboration, the Government, ACF, and the ACF-supported MSU Zambian study team have: completed a number of fertilizer subsidy policy studies that provide evidence for new ways of doing business; undertaken study tours for government and private sector officials to learn how other African countries are distributing fertilizer; and produced policy briefings for members of Parliament.

One study tour to Kenya, Malawi, and Tanzania resulted in a policy advisory note summarizing the study tour's lessons learned and recommendations (http://www.acf.org.zm/). A key policy recommendation, currently under government consideration, is to replace government tendering and special-purpose fertilizer distribution cooperatives with an approach that more carefully targets specific groups of farmers for discount vouchers that they can redeem at private agro-dealers. Extension agents would be responsible for distributing vouchers to those farmers who would not otherwise purchase seed and fertilizer, while simultaneously upgrading these farmers' knowledge and training.

Building African Country Trade Capacity. Nampula province in northern Mozambique produces most of the country's groundnuts. In 2006 farmers began exporting this crop to the lucrative FairTrade and organic markets in the United Kingdom. Farm prices for groundnuts rose by 15-20% over the price for conventional groundnuts. But lack of in-country facilities to test for aflatoxin, a toxin produced by a fungus, resulted in a loss of US $140,000 to smallholders and the groundnut industry due to aflatoxin contamination.

Now Nampula has its own state-of-the-art, fully equipped aflatoxin laboratory, staffed with trained personnel. USAID/Mozambique was instrumental in establishing a public-private partnership between USAID's Global Development Alliance program, the farmer-owned trading company IKURU, and the Universidade UniLurio. With funds from Twin Trading (one of IKURU's customers for groundnuts), the laboratory has been installed at the Universidade UniLurio. Groundnuts are now tested for aflatoxin contamination prior to export, limiting the likelihood of shipment rejection. It is hoped that the laboratory will expand its services to include other staple foods such as cassava and maize, resulting in significant benefits to the public health of Mozambicans.

MS. VINA VERMAN

Women of the FOKABEN association with bags of NERICA rice stored in their warehouse. The association produced over 22 tons of this improved rice seed, which will be used in next year's production, sold to the Malian government for distribution to other farmers, and used by USAID to train other rice farmers.

Building African Women's Capacity. A USAID/Mali project realized women's potential to tap into new income-generating activities using a value-chain development approach for potatoes. The project focused on bringing women into the economic mainstream, providing training in leadership, empowerment, and negotiating techniques. In 2007-2008, the project provided potato farming start-up kits of seed and fertilizer to eight women's groups in the Tombouctou, Gao, and Sikasso regions of Mali and trained these groups in best potato farming practices.

In just one season, the women's groups took charge of the land (which had been procured by the project from the men in the communities), harvested and brought potatoes—a rare and costly commodity in this part of the country—to the local market at a competitive price, returning a profit. Many of the women used their profits from the 2007-2008 season to invest in seed and fertilizer for the 2008-2009 season and to increase the number of hectares in production. Others obtained bank loans to finance the purchase of seed and fertilizer based on their successful harvest the previous year.

Despite their initial hesitation, men in these communities are now willing to increase the amount of land available to women and are offering support. A key factor in the success of the project was gaining access to land and acquiring inputs, major constraints to women's advancement in agriculture.

This new income source has empowered women in significant ways. "I lost my husband just after the potato harvest," said Fatoumata Dicko, one of the project's beneficiaries. "During this difficult time I was able to rely on my funds [from potato farming] and not be worried about how to deal with the situation. I felt proud to be able to resolve my personal issues on my own."

Building African Private Sector Capacity. The Regional Agricultural Trade Expansion Support (RATES) program in East Africa helped the Eastern African Fine Coffees Association grow from a fledgling organization to an industry leader. The association now provides marketing and educational services to its members, including training in post-harvest processing, roasting and blending, cupping, and marketing. It supports national and regional cupping competitions, and barista (retail coffee service) championships. The biannual African Fine Coffee Conference and Exhibition helps the organization to earn revenue and become financially sustainable. In 2008, more than 500 international and regional coffee industry players attended the event in Kampala, Uganda, generating more than $270,000 in net revenue for the organization.

IEHA PROMOTED INFORMED STAKEHOLDER DIALOGUES TO IMPROVE POLICY

Over the past three decades, policy reform has gone in and out of favor with donors, but over its first five years, IEHA has placed a major emphasis on improving national and regional policy to ensure a conducive environment for agricultural transformation. Policies are critical to making markets work for smallholders; moving staple foods from areas of surplus to areas of chronic deficits; managing agricultural research to improve the productivity of smallholders; and reducing regional barriers to trade in inputs.

Biotechnology Regulatory Policy. IEHA helps countries to develop regulatory systems to facilitate the safe and effective use of biotechnology by farmers and traders. After many years of stakeholder dialogue, Uganda, Kenya, and Nigeria have begun field

trials or enacted new regulatory policies that will facilitate research and deployment of bioengineered crops. In 2008 Uganda began its first-ever field trial of a disease-resistant banana. A USAID-supported biosafety program helped build technical capacity at the Ugandan regulatory agencies in advance of their reviewing the applications. Uganda also gave approval for a field trial of insect-resistant cotton in 2008, with the trial now slated to take place in 2009. Nigeria approved field trials of insect-resistant cowpea and biofortified cassava in February 2009.

At the regional level, USAID supported the *Institut du Sahel (NSAH)/Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS)* and the Economic Community of West African States (ECOWAS) to develop a biosafety framework that would establish a system for regional safety assessments of biotech crops. The draft framework underwent several rounds of country-level dialogue and review in 2008 and is currently being further refined by regional organizations. This framework will allow countries with few technical experts to pool their resources and draw upon regional expertise, potentially speeding up the dissemination of new technologies throughout the region.

Seed Regulatory Harmonization. IEHA programs are supporting regional work on approval (registration and release) processes, plant breeders' rights, and the production of breeder seed catalogues. Harmonized regulations will increase seed trade efficiency and help develop a private seed industry. In West Africa, CILSS has promoted the adoption of seed production and trade regulations in the ECOWAS region. In 2008 ECOWAS member states adopted regional seed regulations. The same year the Seed Alliance hosted regional workshops; 17 countries participated in the development of a science-based plant quarantine pest list to facilitate intra-regional seed trade. The workshops also helped the

UNKNOWN/FINTRAC

Rodah Kibuchi, left, learns about drip irrigation from USAID/Kenya expert Harrigan Mukhongo, right, and a consultant.

countries to develop manuals on putting in place clear procedures for implementing the technical agreements on seed trade.

The Southern African Development Community (SADC) Seed Security Network developed regional harmonized seed regulations that were subsequently adopted by SADC Ministers of Agriculture in June 2007 and approved by the Council of Ministers in August 2007. In 2008 the regional seed variety catalogue became fully operational and can be accessed at www.ilri.org/seed/seeddb. The catalogue has opened opportunities for seed companies, especially small-scale seed companies, to invest in the region. Malawi has established the first model enterprise, a seed business development incubator to commercialize certified seed. Plant breeders' rights laws were enacted in Mozambique and approved at the presidential level in Zambia. Malawi drafted a bill on plant breeders' rights that is pending policymakers' review.

IEHA CREATED SYNERGY BETWEEN BILATERAL AND REGIONAL PROGRAMS

One of the guiding principles of IEHA is

creating coordinated sub-regional, multi-country dynamics to induce and encourage agricultural growth by taking advantage of opportunities, promoting spillover of benefits, and averting disasters. Coordination is furthest along in the regional networks and organizations devoted to agricultural research and regional trade. These include *Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles*/West and Central African Council for Agricultural Research and Development (CORAF/WECARD), ASARECA, FANRPAN, COMESA, and ECOWAS.

Prior to IEHA, regional and bilateral operating units developed their strategies independently, based on assessments of opportunities. Although they all drew on the experiences, best practices, and development models available in USAID, there was a wide range in the focus and objectives of programs and projects, and all were on different timelines. Each country and regional program was an island unto itself. Few opportunities existed for staff to discuss lessons learned or plan a new activity. Reports and evaluations were not disseminated systematically nor were they structured to be comparable. This changed under IEHA. Each IEHA operating unit developed an IEHA Action Plan, describing their portfolio of activities and setting targets that would be contributing to a common set of objectives linked to higher level goals, including Millennium Development Goal 1 (MDG 1), which aims to reduce the proportion of people who suffer from hunger and live on less than a dollar a day by half by 2015.

The IEHA framework has provided opportunities for mutual learning, as well as incentives for more closely aligning activities. The common reporting system, common indicators, and consolidated annual reports orient all IEHA operating units around one set of objectives. The annual meetings have provided structured opportunities for comparing outputs and results and for discussing common issues, challenges, and lessons learned. IEHA has provided technical assistance for evaluations as projects have come to an end and for the design of new activities, further encouraging convergence. The Famine Prevention Fund, which has been managed in conjunction with IEHA, also has promoted operating units' working together.

Specific examples of coordination include the following.

- The Crop Crisis Control Project implemented a common set of activities in six countries to deal with common regional threats: the pandemic spread of cassava mosaic virus disease and banana bacterial wilt, two diseases of staple foods.
- The Regional Enhanced Livelihoods in Pastoral Areas Project has linked ongoing bilateral projects in Kenya and Ethiopia to address cross-border animal health and policy and trade issues affecting livestock.
- The RATES Program developed a framework for pulling together private sector partners involved in regional value chains and worked with policymakers at regional and national levels to reduce barriers to trade. This provided entry points for bilateral programs to support country-based policy reform efforts.

Most USAID operating units continue to be relatively autonomous, but those involved with IEHA now have five years of experience cooperating on a common set of programmatic objectives. The intensive planning for the GFSR over the past year is building on this foundation.

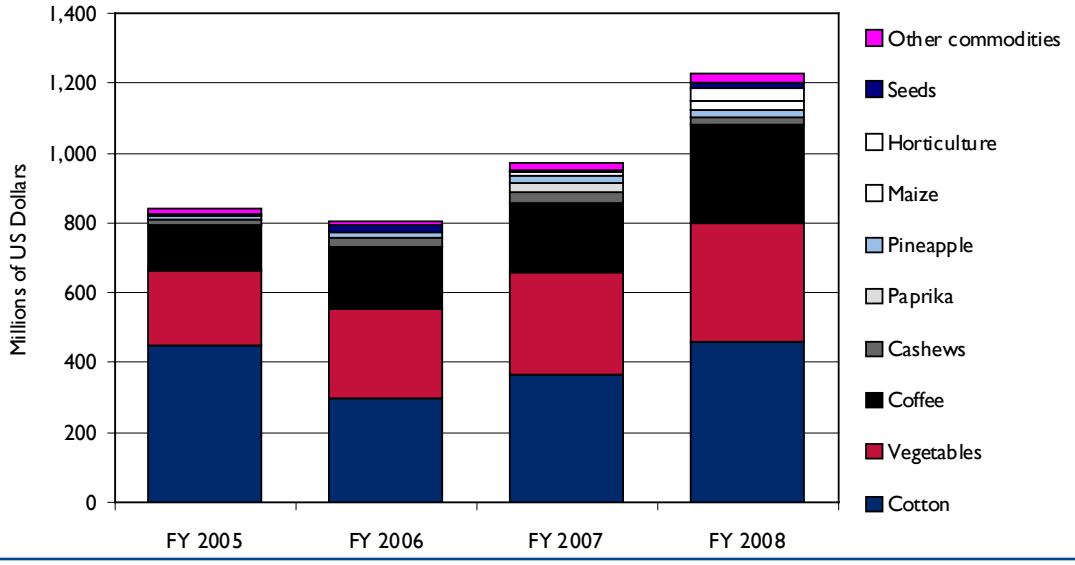
Through coordination and regional harmonization, IEHA programs increased the quality of agricultural products and the productivity of smallholders. This improved their competitiveness in international and regional markets, resulting in an increase, over five years, in the total exports facilitated by

IEHA programs (Figure 3.3) and an increase in intra-regional trade in key food security commodities like maize (Figure 3.4).

IEHA RESULTS HIGHLIGHTS FOR THE PAST FIVE YEARS

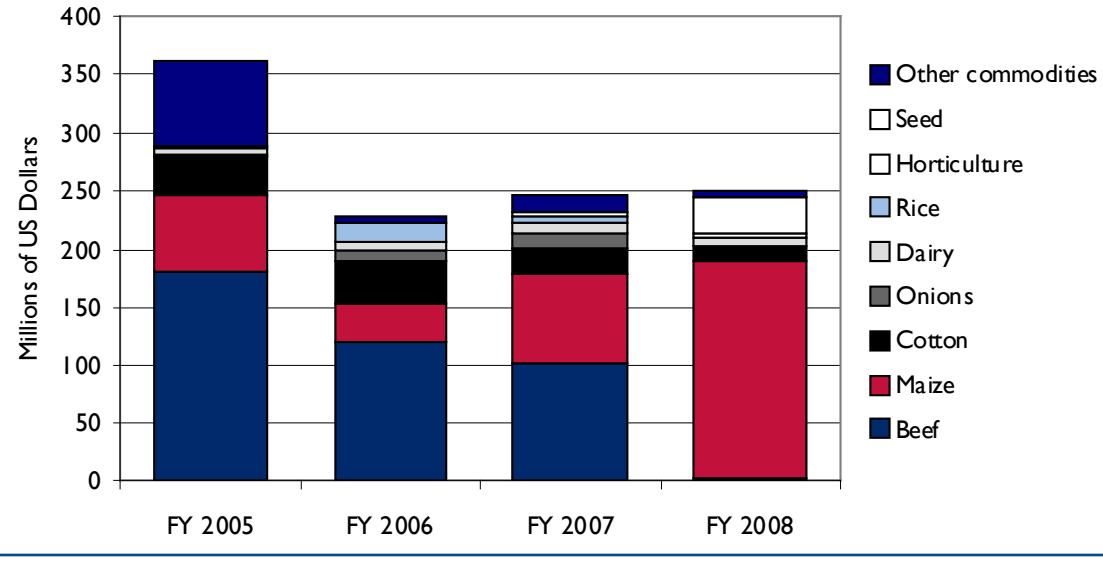
FY 2008 was another successful year for

FIGURE 3.3: INTERNATIONAL EXPORTS OF TARGETED AGRICULTURAL PRODUCTS, FY 2005 – FY 2008



Source: Annual monitoring reports by IEHA operating units.

FIGURE 3.4: INTRA-REGIONAL EXPORTS OF TARGETED AGRICULTURAL PRODUCTS, FY 2005 – FY 2008



Source: Annual monitoring reports by IEHA operating units.

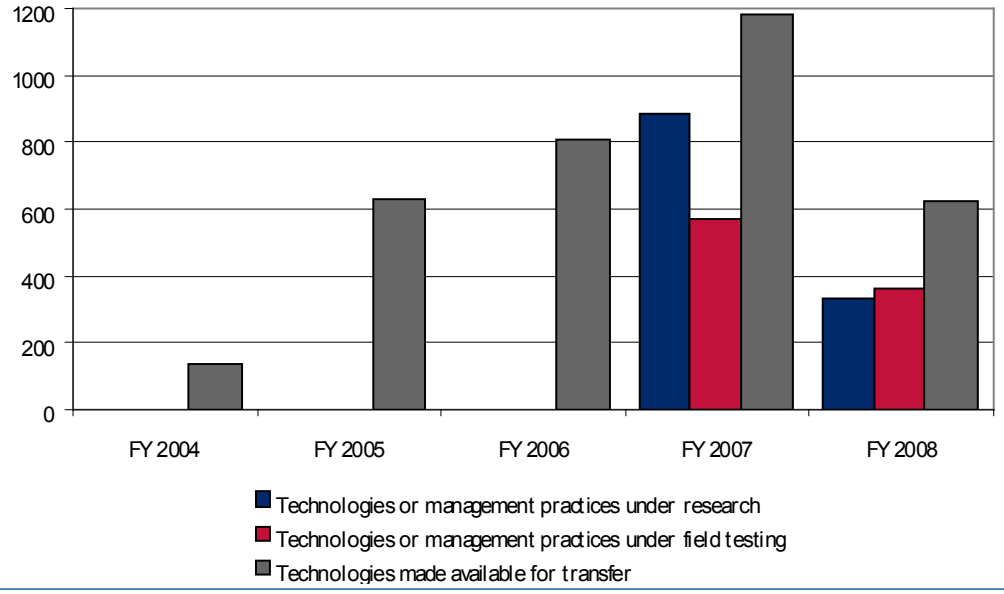
IEHA in each of its main areas of impact:

- increasing agricultural productivity and production;
- increasing trade in agricultural products, especially regional trade in food staples;
- promoting sound market-based principles for agriculture; and
- assisting the vulnerable and accelerating the participation of the ultra poor in rural growth.

INCREASING AGRICULTURAL PRODUCTIVITY AND PRODUCTION

Increasing agricultural productivity in Sub-Saharan Africa is critical to improving both income security and food security. Over the past five years, IEHA made available 3,381 new technologies to help boost productivity (Table 3.2). And, in FY 2008, an additional 334 technologies were in the pipeline under research and another 359 were being field tested (Figure 3.5). IEHA-supported producers continued adopting new technology in ever increasing numbers (Figure 3.6).

FIGURE 3.5: NUMBERS OF TECHNOLOGIES UNDER DEVELOPMENT AND MADE AVAILABLE, FY 2004-2008*



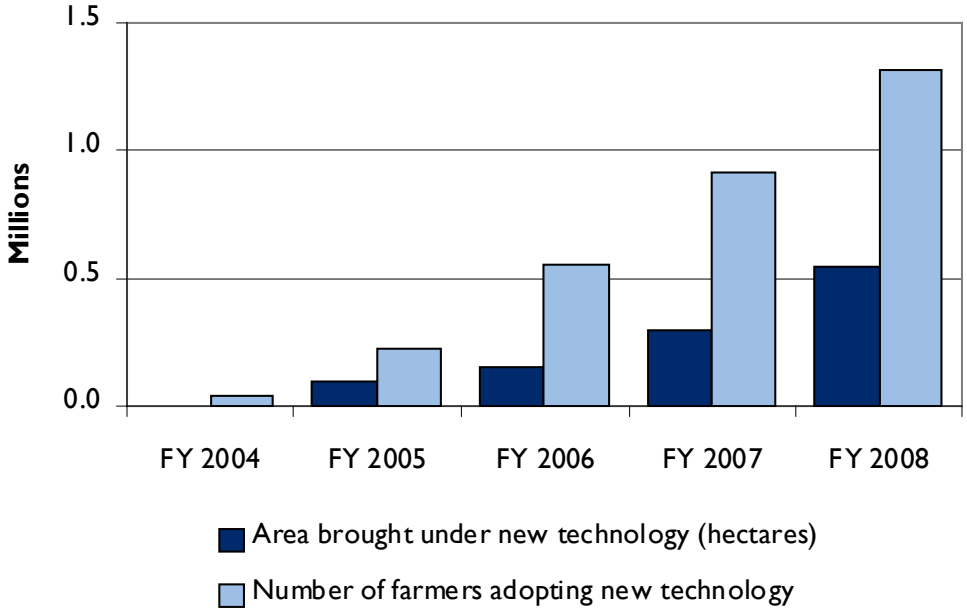
Source: Annual monitoring reports by IEHA operating units.
*There were no indicators for technologies or management practices under research or for technologies or management practices under field testing until FY 2007.

TABLE 3.2 TECHNOLOGY ADOPTION BY IEHA SMALLHOLDERS, FY 2004 – FY 2008

Indicator	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change 2005-2008
Area brought under new technology (hectares)	244	97,439	148,813	297,675	546,487	461%
Number of farmers adopting new technology	44,766	225,594	239,937	913,745	1,311,901	482%

Source: Annual monitoring reports by IEHA operating units.

FIGURE 3.6: ADOPTION OF NEW TECHNOLOGY, AREA AND NUMBERS OF FARMERS, FY 2004-20082007



Source: Table 3.2.

Increasing post-harvest productivity is an increasing focus of IEHA programs. Over the past five years, there has been a rise in the number of processors adopting new technology from 27 processors in FY 2005 to 57 processors in FY 2008 (Table 3.3).

Examples of IEHA's contribution to improving smallholder productivity follow.

TABLE 3.3 NUMBER OF PROCESSORS ADOPTING NEW TECHNOLOGY, FY 2005 - FY 2008

FY 2005	FY 2006	FY 2007	FY 2008	Percent Change 2005-2008
27	42	45	57	111%

Source: Annual monitoring reports by IEHA operating units.

Ghana. An improved variety of maize was disseminated through 281 demonstration sites. Farmers witnessed a doubling in revenue and profit per acre on these half-acre sites. The minor-season (September – January) demonstrations trained 9,692 farmers, while 15,010 farmers were trained during the major-season (March – August) demonstrations.

Mali. As a result of a technology transfer package combining high-yielding seeds and production practices, FY 2008 sorghum yields on average doubled those of last year. Aware of earlier field-testing of these new seeds and production methods and the high yields and profits that could be achieved, many farmers were eager to access the new technology and adopt the production practices. A three-fold increase in the number of farmers adopting these new technologies is anticipated within two years.

Many of the new technologies made available in FY 2008 were the outcome of previous USAID/Mali investments. In particular, sorghum, millet, and foundation seed developments can be attributed to earlier USAID investments in short-term and degree training for Malian scientists.

Uganda. The USAID technology transfer model has made it easier for corporate partners and associated farmers to meet a number of certification programs including UTZ CERTIFIED, Common Code for

TABLE 3.4 NUMBERS OF UGANDAN FARMERS EXPOSED AND EXTENT OF TECHNOLOGY ADOPTION UNDER APEP

Crop	Exposure and Adoption		
	Number Exposed	Low-Intensity Adoption	High-Intensity Adoption
Cotton	168,184	112,683	1,261
Coffee	70,153	49,107	5,261
Sunflower	35,083	31,575	175
Upland rice (paddy)	51,780	36,246	2,589
Banana (matooke)	8,160	5,304	269
Sesame	17,482	4,371	0
Vanilla	9,285	8,357	0
Total	360,127	247,643	9,555
Adoption rate	--	68.8%	2.7%

Source: USAID/Uganda

the Coffee Community (4C), Coffee and Farmer Equity (C.A.F.E.) Practices, and FairTrade. Certification benefits, which include traceability, are enormous. They include, among others, a premium to farmers of up to 300 Ugandan Shillings (about $0.15) per kilogram, improved human and environmental health, and transparency and accountability in the production chain.

USAID/Uganda interventions continued to focus on agricultural research as a key component of agricultural sector productivity. USAID made significant progress in farm trials aimed at refining banana/coffee soil fertility regimes; evaluating the performance of banana hybrids that have been incorporated with resistance to black sigatoka and nematodes; developing wilt-resistant robusta coffee varieties; developing integrated pest management (IPM) packages for Arabica coffee; and developing IPM technology for controlling termites in rice fields. In many of these field trials, preliminary findings showed encouraging results and are awaiting dissemination after the varieties/technology packages have been certified and are released by the national authorities.

West Africa. The Sustainable Tree Crops Program helped participating cocoa producers boost their profits per hectare by 53%

TABLE 3.5 IMPROVEMENTS IN COCOA PRODUCTIVITY IN WEST AFRICA, FY 2007- FY 2008

Element of Productivity	Unit	FY 2007	FY 2008 target	FY 2008	Percent change, 2007-08
Area	Hectares	20,322		52,377	158%
Production	Tons	6,987		19,494	179%
Yield	Tons/ha	0.34		0.37	8%
Quantity Sold	Tons	6,987		19,494	179%
Value of Sales	USD	7,400,586		25,337,000	242%
Output Price	USD/ton	1,059		1,300	23%
Purchased Input Cost	USD	2,419,816		5,641,000	133%
Gross Margin	USD/ha	245	300	376	53%

Source: Sustainable Tree Crops Program, USAID/West Africa.

from FY 2007 to FY 2008 (see Table 3.5), exceeding its target for gross margin by 25% The project also evaluated results against its baseline[6] (see Table 3.6). Overall it is estimated that the 12,000 cocoa farmers trained from October 1, 2006 to September 30, 2008 increased their gross returns in the 2007/2008 harvest by $5.5 million, or 38%, as a result of program efforts.

TABLE 3.6 RETURNS TO COCOA FARMING FOLLOWING FARMER FIELD SCHOOL TRAINING AND IMPROVED COLLECTIVE MARKETING, 2007/2008 HARVEST

"Without Project" Baseline Gross Margin	Cameroon	Nigeria	Ghana	Cote d'Ivoire	Liberia	Total
Number of farmers	3,205	1,831	1,869	3,584	1,676	12,165
Area harvested (ha)	21,043	7,285	7,942	12,756	3,352	52,377
Production (tons)	4,729	1,975	2,185	6,456	402	15,748
Quantity sold (tons)	4,729	1,975	2,185	6,456	402	15,748
Value of quantity sold (USD '000)	7,330	3,457	1,932	6,585	225	19,530
Sharecrop labor revenue (USD '000)	1,398	678	164	717	0	2,957
Agrochemical inputs (USD '000)	1,224	538	81	383	0	2,226
Total gross return (USD '000)	4,708	2,241	1,687	5,485	225	14,346
Gross margin (USD per ha)	224	308	212	430	67	274
"With Project" Gross Margin						
Area harvested (ha)	21,043	7,285	7,942	12,756	3,352	52,377
Production (tons)	6,668	2,351	2,491	7,683	483	19,494
Quantity sold (tons)	6,668	2,351	2,491	7,683	483	19,494
Value of quantity sold (USD '000)	10,780	4,114	2,203	8,072	270	25,337
Sharecrop labor revenue (USD '000)	1,970	807	187	853	0	3,818
Agrochemical inputs (USD '000)	1,110	492	81	141	0	1,823
Total gross return (USD '000)	7,699	2,814	1,935	7,078	270	19,695
Gross margin (USD per ha)	366	386	244	555	81	376
Net change in gross returns (USD '000)	2,991	574	248	1,593	45	5,450

Source: Sustainable Tree Crops Program, USAID/West Africa.

[6] The gross returns per hectare reported in Table 3.6 are calculated for farmers that participated in either 2007 or 2008 in farmer field school training on integrated crop and pest management of cocoa. The "with project" returns are based on (1) average productivity (i.e., yield) gains and (2) reduced use of inputs as documented in the FFS impact studies conducted in 2005 on the initial group of trainees from 2003 (a similar study will be repeated in 2009). Additional gains from collective marketing (i.e., higher farm gate price) are assumed for countries where FFS trainees are also largely members of marketing cooperatives that are the focus of program strengthening activities. The "without project" returns are those that would have prevailed in the absence of training.

STRENGTHENING VALUE CHAINS TO INCREASE TRADE IN AGRICULTURAL PRODUCTS, ESPECIALLY REGIONAL TRADE IN FOOD STAPLES

IEHA implementing partners are in the field every day, helping producers, processors and exporters to become more efficient and to compete in domestic and international markets by meeting technical and social standards. In FY 2008, 53 new firms were officially certified to meet the stringent standards set by independent

certifying organizations, bringing to 290 the total number of firms that have been certified in this way under IEHA.

Table 3.7 provides some additional examples of IEHA accomplishments in markets and trade in FY 2008.

Malawi. Support for the dairy value chain has resulted in significant increases in local milk production and processing, in the sale and availability of dairy animals and in the creation of more than 3,200 new jobs, while reducing the need for expensive imports. A regional dairy association supports 2,300 members in 22 milk-bulking groups. The October 2008 dairy survey measured average annual income by a dairy household at $1,880, which is an increase of $526 (39%) from the 2006 survey. With assistance from USAID implementing partners, a commercial milk processor linked with smallholder dairy farmers and by September 2008 had received and processed 250,000 gallons of milk (achieving quality standards set by the Malawi Milk Act). The processor also has accepted responsibility for deducting smallholder loan repayments from milk checks, thereby increasing access to micro-credit by members of the milk-bulking groups. The processor now provides loans to selected smallholders, which is expected to further strengthen milk production and supply capacity. In addition a commercial insurance provider has offered a new product – dairy cattle insurance. To date 158 smallholders have taken out policies.

TABLE 3.7 SELECTED TRADE-RELATED ACCOMPLISHMENTS OF IEHA IN FY 2008

Indicator	Value
Value of credit to beneficiaries	$40,777,594
Number of enterprises accessing business development services (BDS)	459,199
Intra-regional trade, maize	$188,596,570
Intra-regional trade, milk	$6,179,794
Intra-regional trade, seed	$30,809,501
Smallholder sales to domestic markets, rice	$14,519,024
Smallholder sales to domestic markets, milk	$13,164,017
Smallholder sales to domestic markets, bananas	$10,475,683

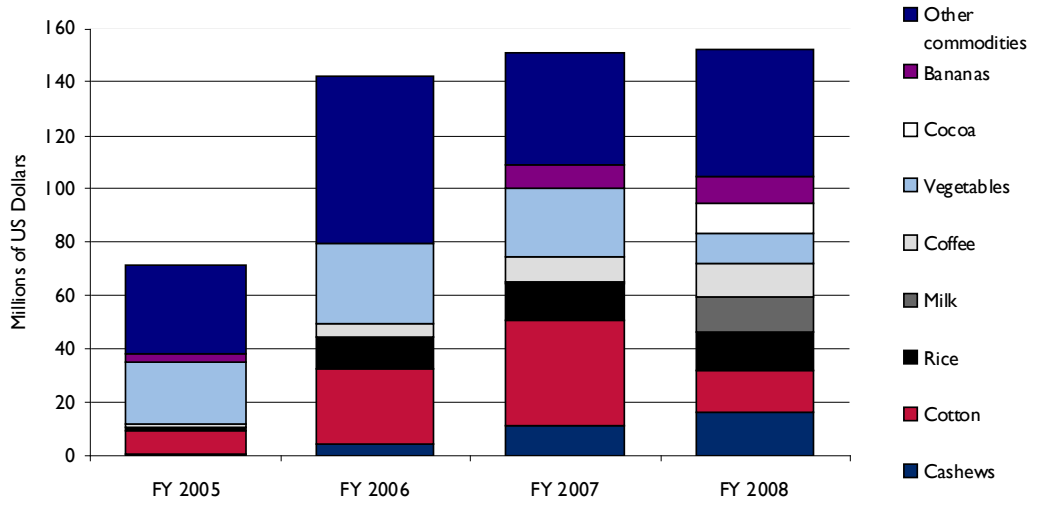
Source: Annual monitoring reports by IEHA operating units.

TABLE 3.8 PURCHASES FROM SMALLHOLDERS OF TARGETED AGRICULTURAL PRODUCTS, FY 2005-2008 (US DOLLARS)

Commodity	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change, 2005-2008
Vegetables	23,161,945	29,662,679	25,411,432	11,755,742	-49%
Cotton	9,065,000	28,297,526	39,713,813	15,713,000	73%
Rice	829,700	12,039,000	13,707,416	14,519,024	1650%
Maize	8,660,638	1,541,553	11,088,275	7,306,916	-16%
Cashew	284,709	3,803,232	10,833,512	15,968,693	5509%
Coffee	1,122,000	5,355,961	9,120,193	12,539,039	1018%
Bananas	3,250,000	a	8,961,900	10,475,683	222%
All other commodities	25,134,173	61,125,450	31,881,127	63,585,538	153%
Total	71,508,165	141,825,401	150,717,668	151,863,635	112%

Source: Annual monitoring reports by IEHA operating units.
a - No reporting.

FIGURE 3.7: PURCHASES FROM SMALLHOLDERS (DOMESTIC SALES) OF TARGETED AGRICULTURAL PRODUCTS, FY 2005-2008



Source: Table 3.8

In many places, high transaction costs leave small-scale producers out of markets altogether. The weakness of rural markets is partly a problem of poor infrastructure. But it is also due to the weak institutions that support markets, such as information systems, grades and standards, and institutions to bring buyers and sellers together. Problems with quality standards, timing and assuring adequate supply are penalizing local products. Over the past five years, IEHA has worked to build African capacity to support its markets and increase private sector investments in agriculture. Through IEHA investments, the value of credit available to beneficiaries rose 2450% (Table 3.9) from US $1,599,234 in FY 2005 to US $40,777,594 in FY 2008 (Figure 3.9).

The number of firms accessing business development services increased 742% (Table 3.9) from 26,682 firms in FY 2004 to

TABLE 3.9 IEHA RESULTS IN BUILDING THE CAPACITY OF MARKET INSTITUTIONS, FY 2004 – FY 2008

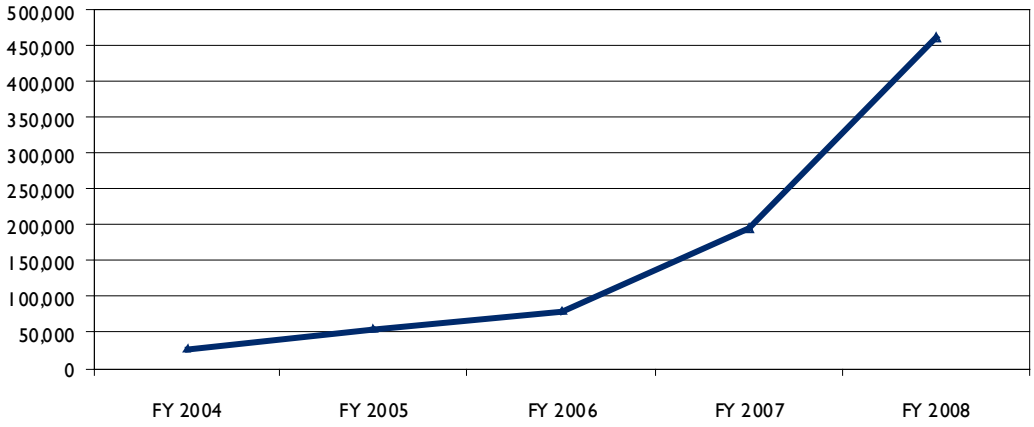
Indicator	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change, FY FY 2005 – FY 2008
Value of credit to beneficiaries (US dollars)	-	1,599,234	4,834,057	39,955,525	40,777,594	2450%
Number of enterprises accessing Business Development Services	26,682	54,539	78,766	195,218	459,199	742%
Number of firms achieving international standards	32	55	41	109	53	-4%

Source: Annual monitoring reports by IEHA operating units.

459,199 firms in FY 2008 (Figure 3.8). Over the five years, 290 firms were certified as meeting international technical and social standards (Table 3.9 and Figure 3.10).

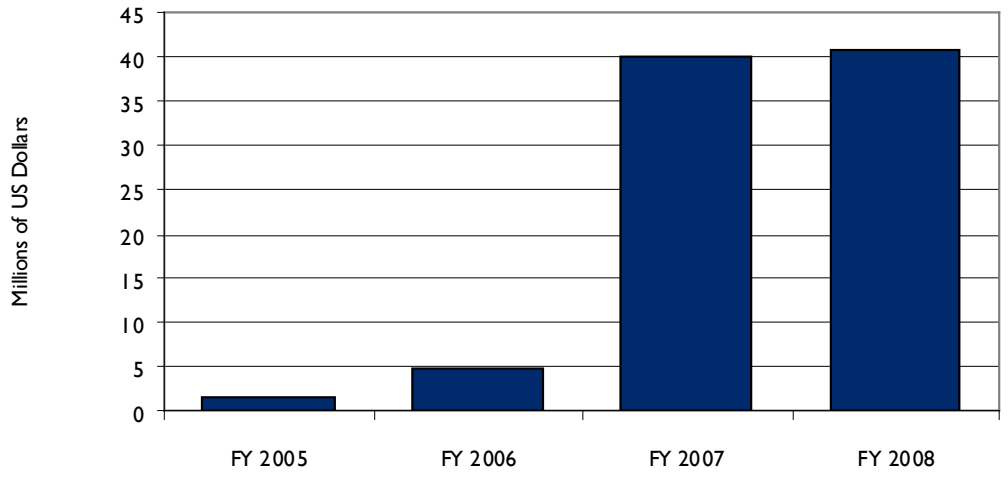
markets in Mali. Four of the markets (Gao, Konna, Gossi, and Kidal) are in the northern regions of Mali, where livestock production is the main agricultural activity.

FIGURE 3.8: NUMBER OF FIRMS ACCESSING BUSINESS DEVELOPMENT SERVICES, FY 2004 – FY 2008



Source: Table 3.9

FIGURE 3.9: VALUE OF CREDIT ACCESSED BY BENEFICIARIES, FY 2005 – FY 2008

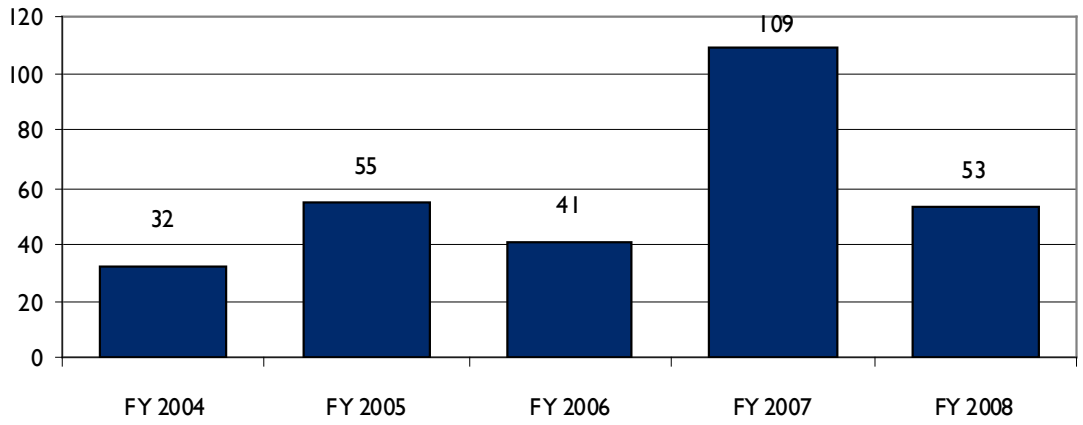


Source: Table 3.9

Mali. In FY 2008 a Short Message Service (SMS) real-time market monitoring system began to increase the supply of livestock market information at six major

Ghana. A grower-supplier database was developed to assist processors and exporters in sourcing products from local farms. The Geographic Information System (GIS)

FIGURE 3.10: NUMBER OF FIRMS CERTIFIED (DURING REPORTING YEAR) AS MEETING INTERNATIONAL STANDARDS, FY 2004 – FY 2008



Source: Table 3.9

database links more than 8,000 farmers to exporters and processors. One thousand three hundred outgrower mango farmers and four pineapple-exporting nucleus firms adopted the GIS system for production monitoring. GIS mapping is a requirement for obtaining certification for export to Europe and for organic certification.

Field-to-packhouse software was also designed. This application is expected to improve the efficiency of field data collection and analyses and the traceability of exported pineapples to the plot from which they were harvested. Exporters view this application as critical to securing the smallholder supply base over the long term, given stringent traceability requirements.

West Africa. The Kraft Cocoa Alliance has made remarkable progress in cocoa production and increased revenue generation by farmers. More than 1,700 certified farmers produced approximately 8,000 tons of cocoa, generating about $10.7 million in revenue, compared to $1.4 million in revenue for the 355 farmers certified in 2007. One thousand two hundred tons was sold through cooperatives to Armajero, the private company in the Alliance responsible for buying cocoa on behalf of Kraft. This cocoa was certified by the Rainforest Alliance, earning farmers a premium of $240,000. The remaining 6,800 tons of certified cocoa was sold to competitors.

While the farmers knew they were losing a premium of $200 per ton plus the recognition they would get on award day, they were not happy with the price offered by Armajero. The farmers desperately needed cash, and competing buyers were ready to purchase the cocoa for a better price (this comparison does not include the certification premium). The farmers are satisfied, however, with the other benefits they derive from the project's capacity building activities, including increased cocoa yields, environmental conservation awareness, improved sanitation, and better organization of cooperatives. A shortfall in funding has prevented certification of all the farmers in the six cooperatives who requested certification as well as others in the remaining cooperatives in the two regions.

Southern Africa. Improved, low-cost cassava processing equipment, including solar driers, has allowed farmers in eight countries to take advantage of market opportunities. The solar driers allow processors to dry up to 30 tons of cassava per week, compared to one ton every three days with existing technology.

Processors are now selling cassava starch for industrial use (in paper making). The low-cost equipment has improved the efficiency of processing cassava to flour, which is both consumed in producing households and sold to bakeries. Bakeries mix cassava flour with imported wheat flour to lower the cost of bread production. In Malawi, Mozambique, and Zambia, bakeries are substituting cassava flour for 40% of (imported) wheat flour. This is a cost savings of up to 23% to the bakeries, which is transferred to the consumer.

Zambia. Support to a task force on accelerated cassava utilization and targeted cassava research has strengthened private sector interest in commercializing the crop. As a result, Tiger Animal Feeds, a Zambian feed manufacturing company, is now using cassava as a substitute for maize in animal feed.

Mozambique. Orange-fleshed sweet potato is increasingly viewed as an important food staple and a cash crop. Rural households are using it in weaning foods and to improve the nutrition of older children. In trials, 38% sweet potato flour has been successfully used in bread making (to reduce costly wheat imports) with high consumer acceptance.

East Africa. The Eastern Africa Grain Council catalyzed the development of a warehouse receipt system in Kenya through the formation of an alliance between a private grain handling and storage company, a Kenyan commercial bank, and farmers' groups supported by USAID/Kenya. In the warehouse receipt system, a farmer brings grain to the warehouse to be dried, graded, and stored. S/he receives a receipt that can be taken to the bank, where it serves as collateral for a loan for the next season's production expenses, reducing risk and leveraging assets. In the first pilot season, $130,000 in loans was provided to farmers. While the program was suspended temporarily for the season because the state intervened directly in the maize market after post-election violence, the program will be revived, and similar schemes are being promoted throughout East Africa.

PROMOTING SOUND MARKET-BASED PRINCIPLES FOR AGRICULTURE

A policy environment that is free of distortions and promotes competition is critical for smallholders to increase their productivity and enter new markets. Over the past five years, IEHA facilitated policy reforms that improved the enabling environment for smallholders and agriculture-based enterprises by removing key constraints and creating real opportunities. IEHA promoted policy reforms by African governments, donors, regional economic groupings, and marketing and technical organizations.

The IEHA monitoring system uses a six-point scale for measuring policy progress, categorizing the status of each policy reform process by a milestone. Each stage of reform (New, Analysis, Dialogue, Proposal, Adoption/Passage and Implementation) is significant. At the outset of the process, "**new**" indicates that USAID efforts resulted in a key issue being put on the reform agenda. Next, completion of "**analysis**" signifies the beginning of an evidence-based process, in collaboration with stakeholders, to improve the enabling environment. The "**dialogue**" that engages policymakers is often a new process, one that reflects the voices of stakeholders, particularly those who often have not been heard from, such as the private sector. By the time a specific "**proposal**" for reform is put forward, a lot of work has gone into studying and discussing the evidence and issues. Designed correctly, the proposal will reflect many views and be well justified, increasing the likelihood of its approval. "**Adoption**" of a new policy is driven by the stakeholders rather than project staff, signifying it as a key milestone for the possibility of change. Adoption of a new policy does not necessarily result in any real change

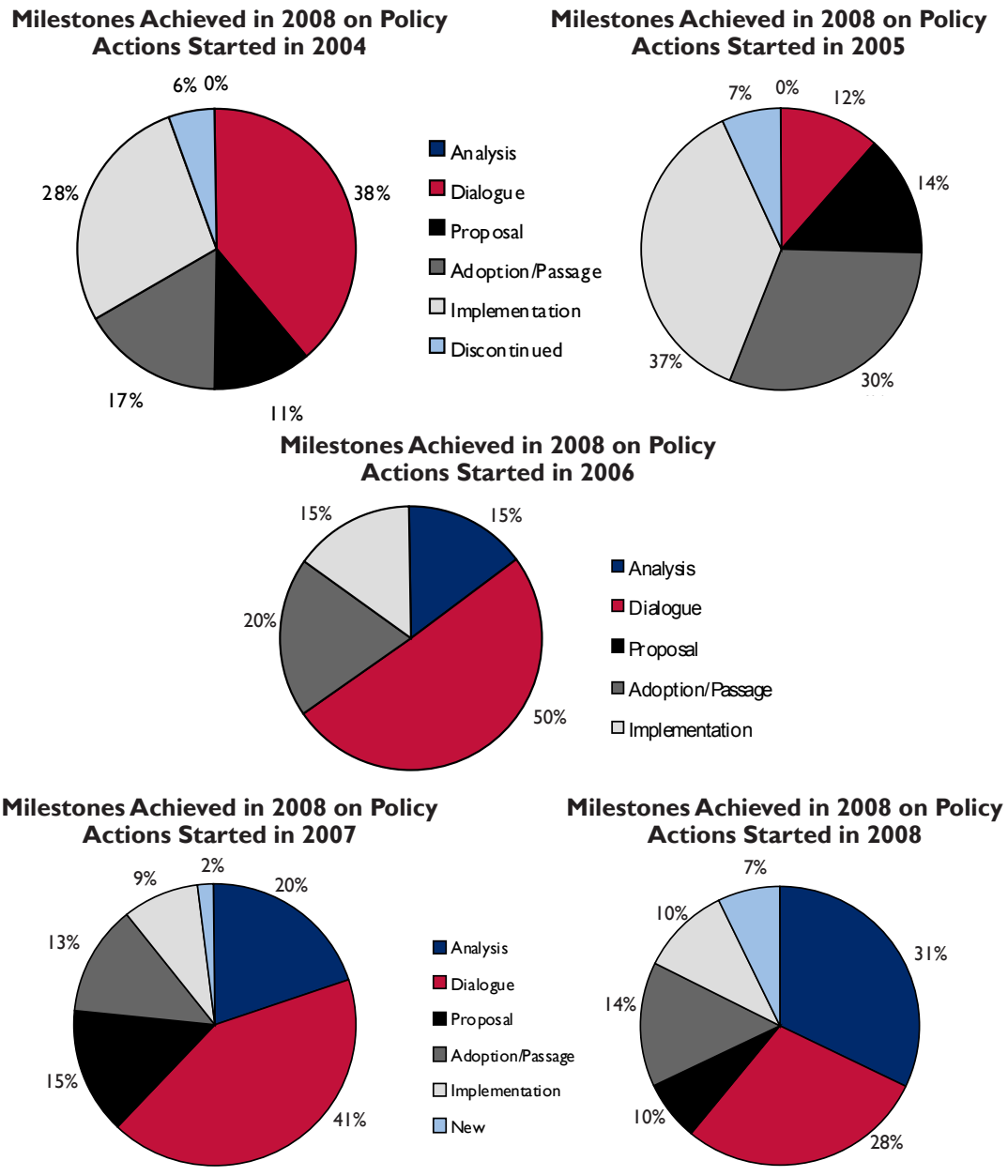
on the ground, however. Laws and decrees often need implementing regulations, and the new policy needs political support to ensure that it is enforced. When "**implementation**" has been completed, it is clear that the reform is on its way to having an impact.

POLICY MILESTONES

IEHA continues to support national and regional agricultural policy reform that, among other efforts, removes trade-distorting barriers and improves and harmonizes agricultural grades and standards. A summary of progress achieved in policy reform is contained in the following charts.

Figure 3.11 tracks IEHA's policy reform efforts over its first five years. Each pie chart provides the FY 2008 status of policy reform efforts by year of first investment. The analysis phase

FIGURE 3.11: MILESTONES ACHIEVED IN 2008 ON POLICY ACTIONS STARTED IN 2004, 2005, 2006, 2007, 2008



has been completed for all policy reforms begun in FY 2004 and FY 2005. And of the reform efforts begun, fewer than 8% had been abandoned by FY 2008. In fact, reform efforts begun in the early years of IEHA have a significant success rate by FY 2008. Of all reform efforts begun, 45% of policy reforms started in FY 2004 and 67% of those started in FY 2005 resulted in adoption of the policy and/or final implementation. Even those started in 2008 had a 24% rate of adoption and/or implementation. It is evident from these charts that reforms are moving toward adoption and implementation. For example, one can see that in any of these years, 10-15% of the reforms were in the proposal stage, which is just one step before adoption.

Table 3.10 provides progress in terms of these milestones in FY 2008. Of the 140 policy reforms pursued in FY 2008, 17 were implemented.

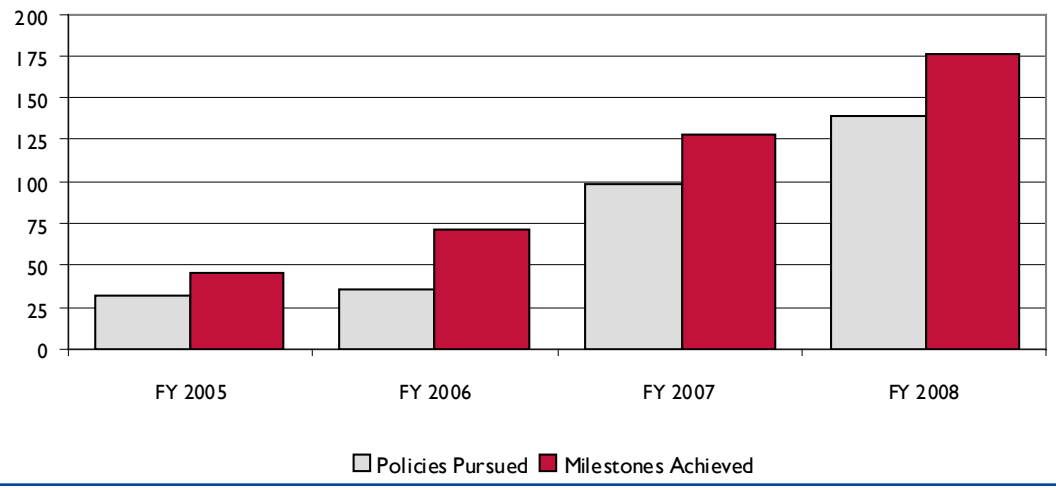
Since FY 2005, policy reform progress (number of policy reform steps completed in the fiscal year) has been greater than the number of reforms pursued (Figure 3.12).

TABLE 3.10 PROGRESS IN POLICY REFORM IN FY 2008

Type of Policy Progress	Number
Number of policy reforms attempted	140
Total number of steps forward (milestones achieved on five-step scale)	176
Number of policies that were adopted	35
Number of policies that were implemented	17

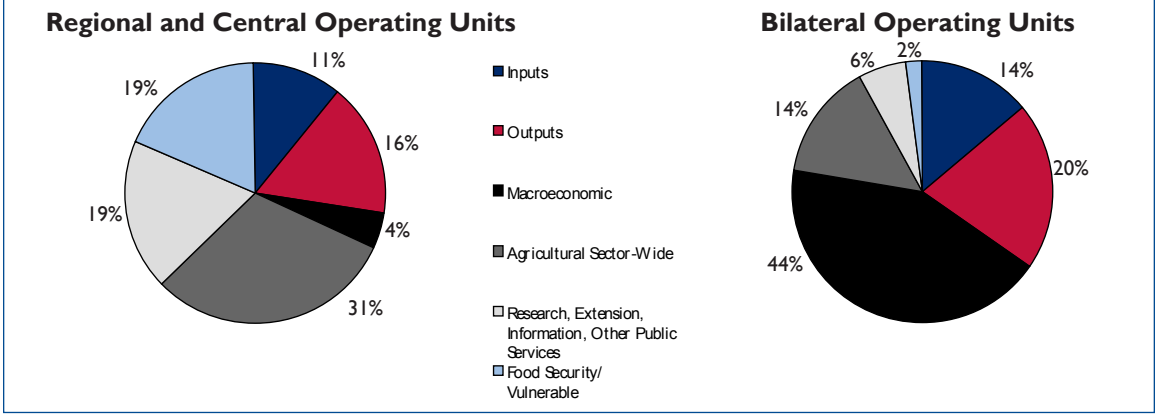
Source: Annual monitoring reports by IEHA operating units.

FIGURE 3.12: PROGRESS IN POLICY REFORM, FY 2005-2008



Source: Annual monitoring reports by IEHA operating units.

FIGURE 3.13: POLICY REFORMS PURSUED, FY 2008, BY POLICY AREA



Source: Annual monitoring reports by IEHA operating units.

TABLE 3.11 PROGRESS ON POLICY REFORM, FY 2008, BY COUNTRY AND POLICY

Policy	Baseline Year	Status	
		Actual, Start of FY 2008	Actual, End of FY 2008
USAID/Ghana			
Foreign exchange bill to liberalize foreign exchange market	2005	Adoption/Passage	Adoption/Passage
Implement Regulatory Impact Assessment (PRIA/PIET)	2005	Adoption/Passage	Adoption/Passage
Review of FASDEP (Agric policy)	2005	Proposal	Adoption/Passage
Develop long-term savings plan	2005	Proposal	Adoption/Passage
Revise regulatory framework for non-bank financial institution	2005	Proposal	Adoption/Passage
Analysis of interest rate spread to inform Ministry of Finance policy on commercial bank regulation (1)	2005	Proposal	Proposal
Analysis of interest rate spread to inform Ministry of Finance policy on commercial bank regulation (2)	2005	Proposal	Proposal
SEC regulatory reforms (over the counter regulations)	2005	Proposal	Proposal
Operational plan for National Labor Commission	2005	Proposal	Adoption/Passage
Telecoms bill	2005	Proposal	Adoption/Passage
National communications (Amendment bill)	2005	Proposal	Adoption/Passage
E-legislation bills	2005	Proposal	Adoption/Passage
National agency bill	2005	Proposal	Adoption/Passage
Borrowers and lenders bill	2006	Proposal	Adoption/Passage
Develop new seed act	2006	Analysis	Dialogue
Develop plant quarantine act	2006	Analysis	Analysis
SEC regulatory reforms (mergers & acquisitions regulations)	2005	Proposal	Implementation
Analysis of unclaimed assets to inform Ministry of Finance on policy options	2007	New	Proposal
Develop debt strategy for Minister of Finance	2007	New	Proposal
Draft legislative instrument (LI) for WTO safeguards	2008	Analysis	Analysis
Draft LI for anti-dumpling	2008	Analysis	Analysis
Draft Ghana International Trade Commission (GITC) Act	2008	Analysis	Analysis
Draft subsidy and countervailing duty regulations	2008	Analysis	Analysis
Analyze import fees for WTO compliance	2007	New	Proposal

TABLE 3.11 CONTINUED			
USAID/Kenya			
Dairy policy and bill	2004	Dialogue	Dialogue
Livestock policy and bill	2004	Proposal	Proposal
Cotton policy, bill and act	2004	Adoption/Passage	Implementation
Consolidation of policies in agriculture	2003	Dialogue	Dialogue
National food nutrition and security policy	2004	Proposal	Dialogue
Pyrethrum amendment bill 2007	2006	Proposal	Dialogue
Coffee amendment bill 2007	2006	Adoption/Passage	Analysis
Kenya Vision 2030	2007	Proposal	Implementation
Medium-Term Plan 2008-2012	2008	Proposal	Adoption/Passage
Kenya National Biosafety Bill[7]	2007	Proposal	Adoption/Passage
USAID/Mali			
The law institutes regulations of production, quality control, certification, and the commercialization of seeds of vegetable/plant origin of Mali.	2008	New	Dialogue
The document of national seed policy	2008	New	Dialogue
USAID/Uganda			
Include fish in the national feeds policy	2005	Proposal	Proposal
Include aquaculture equipment in the agricultural equipment import duty exemption policy	2005	Proposal	Dialogue
Policy for importation "Fish Sex Reversal Hormone"	2005	Proposal	Implementation
Policy to allow fish farmers to purchase nets from approved vendors	2005	Dialogue	Implementation
Aquaculture rules review	2005	Dialogue	Dialogue
National bio-safety policy	2004	Dialogue	Adoption/Passage
National biosafety bill[8]	2004	Analysis	Dialogue
USAID/Zambia			
Agricultural market development plan	2005	Proposal	Proposal
Agricultural inputs marketing	2005	Proposal	Proposal
Horticulture marketing channels	2007	Implementation	Analysis
Maize export ban	2007	Adoption/Passage	Implementation
Mandating use of composite wheat/cassava flour for bread making in Zambia	2007	New	Dialogue
Government resource allocation to the agricultural sector	2006	Implementation	Adoption/Passage
USAID/Southern Africa			
Promotion of agriculture input vouchers policy system in 3 SADC countries	2006	Analysis	Implementation
National policy on biotechnology and biosafety Malawi	2007	Proposal	Implementation
National biosafety act for Malawi*	2006	Adoption/Passage	Implementation
Biosafety regulations and guidance Malawi*	2006	Adoption/Passage	Implementation
SADC seed variety release system and implementation manual	2004	Adoption/Passage	Implementation
SADC seed certification and quality assurance system and implementation manual	2004	Adoption/Passage	Implementation

[7] This effort was supported jointly by the bilateral mission and EGAT.
[8] This effort was supported jointly by the bilateral mission and EGAT.
*These policies were also supported by USAID/EGAT.

TABLE 3.11 CONTINUED			
SADC quarantine and phytosanitary measures for seed system and implementation manual	2004	Adoption/Passage	Implementation
SADC plant variety protection system - Plant Breeders Rights – Draft	2005	Proposal	Adoption/Passage
USAID/West Africa			
Agricultural Policy of the West African Economic Community (ECOWAP)	2004	Adoption/Passage	Adoption/Passage
Framework convention introducing a common biosafety regulation for the prevention of biotechnological risks in the CILSS countries[9]	2005	Adoption/Passage	Adoption/Passage
Framework convention instituting common regulations for conventional and transgenic seeds in the CILSS countries	2005	Adoption/Passage	Adoption/Passage
Decree rendering indebted producer associations ineligible for state-organized agricultural credit in Benin	2008	New	Implementation
Reform of the input management policies of the apex cotton producers' organizations in Benin	2008	New	Implementation
Reform of the debt recovery policies of the apex cotton producers' organizations in Benin	2008	New	Adoption/Passage
Introduction of committees of credit at all levels of Beninois producers' organizations.	2008	New	Implementation
Revision of the national biosafety framework in Benin to allow selected GMO research activities	2008	New	Proposal
USAID/EGAT			
Land reform policies in Liberia	2007	New	Analysis
Land reform policies in Uganda	2007	New	Analysis
Managing idiosyncratic risk in Ethiopia	2007	New	Analysis
Managing idiosyncratic risk in Ghana	2007	New	Analysis
Productive component of Hunger Safety Nets Program in Kenya	2007	New	New
Biometrics and financial innovations in rural Malawi	2007	New	Analysis
Ghana interim LI to allow GMO field trials	2008	Proposal	Adoption/Passage
Malawi national policy on biotechnology and biosafety	2008	Analysis	Adoption/Passage
Mabira forest degazetting (removing protections) proposal	2006	New	Analysis
Financial sustainability of market information systems	2005	New	Dialogue
Improvements in fertilizer delivery and increased use by farmers	2002	Analysis	Adoption/Passage
Mitigating impacts of HIV/AIDS on rural households	2002	Analysis	Dialogue
Local procurement of grain for food aid	2006	New	Adoption/Passage
Coping with high world prices of food grains and fertilizers	2008	New	Analysis
USAID/AFR/SD			
Reform of Liberia cocoa marketing policy (LPMC)	2007	Analysis	Dialogue
Extension service reform	2007	New	Analysis

[9] This effort was supported jointly by USAID/WA and EGAT.

TABLE 3.11 CONTINUED			
Policies to improve the production and distribution of perennial tree crops, plantains, roots and tuber, rice	2007	Analysis	Dialogue
Reform of cooperative development agency	2007	New	Analysis
The economics of interventions in the related commodity markets of the cocoa belt of Cameroon	2007	Analysis	Dialogue
The economics of interventions in the related commodity markets of the cocoa belt of Nigeria	2007	Dialogue	Dialogue
The economics of interventions in the related commodity markets of the cocoa belt of Côte d'Ivoire	2007	Analysis	Dialogue
The economics of interventions in the related commodity markets of the cocoa belt of Ghana	2007	Analysis	Dialogue
Namibia FSIS[10] equivalency for meat exports	2006	New	Dialogue
Mozambique fruit fly survey and monitoring protocol	2008	New	New
South Africa import regulations for honey from Swaziland	2008	New	Analysis
South Africa import regulations for honey from Zambia	2008	New	New
Mozambique SPS/biosecurity working group	2008	New	Analysis
Agricultural input subsidy policies in Malawi	2006	New	Adoption/Passage
Policy reforms to improve fertilizer marketing and consumption	2004	Analysis	Proposal
Strategy options for the maize sectors of Eastern/ Southern Africa	2004	New	Dialogue
Policy reforms to improve performance of domestic horticultural value chains in Eastern and Southern Africa	2004	New	Dialogue
Cotton sector policy reform in Eastern and Southern Africa	2005	Analysis	Dialogue
Policy priorities to support smallholder farming	2005	Analysis	Dialogue
Policies and programs in support of CAADP Pillar 3: COMESA Region Concept Paper	2006	New	Dialogue
Policies and programs in support of CAADP Pillar 3: Framework for African Food Security	2006	New	Dialogue
Policies and programs in support of CAADP Pillar 3: CAADP Country Compact Roundtables in Kenya, Malawi, Mali, Zambia	2006	New	Dialogue
Policies and programs in support of CAADP Pillar 3: Discussions with RECS (COMESA and ECOWAS)	2006	New	Dialogue
Review of key analytical issues related to CAADP Pillars 2 and 3 which need to be resolved in order to develop a Regional Compact and investment plan	2008	New	Analysis
Policy responses to high world food and fertilizer prices	2008	New	Dialogue
Relative effectiveness of providing public versus private assets for encouraging market participation by small farmers	2007	New	Analysis
Use of cash transfers to improve the food security of the urban poor	2007	New	Analysis
CAADP Pillar 2 framework	2007	Analysis	Implementation

[10] Food Safety and Inspection Service

TABLE 3.11 CONTINUED

CAADP Compact - Zambia	2007	New	Proposal
M&E system for CAADP implementation	2007	Dialogue	Proposal
Agricultural growth and investment options for poverty reduction in Rwanda.	2007	Dialogue	Adoption/Passage
Agricultural growth and investment options for poverty reduction in Uganda	2007	Dialogue	Dialogue
Investing in African agriculture to halve poverty by 2015	2007	Analysis	Dialogue
Agricultural growth and investment options for poverty reduction in Malawi	2007	Analysis	Dialogue
Agricultural growth options for poverty reduction in Mozambique	2007	Dialogue	Dialogue
Agricultural growth and investment options for poverty reduction in Zambia	2007	Analysis	Dialogue
Agriculture for development in Ghana: new opportunities and challenges	2007	Analysis	Dialogue
Economic transformation in theory and practice: What are the messages for Africa?	2008	New	Dialogue
Accelerating Africa's food production in response to rising food prices – impacts and requisite actions	2008	New	Dialogue
Tracking agricultural spending for agricultural growth and poverty reduction in Africa	2007	Analysis	Proposal
Annual agricultural trends and outlook report for Southern Africa	2007	Analysis	Proposal
Agriculture public expenditure tracking and analysis	2008	Analysis	Analysis
Potential for intra-regional grain trade in Southern Africa: a sub-national level analysis	2008	Analysis	Dialogue
Regional developments in contract farming arrangements	2008	Analysis	Dialogue
Agricultural subsidies in Southern Africa: A summary of current debate and evidence	2007	Analysis	Dialogue
SADC customs Union and FTA[11] and their impact on regional agricultural trade	2007	Analysis	Dialogue
Growth options and poverty reduction in Southern Africa	2007	Analysis	Dialogue
Non-tariff barriers to trade of maize and beef cattle	2007	Dialogue	Dialogue
Livestock investment options to increase income, create employment and reduce poverty and food insecurity in the North Eastern Province, Kenya	2007	Dialogue	Dialogue
Policy for extension services to pastoral communities in Kenya	2007	Dialogue	Dialogue
Policies addressing conservation agriculture and mixed-use farming in the Lake Victoria basin, Kenya	2007	Dialogue	Adoption/Passage
Policies on improved land management (reduce soil erosion), Kenya	2007	Dialogue	Adoption/Passage
Policies on improved agricultural productivity (increasing crop yields per area), Kenya	2007	Dialogue	Adoption/Passage

[11] Federal Transit Authority

TABLE 3.11 CONTINUED			
Policies targeting vulnerable livelihoods in Kagera and Mara river basin, Kenya	2007	Dialogue	Adoption/Passage
Creating policy environment to generate and share information to support policy formulation through the establishment of the country Strategic Analysis and Knowledge Support System node in Rwanda	2007	Adoption/Passage	Adoption/Passage
Responding to the food price crisis in Eastern and Southern Africa: Policy options for national and regional action	2008	New	Dialogue
Policies to target the control of interventions in the hotspots of vulnerability within the COMESA region	2007	Analysis	Dialogue
Trade policies in the COMESA region as they relate to the Common External Tariff (CET) in the framework of a customs union	2007	Analysis	Dialogue
Policies that support climate change adaptation	2007	Analysis	Analysis
Investment policies for different ecological sites in Benin, Guinea, Mali, Nigeria, and Senegal	2007	Analysis	Dialogue
Agricultural growth and investment options to achieve CAADP targets at national level	2007	Dialogue	Dialogue

Source: Annual monitoring reports by IEHA operating units.

TABLE 3.12 SUMMARY OF PROGRESS ON POLICY REFORM, FY 2008, BY REFORM STATUS

Operating Unit	Number of Reforms in Progress	Number of Reforms Achieving Target	Number of Reforms Achieving Approval	Number of Reforms Achieving Implementation
Ghana	24	12	10	1
Kenya	10	0	3	2
Mali	2	2	0	0
Uganda	7	1	3	2
Zambia	6	2	1	1
Southern Africa	8	2	3	7
West Africa	8	5	4	3
EGAT	14	12	4	0
AFR/SD	61	34	7	1
Total	140	70	35	17

Source: Annual monitoring reports by IEHA operating units.
a - 1 target submitted.

A key area of progress in FY 2008 was establishing a regulatory framework for biotechnology. IEHA starts from the position that African scientists want and need to make their own assessments of genetically modified organisms (GMOs). To do so, they need technical capacity, and they need to understand risk/benefit analysis. IEHA programs in several countries addressed these needs. Some specific examples of IEHA's 2008 accomplishments in improving the African enabling environment follow.

Ghana. The USAID supported Program for Biosafety Systems facilitated a review of Ghana's draft biotechnology/biosafety law and presented it for stakeholders' consultation prior to submission to Cabinet. In the interim a legislative instrument (LI) to facilitate confined field trails was introduced and

passed by Parliament (LI 1887) in May 2008. A training session was held for a Parliamentary Subcommittee group of 20 members (19 male, 1 female) on subsidiary legislation to inform their understanding of biosafety and biotechnology and the intent of the LI. A cross-section of stakeholders—consumers, scientists, media, farmer groups, policymakers, NGOs and Members of Parliament—have been informed about biotechnology-related issues through the media and workshops.

Kenya. Under its Biotechnology/Biosafety program, USAID facilitated training of key parliamentary committees on the Biosafety Bill. Consequently, the bill received strong and consistent support from the Parliamentarians, resulting in the Bill's smooth sailing in the first and second readings. The bill was enacted by Parliament in December 2008 and was ratified by the president in February 2009.

Malawi. The Government of Malawi drafted, presented and successfully legislated a bill permitting commercialization of genetically modified (GM) crops. Assistance was provided to strengthen the capacity of the National Biosafety Committee to draft GM policy and approve implementation of GM trials.

Uganda. The Uganda Biotechnology-Biosafety policy was passed by the Cabinet in March 2008, and the process of establishing the rules and regulations (the bill) governing the use of biotechnology tools started. USAID's collaboration with the Uganda Commodity Exchange, Danish International Development Agency (DANIDA)-funded Agricultural Sector Program Support, Phase II (ASPSII) and Enterprise Uganda resulted in the adoption of quality standards by rice processing firms and several rice traders, improving the quality of paddy and milled rice sold in the market. USAID also provided technical guidance to the National Planning Authority during its consultancy to design a national rice strategy.

Zambia. USAID's analytical work in collaboration with the Cotton Ginners' Association, the Cotton Association of Zambia and the Ministry of Agriculture and Cooperatives assisted sector stakeholders promoting the passage of the revised Cotton Act. As a result, the Government established an interim Cotton Board.

ASSISTING THE VULNERABLE AND ACCELERATING THE PARTICIPATION OF THE ULTRA-POOR IN RURAL GROWTH

IEHA is helping both smallholders with limited assets and smallholders highly vulnerable due to food shortages, civil conflict, and illness by increasing their productivity and linking them to markets. Here are some examples of USAID's success in 2008 in assisting these vulnerable individuals and households.

Uganda. In northern Uganda agricultural productivity activities focused on reducing food insecurity for internally displaced persons and other populations affected by the 22-year civil conflict. Food for Peace-

M. HERRICK/CHEMONICS

Bagging rice seed in Uganda

funded development interventions provided new production and post-harvest handling technologies and practices that aim to increase agricultural yields and reduce storage losses. A new Global Development Alliance (GDA) provided 40 oxen, ploughs, and carts to a group of women to help open up land. Other activities in Northern Uganda focused on improving production systems for income-generating crops (sunflower, upland rice, sesame, and cotton) and linking producers to markets. Through a second GDA, USAID provided producers with agricultural inputs and training to increase cotton and food crop production, ensuring a guaranteed market at an agreed-upon price for all the cotton they produce. In FY 2008, this GDA benefited about 7,500 farmers growing food crops alongside their organic cotton enterprises, thereby increasing food security and incomes.

Malawi. More than 70,000 smallholders have produced and stored in community seed banks 1,000 tons of improved seed (groundnuts, soybeans, pigeon peas, rice, vegetables, sunflower) valued at nearly $600,000 under the Food for Peace Program.

Southern Africa. Over the past three years, FANRPAN has improved policymakers' understanding of vouchers as a tool to help vulnerable households access inputs through commercial markets. While input vouchers have achieved remarkable results in Malawi, not all households shared in the success. This raises the question of whether input vouchers are suitable for all households.

FANRPAN also has begun using the Human Vulnerability Index, an effective analytical tool for categorizing households and identifying the sources of their vulnerability. Armed with knowledge on the sources of vulnerability, it is possible to identify the specific resources needed by a household to reduce its vulnerability.

West Africa. CILSS continues to coordinate the food security early warning system in 17 countries, which alerts donors and national programs to the level of food insecurity in different areas. CILSS has been instrumental in getting countries in the ECOWAS region to adopt:

- seed production and trade regulations;
- pesticide regulations, thereby improving their safe use and cross-border trade;
- an environmental protection policy; and
- a regional policy on the management of water.

BUILDING ON IEHA'S MOMENTUM

As part of this five-year overview on IEHA's performance and lessons learned, targeted interviews with several key informants were conducted in February and March, 2009. Most of these individuals were senior USAID IEHA program managers with many years of experience. The interviews were qualitative and open-ended.

In a nutshell, the "IEHA smallholder productivity strategy is sound and will lead to reductions in hunger and poverty." One informant said that IEHA needs to be maintained for another 20 years. Another noted the need for more resources to scale up IEHA activities.

Several lessons learned also emerged.

LESSONS LEARNED

Balancing and integrating development and humanitarian assistance. IEHA has improved the integration of development and humanitarian assistance. One informant noted that IEHA has been able to identify food-insecure areas and target development assistance to these areas. However, this informant also noted that there needed to be a better balance between relief and

development. Another noted that continued improvement in balancing and integrating humanitarian assistance and development assistance requires commitment at the highest levels. Mission directors and ambassadors need to get involved to enforce coordination between relief and development.

Targeting the ultra-poor. IEHA hopes to increase the resilience of the "ultra-poor," previously referred to as the "vulnerable." However, one informant noted that the term "vulnerable" was never adequately defined. This led to confusion and, in some cases, omission of programs targeted to landless vulnerable populations.

Political will. Several comments pertained explicitly or implicitly to improving the coalition of political actors who commit to and support IEHA. In essence, there is a need to generate the political will to make IEHA work on a large scale. There also needs to be "better communication to general audiences and specifically to mission directors." Mission directors and ambassadors need to get involved to restore/retain full credibility and achieve results. In particular, high-level U.S. government personnel need to "work with host-country governments more consistently and at the right (high) level." These comments, along with evidence of underinvestment in food security by donors (Sachs, 2005) and African governments that have not met their Maputo Declaration commitments, suggest the need for a communications campaign to build the political will necessary for IEHA to succeed and MDG 1 to be attained.

The broad context. One informant commented that IEHA needs to look at agriculture in a broader context to ensure that all constraints are addressed (for example, trade policies and impediments, infrastructure, etc). In 2008 IEHA worked on improved trade policy for agricultural inputs and staple foods through African regional trade organizations. This includes support for infrastructure investments from feeder roads to port improvement. Another informant commented that smallholder finance is a key issue that IEHA did not initially emphasize. Currently IEHA objectives include improved smallholder finance and improved financial credit systems in the food commodity value chains.

These comments raise the interesting issue of whether IEHA contributes to broader MDGs beyond MDG 1. For example, by improving food security, especially among the ultra-poor, does IEHA decrease child mortality (MDG 4) and improve maternal health (MDG 5)?

A CRSP cowpea scientist with a Fulani farmer in Niger

UNKNOWN

Does creating and strengthening women's groups help promote gender equality (MDG 3)? Does IEHA support for school food programs help achieve universal primary education (MDG 2)? Does IEHA-supported agricultural and natural resource research help ensure environmental sustainability (MDG 7)? Does IEHA support for the New Partnership for Africa's Development (NEPAD) and CAADP help create a global partnership for development (MDG 8)?

THE GLOBAL FOOD SECURITY RESPONSE

IEHA provided the foundation for the FY 2008 Global Food Security Response, which began to address recent food price and global financial challenges. GFSR provides an opportunity to scale up current levels of investment. It will build on IEHA accomplishments, such as linking producers to markets and thereby increasing their incomes; regional harmonization of seed standards that increase the availability of high-quality seeds; and strengthened African capacity to manage the agricultural research agenda. Already, GFSR has started to erase the divide between humanitarian and development assistance with the FY 2009 supplemental funding. Chapter 4 discusses the U.S. Government response in detail.

4. FACING THE FOOD SECURITY CHALLENGES

The food crisis was a global challenge, affecting poor people around the world, but Sub-Saharan Africa was its center of gravity. Three-quarters of the world's ultra-poor, those living on less than 50 cents a day, are in Sub-Saharan Africa. These poor people spend the majority of their meager incomes on food, making them highly vulnerable to hunger and malnutrition when food prices increase. Globally, a majority of the countries facing food security crises and related demonstrations are in Africa. In West Africa alone, eight countries experienced riots and demonstrations related to high prices, posing threats to peace and stability.

UNKNOWN

Young Senegalese woman with a rice panicle.

THE WORLD FOOD CHALLENGE

The 2008 food price challenge began in 2004 with upward pressure on commodity prices in general, and staple food prices in particular. Between 2004 and May 2008 international staple food prices increased 102%, led by an increase in the price of rice of 255%. Sixty percent of the increase in staple food prices and 75% of the increase in the price of rice occurred in the first five months of 2008. Fertilizer prices followed commodity prices, increasing 379% from 2004 to May 2008.[1] The effects of the food challenge on Africans are potentially devastating, particularly for those countries or localities already subject to other crises. Kenya's food security crisis threatens millions, with 1.4 million currently in need of humanitarian aid. In some regions of the country 19-22% of the people suffer from acute malnutrition.[2]

[1] International Monetary Fund. 2008. International Financial Statistics. IMF, Washington, D.C.
[2] USAID Disaster Assistance: Kenya. Most Recent Disaster Declaration: Food Security Crisis, 10-29-2008. http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/kenya/template/,viewed February, 2009.

UNITED STATES GOVERNMENT ACTIONS TO ADDRESS THE FOOD SECURITY CHALLENGE

In May 2008 the Policy Coordinating Committee (PCC) on Development, chaired by the USAID Administrator and U.S. Department of State Director of U.S. Foreign Assistance, established a Sub-PCC on Food Price Increases and Global Food Security (the Food Security Sub-PCC) to address the immediate and medium-term responses to rising food insecurity. The Sub-PCC, co-chaired by the Deputy Assistance Administrator, Bureau for Democracy, Conflict and Humanitarian Assistance, USAID; the Deputy Assistant Administrator, Bureau for Economic Growth, Agriculture and Trade, USAID; the Deputy Assistant Secretary, Economic, Energy and Business Affairs Bureau, U.S. Department of State; and the General Sales Manager, Foreign Agriculture Service, U.S. Department of Agriculture, has representatives from the Office of the U.S. Trade Representative, Office of Management and Budget, Central Intelligence Agency, U.S. Department of Treasury, International Trade Administration (Department of Commerce), Trade and Development Agency, Peace Corps, Millennium Challenge Corporation, and the National Security Council.

The Food Security Sub-PCC developed a vision statement for the new administration, "Re-establish the United States as a Global Leader in Ending Hunger and Reducing Extreme Poverty by Improving Availability, Stability of Supply, Access and Utilization of Food." The vision statement presents an interagency consensus on a dynamic approach for re-establishing the U.S. Government (USG) as the global leader for ending hunger and reducing extreme poverty. ***The approach involves comprehensive and sustainable agricultural sector growth through improved productivity, stability of supply, availability and access to food.*** The focus is primarily the chronically poor in Africa, Asia, and Latin America.[3]

U.S. RESPONSE TO RISING FOOD PRICES IN DEVELOPING COUNTRIES

The U.S. provided over $5.5 billion to fight global hunger in FY 2008 and FY 2009. Since mid-April 2008, in response to the Administration's request for additional resources, Congress provided $1.8 billion in "additional" resources[4] through FY 2008 and FY 2009 bridge supplemental funding, Emerson Trust resources, and Famine Prevention Funds.[5] These resources are being used to provide both immediate humanitarian assistance and longer-term development assistance, primarily in Africa.

The Administration undertook an immediate humanitarian response that focused on countries that:

- had been flagged as countries of concern by international organizations;
- were highly dependent on food imports;
- had high poverty levels coupled with weak or non-existent safety nets;

[3] In May 2008 the Government Accountability Office (GAO) completed its report, "International Food Security: Insufficient Efforts by Host Governments and Donors Threaten Progress to Halve Hunger in Sub-Saharan Africa by 2015." The report examined factors that contribute to persistent food insecurity in Sub-Saharan Africa and the extent to which host governments and donors, including the United States, are working toward halving hunger in the region by 2015. The report concluded that to enhance efforts to address global food insecurity and accelerate progress toward halving world hunger by 2015, particularly in sub-Saharan Africa, the USAID Administrator should work in collaboration with the Secretaries of State, Agriculture, and the Treasury to develop an integrated government-wide U.S. strategy that defines each agency's actions and resource commitments toward achieving food security in Sub-Saharan Africa. The formation of the Food Security Sub-PCC and its development of a vision statement responded to this recommendation.

[4] The $1.8 billion is included in the $5.5 billion mentioned just above.

[5] $200 million for emergency food assistance from the Emerson Humanitarian Trust; $1.245 billion in additional P.L. 480 Title II humanitarian food aid assistance (FY2008-FY2009 supplemental funds); $175 million ("up to") in additional non-food emergency assistance (FY2008-FY2009 supplemental funds); $200 million in additional development assistance (FY2009 supplemental funds); and $40 million in Famine Prevention Funds.

- had significant food price inflation; and
- had U.S.-funded operations in-country to speed aid delivery.

On April 14, 2008, the President directed that approximately $200 million in emergency food aid be made available through the Bill Emerson Humanitarian Trust for the most urgent and severe emergencies, including in Afghanistan, Ethiopia, Kenya, and Zimbabwe.

On May 1, 2008, the Administration announced its request to Congress for additional resources to help address the impact of high global food prices on developing countries through an integrated response that would both mitigate the immediate consequences of high food prices on the most vulnerable, as well as identify medium- and long-term measures to address the underlying causes of the crisis. On June 30, 2008, Congress passed and the President signed the Supplemental Appropriations Act, 2008, providing FY 2008 and FY 2009 emergency funding for P.L. 480 Title II assistance, International Disaster Assistance (IDA), and Development Assistance (DA) to address the international food crisis. Congress designated USAID to implement this agenda on behalf of the U.S. Government.

JIDE ADENIYI-JONES

Farmers working on USAID's Model Rice Farm, Agasha, Benue state, northern Nigeria.

Nearly $1 billion in emergency food assistance and $24 million in non-food emergency resources provided through the FY 2008 supplemental appropriation and Emerson Trust were programmed by the end of the FY 2008 fiscal year.

The U.S. was also a leading force in ensuring the G-8 committed to a set of strong measures to improve food security and continues to work closely with international partners—including the United Nations, the World Bank, and donor and recipient countries—to implement these plans and ensure that the food crisis receives sustained international attention.

GLOBAL FOOD SECURITY RESPONSE

The Global Food Security Response (GFSR) presented a road map out of food insecurity for developing countries willing to make the policy and pubic investment decisions necessary to promote sustainable growth. It also provided the U.S. Government with the flexibility to respond to emergency needs wherever they occur. The emergency humanitarian response was funded with P.L. 480 Title II and IDA resources. The DA funds were used to support urgent agricultural and trade measures as well as local and regional procurement to meet emergency humanitarian needs and to improve markets for African smallholder farmers. The Response coordinated programs among various USG stakeholders (including USAID, Department of State, and the Millennium Challenge Corporation) at the country level in order to ensure the greatest complementarity of efforts.

The GFSR comprises three interrelated pillars to target the immediate consequences and the underlying causes of this emerging challenge.

Pillar One – Immediate Humanitarian Response. In FY 2008, the Response supported emergency actions to mitigate hunger and malnutrition in target countries due to rising food prices and food shortages – both underlying causes of the food crisis. Such actions included helping smallholder farmers plant and harvest crops for the next season, which immediately help to increase agricultural production and food security.

- The increase in emergency food aid, which was used to strengthen social safety nets, built on existing food assistance programming in rural areas and identified and/or strengthened targeting and distribution mechanisms in urban areas.
- The expanded non-food assistance provided nutritional support and other essential services, increasing access to farm inputs; preserving households' existing productive assets; creating productive community assets; procuring and redistributing locally grown food; and strengthening host countries' abilities to monitor and respond to food crises.

Pillar Two – Urgent Measures to Address Causes of the Food Crisis. Commodity prices were projected to remain high. If developing countries were to prosper at these higher prices, they would need to increase long-term productivity, alleviate transportation and distribution bottlenecks, and address problematic domestic government policies. The Response provided immediate support for these types of actions, which address the underlying causes of the food crisis. In countries where emergency interventions were undertaken, these resources integrated with and built on those efforts.

Specific actions taken included:

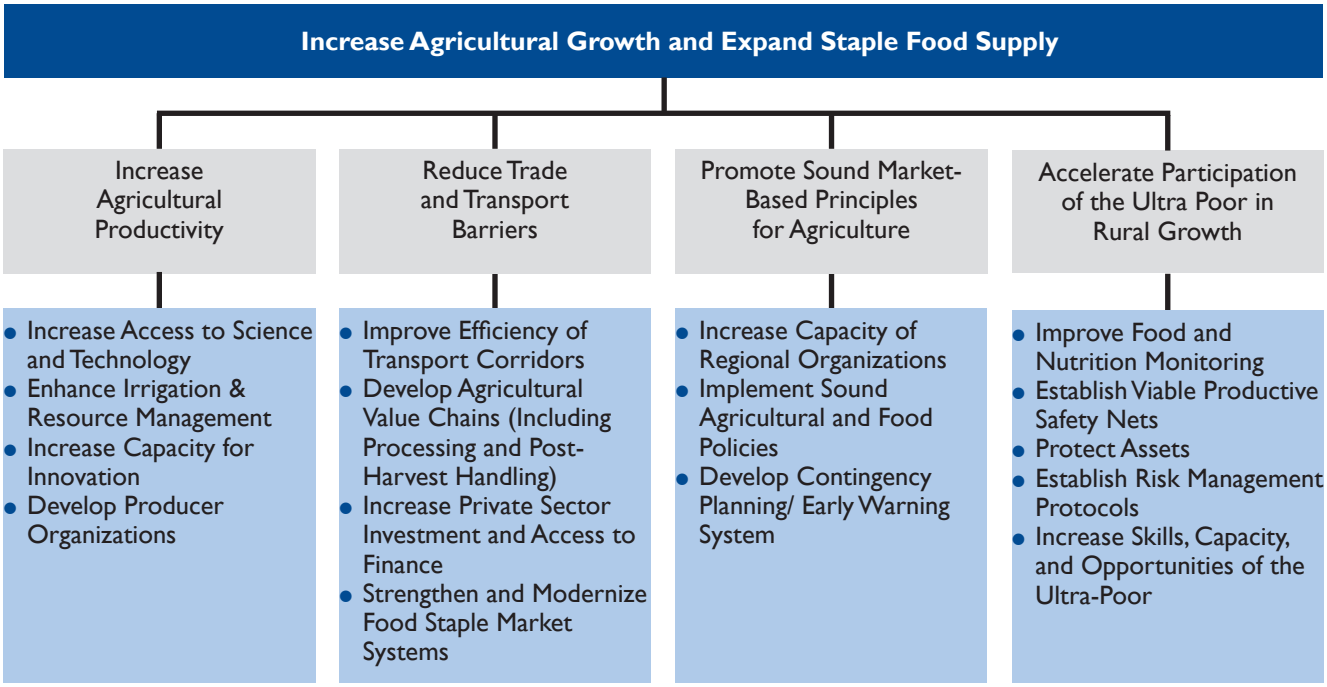
- increasing agricultural productivity by deploying available science and technology; enhancing irrigation and resource management; developing agro-processing capacity; and increasing educational alliances;
- alleviating transportation, distribution, and supply-chain bottlenecks by developing trade and transport corridors; supporting agricultural value chain development; and increasing access to capital; and
- promoting sound market-based principles by assisting countries and regional organizations; implementing sound food and agricultural policies; and developing contingency planning.

Pillar Three – Address Related International Policies and Opportunities. The GFSR also supported global policy initiatives that address the systemic causes of high food prices. These actions supported the goal of moderating global food prices, while also addressing other concerns, some directly challenging U.S. policies. Targeted actions included developing principles and best practices for biofuels sustainability; completing an ambitious Doha Round; ensuring access to science and technology; and working with international partners.

Global Food Security Response Africa Action Plan. Significant foci of the FY 2009 bridge supplemental funding were Sub-Saharan Africa and the improvement of staple food systems. In the face of rising food prices, urgent actions were undertaken for fast-impact food production programs in key areas. These actions included regional and national efforts to make staple food markets work better both so the poor have greater access to food and to stimulate private investment, which is needed to sustain the growth process and build resilience to economic shocks (Figure 4.1). The implementation of this agenda built on and expanded the foundation laid by the Initiative to End Hunger in Africa (IEHA).

West Africa Action Plan. The majority of the DA funds are concentrated on one

FIGURE 4.1: URGENT MEASURES OF THE GLOBAL FOOD SECURITY RESPONSE



sub-region in Africa—West Africa—where five countries (Ghana, Liberia, Mali, Nigeria, Senegal) jointly have the potential to significantly increase output of staple foods. Increasing the production and marketing of food staples are key to addressing the structural imbalance in the supply of and demand for food; reducing food prices; and increasing incomes needed to buy food.

USAID works with its various partners to deploy available production technology, including seeds and fertilizer, and improve land and water management, including irrigation. The Agency will scale up and expand a public-private alliance to develop commercial seed systems in West Africa that can provide quality seed to small farmers. USAID will develop a similar public-private alliance to expand commercial fertilizer operations in the region by developing the capacity of the newly created Africa Fertilizer Association.

USAID will work with national and regional organizations to identify and address the main infrastructure-related bottlenecks to the marketing and trade of food staples. Activities will include: improving rural roads to connect farmers to the main trade routes; expanding market information services utilizing new information and communication technologies; ensuring border posts are equipped to expeditiously facilitate movement of staple foods across national borders; and building the capacity of trade associations to identify and advocate for needed improvements along the trade corridors.

Local and international banking institutions will be assisted to increase financing for the production, processing, and trade of staple foods by developing public-private finance alliances, expanding warehouse receipt programs, and possibly using the Development Credit Authority to reduce risk. USAID will also build market capacity by supporting commodity exchanges and storage programs.

USAID will work with national and regional organizations to remove key policy constraints and barriers to the production, processing, and marketing of food staples. Policy reforms will include instituting commodity standards, developing bio-safety regulations, and harmonizing seed policies. USAID will assist its partner organizations to identify and address regional barriers to the trade in food staples in West Africa. Such barriers include trade tariffs; seasonal export restrictions; poorly harmonized grades and standards; and corruption at custom posts. Partner organizations will be assisted to develop the capacity, knowledge and tools to design and manage policy and to establish policy frameworks that encourage private sector investment in input and output markets.

The Office of U.S. Foreign Disaster Assistance provides support to five West African countries (Burkina Faso, Mali, Mauritania, Niger, and Senegal). The support is increasing the purchasing power of households by providing subsidized grain and through cash-for-work programs, which focus on the improvement of dams for water catchments and the extension of market gardening facilities.

East Africa Action Plan. In East Africa the focus is on the local and regional procurement of food aid commodities[6] to meet emergency needs and to make local procurement work for the African farmer. The ability to procure food aid commodities locally and regionally offers an exceptional opportunity to meet humanitarian needs in an efficient and timely fashion. It can fill pipeline gaps and increase the total amount of life-saving food aid. In addition to its value as a rapid humanitarian response tool, local and regional procurement has the potential to strengthen and expand commercial markets, stimulate local and regional production, and ultimately reduce emergency food aid requirements.

[6] Local procurement refers to the process of buying food aid commodities in the same country where the food is distributed; regional procurement is the purchase of these commodities in a different country in the same region.

USAID will work with eligible organizations, including the World Food Program (WFP) and private voluntary organizations, that procure food commodities in response to unexpected emergency food needs, including emergency food aid pipeline breaks. Commodities procured with these funds may also be integrated into productive safety-net activities designed to mitigate the impact of rising food prices on vulnerable populations. Such programs may include food-for-work, which by improving rural infrastructure boosts agricultural productivity and lowers transaction costs of food trade. These programs may also improve educational and health infrastructure. Food-for-training programs increase household assets and improve health and nutrition.

Key actions will be taken to strengthen commodity exchanges, which will enable the WFP and others to procure local food products in a timely and efficient manner. In East Africa, there is a commitment to support improvements in warehousing, communications and finance systems, which will enable the purchase of large quantities of products and improve the efficiency of procurement. The Response in East Africa will help strengthen farmers' organizations to enable them to collectively market produce, directly improving market access for tens of thousands of farmers. Stronger farmers' organizations will be better equipped to secure technical services and inputs that can increase their yields. The GFSR will support efforts to reduce the costs of moving goods from farms to markets by simplifying border inspections and certification processes. Doing so will make regional markets more accessible and help connect areas of food surplus and deficit. Finally, the Response will support efforts to ensure financial markets work efficiently to support procurement of food staples.

5. TRANSFORMING ECONOMIES THROUGH STAPLES-LED GROWTH

In Africa a typical family spends between 50 and 70 percent of its budget on staple foods. A staple food[1] "is one that is eaten regularly and in such quantities as to constitute the dominant part of the diet and supply a major proportion of energy and nutrient needs."[2] Poor households are vulnerable to hunger and malnutrition when their staple foods are not available or accessible. Not only are staples key to food security, staples-led development has the power to reduce poverty and hunger.

WHY STAPLES ARE SO IMPORTANT

Poor African farming households produce food staples for the household's own consumption, and production of staples is also usually their main source of income. In a minority of the households some of the food staple crop is converted to cash income by selling small surpluses. However most poor farming households in Africa are net buyers of food; that is, they do not produce enough for their own consumption, so they do not sell any staple foods[3] and purchase the rest of their food requirements. One can consider the staples produced and not sold as income, in the sense that they could be sold and the cash could be used to purchase food for consumption. It is in this sense that staple food crops are the main source of income in these poor households. Staple foods are the main source of income of these farming households because they represent the largest value among the crop and livestock products produced (and any other income-producing activities of the household).

UNKNOWN/BEAN-COWPEA CRSP

Senegalese market women sell cowpeas. These cowpea varieties, developed through the Bean/ Cowpea Collaborative Research Support Program, have been widely adopted and have contributed to yield increases 2.4 times above the 20-year baseline.

[1] Diao, Xinshen, et al., 2008a
[2] FAO, 1995.
[3] Some of these households both sell and buy food. When they buy more than they sell, they are termed "net buyers." Whereas for the daily food security of these households these sales and purchases are very important, for the purposes of this strategic discussion, the amounts that were sold and then repurchased can be ignored, and one can focus on the households' status as net buyers.

Because staple foods are such an important part of food security and income for poor households, improving the productivity of staple food production will have major positive impacts. Improvements in staple food productivity–the increase in output for the same amount of labor and land inputs—not only increase the availability of food but also increase access to food, through lower food prices. As a greater surplus is generated in more households, more food enters local markets, lowering the price of food.[4] At lower prices, all consumers (urban and rural) can afford to buy more food with the same income. As food staple productivity increases, farm households' own labor and land resources shift to other profitable enterprises, further increasing those households' income, and helping to lift them out of poverty. Easier access to more affordable food among net buyer households increases the amount of income that they can spend on other goods and services, which stimulates the local economy, creating new jobs and more income for their neighbors.

Ultimately, therefore, a strategy that focuses on food staples offers a win-win situation by improving directly many farming households' economic situation and improving indirectly the situation of many rural nonfarm and urban households. The success of such a strategy will depend on how well it enables smallholder farmers to have adequate access to modern input technologies and to input and output markets.

The agricultural sector is the sum of its farms. In most African countries, traditional smallholder farming households still make up a majority of the rural population and produce most of the food and other agricultural output. Smallholders comprise about 70 percent of the continent's farmers (Johnson et al., 2003). As they do in households, food crops account for the largest share of output at the agricultural sector level. Similarly, because agriculture typically accounts for the lion's share of total economic output, increasing the productivity of food staples will not only improve the economic and nutritional welfare of millions of poor Africans in farming households, but will also play a critical role in generating broader economic growth.[5]

IEHA IS ENGAGING TO BRING ABOUT STAPLES-LED GROWTH

IEHA supported analyses at both the country and regional levels to identify those commodities with market opportunities and the potential for regional growth spillovers. Country and regional operating units then implemented focused programs to accelerate economic growth and poverty reduction through increased staple productivity and trade. IEHA targets its agricultural productivity investments to crops, livestock, and environmental goods and services where African smallholder farmers and firms have a comparative and competitive advantage. These targeted commodities include traditional and nontraditional export and staple food commodities that have the potential to raise incomes and attract private investment, and that lend themselves to smallholder production and technical innovation.

IEHA operating units began to report on gross margin (profits) in 2005. In 2005, the value of the staple food (maize, cassava, sorghum, legume grain, rice, banana, milk, onions, sweet potato, and fish) sales reported under the gross margin indicator was $75 million. The value of sales for traditional and nontraditional

[4] Greater supply facing the same (downward-sloping) demand (curve) results in a lower price.

[5] A wide range of research results have demonstrated the importance of food staples–both crops and livestock products–in driving overall economic growth and contributing to a dynamic structural transformation of traditional rural economies: Byerlee et al., 2005; Bezemer and Headey, 2008; Diao and Hazell, 2005; World Bank, 2008a; Diao et al., 2007; and Haggblade et al., 2007

export crops was $55 million. By 2008, the value of staple food sales had more than doubled to $155 million, whereas export crop value increased by only 60% to $87 million.

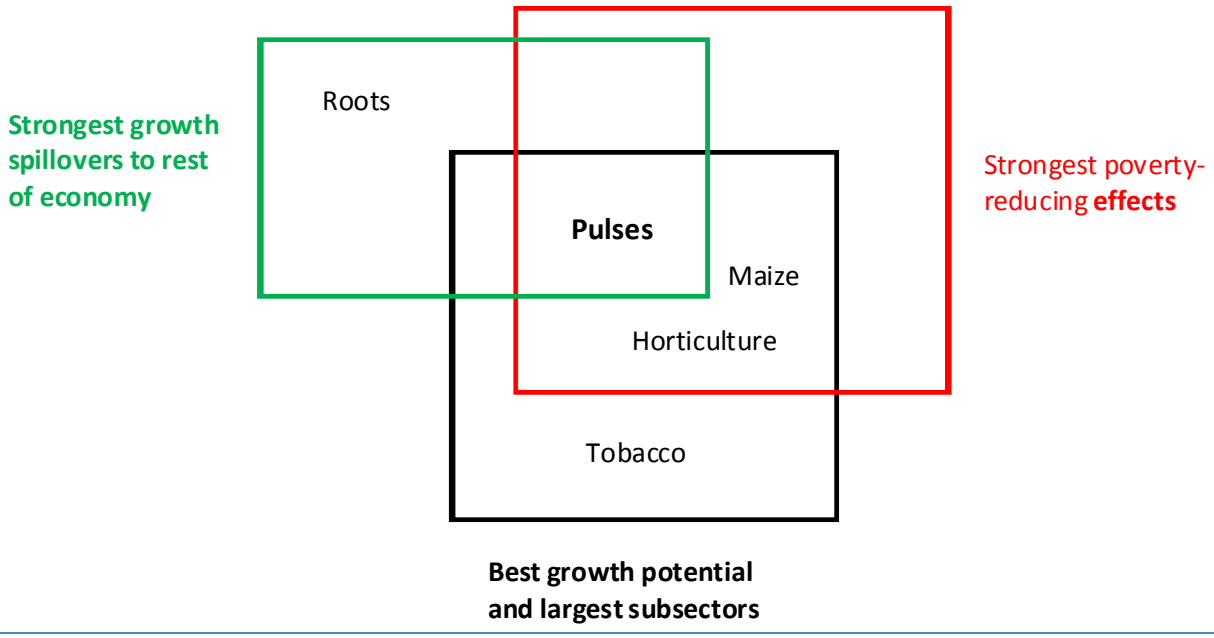
In FY 2008, country and regional programs continued their investments in staple foods based on analytical evidence; examples follow.

Malawi. Modeling results produced by the Regional Strategic Knowledge Support Systems (ReSAKSS) initiative under the Comprehensive Africa Agriculture Development Program (CAADP) compact development process indicate that the staple food crops of pulses and maize have the best growth potential, strongest growth spillovers to the rest of the economy, and the strongest poverty reducing effects. (See Figure 5.1) IEHA activities have been primarily directed to increase productivity and incomes for smallholder farmers through dissemination of new technologies; improvements in soil fertility and sustainable small scale irrigation techniques; assistance to agribusinesses to improve production and involve private companies in overcoming bottlenecks in value chains; and improving access to markets and finance for agriculture-related enterprises.

West Africa. In 2008 USAID/West Africa implemented two new programs that focus on promoting a commercial seed industry that will increase regional capacity for the dissemination of high-quality seeds in West Africa and on achieving the potential of intra-regional trade in maize and livestock.

Kenya. Analysis indicates that productivity growth in food crops such as maize, sorghum, and millet generate the most poverty reduction in Kenya, where agriculture is the main livelihood for the poor. To increase incomes and food security for rural households, USAID used IEHA resources to advance policy and institutional reforms to create an enabling environment for greater growth and to improve productivity and competitiveness in targeted value chains including maize, dairy, and milk through

FIGURE 5.1: POTENTIAL IMPACTS OF GROWTH IN AGRICULTURAL SUBSECTORS, MALAWI



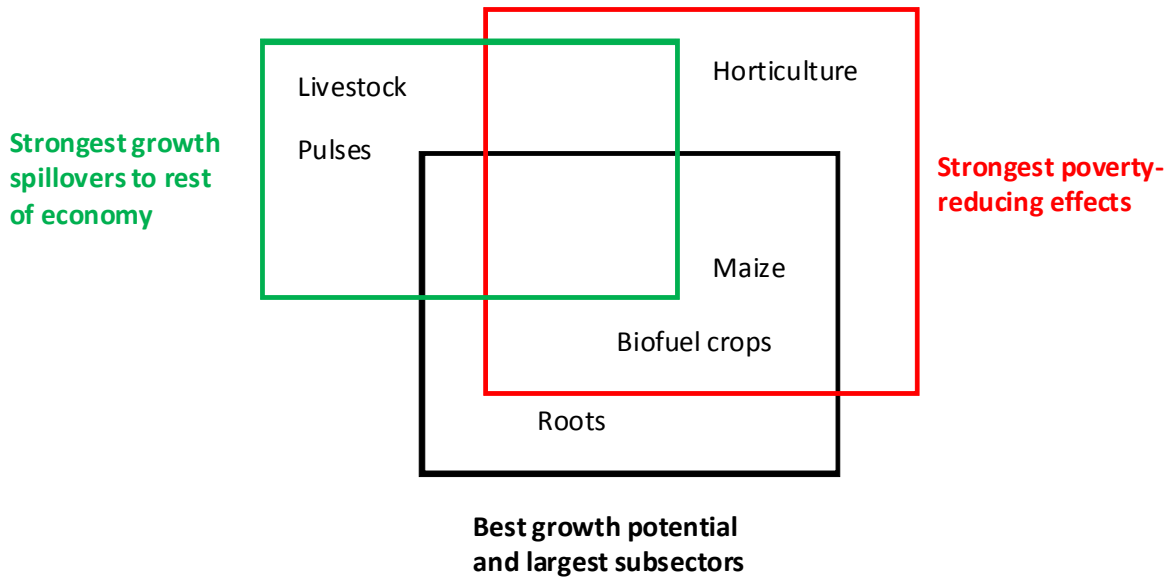
Source: IFPRI CAADP modeling results

development and transfer of improved agricultural technologies. Kenya's food security and overall agricultural sector production were seriously affected by post-election disturbances in early 2008, which disrupted supply chains in Western Kenya, where most of Kenya's maize, wheat, and dairy products are produced.

Mozambique. ReSAKSS modeling results under the CAADP compact development process indicate that maize and biofuel crops have the best growth potential and strongest poverty-reducing effects, while livestock and pulses have the strongest growth spillovers to the rest of the economy. (See Figure 5.2) USAID supports the Government of Mozambique's (GoM) new Food Action Plan, a three-year plan for reducing Mozambique's dependency on staple food imports that was developed in response to the recent escalation in global food prices. The Plan is largely focused on those commodities that USAID/Mozambique is already supporting due to their critical role in food security, including maize, cassava, oilseeds, potato, and poultry. USAID is recognized by the GoM as the lead donor agency for several areas of the Food Action Plan.

Zambia. Under the CAADP process ReSAKSS analysis indicates that maize has the strongest poverty-reducing effects, best growth potential, and strongest growth spillovers to the rest of the economy, while investments in roots and tubers had the strongest growth spillovers and

FIGURE 5.2: POTENTIAL IMPACTS OF GROWTH IN AGRICULTURAL SUBSECTORS, MOZAMBIQUE



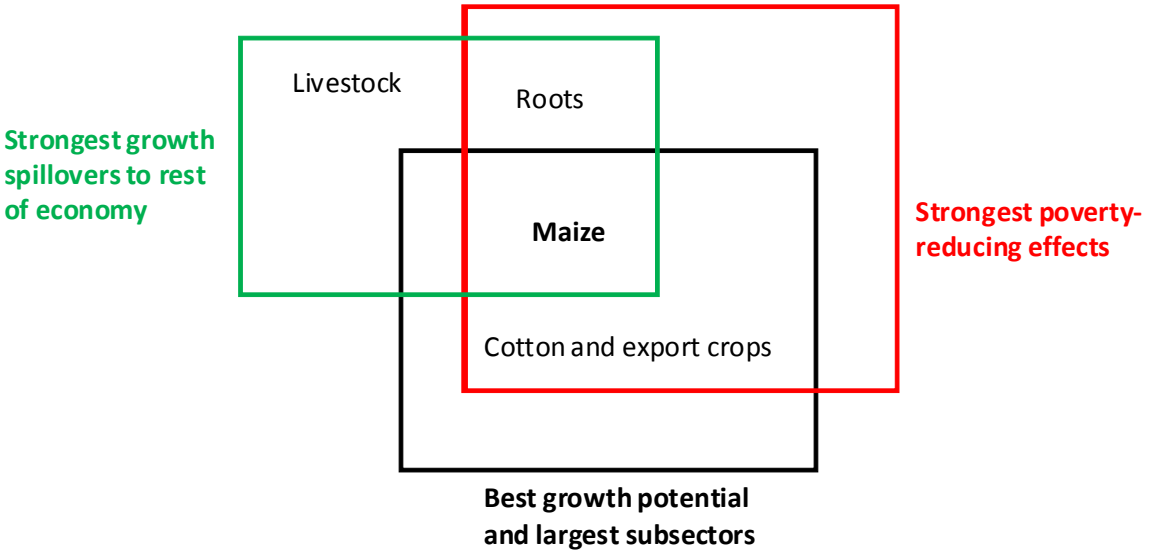
Source: IFPRI CAADP modeling results

poverty reduction effects. (See Figure 5.3) USAID supported research on cassava and accelerated cassava utilization activities that strengthened private sector commercialization. As a result, Tiger Animal Feeds, a Zambian feed stock manufacturing company, is now using cassava as a substitute for maize in animal feed. This helps both smallholder producers of cassava by increasing their market opportunities and poor consumers of maize by keeping more maize in the food markets.

IEHA GETS RESULTS IN STAPLES

In FY 2008 IEHA's staples-related investments increased agricultural productivity, reduced trade and transport barriers, promoted sound market-based principles for agriculture, and accelerated the participation of the ultra poor in rural growth.

FIGURE 5.3: POTENTIAL IMPACTS OF GROWTH IN AGRICULTURAL SUBSECTORS, ZAMBIA



Source: IFPRI CAADP modeling results

INCREASING AGRICULTURAL PRODUCTIVITY

IEHA's emphasis on improving the productivity of staple commodities resulted in significant increases in gross margin (profit) in milk and maize in Kenya from 2005 to 2008 (Tables 5.1 and 5.2). Other examples are bananas in Uganda (Table 5.3), where gross margin soared by more than 300 percent from FY 2005 to 2008, based on increased yield (128%), sales (222%) and price (46%). The gross margin for onions in Kenya (Table 5.4) increased by more than 200% during the same time period.

TABLE 5.1 IMPROVEMENTS IN MILK PRODUCTIVITY IN KENYA, 2005-2008, BY SEX OF HEAD OF HOUSEHOLD

Sex	Element of Productivity	Unit	2005	2006	2007	2008	Percent change, 2005-2008
Male	Number of Milking Animals		42,000	52,500	58,803	24,678	
	Production	Liters	106,596,000	137,498,000	174,327,374	61,719,678	
	Quantity Sold	Liters	79,940,000	105,875,000	141,205,173	49,626,635	
	Value of Sales	USD	18,270,000	24,203,000	35,828,178	15,384,257	
	Purchased input cost	USD	15,350,000	19,075,000	19,816,611	11,138,333	
	Gross Margin	USD/L	215	235	415	324	51%
Female	Number of Milking Animals		18,000	22,500	36,570	13,290	
	Production	Liters	38,394,000	66,218,000	97,356,654	27,698,575	
	Quantity Sold	Liters	26,874,000	46,350,000	77,885,323	22,631,984	
	Value of Sales	USD	6,144,000	10,598,000	19,761,948	7,015,915	
	Purchased input cost	USD	5,646,000	7,155,000	11,836,490	4,933,913	
	Gross Margin	USD/L	174	355	352	275	58%

Source: Annual monitoring reports by IEHA operating units

TABLE 5.2 IMPROVEMENTS IN MAIZE PRODUCTIVITY IN KENYA, 2005-2008

Element of Productivity	Unit	2005	2006	2007	2008	Percent change, 2005-2008
Area	Hectares	26,649	72,774	131,528	143,652	
Production	Tons	89,941	360,231	695,456	645,891	
Yield	Tons/ha	3.38	4.95	5.29	4.50	
Quantity Sold	Tons	62,958	252,162	486,819	452,124	
Value of Sales	USD	13,536,047	54,214,811	104,666,057	98,564,872	
Purchased input cost	USD	9,827,170	39,359,953	63,322,964	60,124,572	
Gross Margin	USD/ha	357	523	655	562	57%

Source: Annual monitoring reports by IEHA operating units

TABLE 5.3	IMPROVEMENTS IN BANANA PRODUCTIVITY IN UGANDA, 2005-2008					
Element of Productivity	**Unit**	**2005**	**2006**	**2007**	**2008**	**Percent change, 2005-2008**
Area	Hectares	4,020	3,620	4,180	4,180	
Production	Tons	80,400	74,400	156,750	191,235	
Yield	Tons/ha	20	21	38	46	
Quantity Sold	Tons	65,000	68,000	117,625	143,500	
Value of Sales	USD	3,250,000	3,570,000	8,065,714	10,475,683	
Purchased input cost	USD	1,340,000	1,210,000	1,672,000	2,340,800	
Gross Margin	USD/ha	667	745	2,171	2,780	317%

Source: Annual monitoring reports by IEHA operating units

TABLE 5.4	IMPROVEMENTS IN ONION PRODUCTIVITY IN KENYA, 2005-2008*					
Element of Productivity	**Unit**	**2005**	**2006**	**2007**	**2008**	**Percent change, 2005-2008**
Area	Hectares	128	140	213	632	
Production	Tons	1,228	2,406	2,475	13,189	
Yield	Tons/ha	9.6	17.2	11.6	20.9	
Quantity Sold	Tons	1,105	2,165	2,228	11,877	
Value of Sales	USD	294,690	577,440	795,714	3,299,166	
Purchased input cost	USD	120,324	80,200	190,221	391,811	
Gross Margin	USD/ha	1,619	4,011	3,257	5,177	220%

Source: Annual monitoring reports by IEHA operating units
*Onions are not a staple but are a very important and common crop and food in many parts of Africa.

In Kenya there is evidence that improved staple crop production leads to increased household income (Oehmke, 2009). The value of maize sales and the ratio of maize quantity sold to maize quantity harvested are two different ways of considering the household's marketed surplus. These measures are positively correlated with maize gross margin, or the amount of money that the household earns from maize production (including home consumption) after accounting for seed, fertilizer, and land preparation costs. Maize gross margin in turn is positively correlated with gross margin from all crops and net crop income. Finally, net crop income is positively correlated with net household income. Thus there is evidence of a causal chain from increased marketed surplus to higher household net income. This evidence is consistent with the hypothesis that the staple foods strategy of linking smallholders with staple food markets will help alleviate poverty.

REDUCING TRADE AND TRANSPORT BARRIERS

In order for staples to play their full role in increasing economic growth and reducing hunger and poverty, transport corridors and borders need to be as free as possible of impediments. IEHA programs are supporting policy reforms and institutional capacity building across Sub-Saharan Africa to reduce

intra-regional barriers to food staple trade. In Zambia USAID is supporting analysis on the impacts of the maize export ban that was imposed in response to the 2008 global food price crisis. IEHA also sponsored analysis on barriers to and impacts of intra-regional grain trade in southern Africa and on non-tariff barriers to maize and beef cattle trade. One of the key findings of the analysis was that roadblocks are a major non-tariff barrier in the region. The East African Community is already using this information in negotiations to remove roadblocks.

USAID's West Africa regional program is working with regional and national partners to streamline and improve intra-regional trade in livestock, onions, and grains. As part of regional value chain assessments, organizations provided information on trade and transport barriers. These assessments revealed the high and rising cost of 'informal' charges along trunk roads and at border crossings, levied illicitly by uniformed agents. The program will begin tracking these costs along the Niger-to-Ouagadougou (Burkina Faso) trade corridor in 2009, along with working with commodity and producer organizations to reduce the costs of corruption along roads. Another barrier is the lack of regulatory transparency. Regional trade and transit policies, rules, and procedures are not well publicized, easily accessible, or understood by private traders and transporters. Analysis has begun to identify the gaps between the rules and field application, as well as the private sector's understanding of the rules.

PROMOTING SOUND MARKET-BASED PRINCIPLES FOR AGRICULTURE

In FY 2008, IEHA programs continued to make progress in establishing policy environments that are conducive for producing and trading staple foods. In addition to reforms to reduce barriers to trade, accomplishments in staples-related policy reform and analyses spanned several areas (Table 5.5).

ACCELERATING THE PARTICIPATION OF THE ULTRA POOR IN RURAL GROWTH

USAID's Office of Food for Peace (FFP) implements the P.L. 480 Title II programs. The focus of Title II programs is to reduce food insecurity in vulnerable populations by improving resiliency to shocks, an essential first step for household self-sufficiency and economic independence. In support of this

TABLE 5.5 STAPLES-RELATED POLICY REFORM AND ANALYSES UNDER IEHA, FY 2008

Operating Unit	Focus of Staples-Related Reform
Kenya	• Dairy policy • Livestock policy
Uganda	• Including fish in the National Feeds Policy • Including aquaculture equipment in the agricultural equipment import duty exemption policy • Allowing fish farmers to purchase nets from approved vendors
Zambia	• Mandating use of composite wheat/cassava flour for bread making
Africa Bureau	• Local procurement of grain for food aid • Policies to improve the production and distribution of perennial tree crops, plantains, roots and tubers, and rice • Policy responses to high world food and fertilizer prices • Accelerating Africa's food production in response to rising food prices: impacts and requisite actions • Livestock investment options to increase income, create employment, and reduce poverty and food insecurity in the North Eastern Province, Kenya

Source: Annual monitoring reports by IEHA operating units

strategy, the non-emergency development portfolio incorporates some activities to strengthen local capacity to respond to natural disasters. In FY 2008, FFP implemented programs in all seven IEHA focus countries (summarized in Table 5.6).

AN APPROACH TO CONTINUE CUTTING HUNGER

Although the benefits of pursuing a staples-led growth strategy in Africa are potentially large, realizing such benefits requires appropriate and timely policy actions aimed at achieving rapid growth in agricultural production and increasing market access. Given the many countries and development players in the region, it is going to require well-coordinated efforts in order to increase investments and establish a policy environment that promotes growth and stability in both domestic and regional food staple markets.

The CAADP initiative offers such a framework, focusing attention on four

TABLE 5.6 AMOUNT AND OBJECTIVES OF FOOD ASSISTANCE PROVIDED BY OFFICE OF FOOD FOR PEACE, FY 2008

IEHA Country	Food Assistance Provided	Main Objectives of Assistance
Ghana	8,490 metric tons of Corn Soy Blend, Soy Fortified Bulgur, Soy Fortified Sorghum Grits, Hard Red Winter Wheat (bulk), Vegetable Oil	Improved health and nutrition of children under three and pregnant women; enhanced livelihood capacity and community resiliency; and bolstered human capabilities in health and nutrition.
Kenya	11,080 metric tons of Corn Soy Blend, Dark Northern Spring Wheat (bulk), Green Split Peas, Soy Fortified Bulgur, Vegetable Oil	Improved water and sanitation; strengthened asset and savings bases; and improved nutrition for orphans and vulnerable children.
Malawi	17,120 metric tons of Cornmeal, Corn Soy Blend, Hard Red Winter Wheat (bulk), Pinto Beans, Vegetable Oil	Protecting and enhancing the livelihood capacities of vulnerable groups; enhancing the nutritional status of vulnerable groups; and boosting the capacity of communities and district institutions to strengthen food security.
Mali	$2 million (Section 202e/ITSH funds. No commodities received.)	Increased production in agriculture, livestock, and fishing; improved nutrition and health; heightened household purchasing power; and enhanced community resiliency and good governance.
Mozambique	30,940 metric tons of Hard Red Winter Wheat (bulk)	Enhanced livelihood capacity and community resiliency; expanded sustainable agriculture and rural enterprise; and improved household nutrition.
Uganda	33,170 metric tons of Cornmeal, Corn Soy Blend, Hard Red Winter Wheat, Lentils, Soy Fortified Cornmeal, Vegetable Oil	Increasing the agricultural income of smallholder farm families by re-establishing livelihoods and strengthening marketing systems; improving food access and production; raising food utilization; and boosting health and nutrition for women, children, and vulnerable groups.
Zambia	5,470 metric tons of Bulgur, Lentils, Sorghum (bulk), Hard Red Winter Wheat	Diversifying and increasing agricultural livelihoods; boosting incomes for smallholder farmers; strengthening nutritional status; and improving their collective ability to identify and respond to developmental issues and external shocks affecting food security.

Source: U.S. International Food Assistance Report 2008. Appendix 5: USAID Title II Non-Emergency Activities: Summary Budget, Commodity, Recipient and Tonnage Tables – Fiscal Year 2008.

key areas–land and water management, market access, food supply and hunger, and agricultural research–areas that are not necessarily independent from each other. The rapid agricultural growth that occurred during the Asian green revolution, for example, depended on a combination of increased access to a package of modern agricultural technologies (high-yielding varieties of seed, chemical fertilizers and pesticides, and irrigation) and broader improvements in infrastructure, particularly transportation and rural electrification (Johnson et al., 2003 and World Bank, 2008a).

In Africa, foundational actions requiring more resources are 1) increasing smallholder access to a modern package of inputs and 2) improving market and trade opportunities. This means targeting investments and policy actions to remove marketing and trade barriers and to reduce transportation and storage costs for both agricultural inputs and the agricultural commodities produced.

By lowering transportation costs through improvements in rural road networks, the costs of other investments (rural electrification, irrigation, and education, for example) will be lowered. It is therefore not surprising that public investments in rural feeder roads and agricultural research and technology development provide some of the highest social returns in Africa (Fan et al. 2003). Finally, by improving transport networks across countries (such as along major trade corridors) and rural regions within countries, food-surplus areas can become better linked with deficit areas, ultimately improving food security and reducing food price volatility.

In addition to lowering transportation costs, the transaction costs of doing business in Africa need to be reduced as well. This will require improving both the institutional and legal environments that support market development, such as: market information systems, financial services, grades and standards, farmer and trader organizations, and commodity exchanges

While the challenges are immense, one important lesson from Asia's green revolution is that it is possible to radically change course for the better. For example, amidst similarly high rates of poverty and hunger in 1978, China engaged in a series of profound agricultural reforms that were responsible for reducing China's national poverty rate from 33% to 11% within a span of just six years (1978-84), constituting the world's largest single poverty reduction episode in recorded history (Gulati and Fan, 2007). A few years later, Vietnam achieved similar results by also focusing on the major constraints to agricultural growth, and achieved an equally spectacular reduction in poverty, from close to 70% in the late 1980s to 37% in 1998 (Balisacan et al., 2003). Political will, commitment, and financial muscle are going to be needed for Africa to undergo any similar radical changes.

6. REGIONAL INTEGRATION IMPROVES FOOD SECURITY

Addressing food insecurity and promoting agriculture-led growth on an Africa-wide scale as set out by the New Partnership for Africa's Development (NEPAD), the Africa Union, and the Regional Economic Communities under the Comprehensive Africa Agriculture Development Program (CAADP) agenda will require greater economic integration and cooperation across member countries. Research has shown that through regional integration, powerful growth multipliers can be unleashed that lead to faster growth and reduced poverty and hunger (Abdulai et al., 2006).

While many of the required investments for African agriculture-led growth are necessarily country-focused, there are sound economic reasons to support better coordination and expanded co-financing among African countries. First, the small size, economic isolation, and rudimentary infrastructure of many African economies present development challenges not easily surmounted at the national level. Second, there are economies of scale and scope to be had from greater mobility and access to regional markets, finance, human capital, and knowledge. Third, countries can better address cross-border ills among humans and animals caused by epidemics, pollution, and conflict. And finally, by working regionally, countries can be held accountable to a larger group of stakeholders.

Activating both short- and long-term regional growth dynamics must be a key element of any agriculture-led growth strategy in the region. This includes investing in improving the transportation and other physical and information infrastructure of existing trade corridors, strengthening the institutional capacity of Africa's regional economic and scientific organizations to promote greater cooperation and integration. Already regional economic bodies have been instrumental in facilitating the organization and implementation of the CAADP agenda among member countries. Regional growth and integration can also be promoted through a value-chain-based approach that is implemented with a focus on particular trade corridors.

Women and children pick green beans at the Dodicha Vegetable Cooperative in Ethiopia. The beans will be sold to a local exporter, who will sell them to supermarkets in Europe

KRISTINA STEFANOVA/USAID

BENEFITS OF REGIONAL INTEGRATION

IEHA's efforts to increase regional integration in Sub-Saharan Africa (SSA) can be grouped in two main categories: 1) promoting policy reform and harmonization, and 2) organizing to take advantage of economies of scale in technology development and dissemination.

PROMOTING POLICY REFORM AND HARMONIZATION

Sub-Saharan Africa is characterized by areas of food surplus and areas of food deficit. Existing transport corridors typically evolved to link areas of extractive industry to ports for export and to major cities in coastal and inland countries for access to domestic and international markets. Focusing investments on existing corridors offers a win-win strategy. By building on these cross-border links, the potential exists to not only contribute to overall economic growth and poverty reduction, but also to link staple food production areas in the region to food-deficit areas, lowering food prices and the incidence of hunger.

In the long run, efficient corridors help increase regional integration through expanded trade and through exchanges of knowledge and information. Together with an enabling policy and institutional environment, this increase in regional integration will ultimately contribute to region-wide economic growth and poverty reduction.

In this context, policy reform and harmonization has the potential to increase market access and improve the availability of agricultural inputs (e.g., seed).

With greater economic integration, countries can exploit their comparative advantage with regard to their natural resource and human capital endowments. This would lead to specialization and improved competitiveness in regional and global markets. Currently, low productivity, high marketing costs, and the persistence of both formal and informal trade barriers, within and across countries, erode the competitiveness of the continent's entrepreneurs.

Large economic gains can be realized by improving marketing channels across borders, either through road infrastructure or market information systems. This is especially true for many of the landlocked countries that face exorbitant transportation costs to move goods and services across borders to reach global markets.

In the long run, regionalization can help attract additional investment and increase the level of economic activity among neighboring countries by making it possible for firms to reach consumers and producers in multiple countries. The recognition of these potential gains is clear among the major regional economic communities, which are currently working towards promoting greater economic integration through more liberal trade arrangements such as customs unions.

ORGANIZING TO TAKE ADVANTAGE OF ECONOMIES OF SCALE

Countries can gain from shared investments and cooperation in agricultural research and development, especially when they grow some of the same crops in similar agro-climatic environments.

International Food Policy Research Institute (IFPRI) studies have shown that when neighboring African countries remove barriers to agricultural trade and technology transfers, large benefits can result, and regionally focused programs can supplement the gains from country-level interventions (Abdulai et al., 2006). The immediate gains in agriculture would translate into much higher returns over time as skilled labor, capital, and technologies move more freely across African borders, further stimulating income growth and development.

WHAT IS IEHA DOING?

IEHA is promoting regional integration and strengthening regional capacity through its support to the CAADP Regional Economic Communities (RECs), sub-regional institutions, regional alliances, and trade associations.

REGIONAL ECONOMIC COMMUNITIES

The RECs in Africa bring countries together to achieve greater economic integration. These economic communities are also central to the implementation of CAADP, working in partnership with national and regional partners. The RECs organized meetings with member countries to discuss project preparation and implementation, including: rules and procedures for country and regional-level project preparation; in-country resource mobilization for project implementation; resource mobilization from development partners; project coordination and governance; project performance review; and selection and implementation of early action projects. Throughout 2008, IEHA provided capacity support to the RECs and NEPAD.

The Common Market for Eastern and Southern Africa (COMESA) is the largest REC in Africa. COMESA coordinates the actions of its 19 member states to promote intra-regional trade and integration. USAID/East Africa supports a number of COMESA programs through the Regional Agricultural Trade Expansion Support (RATES) program. During FY 2008, RATES and its partner regional trade associations undertook policy analysis and advocacy with COMESA, the East African Community (EAC), and national governments. RATES also successfully concluded work on regional maize and dairy product quality standards; published a simplified trade regime for small traders on uniform dairy sanitary and phytosanitary (SPS) protocols; and provided training to implement the protocols.

A RATES-supported study with the EAC identified non-tariff barriers on maize and beef, two staple food commodities for which tariffs had officially been removed. An analysis of trading found that many costs remain, including the cost of permits, licenses, various local taxes, and fees. Delays at frequent roadblocks raise costs considerably, both in time lost, fees, and bribes. The poor quality of roads translates into high costs in time and vehicle maintenance.

The Economic Community of West African States (ECOWAS), a REC, was founded in 1975 to attain regional integration through cooperation and development in all fields of economic activity. ECOWAS works towards creating region-wide policies and programs in key sectors including energy, transportation, and agriculture. It is also developing a common external tariff for the region and has been actively engaged in mitigating conflict in the region in order to enable stronger economic ties. USAID/West Africa is providing assistance to ECOWAS to increase regional economic integration by increasing trade, reducing customs barriers, and building capacity in the areas of agriculture, health, organizational development, and humanitarian issues, including trafficking in persons.

SUB-REGIONAL INSTITUTIONS

The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) is a sub-regional organization of national agricultural research institutes, universities, extension and advisory service organizations, NGOs, and private sector partners from ten countries. ASARECA provides established mechanisms for the regional planning and implementation of adaptive research, testing, and scaling up of improved technologies and knowledge. It provides research on and advocates for improved policies and regulations to increase regional trade, and builds capacity.

R. NYBERG

A Senagalese man shows off his garden in a region recovering from conflict.

IEHA supports ASARECA's overall management and its programs on staple crops; agro-biodiversity and biotechnology; policy analysis and advocacy; and adoption and scaling up of successful approaches.

ASARECA and COMESA have been collaborating on IEHA's Regional Approach to Biotechnology and Biosafety in Eastern and Southern Africa project, which addresses the constraints to the use of biotechnology from the lack of biosafety laws, regulations, and implementation procedures. Phase II, started in 2008, is focused on the implementation of a roadmap and regional guidelines for national biosafety laws and regulations and the finalization of plans for regional centers of excellence. COMESA has appointed an advisory panel of ten regional experts, and USAID/East Africa is supporting the COMESA Secretariat to engage a senior person to spearhead its commitment to move the agenda forward.

The West and Central African Council for Agricultural Research and Development (CORAF/WECARD) supports both technology and policy. CORAF/WECARD was founded in 1987 at the Conference of African and French leaders of agricultural research institutes. Renamed the West and Central African Council for Agricultural Research and Development in 1999, CORAF/WECARD members are the 21 national agricultural research systems (NARS) of the West and Central African French-, English- and Portuguese-speaking countries. CORAF/WECARD's mission is: "Sustainable improvements to the competitiveness, productivity and markets of the agricultural system in West and Central Africa by meeting the key demands of the sub-regional research system as expressed by target groups." Besides USAID, other donors supporting CORAF/WECARD are the UK Department for International Development, the African Development Bank, Canadian International Development Agency, and the Technical Center for Agricultural and Rural Cooperation.

USAID/West Africa supports the coordination of a food security early warning system in 17 countries that alerts donors and national partners to the changing levels of food security through the *Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS)*. In the ECOWAS region, CILSS has been instrumental in the adoption of regional seed production and trade regulations; pesticide regulations; environmental protection policy; and a regional policy on the management of water.

Through technical assistance, grant support and institutional mentoring, USAID/Southern Africa assists the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) and the Southern Africa Development Community (SADC) Seed Security Network to research, formulate and advocate for improved agricultural policies

that foster intra-regional trade, increase crop diversification, improve access to markets and market information systems, and improve market standards. Through IEHA assistance under institutional capacity building for policy, FANRPAN has built its reputation as the regional agricultural policy network. As a result, FANRPAN has been contracted by COMESA to lead the regional CAADP Compact process.

One notable success of FANRPAN is the Household Vulnerability Index (HVI) that FANRPAN developed to assess the impact of HIV/AIDS on agriculture and food security. The HVI has proven effective in categorizing households as well as in identifying the sources of their vulnerability. Armed with knowledge on the sources of vulnerability, it is possible to identify the specific types of inputs that will assist particular households to reduce their vulnerability.

REGIONAL ALLIANCES

IEHA supports the West Africa Seed Alliance (WASA), begun in 2007. Its goal is to establish a sustainable commercial seed industry capable of ensuring that small-scale farmers have affordable, timely, and reliable access to adapted genetics and traits in high-quality seeds and planting materials. WASA is leading the development of viable agricultural input systems; supporting the overall growth of the West Africa agricultural sector; and improving West Africa's agricultural enabling environment. The Alliance is committed to partnering with African institutions to ensure local ownership and the sustainability of seed industry activities.

USAID/East Africa is a member of the Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA), a multi-donor effort led by COMESA to build cross-border alliances to strengthen innovative market institutions and link chronically food-insecure smallholder farmers with growing national and regional markets for staple foods. The alliance works to enhance the capacity of producers to commercialize production and link them with market institutions to increase the trading of staple foods. ACTESA concentrates its efforts in the most conducive and promising countries that include a large number of vulnerable populations but also have the potential to produce surplus staples for the market, targeting Malawi and Zambia in Southern Africa, northern Uganda, southern Sudan, and the Great Lakes Region (Burundi and portions of the Democratic Republic of Congo and Rwanda) in East Africa.

REGIONAL TRADE ASSOCIATIONS

In West Africa, USAID's Agribusiness and Trade Promotion project (ATP) is working with regional and national organizations to streamline and improve intra-regional trade in livestock, onions, and grains. By the end of FY 2008, value chain assessments had been conducted, leading to the drafting of value chain development plans in FY 2009. Value chain assessments were highly consultative. Representatives of the partner organizations provided key information on trade and transport barriers and participated in regional validation workshops. In the first quarter of FY 2009, the assessments were followed by validation workshops, where stakeholders vetted the findings with the ATP team and priorities for implementation were outlined.

WHAT ARE THE RESULTS?

IEHA support to regional integration through its investments in the CAADP Regional Economic Communities (RECs), sub-regional institutions, regional alliances and trade associations has produced significant results, including policy reform and harmonization of regulatory standards, liberalization of trade systems for both inputs and food staple commodities, and improved transportation and infrastructure efficiencies. Overall, support for regional integration has resulted in improvement in the policy environment and in technology

development and dissemination that have led to increased trade and increased productivity.

INCREASED MARKET ACCESS

USAID facilitates trade across borders, which often results in new market access for private companies. For example, a seed company in Tanzania was able to sell its maize seed in Malawi, Mozambique, and Zambia through partner companies in those countries. Cassava planting material moved across borders among Malawi, Mozambique, Zambia, and Angola. Through regionally supported research for potato and sweet potato seed, small-scale farmers grew seed for sale to others in Mozambique, Malawi, and Zambia. These are also examples of increased availability of inputs.

One of USAID's new projects, ATP, has identified four strategic road corridors and, in partnership with various agribusiness groups, will monitor cross-border trade constraints. Value-chain validation workshops facilitated commercial linkages and led to increased trade in maize. Some 15,000 tons of maize was purchased by SITRAC, a Burkinabe grain milling company, in late 2008/early 2009. With support from ATP, SITRAC has been able to secure a total of 72,750 tons of maize from Burkina Faso (37,000 tons), Côte d'Ivoire (27,500 tons), Benin (7,500 tons), and Ghana (750 tons).

With RATES' support, the Eastern Africa Grain Council has promoted innovative programs including warehouse receipts and other collateral management systems to allow commercial trade to address food security needs within the region by having available known quantities of grain in secured warehouses. The RATES-supported Regional Agricultural Trade Intelligence Network continues to serve as a leading source of agricultural market information locally, regionally, and internationally.

INPUT BARRIERS REMOVED

Helping smallholders obtain improved seed has been an important IEHA objective in all three sub-regions. In East Africa, ASARECA, COMESA, and RATES have been actively involved in the improvement of the policy and regulatory environment for agricultural development and economic growth. Seed policy harmonization has been a flagship project of ASARECA for ten years. Significant progress has been made through the Eastern Africa Seed Committee (EASCOM), whose members include private seed trade associations and relevant public agencies from Kenya, Tanzania, Uganda, Rwanda, Burundi, southern Sudan, and Ethiopia. EASCOM has succeeded in getting public sector regulators and plant breeders to work with national and multinational seed company representatives. To date, they have agreed on the content of harmonized quarantine lists, varietal registration and release procedures, seed certification standards, plant breeders' rights, and other intellectual property issues.

MR. DJIGUIBA KOUYATE

Gross income for assisted tomato producers in Mali increased significantly after the application of the integrated pest management technique, which combined compliance with a host-free period and large-scale dissemination of hybrid seeds.

In East Africa, progress has been made on seed laws and regulatory regimes in several countries, but putting a harmonized regional system in place has been slow. The process was revitalized in 2008 by the decision of the COMESA Council of Ministers of Agriculture to work towards harmonized systems for the free movement of seed across all member countries within two years. To move this agenda forward, EASCOM has been reorganized as a technical committee of the African Seed Trade Association (AFSTA), and USAID/East Africa has been involved in discussions with COMESA, AFSTA, Pioneer Hi-Bred International, the International Crops Research Institute for the Semi-Arid Tropics, the Citizens' Network for Foreign Affairs, and other partners on the formation of a broader Eastern and Southern Africa Seed Alliance.

In West Africa, WASA is supporting the development of a commercial seed industry. A seed company database is in place; more than 800 agro-dealers in Mali and Ghana have been identified and mapped; 116 hectares have been established under improved technologies and 100 ha under basic seed production in three countries. Business management and product use training has been provided to some 200 agro-dealers; and visits by about 1,000 clients to the agro-dealer demonstration plots helped to expose farmers, agro-processors, and other market actors to the benefits of adopting high-quality inputs.

There were two significant policy achievements in West Africa this year. The first is the adoption of regional seed regulations in the ECOWAS states, with nine of the CILSS countries moving towards policy analysis and ultimate adoption. The second is WASA's hosting of two regional workshops with 17 countries participating. The first workshop was on the development of a science-based plant quarantine pests list to facilitate intra-regional seed trade; the second was on developing process management manuals for putting in place clear procedures for implementing the technical agreements on seed trade.

INCREASED TRADE

USAID programs have facilitated increased trade in all three sub-regions. Table 6.1 shows data for the COMESA region, where RATES promoted the Maize without Borders concept that has opened cross-border trade and helped strengthen this key regional value chain. Heads of state have embraced the Maize without Borders concept as the way of improving food security through increased trade. The newly formed Eastern Africa Grain Council is leading discussions on the development of a strategy for better coordination between the private sector and government policymakers. Regional exports of maize in 2007 exceeded $209 million, compared with a 2001 baseline of only $5 million. From FY 2002 through FY 2008 RATES provided direct support

TABLE 6.1 VALUE OF INTRA-REGIONAL TRADE IN SELECTED COMMODITIES, COMESA, 2001-2007

	2001	2002	2003	2004	2005	2006	2007
Maize	3,780,248	52,379,540	28,840,775	41,623,297	59,184,791	65,457,653	188,596,570
Dairy products	491,525	1,415,259	2,252,708	4,680,451	13,192,748	7,200,680	8,248,039

Source: COMESA official statistics for formal trade, compiled by RATES

to more than 2,000 agricultural exporting and manufacturing firms in the region that are now networked through national and regional trade organizations.

INCREASED PRODUCTIVITY

Productivity has been a major focus of nearly all USAID agricultural programs in SSA. In East Africa, the Crop Crisis Control Project was a regionally coordinated response to the spread of two catastrophic diseases of staple food crops–cassava mosaic virus and banana bacterial wilt. Implemented under the auspices of COMESA and ASARECA by Catholic Relief Services (CRS), in collaboration with two CGIAR Centers–IITA and Bioversity International[1] –and nearly 40 local NGOs in six countries, the program linked sources of disease-resistant cassava varieties with decentralized, community-based multiplication plots that delivered clean planting material to approximately 100,000 households. With no genetic resistance to the banana disease available, more than 1,100 extensionists, working for both public institutions and NGOs, were trained in identifying the disease and in production practices to reduce its severity and prevent its spread. An estimated 65,000 households received information on the disease.

Overall, regional integration can increase productivity through improvements in the policy environment and in technology development and dissemination. Moreover, integration can greatly reduce the price swings experienced by both food producers and food consumers. Ultimately, regional integration results in greater rural income and food security and reduced poverty and hunger.

[1] With the launch of Bioversity International, the International Network for the Improvement of Banana and Plantain (INIBAP) has become a network of collections, curators and information scientists whose responsibility is the care of the world's genetic resources of banana (http://bananas.bioversityinternational.org).

7. CAADP GATHERS MOMENTUM

Under the leadership of the African Union New Partnership for Africa's Development (AU/NEPAD), the Comprehensive Africa Agriculture Development Program (CAADP) is an African-led effort to accelerate agricultural growth and raise incomes in order to achieve the Millennium Development Goal (MDG) of halving 1990's proportion of poor and hungry people by 2015. To accomplish this, CAADP aims to align and guide national policies, strategies, and investment programs to realize a 6-percent annual agricultural growth rate at the country level and the allocation of 10 percent of national budgets to the agricultural sector. The alignment is around four broad pillars of the CAADP framework:

- Pillar 1 - Extending the area under sustainable land management;
- Pillar 2 - Improving rural infrastructure and trade-related capacities for market access;
- Pillar 3 - Increasing food supply and reducing hunger; and
- Pillar 4 - Agricultural research, technology dissemination and adoption.

In line with the philosophy of the overall NEPAD agenda, CAADP emphasizes accountability and peer/mutual review as part of the transition towards alignment and evidence- and outcome-based policy planning and implementation.

PROGRESS WITH THE CAADP IMPLEMENTATION PROCESS

Implementation of CAADP involves African institutions at all levels. The CAADP process is led by national governments and their key stakeholders, maintaining local ownership in the process. To ensure consistency and alignment with overall CAADP goals, the process is carried out in close cooperation with the lead Regional Economic Communities (RECs), which are providing overall guidance in consultation with regional stakeholders, technical partners, the African Union, and NEPAD.

The Initiative to End Hunger in Africa (IEHA) is committed to supporting the CAADP agenda and implementation process. Its own priorities are closely aligned with the four CAADP framework pillars. The Initiative plays a key role in the CAADP implementation process, providing needed resources and technical assistance. On the following page is a summary of progress to date with CAADP implementation, as well as the role IEHA continues to play in supporting this effort.

MOAMED DICKO

USAID trained this Malian women's group in potato farming. In just one season, the group took ownership of the land, harvested potatoes, returned a profit, and brought potatoes to the local market at a competitive price.

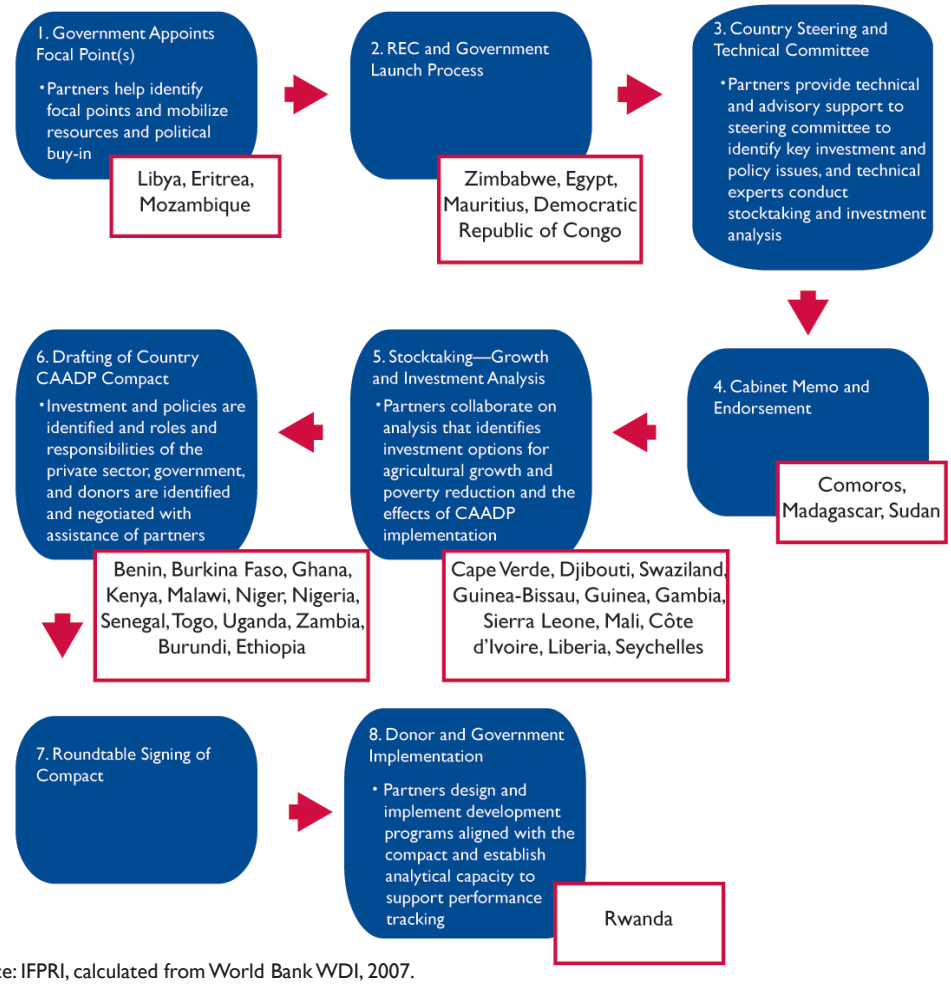
PROGRESS WITH ROUNDTABLE PROCESS

Country implementation of CAADP requires several steps, culminating in a country roundtable meeting and the signing of a country CAADP Compact. The Compact specifies the long-term investment commitments of the country for agricultural growth and development. The key steps are:

1. Government appoints Focal Point(s) to lead CAADP process;
2. REC and government launch process;
3. Country steering and technical committee(s) appointed;
4. Cabinet memo and endorsement;
5. Stocktaking, including growth and investment analysis;
6. Country CAADP Compact drafted; and
7. Roundtable signing of Compact.

Progress in meeting the CAADP goals has been slow in many countries. To date (August 2009), only Rwanda had completed the CAADP roundtable process, which culminated in the signing of the Rwanda CAADP Compact in March 2007. Six countries are still at relative early stages of the process, but 13 countries are drafting country CAADP compacts, during which they and their partners decide on investments and policies for achieving the CAADP targets and assign roles and responsibilities (Figure 7.1). Another 11 countries are engaged in the stocktaking exercise to identify investment options for agricultural growth and poverty reduction. And three countries have reached the stage of cabinet endorsement of CAADP plans.

FIGURE 7.1 PROGRESS IN THE CAADP PROCESS

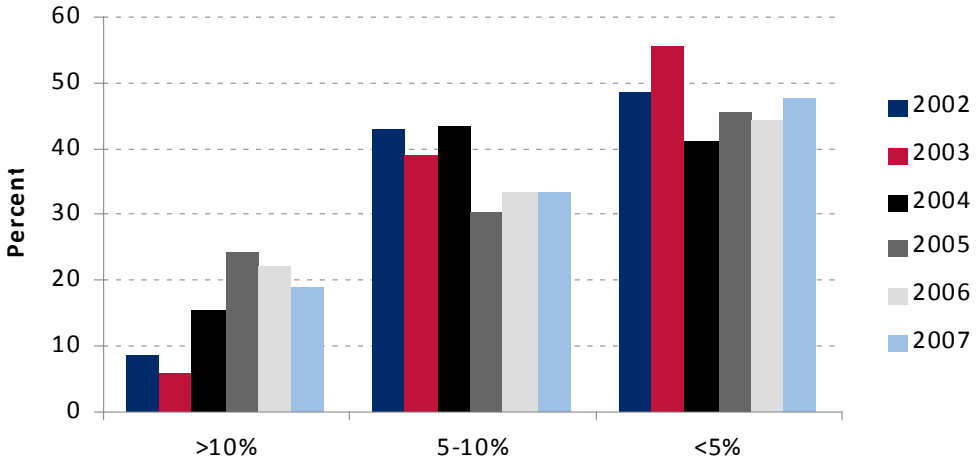


Source: IFPRI, calculated from World Bank WDI, 2007.

PROGRESS WITH 10 PERCENT BUDGETARY COMMITMENT

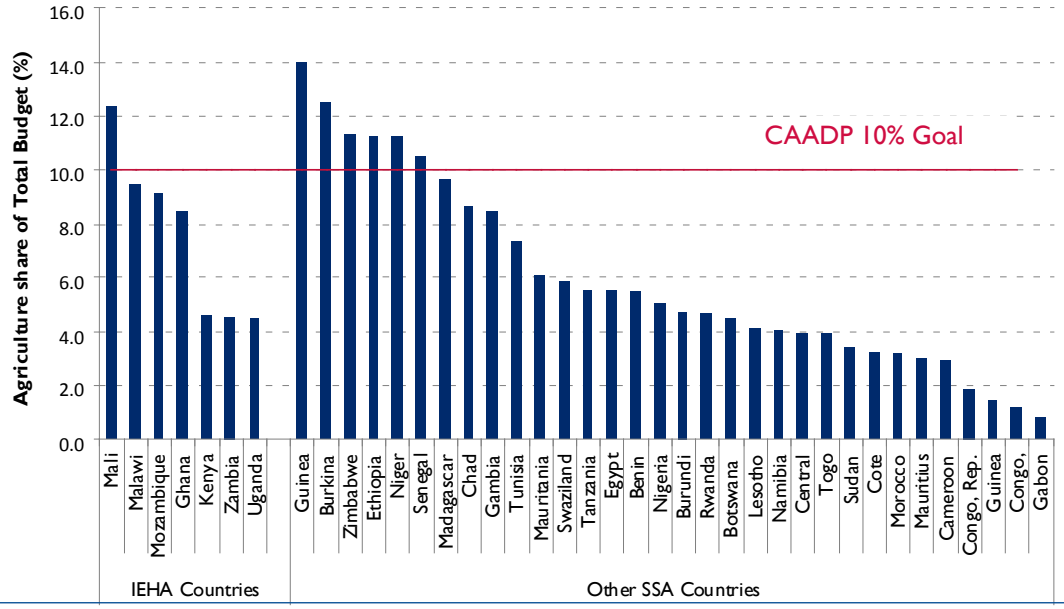
One of the key commitments expected of African governments as they align with the CAADP agenda is their agreement to allocate at least 10% of their total budget to agriculture. FY 2007 results show inadequate progress by CAADP members toward meeting this target. Approximately 21 percent of all countries allocated 10% or more of their national expenditures to agriculture in 2007 (8 out of 38 countries), even though the target year to achieve the 10% goal was 2008 (Figure 7.2).

FIGURE 7.2 SHARE OF THE NATIONAL BUDGET ALLOCATED TO AGRICULTURE, CAADP COUNTRIES, 2002–2007



Source and note: 2003 to 2006 relied on the ReSAKSS database of 34 countries. 2007 estimates are taken from the NEPAD Dialogue Fortnightly newsletter, Issue 255, 12 December 2008, based on the AU/FAO/WB expenditure tracking system. Their system includes Egypt, in addition to the 34 countries for Sub-Saharan Africa in the ReSAKSS database downloadable at http://www.resakss.org/data_alt.asp#Ag_spend.

FIGURE 7.3 SHARE OF THE NATIONAL BUDGET ALLOCATED TO AGRICULTURE, AVERAGE 2003 TO 2007



Source and notes: For some years, data is calculated by IFPRI using International Monetary Fund's Government Finance Statistics Yearbooks. For Ghana, expenditures of the Cocoa Board are included. Other data are from the NEPAD/AU/FAO/World Bank budgetary tracking survey and preliminary in-country surveys by ReSAKSS.

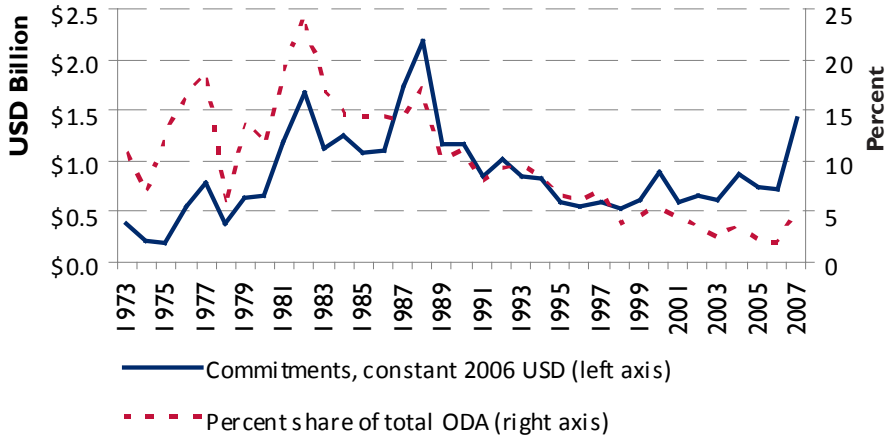
Among the IEHA countries, Ghana, Malawi and Mali have allocated 10% or more for agriculture since CAADP was launched in 2003 (Figure 7.3).

Development partners have continued to work together closely to support CAADP processes and the development of the CAADP Pillars. According to a recent report by NEPAD, this collaborative effort has resulted in a significant harmonization of donor support for CAADP activities and investment programs (NEPAD Dialogue Fortnightly, Issue No.255, 2008).

Among the donor community, there has clearly been an increase in aid flows to African agriculture in more recent years—from half a billion dollars in 1997 to $1.5 billion in 2007 (Figure 7.4).

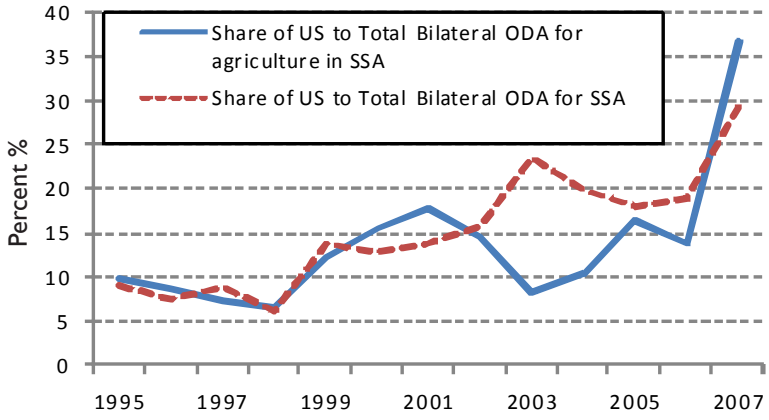
However, this is still a very small share of total development aid, accounting for less than five percent of total aid, compared to a high of 20 percent in the 1980s. The U.S. has led much of the gain in recent years, increasing its share in 2007 to 35 percent of the total bilateral overseas development assistance for agriculture in SSA (Figure 7.5).

FIGURE 7.4: TOTAL ODA GOING INTO AFRICAN AGRICULTURE, 1973-2007



Source: Based on OECD database, 2009.

FIGURE 7.5: SHARE OF US OVERSEAS DEVELOPMENT ASSISTANCE FOR SSA, 1995-2007



Source: Based on OECD database, 2009.

NEW WAY OF DOING BUSINESS – MULTI-DONOR TRUST FUND TO SUPPORT CAADP

An important milestone in 2008 was the establishment of a $50 million CAADP Multi-donor Trust Fund by NEPAD, the Regional Economic Communities (RECs), the African Union (AU), a number of key donors (including USAID and the U.K. Department for International Development), and African governments to further harmonize support to CAADP. The Trust Fund will be able to channel financial support to CAADP processes and investments in a more systematic, efficient, and reliable way. Even more importantly, it will help:

- harmonize priorities;
- create economies of scale;
- increase the efficiency and effectiveness of financial resources;
- fill specific gaps in financing, capacity, and technology;
- facilitate partnerships and coalition-building among African institutions, partners, and donors; and
- complement existing resources mobilized around CAADP Pillars and other thematic priorities.

Details of how the Fund will be managed to support program implementation are still being worked out and will be finalized during the fourth CAADP Partnership Platform meeting in early 2009.

BOX 7.1: HIGHLIGHTS OF RESAKSS SUPPORT OF CAADP IMPLEMENTATION

Ghana: Stocktaking and analytical work has been completed, resulting in a ReSAKSS working paper (No.16). Stakeholder consultative workshops were organized in the first half of August 2008. Other countries in West Africa that received ReSAKSS technical support for the Roundtable process in 2008 included Mali, Nigeria, Senegal, and Togo.

Kenya: ReSAKSS-East and Central Africa has held a number of meetings in preparation for the Roundtable and signing of the compact. Various background analyses have been undertaken, and a ReSAKSS working paper detailed the agricultural growth and investment options for poverty reduction in Kenya. Early results indicate that at current rates of growth and performance of the agricultural sector, Kenya is unlikely to meet the CAADP and MDG goals by 2015.

Malawi: Malawi launched the CAADP Roundtable process in 2007 as part of its Agricultural Development Plan preparations. The stocktaking exercises, analysis, and stakeholder consultations were carried out and the growth options completed as of September 2008. Country analysis has been published in four ReSAKSS working papers (Nos. 8, 9, 13, and 18).

Mozambique: Key stakeholders have been engaged around a common commitment to pursue the CAADP agenda. Analysis of growth options for Mozambican agriculture has been published as a ReSAKSS working paper (No.20).

Rwanda: Since the signing of the Compact in 2007, Rwanda has mainstreamed and integrated the CAADP Compact priority issues and investment programs into the country SWAp (sector-wide approach). A number of analytical works have been undertaken since 2007, published as a ReSAKSS Working Paper (No.21). The process of establishing a Rwanda SAKSS began in 2008, working in close consultation with the national government and key stakeholders.

Uganda: A number of background analyses and stakeholder consultations have been undertaken in preparation for its Roundtable. The analyses have been published in a ReSAKSS Working Paper (No.17) and a ReSAKSS Issue Brief (No.13). The studies indicate that Uganda is on track to meet the first Millennium Development Goal target of halving poverty by 2015.

Zambia: As of September 2008 Zambia had completed its analytical work in preparation for its CAADP Roundtable, culminating in several ReSAKSS publications, including four working papers (Nos. 2, 5, 13, and 14) and two issue briefs (Nos. 2 and 12).

Note: For full citations and to download ReSAKSS publications, please visit: www.resakss.org

IEHA'S SUPPORT TO CAADP IMPLEMENTATION – PROGRESS

CAPACITY SUPPORT

IEHA has provided support to the CAADP implementation process through the Regional Strategic Analysis and Knowledge Support System (ReSAKSS) network. The International Food Policy Research Institute (IFPRI) in Washington, DC, hosts the Africa-wide ReSAKSS network. The three regional nodes within the system are hosted by four other Consultative Group for International Agricultural Research (CGIAR) centers. ReSAKSS-East and Central Africa is hosted by the International Livestock Research Institute (ILRI) in Nairobi, Kenya. ReSAKSS-Southern Africa is hosted by the International Water Management Institute (IWMI) and International Crops Research Institute for Semi-Arid Tropics (ICRISAT) in Pretoria, South Africa. ReSAKSS-West Africa is hosted by the International Institute of Tropical Agriculture (IITA) in Ibadan, Nigeria.

The ReSAKSS network provides accessible, high-quality analysis, data, and tools to agricultural practitioners, researchers, policymakers, and development professionals to promote evidence-based decision-making; improve the awareness of the role of agriculture in development; close knowledge gaps; promote dialogue among stakeholders; and facilitate the review process associated with CAADP. Initially established with IEHA resources, ReSAKSS has since grown and receives funding from others, including the U.K. Department for International Development and the Swedish International Development Cooperation Agency (SIDA).

The ReSAKSS network provides technical support to the CAADP implementation process by:

- supporting the stocktaking of ongoing agricultural development efforts in many African countries, and identifying investment gaps that need to be filled to help increase growth and reduce poverty and hunger;
- specifying the strategic options and sources of poverty-reducing growth to guide long-term development efforts in the agricultural sector;
- estimating long-term funding needs to leverage the growth and poverty reduction potential associated with the identified options and sources of growth; and
- identifying processes and mechanisms to support evidence-based and outcome-oriented strategy planning and implementation.

In FY 2008, ReSAKSS support to CAADP resulted in the following actions.

- The preparation and validation by the CAADP Partnership Platform[1] of an M&E framework for CAADP implementation. The M&E system is being established and data collection efforts have begun. The framework is available at: www.resakss.org.
- The development of an integrated website platform to access interactive tools and databases across ReSAKSS nodes and the launch of all four websites in 2008 (see www.resakss.org). Website content includes data collected at country and regional levels on key indicators (e.g., poverty, hunger, agricultural growth, and agricultural spending). The websites have since been further modified to allow for sophisticated mapping and visualization effects in collaboration with Mapping Worlds of Netherlands (www.mappingworlds.com).

[1] The CAADP Partnership Platform is a multi-partner, continental-wide group for coordination, mutual review, and dialogue to ensure effective monitoring of overall progress and facilitate the necessary coordination of efforts for a successful implementation of the CAADP agenda at all levels. Members of the Platform include the AU, NEPAD, RECs, national governments, private and farmer organizations, and development partners.

- ReSAKSS' providing additional technical support to the CAADP roundtable process in several countries in collaboration with the RECs. This involved helping countries draft their CAADP process terms of reference; ensuring all stakeholders (such as producer associations, the private sector, civil society, and donors) were included and part of national backstopping teams; and providing technical assistance to roundtable analyses (Box 7.1).
- Launching of the process of establishing country Strategic Analysis and Knowledge Support System (SAKSS) nodes in Mozambique, Rwanda, Malawi, and Uganda.

A key milestone in 2008 was the hiring of a full-time ReSAKSS Coordinator to manage the Africa-wide efforts and ensure common goals and objectives across the network. This has strengthened ties with NEPAD, the African Union, the RECs, and other regional bodies. It also has provided consistency in the delivery of services and support to CAADP implementation, including ensuring common approaches in the establishment of country-level SAKSS-like programs based on country needs and facilitating the transition towards evidence-based and outcome-oriented strategic planning and implementation.

ANALYTICAL SUPPORT

In FY 2008 IEHA supported the preparation of an investment framework and supporting documents for CAADP Pillar Three – Increasing Food Supply and Reducing Hunger. Framework documents analyze the key strategic challenges; identify critical success factors in meeting these challenges; and compile best practices to inform courses of action. An Expert Reference Group composed of African researchers, representatives of the private sector, governments, and international experts was established to inform the development of the framework drawing upon these supporting documents. The Pillar Three Framework for Food Security (FAFS) guides the RECs and national governments in the design and implementation of policies and investment programs under this Pillar.

An Africa-wide technical conference on the "Convergence between Social Services Provision and Productivity Enhancing Investments" brought together leading experts and practitioners to determine how best to overcome the budgetary constraints on rapidly and sufficiently raising productive investment in agriculture. They examined ways to maximize investments in social services, such as education and health, for which expenditures are growing rapidly, to facilitate growth in the agricultural sector and the rural economy.

As part of IEHA's support to strengthening national policymaking, IFPRI provides country strategy support programs to link the CAADP framework at the Africa-wide level to national agricultural and rural development policy. Country strategy support programs provide research and analytical assistance on linking current strategy formulation processes to the CAADP framework and design and implementation of country SAKSS nodes. Analysis provides information on such issues as: What growth composition (agriculture vs. non-agriculture; staple crops vs. non-staple crops) will achieve the larger poverty reduction?; Is 6% annual agricultural growth sufficient for achieving development goals such as cutting hunger and poverty in half before 2015?

In Rwanda, where the CAADP Compact was signed in 2007, analytical support has moved to the second phase, emphasizing the formulation of policy and investment strategy options for sustained agricultural growth, poverty reduction, and food security. IFPRI works in close collaboration with the staff at the RECs and researchers and staff from local research institutions and government agencies, including the Ministries of Agriculture and Economic Planning. The

research results, even at their preliminary stages, have contributed to key policy debates.

COMPACT SUPPORT

IEHA country missions have been involved in the CAADP process in collaboration with donor sector working groups and government partners.

- USAID/Uganda has partnered with the Government, other donors, NGOs, and the private sector community on the National Development Plan, which seeks to harmonize a number of previous programs and strategies (including the agricultural sector strategies that were linked to CAADP) and articulate a plan for Uganda's way forward over the next five years.
- Tegemeo Institute, with IEHA support, participated in a detailed stocktaking exercise to model the Kenyan economy, an initial step in moving the CAADP agenda forward.
- USAID/Zambia chaired the agricultural sector donor group, which has been active in consultations with COMESA on the way forward for CAADP in Zambia. During FY 2008, the Food Security Research Project, with its regional collaborators, identified strategic options to accelerate agricultural growth and contribute to the Government of Zambia's CAADP target of 6% annual growth.

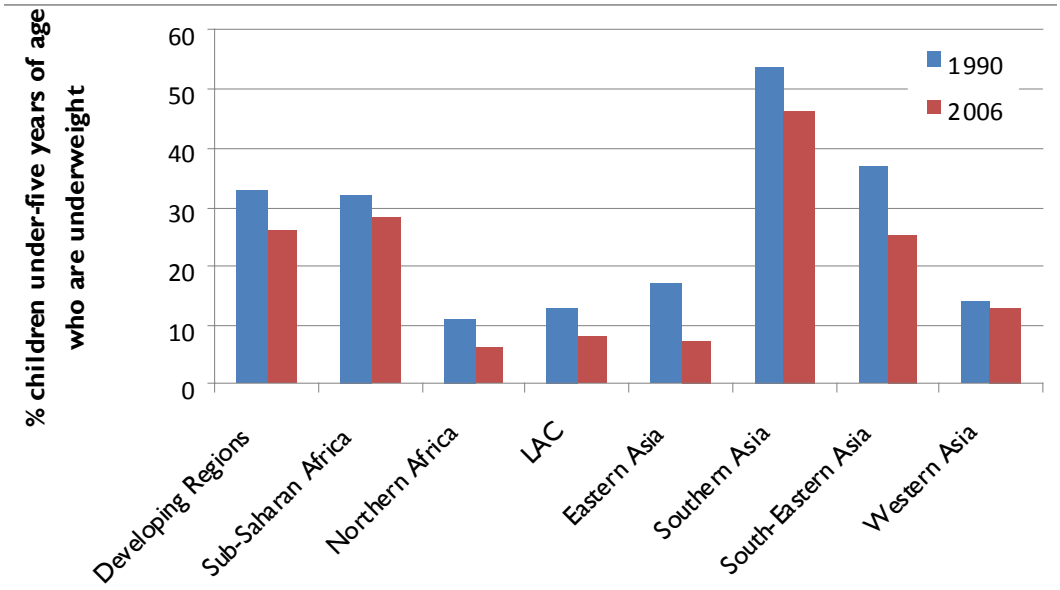
8. REACHING IEHA GOALS AND THE WAY FORWARD

The Initiative to End Hunger in Africa (IEHA) aims to meet the first Millennium Development Goal: to cut 1990 hunger and poverty rates in half by 2015. To accomplish this, IEHA's main objective is to increase rural income. Under IEHA, the US Government (USG) continues its strong partnership with Africans and their governments to implement the Comprehensive Africa Agriculture Development Program (CAADP), a framework for collaboration and efficient investment designed and committed to by African leaders.

PROGRESS TO DATE IN SUB-SAHARAN AFRICA

The soaring food prices in 2007-08 have had a detrimental effect on global hunger and poverty reduction. An estimated 963 million people worldwide were undernourished in 2008, representing an additional 40 million from the previous year (FAO, 2008a). In Sub-Saharan Africa (SSA), more than 200 million people, about one-third of the population, experienced chronic hunger. While the percentage of the population in SSA that is undernourished decreased from 34 to 30 percent since the mid-1990s and the proportion of malnourished children in SSA also declined, from 32 percent in 1990 to 28 percent in 2006 (Figure 8.1), the total numbers of people and children suffering from hunger in SSA have, in fact, increased.

FIGURE 8.1: CHILD MALNOURISHMENT TRENDS

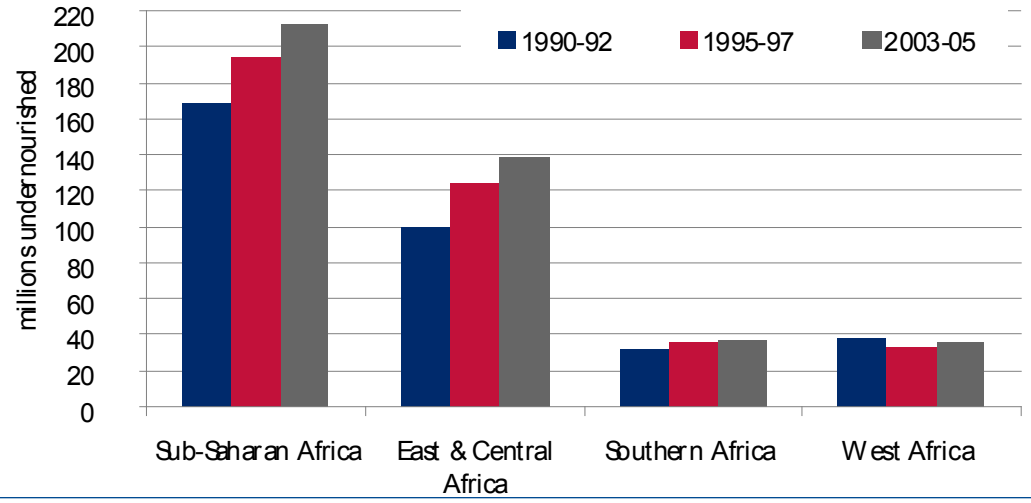


Source: UN MDG Report 2008.

At the sub-regional level, very little progress has been made in reducing hunger (Figure 8.2). West Africa has the lowest rate of undernourishment at 14 percent, while the East Africa region has the highest rate at almost half of the total population, almost 140 million people. Southern Africa and West Africa have about the same number of undernourished, with 37 million and 36 million, respectively, although this number represents a greater percentage of the population of Southern Africa.

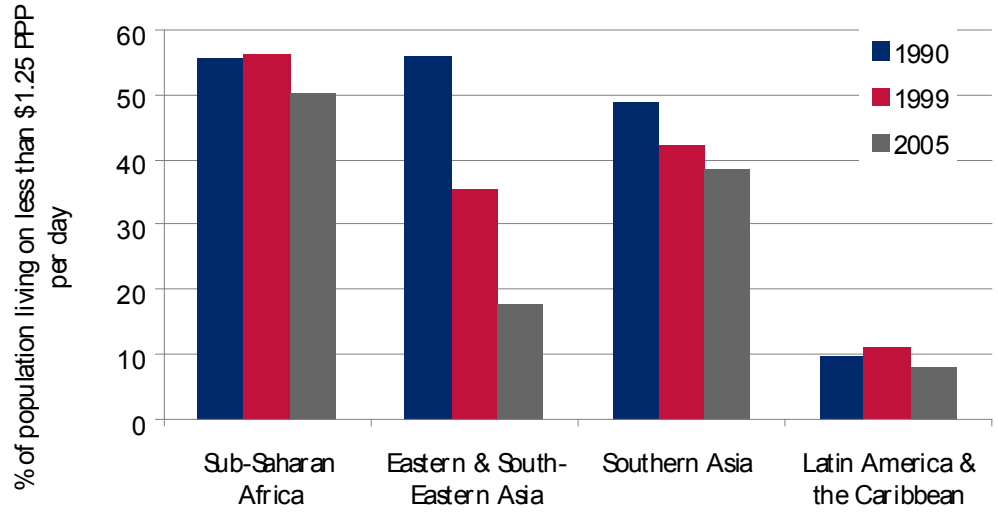
Given that a high percentage of rural household income is spent on food, higher food prices increase the incidence of not only hunger, but also poverty. Out of the approximately 1.4 billion people living in poverty globally, about 380 million are located in SSA. The percentage of people living in poverty in SSA has decreased slightly, from 55 percent in 1990 to 50 percent in 2005 (Figure 8.3). As with hunger, however, the total number of poor has increased. With these trends, SSA will not achieve the first

FIGURE 8.2: REGIONAL TRENDS IN NUMBER OF UNDERNOURISHED IN SSA



Source: FAO Statistics Division.

FIGURE 8.3: GLOBAL POVERTY TRENDS



Source: Estimates by the World Bank, 2008b in UN MDG Report, 2008. The poverty rate is defined as the percentage of population with average consumption expenditures less than US$1.25 a day measured in 2005 prices converted using Purchasing Power Parity (PPP) exchange rates. PPP rates are determined by comparing prices of a similar basket of goods in different countries, allowing for cross-country comparisons of poverty.

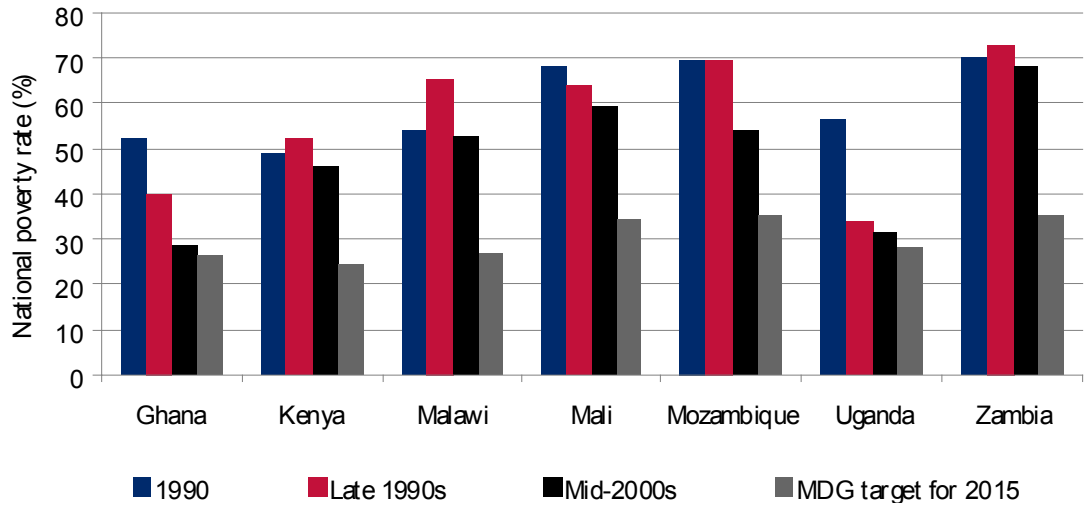
Millennium Development Goal of halving poverty and hunger by 2015 (MDG 1).

TRENDS IN HUNGER, INCOME, AND POVERTY IN IEHA COUNTRIES

Some countries, however, have seen significant reductions in poverty and malnutrition rates, and Ghana, Uganda, and Mozambique are on track to meet MDG1 (Figures 8.4 and 8.5). Other countries in SSA have also reduced poverty and malnutrition, but at slower rates.

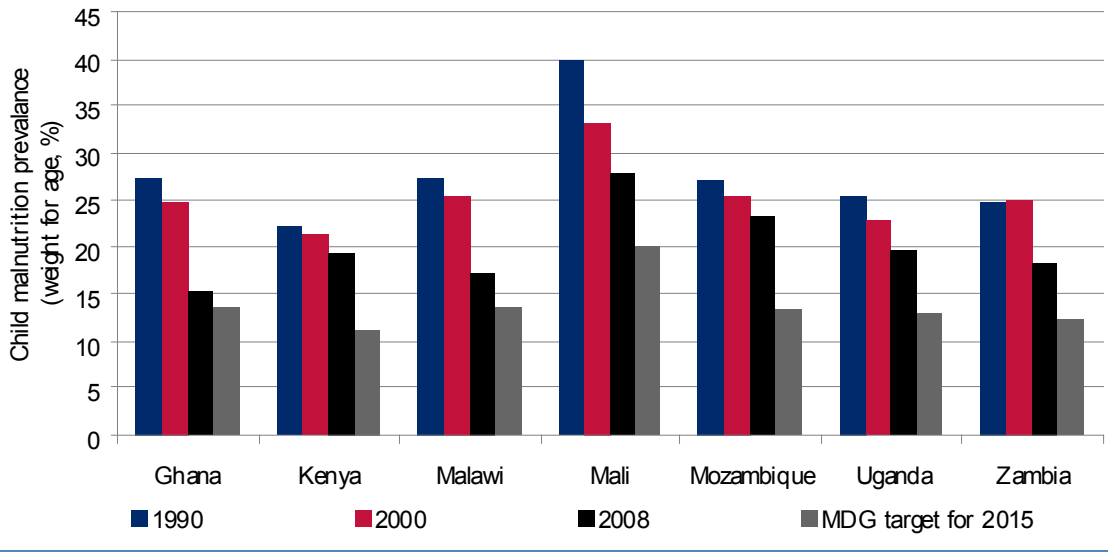
IEHA countries are generally heading in a positive direction, based on current trends

FIGURE 8.4: PROGRESS TOWARDS MDG POVERTY TARGET IN IEHA COUNTRIES



Sources: World Development Indicators, 2008 and various country sources including CBS-Kenya, 2007; National Statistical Office, Malawi; Mali PRSP, 2008; Uganda Bureau of Statistics, 2006.
Note: National poverty rate based on household surveys in various years.

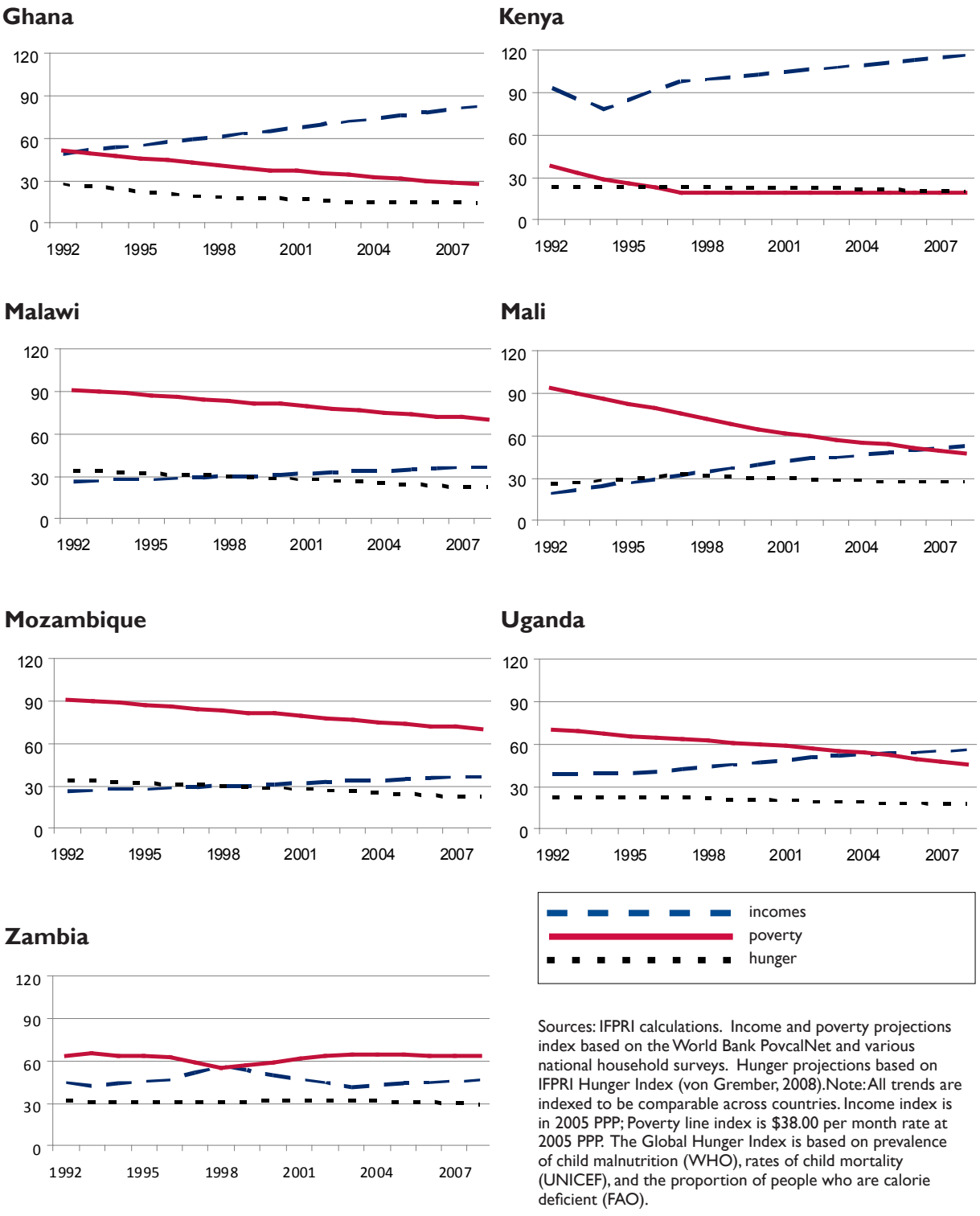
FIGURE 8.5: PROGRESS TOWARDS MDG HUNGER TARGET IN IEHA COUNTRIES



Source: ReSAKSS based on WDI, 2008 and UN Official MDG Statistics, 2008.

in hunger, income, and poverty (Figure 8.6). Some countries, however, have made more progress than others. Ghana, in particular, has seen increased incomes and significant and steady reductions in hunger and poverty. Political stability, macroeconomic reforms,

FIGURE 8.6: INCOME, POVERTY, AND HUNGER TRENDS IN IEHA COUNTRIES



Sources: IFPRI calculations. Income and poverty projections index based on the World Bank PovcalNet and various national household surveys. Hunger projections based on IFPRI Hunger Index (von Grember, 2008).Note: All trends are indexed to be comparable across countries. Income index is in 2005 PPP; Poverty line index is $38.00 per month rate at 2005 PPP. The Global Hunger Index is based on prevalence of child malnutrition (WHO), rates of child mortality (UNICEF), and the proportion of people who are calorie deficient (FAO).

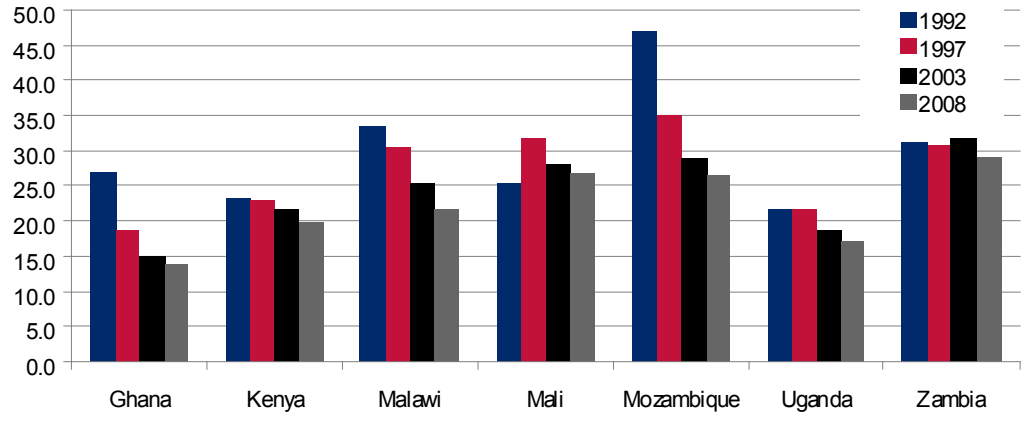
a high price for its main agricultural export (cocoa), debt relief, and development aid have all been factors in its success.

In contrast, Zambia has experienced more volatility and setbacks, and hunger levels have remained persistently high. Although poverty rates dropped and incomes increased from 1993-1998, they soon returned to previous levels by 2003. Economic growth during this time was based on high prices for its main export, copper. These prices do not tend to affect the agriculture-based income of most of the population. In the past few years Zambia has begun to turn around, with slight reductions in hunger and improved incomes, although there is a danger that the current economic crisis will undermine this trend.

Mozambique has seen the largest reduction of hunger in Africa: the Global Hunger Index (GHI) dropped by 21 points from 1992 to 2008 (Figure 8.7).[1] Its levels of hunger are still fairly high, however, with about 40 percent of its population considered undernourished. Encouragingly, it is on a positive path and is also experiencing a steady rise in incomes and a reduction in poverty. Similar results occurred in Uganda and Malawi, although Malawi is not likely to achieve MDG1. Mali, after seeing a rise in hunger in the early 1990s, began to reverse the trend later in the decade, but has not yet reached previous levels.

Trends in Kenya have been mixed. Increases in incomes have not been accompanied by similar decreases in poverty. With the largest number of hungry among the IEHA countries, and with about 11 million people suffering from undernourishment, Kenya has made limited progress in reducing hunger. In SSA, hunger often corresponds to lower agricultural GDP, but Kenya proves

FIGURE 8.7: GLOBAL HUNGER INDEX TRENDS FOR IEHA COUNTRIES



Source: Von Grebmer et al., 2008.
Note: The Global Hunger Index is based on prevalence of child malnutrition (WHO), rates of child mortality (UNICEF), and the proportion of people who are calorie deficient (FAO).

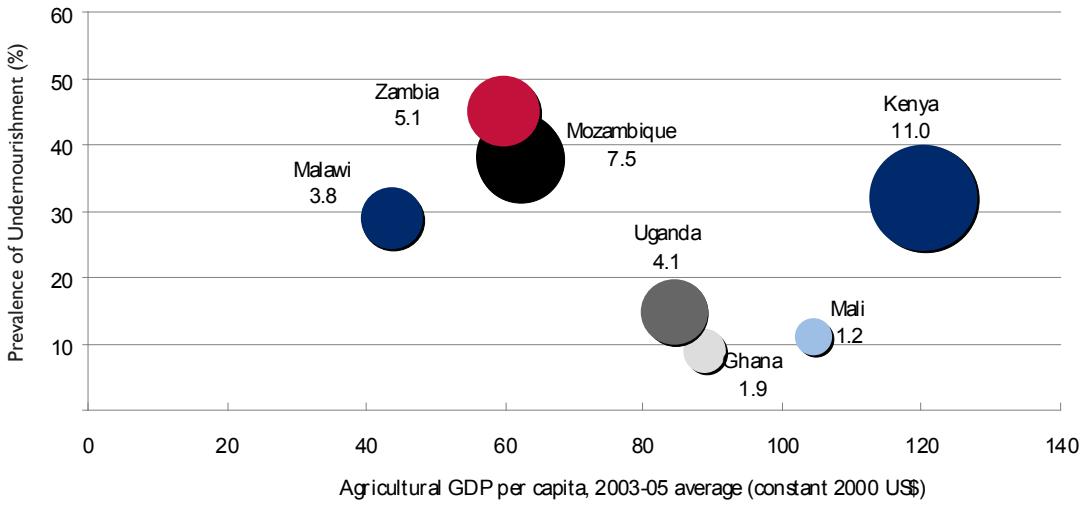
[1] The Global Hunger Index is based on prevalence of child malnutrition (WHO), rates of child mortality (UNICEF), and the proportion of people who are calorie deficient (FAO).

to be an exception (Figure 8.8). Despite high agricultural GDP per capita, Kenya also has a high rate of hunger—recent high agricultural growth is primarily due to growth in production of high-value commodities such as dairy and flowers, which is limited to more affluent peri-urban farmers rather than the poor. Among the other IEHA countries, Zambia, Mozambique, and Malawi all have higher rates of undernourished as a percentage of total population and lower agricultural GDP per capita. In contrast, Ghana, Uganda, and Mali have lower rates of hunger, and higher agricultural GDP per capita.

PERFORMANCE IN THE AFRICAN AGRICULTURAL SECTOR

Economic and agricultural growth in SSA in 2008 was affected by two major factors – the spike in food and energy prices that occurred in the first half of the year and the global financial crisis that grew worse over the course of the year. Economic growth for 2008 is estimated to have dropped to 4.8 percent from an average of 6 percent achieved annually in 2005-2007. Growth will likely decline further in 2009 to an estimated 1.0 percent, then rise in 2010 to 3.7 percent (World Bank, 2009). A major driver of growth has been the high prices for primary commodities. Continued volatility in food and energy prices, together with a deepening global recession, will likely affect growth in 2009 and beyond.

FIGURE 8.8: LEVELS OF UNDERNOURISHMENT COMPARED WITH AGRICULTURAL GDP PER CAPITA IN IEHA COUNTRIES, 2003-2005

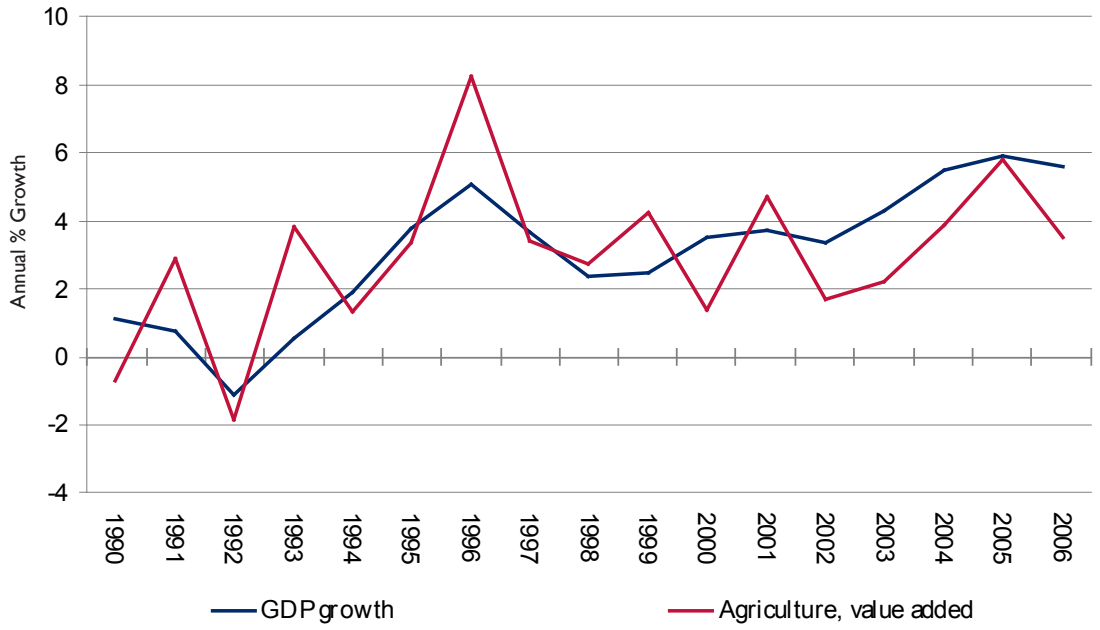


Source: FAO Statistics Division and WDI, 2008
Note: Size of bubble represents numbers of undernourished in millions

Agricultural growth in SSA dropped from a high of 5.8 percent in 2005 to 3.5 percent in 2006 (Figure 8.9). Preliminary figures for 2007 show a recovery, with a rate of 6.5 percent expected. Global cereal harvests in 2008 reached record levels, but the gains occurred mostly in developed countries. Cereal production in Africa increased only slightly, from about 143 million tons in 2006 to an estimated 148 million tons in 2008 (FAO, 2008b). Twenty countries in SSA are expected to need outside assistance to manage current food insecurity crises. Although food prices have fallen recently from 2008 peaks, they are still higher than levels in previous years in many African countries.

Kenya, Uganda, Mali, and Ghana maintained agricultural growth of around 5-6 percent in 2006 and are expected to have maintained or achieved even higher rates in 2007 (Table 8.1). Malawi and Mozambique recovered from poor agricultural performances in 2005,

FIGURE 8.9: GDP AND AGRICULTURAL GDP GROWTH RATES IN SSA, 1990-2006



Source: World Development Indicators, 2008

TABLE 8.1 ANNUAL AGRICULTURAL GROWTH RATES, 1990-2007

Countries	Average Annual Agricultural GDP Growth (%)			Annual Agricultural GDP Growth (%)				
	1990-2000	2000-2003	2003-2006	2003	2004	2005	2006	2007*
Ghana	3.4	1.3	6.5	-4.6	9.7	4.5	6.0	8.4
Kenya	1.9	2.6	4.9	2.4	1.8	6.9	5.4	7.1
Malawi	8.6	-3.3	0.7	3.7	2.8	-8.5	11.9	9.0
Mali	2.6	6.8	3.2	17.7	-4.7	7.6	5.7	5.6
Mozambique	4.9	9.9	5.8	9.1	8.3	1.7	9.0	6.8
Uganda	3.7	3.7	5.1	2.3	5.2	5.1	5.0	12.1
Zambia	4.2	0.0	3.1	5.0	4.3	2.8	2.2	1.9
Sub-Saharan Africa	3.3	2.7	4.5	2.2	3.9	5.8	3.5	6.5

Source: World Development Indicators, 2008.* 2007 preliminary data from United Nations Statistics Division, National Accounts, 2008.

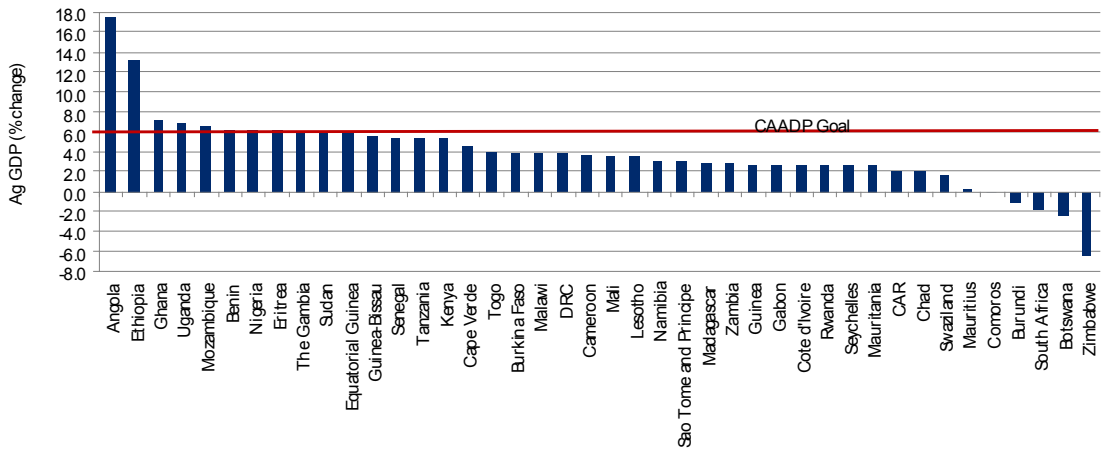
posting rates of about 12 and 9 percent in 2006, respectively. Zambia has been a poor performer in the past five years, with a steadily declining rate of overall growth from a high of five percent in 2003 to less than two percent expected for 2007. Mozambique has most consistently achieved the CAADP agricultural growth rate target of six percent, reaching it in four out of the past five years. Among the IEHA countries, only Malawi and Zambia have not achieved a steady growth rate at or above the CAADP 6% over the years 2005 through 2007 (Figure 8.10). In total, 14 out of 42 countries in SSA have achieved this goal over the same period.

POVERTY REDUCTION LINKED TO PRODUCTIVITY ENHANCEMENT: EVIDENCE FROM KENYA

IEHA tracks trends in poverty and hunger at the national level to ensure that a full picture is obtained of progress and challenges. The causal chain linking staple crop earnings to poverty reduction among smallholders is reasonably straightforward conceptually. For instance, investments are made in research and technology that improve crop productivity, and in activities such as supporting producer groups to link smallholders to markets and increase the prices received by smallholders (Figure 8.11). Improved staple crop earnings contribute to increases in the total amount of income the household derives from all farm income sources (net farm income). Increased farm income is associated with increases in the total income available to the household. Finally, increases in total household income reduce the number of poor households and improve their food security situation.

Among the Kenyan poor in a Tegemeo Institute data set (households with per person income of less than $1.25 per day), annual net household income per person ranges from $11.15 to $456.23 with a median value of $231.69 and a poverty gap per household ranging from $47.75 to $5,598.[2] The median poverty gap is $1,338 (if all poor households were to raise their net income by $1,338

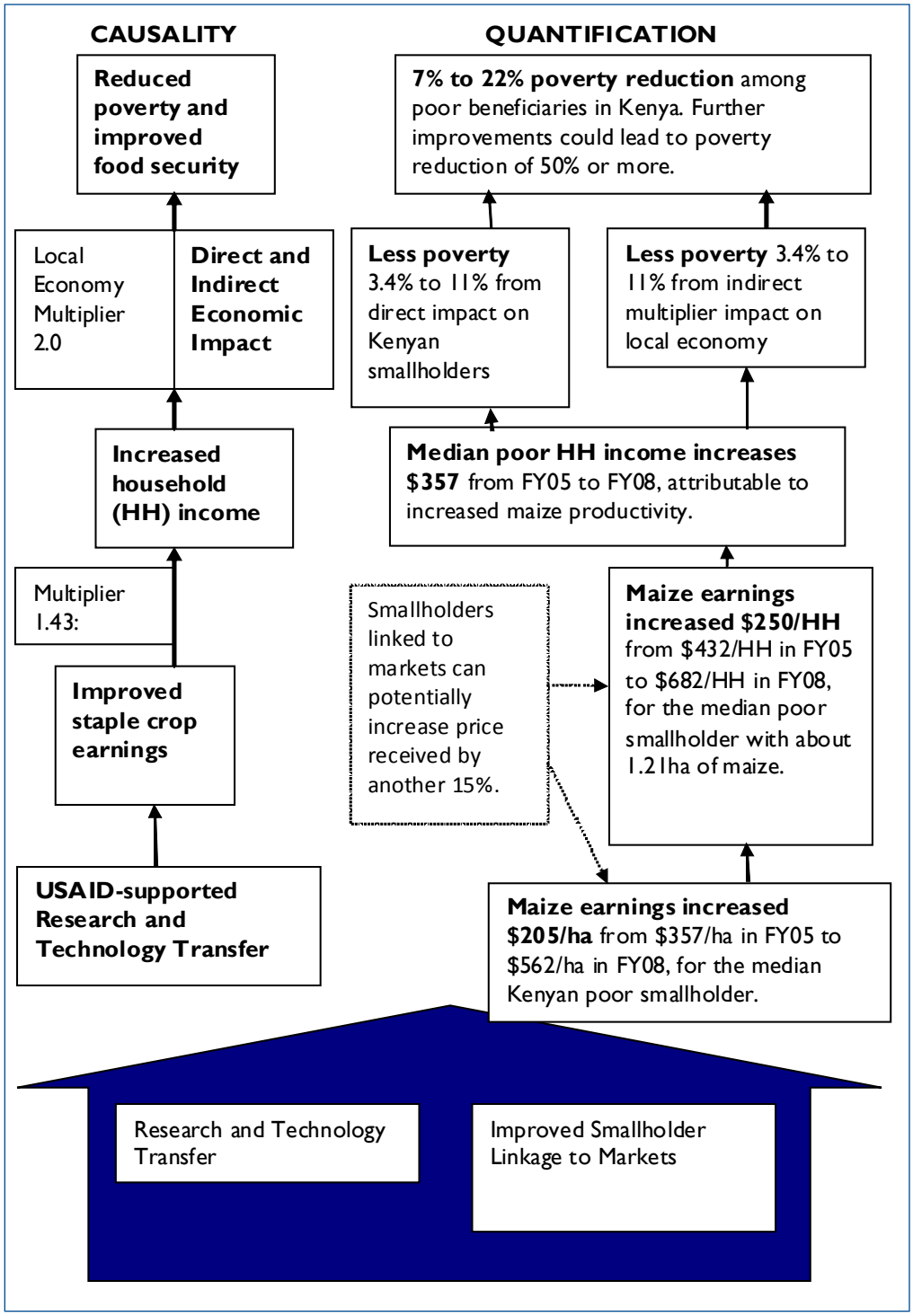
FIGURE 8.10: AGRICULTURAL GDP GROWTH RATES IN SSA, 2005-2007 AVERAGE PERCENT CHANGE



Source: 2005-2006 data from World Development Indicators, 2008. 2007 preliminary data from United Nations Statistics Division, National Accounts, 2008

[2] The poverty gap represents the increase in annual household net income needed to bring the household up to the poverty line.

FIGURE 8.11: CAUSAL MODEL OF INCREASED PRODUCTIVITY AND POVERTY REDUCTION



per year, half of these poor households would be lifted out of poverty). Increasing maize productivity increased maize earnings in the study area by $205/ha. With the median poor household having just over one hectare of land in maize, this translated into increased maize earnings of $250 per household. Based on an econometrically estimated multiplier of 1.43, these maize earnings translate into increased household net income of $357 per household.

While the multiple benefits from increased household income (the multiplier effect) are not yet well quantified, a key component is likely improved household health. Increased staple food productivity and production requires less labor per unit of output, and provides more food and money for the household. There is sufficient evidence in the medical literature to confirm the impact of poverty, including increased biological susceptibility to infectious diseases through malnutrition, parasitosis, and lack of access to health care (e.g., Bates, Fenton et al. 2004; Fenton 2004). Chronic disease and morbidity is associated with malnutrition and diminished physical capacity, making it harder for the household to work or access medical care or sufficient and nutritious food. A household can become trapped not just in poverty but in chronic poor health and undernutriton. [3] In Kenya, the estimated household net income increase of $357 is sufficient to pull 3.4% to 11.0% of the target population out of poverty.

The Tegemeo data set also provides evidence that smallholders who sell maize to the National Cereals Production Board or to large traders earn as much as a 15% price premium relative to smallholders who sell maize to small traders. By forming producers' groups and linking the producers groups to the marketplace, USAID-supported programs are working to help smallholders receive these higher prices, as are other USAID-supported programs such as warehouse receipts programs. An increase of 15% in price received translates into a 26% increase in gross margins, and an increase of $502 in household net income (compared to a $357 increase without the higher prices received). This adds approximately another 7% of the target households who are able to climb out of poverty.

Investments in maize productivity have further impacts on poverty reduction. Research on non-farm rural employment suggests that for every dollar in agricultural income generated, there is a multiplier effect in the local economy that generates an additional dollar (or more) in local non-farm income. To an important extent it is expected that this local income accrues to the poor as they find new or additional employment. Thus the total proportion of the target population able to climb out of poverty could be twice the size of those directly affected by maize productivity increases. That is, accounting for rural non-farm employment, 7% to 22% of the target population could be climbing out of poverty.

Increasing staple crop productivity through additional agricultural research and greater use of improved inputs (linking smallholders to input markets) has the potential to raise the proportion of the target population climbing out of poverty to nearly 50%.

It is important to note that an increase in staple crop earnings has strong potential to help both smallholder net sellers of staple crops and net purchasers of staple crops. Unlike increases in the price of staple foods, which are likely to hurt net purchasers of staples, increases in staple crop earnings accomplished by research and technology

[3] Ulimwengu (2009) documents the relationship between disease and agricultural production in Ethiopia, finding that sickness causes lower agricultural efficiency and lower food expenditures cause susceptibility to diseases. Improved staple crop production and/or cash earnings are thus likely to improve disease resistance, and increase the household's ability to generate income from other opportunities.

transfer or better market linkages have the potential to benefit all smallholders participating in the program, including net purchasers, who will benefit from greater amounts of maize in the marketplace.

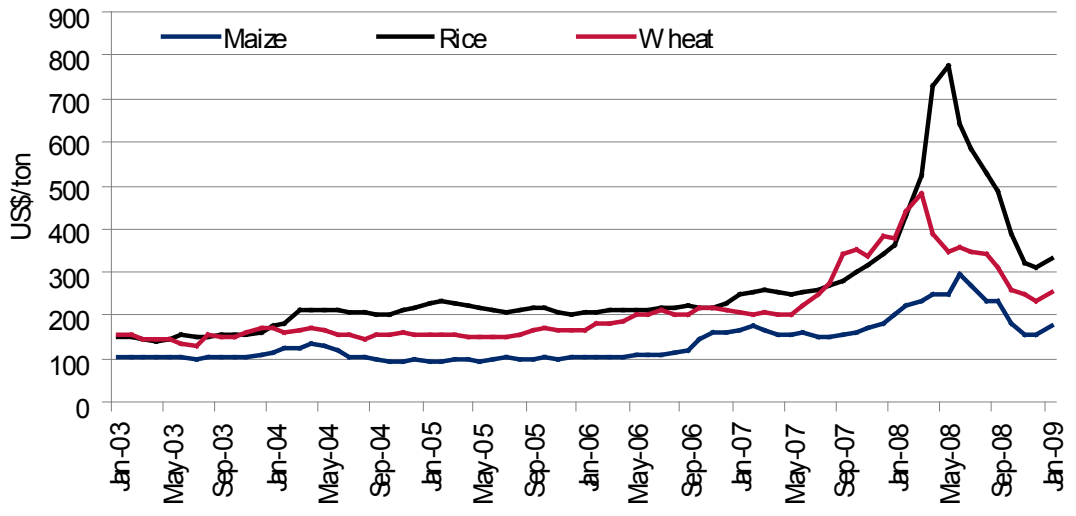
In addition to direct actions such as research and extension in the areas of crops, livestock, aquaculture, natural resources management and water management, African development actions such as supporting the development of producers' groups, instituting warehousing systems, developing transport and market infrastructure, and liberalizing markets help improve smallholder earnings by providing better access to affordable, improved inputs and in some cases result in farmers' receiving higher prices.

EMERGING CHALLENGES AND OPPORTUNITIES

CHALLENGES

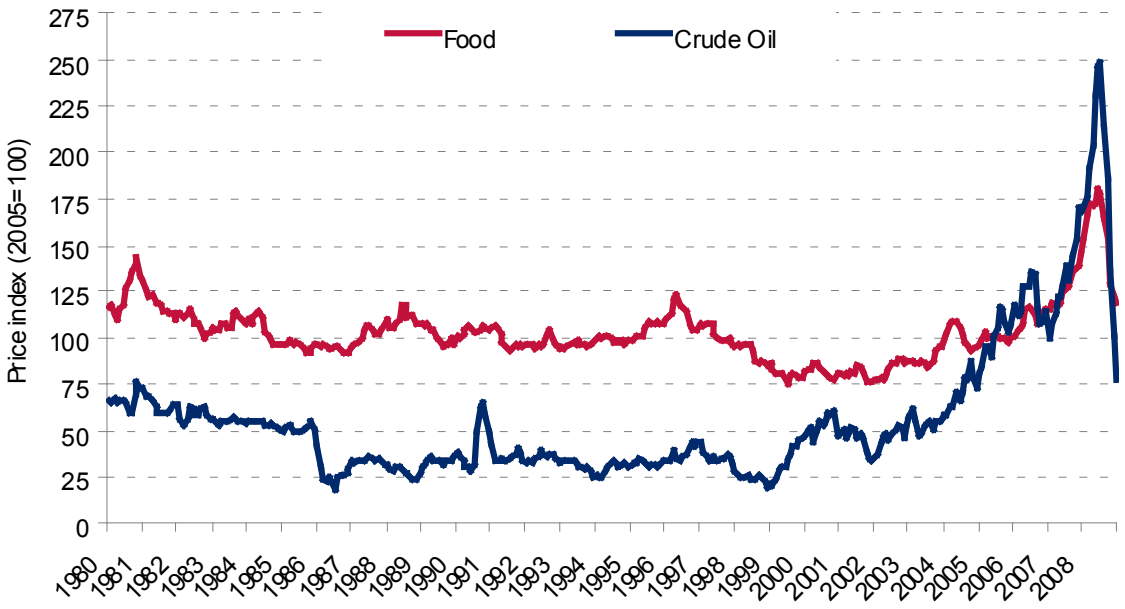
High food and energy prices from 2007 through mid-2008 affected food and nutrition security, macroeconomic stability, and political security in SSA (von Braun, 2008). Demand for primary commodities dropped sharply at the end of 2008, due to the growing global financial crisis and recession, pulling food and energy prices back down from record highs (Figures 8.12 and 8.13). However, food prices are still higher than earlier in the decade, signaling that a longer-term trend of higher commodity prices may be in effect.

FIGURE 8.12: THE GLOBAL FOOD PRICE CRISIS IN 2007–08



Source: FAOSTAT, 2009.

FIGURE 8.13: WORLD COMMODITY AND CRUDE OIL PRICES



Source: IMF, 2009.

While Africa has generally benefited from higher prices for primary commodities in the past decade, it continues to be extremely vulnerable to food insecurity and remains critically dependent on food imports. High food prices have hurt the poor most significantly. The higher prices for cereals are not necessarily a boon to rural farmers, many of whom are net buyers of food, rather than net sellers. Those farmers who were able to move quickly to take advantage of the high prices have found that they may not see a return on their investment now that prices are declining (Polgreen, 2009). Such volatility affects the incentives and ability of farmers to increase production.

In addition to repercussions from price volatility, the impact of the global financial crisis and recession will be felt in Africa in various other ways. Private investment, remittances, and the tourism sector are expected to be affected negatively. Access to credit will continue to be constrained. Foreign direct investment and foreign aid budgets are expected to decline as well. In 2007, Official Development Assistance (ODA) to SSA increased by 11 percent, excluding debt relief (OECD, 2008a). U.S. ODA to SSA increased by 6.5 percent. Forecasts for 2009 indicate that a drop in aid is not expected, but neither is an increase likely for poorer countries (OECD, 2008b). Depending on the depth of the recession, however, pressure may grow to make cuts. Already, budgets proposed in Japan and Ireland for 2009 have included reductions in foreign aid.

A major constraint to agricultural development in Africa is the minimal use of improved inputs. In particular, fertilizer use has remained at very low levels across SSA in the past decade and has been further affected by escalating prices over the past few years.

OPPORTUNITIES

High food prices have been a wake-up call for leaders around the world. The price shock has strengthened a growing consensus on the need for an agricultural transformation in Africa. African leaders had already recognized the need for a new push for agricultural development in 2003 with the adoption of CAADP. Government expenditure on agriculture appears to be slowly increasing, from 4.5 percent in 2002 to 6 percent in 2005 (Fan and Saurkar, 2008). Four countries achieved the 10-percent agricultural spending CAADP goal by 2005: Burkina Faso, Ethiopia, Mali, and Guinea. Mozambique, Chad, Malawi and the Gambia are close to 10 percent (ReSAKSS website).[4]

Along with greater investment in agriculture, other developments have improved the environment for agricultural development. First, fewer wars and political crises have taken place over the past decade, resulting in greater political and economic stability across the continent. Several countries have shown progress in certain aspects of governance, such as Ghana, Mali, and Uganda in the area of government effectiveness (World Bank, 2007). Ghana recently underwent its second peaceful transition of political power. In addition, several countries have completed or have begun the African Peer Review Mechanism process, a program of the AU and NEPAD that aims to reduce governance constraints that may be hindering growth and poverty reduction. The peer review assesses countries' governance against a set of common indicators and, in response, the countries develop action plans to address any problems. Finally, the drop in oil prices should allow fertilizer prices and transportation costs to return to previous levels, affording an opportunity to increase investments in expanding fertilizer use and improving market access.

[4] http://www.resakss.org/investment.asp

Development partners have also recognized the importance of supporting agriculture after decades of neglect. They have pledged to support CAADP and are coordinating actions through the African Partnership Forum and the CAADP Partnership Platform. They are also supporting other multilateral institutions and initiatives such as the Consultative Group on International Agricultural Research (CGIAR) and the Alliance for a Green Revolution in Africa (AGRA). At the height of the crisis last year, a High Level Task Force on the Global Food Security Crisis was established, and policymakers and international agencies met at Rome in June 2008 to coordinate interventions and funding to respond to the situation. A follow-up summit convened in January 2009 in Madrid reaffirmed the need to address food security and agricultural development comprehensively. To that end, a process was begun to set up a Global Partnership on Food and Agriculture.

THE WAY FORWARD

Despite the current economic challenges, the outlook for economic growth in SSA is not as gloomy as for other regions of the world. Slower growth will occur, but negative growth is unlikely except in countries that were already experiencing serious instability, such as Zimbabwe (World Bank, 2009; IMF, 2008). Countries that have been strong stable performers are expected to weather the shocks and return to previous growth rates by 2010-11. Export growth is also expected to drop due to lowered demand, then return to former growth patterns.

Although slower growth is surely a better outcome than negative growth, African countries have very little room for setbacks. The consequences of not maintaining or accelerating growth could be serious. Without proper agricultural investment and policies, food prices would likely increase again, potentially leading to increased

malnutrition and poverty. With high rates of population growth, it is important to achieve not only positive economic growth but positive per capita growth. The type of growth matters greatly as well. If growth is based on extractive industries, it is not likely to contribute to poverty reduction.

Currently, not a single country in SSA is capable of consistently producing enough food for itself or supplying its neighbors. The recent price crisis and the response of surplus food producers who instituted export bans at the height of the crisis reveals weaknesses in the global markets for staple food crops. It also illustrates the vulnerability of the continent to any volatility in this market. A transformation of African agriculture—a "green revolution"—achieved by improved production of staple crops and regional market integration could lead to lower food prices, increased income for farmers, and the potential transition of more than 70 million Africans out of poverty (Diao et al., 2008b). Country-level analyses of a number of African countries have also indicated that broad-based agricultural growth strategies are the best way to increase economic growth and reduce poverty.

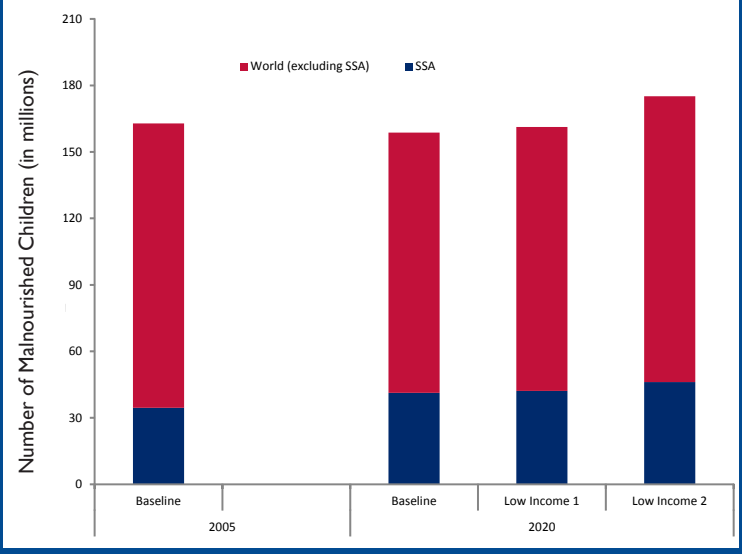
The global recession does not change the fundamentals of development; it only reinforces the need for countries to accelerate reforms as quickly as possible (Box 8.1). The environment for pursuing growth will certainly be less conducive, but it should not prevent timely action by leaders on development priorities such as maintaining macroeconomic stability, increasing investment in agriculture and infrastructure, improving governance, and providing a conducive policy environment for agricultural markets.

BOX 8.1: POSSIBLE EFFECTS OF A RECESSION ON HUNGER

IFPRI undertook an IMPACT scenario analysis of the current recession's possible impact on hunger. Two scenarios were mapped: Scenario 1 where economic growth is reduced by 2 to 3 percentage points, depending on world region, but agricultural productivity and investments are maintained by wise policy. And, Scenario 2 where economic growth is reduced as in Scenario 1 and agricultural investment and productivity also decline, in line with the reduced economic growth. Scenario 2 is, unfortunately, the more likely scenario.

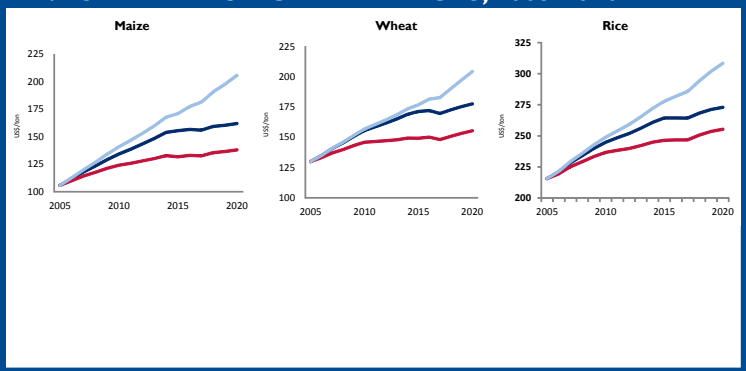
The implications of a recession on child malnutrition in Sub-Saharan Africa can be seen in Figure A below. Under Scenario 2, the region's share of the number of malnourished children globally will increase from 20 percent in 2005 to 25 percent in 2020.

FIGURE A: THE IMPLICATIONS OF A RECESSION ON CHILD MALNUTRITION, 2005-2010



Under Scenario 2, malnutrition increases, in part, due to the rise in the prices of cereals as seen in Figure B below.

FIGURE B: THE IMPLICATIONS OF A RECESSION AND INVESTMENT FOR CEREAL PRICES, 2005-2010



REFERENCES

Abdulai, A., M. Johnson, and X. Diao. 2006. "Achieving regional growth dynamics in leveraging regional growth dynamics in African agriculture." African Journal of Agriculture and Resource Economics, 1(1):49-66.

Balisacan, Arsenio and Ernesto Pernia and Gemma Esther Estrada. 2003. "Economic Growth ad Poverty Reduction in Vietnam," ERD Working Paper No. 42, Manila: Asian Development Bank

Bates, I., C. Fenton, et al. 2004. "Vulnerability to malaria, tuberculosis, and HIV/AIDS infection and disease. Part 1: determinants operating at individual and household level." The Lancet Infectious Diseases 4(5): 267-277.

Bezemer, D., and D. Headey. 2008. Agriculture, Development, and Urban Bias. World Development 34, 1342-1364.

Byerlee, D., X. Diao, and C. Jackson. 2005. Agriculture, Rural Development, and Pro-Poor Growth: Country Experiences in the Post-Reform Era. Synthesis paper for the Operationalizing Pro-poor Growth in the 1990s project. World Bank, Washington, D.C

Diao, Xinshen, et al. 2008a. Accelerating Africa's Food Production in Response to Rising Food Prices – Impacts and Requisite Actions. ReSAKSS Working Paper No. 3. Washington, D.C.: IFPRI.

Diao, X., D. Headey , M. Johnson. 2008b. "Toward a Green Revolution in Africa: What Would It Achieve, and What Would It Require?" Agricultural Economics 39 (2008) supplement: 539-500.

Diao, X., P. Hazell, D. Resnick, and J. Thurlow. 2007. The Role of Agriculture in Development: Implications for Sub-Saharan Africa. Research Report no. 153, International Food Policy Research Institute, Washington, D.C.

Fan, S. and A. Saurkar. 2008. "Tracking Agricultural Spending for Agricultural Growth and Poverty Reduction in Africa." ReSAKSS Brief.

Fan, S., D. Nyange, and N. Rao. 2003. Public Investment and Poverty Reduction in Tanzania: Evidence from Household Survey Data. Development Strategy and Governance Division Discussion Paper no. 18, International Food Policy Research Institute, Washington, D.C.

FAO. 2009. "FAOSTAT Database." Rome: FAO.

FAO. 2008a. "The State of Food Insecurity in the World 2008." Rome: FAO.

FAO. 2008b. "Crop Prospects and Food Situation." No. 5, December. Rome: FAO-GIEWS.

Fenton, L. 2004. "Preventing HIV/AIDS through poverty reduction: the only sustainable solution?" The Lancet 364(9440): 1186-1187.

Gregory, D.I., and B.L. Bumb. 2006. Factors Affecting the Supply of Fertilizer in Sub-Saharan Africa. Agriculture and Rural Development Discussion Paper No. 24, World Bank, Washington, D.C.

Gulati, A., and S. Fan. 2007. The Dragon and The Elephant: Agricultural and Rural Reforms in China and India. Baltimore: Johns Hopkins University Press.

Haggblade, S., P.B.R. Hazell, and T. Reardon. 2007. Strategies for Stimulating Equitable Growth in the Rural Nonfarm Economy. In Transforming the rural nonfarm economy, edited by S. Haggblade, P.B.R. Hazell, and T. Reardon. Baltimore: Johns Hopkins University Press.

Hazell, P. and X. Diao. 2005. The Role of Agriculture and Small Farms in Economic Development. In: IFPRI (International Food Policy Research Institute), 2005. The future of small farms: Proceedings of a research workshop, Wye, UK, June 26-29, 2005. Washington, DC, pp. 135-149.

IMF. 2008. "Regional Economic Outlook: Sub-Saharan Africa." Washington, D.C.: IMF.

International Fertilizer Industry Association (IFA). 2008. "Food Prices and Fertilizer Markets." Feeding the Earth Issue Brief. Paris: IFA.

Johnson, M., P. Hazell, and A. Gulati. 2003. The Role of Intermediate Factors Markets in Asia's Green Revolution: Lessons for Africa? American Journal of Agricultural Economics 85: 1211-16

OECD. 2008a. "Aid Targets Slipping Out of Reach?" Paris: OECD.

OECD. 2008b. "The Fallout from the Financial Crisis: Will Aid Budgets Fall Victim to the Credit Crisis?" Policy Insights No. 85. Paris: OECD.

Oehmke, James F. 2009. "Will the Staple Foods Market Development Agenda Work for Africa: Concepts and Empirical Evidence from Kenya." Unpublished manuscript, Department of Emergency Medicine, Yale University, July 2009.

Polgreen. 2009. "West African Villagers Stake Their Fortunes on the Future Price of Rice." The New York Times. January 26.

Ulimwengu, J. 2009. "Farmers' health status, agricultural efficiency, and poverty in rural Ethiopia: A stochastic production frontier approach." IFPRI Discussion Paper No. 868, International Food Policy Research Institute, Washington, DC.

United Nations. 2008. "The Millennium Development Goals Report 2008 Statistical Annex." New York: United Nations.

Von Braun, Joachim. 2008. "Food and Financial Crises: Implications for Agriculture and the Poor." IFPRI Food Policy Report. Washington, D.C.: IFPRI.

Von Grebmer, Klaus, Heidi Fritschel, Bella Nestorova, Tolulope Olofinbiyi, Rajul Pandya-Lorch, and Yisehac Yohannes. 2008. "The Challenge of Hunger 2008: Global Hunger Index." Bonn, Washington D.C., and Dublin: Welthungerhilfe, IFPRI, and Concern Worldwide.

World Bank. 2009. "Global Economic Prospects 2009: Commodities at the Crossroads." Washington, D.C.: World Bank.

World Bank. 2008a. World Development Report 2008: Agriculture for Development. Washington, D.C.: World Bank.

World Bank. 2008b. "World Development Indicators 2008." Washington, D.C.: World Bank.

World Bank. 2007. "A Decade of Measuring the Quality of Governance: Governance Matters 2007." Washington, D.C.: World Bank

ANNEX 1. IEHA'S PARTNERS

AFRICAN IMPLEMENTING PARTNERS

AFRICA BUREAU, OFFICE OF SUSTAINABLE DEVELOPMENT

African Center for Food Security, University of KwaZulu Natal

Ahmadu Bello University, Nigeria

Benin National Cashew Growers Federation

Fresh Producers' Exporters Association of Kenya (FPEAK)

Ghana Export Promotion Council

Honey Council of Zambia

Kenya Agricultural Research Institute (KARI)

Kwame Nkruma University of Science and Technology, Ghana

National University of Rwanda – Faculty of Agriculture

Nigeria Export Promotion Council

Sokoine University

Tanzania Horticulture Association (TAHA)

Uganda Flower Exporters Association (UFEA)

University of Eduardo Mondlane

University of Nairobi

University of Swaziland

University of Thies – Faculty of Agriculture, Senegal

University of Zambia

Zambia Agricultural Research Institute

Zambian Export Growers Association

GHANA

Biotechnology and Nuclear Agricultural Research Institute

KENYA

African Breeders Services - Total Quality Management

Fineline Rural Outreach

Kenya Agriculture Commodity Exchange (KACE)

MALAWI

Catholic Development Commission of Malawi

Central Region Milk Producers Association

Christian Health Association of Malawi

Mpoto Dairy Farmers Association

Wildlife and Environment Society of Malawi

MALI

Aquaculture Association of Mali

Association of Farm Professionals (AOPP)

Association of Integrated Development Support

Association of Village Women's Groups

Council of Management, Financial Negotiation and Organization (CONFIGES)

Equipe de Recherche et d'Appui Pour le Developpement

ESPOIR

Evangelical Agency for Development

Federation of Livestock and Meat Producers of Mali (FEBEVIM)

GIE Peenal

GREFA SARL

Group d'Animation Action au Sahel

Groupe de Recherche d'Etudes de Formation Femme Action

Moi University

National Directorate of Animal Production and Industries (DNPIA) - Mali

Network of Counselors in Management for Producers Associations (RCGOP)

Observatoire du Marche Agricole (OMA)

Organisation Pour la Gestion de l'Environnement au Sahel

Organisation Pour un Developpement Integre au Sahel

Organization of Producers of Fruit Trees and Oilseed Crops of Mali (AOM)

PDCo

Rural Polytechnic Institute (IPR)

Sahel Etude Action pour le Developpement

Solidarite Pour l'Autopromotion a la Base

Team of Research and Support for Development

Union des coopératives de Yanfolila

MOZAMBIQUE

Ajuda de Desenvolvimento de Povo para Povo (ADPP)

Cubatserane

IKURU

Mozambican and South African Agricultural colleges

University of Eduardo Mondlane

SOUTHERN AFRICA

Bunda College

University of Zambia

UGANDA

Agency for Promoting Sustainable Development Initiatives

Church of Uganda - Gulu Diocese

Coffee Research Institute

Eco Trust

Fisheries Resources Research Institute

Makerere University

Makerere University's Faculty of Agriculture

New Vision

Serere Agricultural and Anima Production

The AIDS Support Organization

Uganda Flower Exporters' Association

Uganda Grain Traders

WEST AFRICA

Plant Protect & Producer Organizations

Producer Organizations

Producers Organizations

Songhai NGO

GOVERNMENT PARTNERS

AFRICA BUREAU, OFFICE OF SUSTAINABLE DEVELOPMENT

Burkina Faso Service of Standardization

Burundi Ministry of Agriculture and Livestock

Centro De Promocao da Agricultura (CEPAGRI)

Ethiopia Ministry of Agriculture and Rural Development

Ghana Food and Drugs Board

Ghana Standard Board

Instituo de Investigacao Agraria de Mocambique (IIAM)

Kenya Plant Health Inspectorate Service (KEPHIS)

Liberia Ministry of Agriculture – National Quarantine Services

Liberia Ministry of Commerce

Madagascar Ministry of Agriculture

Mali National Food Safety Agency

Ministries of Agriculture (Veterinary Services)

Ministriesof Agriculture - East Africa

Ministry of Agriculture - Benin

Ministry of Agriculture - Burkina Faso

Ministry of Agriculture - Burundi

Ministry of Agriculture - Comoros

Ministry of Agriculture - Cote d'Ivoire

Ministry of Agriculture - D.R. Congo

Ministry of Agriculture - Djibouti

Ministry of Agriculture - Ethiopia

Ministry of Agriculture - Ghana

Ministry of Agriculture - Guinea
Ministry of Agriculture - Kenya
Ministry of Agriculture - Madagascar
Ministry of Agriculture - Malawi
Ministry of Agriculture - Mali
Ministry of Agriculture - Niger
Ministry of Agriculture - Nigeria
Ministry of Agriculture - Rwanda
Ministry of Agriculture - Senegal
Ministry of Agriculture - Seychelles
Ministry of Agriculture - Sierra Leone
Ministry of Agriculture - Sudan
Ministry of Agriculture - Swaziland
Ministry of Agriculture - Togo
Ministry of Agriculture - Uganda
Ministry of Agriculture - Zambia
National Agricultural Research Organization
National Institute of Standardization and Quality (NNOQ)
National Plant Protection Organization of Swaziland
Nigeria Codex/Food Standards Organization
Rwanda Agriculture Development Authority
Rwanda Horticulture Development Authority
Rwanda Institute of Agriculture and Animal Husbandry
Rwanda Ministry of Agriculture
SEEDS Alliances
Senegal Ministry of Agriculture – Plant Protection Department (DPV)
Sierra Leone Standards Bureau
Swaziland Agriculture Research Institute
Swaziland Ministry of Agriculture and Cooperatives
Tanzania Agricultural Information Service
Tanzania Ministry of Agriculture Food Security & Cooperatives - Plant Health Services
Uganda Crop Protection Service
Uganda Ministry of Agriculture Animal Industry & Fisheries (MAAIF)
Zambia Crop Protection
Zambia Ministry of Agriculture

GHANA

Ministry of Education Science and Sports - Ghana
Ministry of Education Science and Sports - Ghana
Ministry of Food and Agriculture - Ghana
Ministry of Local Government Rural Development and Environment - Ghana
National Development Planning Commission

KENYA

Agricultural Sector Coordinating Unit
Central Bank of Kenya
Department of Veterinary Service - Kenya
Horticulture Crop Development Agency
Kenya Agricultural Research Institute (KARI)
Kenya Broadcast Corporation
Kenya Commercial Bank
Kenya Plant and Health Inspector Services
Ministry of Agriculture - Kenya
Ministry of Cooperative Development - Kenya
Ministry of Fisheries - Kenya
Ministry of Health - Kenya
Ministry of Livestock - Kenya

MALAWI

Department of Fisheries - Malawi
Ministry of Agriculture - Malawi
Ministry of Health - Malawi
Ministry of Local Government - Malawi

MALI

Institute of the Rural Economy (IER)
Malian National Extension Agency
Ministry of Agriculture - Mali
Ministry of Livestock and Fisheries - Mali
Ministry of Rural Development (Selingue) - Mali
National Directorate of Agriculture (DNA)
National Directorate of Animal Production and Industries (DNPIA) - Mali

National Directorate of Nature Conservation (DNCN)

National Directorate of Rural Works (DNGR)

National Directorate of Trade and Competition (DNCC)

National Fisheries Directorate

Office of Rural Development of Selingue (ODRS)

Office of Rural Development of Selingue (ODRS) Fish Farm and Hatchery

Office of the Irrigated Perimeter of Baguineda

Permanent Assembly of the House of Agriculture (APCAM)

Regional Fisheries Directorate (Koulikoro)

The Institute of Food Technology, Senegal

MOZAMBIQUE

Agriculture and Health Provincial Directions

Bank of Mozambique

Department of Agriculture - Mozambique

District Directorates of Health

Inter-Ministerial Technical Secretariat for Food and Nutrition (SETSAN)

Ministry of Agriculture - Mozambique

Ministry of Coordination and Environmental Affairs - Mozambique

Ministry of Industry and Commerce - Mozambique

Ministry of Industry and Commerce - Mozambique

National Agricultural Research Institute

National Institute for Agronomic Research

National Research Institute

Provincial and District Directions of Agriculture (DPA and DDAs) Health

Provincial and District Directions of Agriculture and Health

Provincial Departments of Health, Water and Sanitation

SCF-US Provincial and Districtal Directions of Agriculture (DPA and DDAs)

SOUTHERN AFRICA

Angola Ministry of Agriculture

Angola Ministy of Health

Malawi Ministry of Agriculture

Mozambique Ministry of Agriculture

National Agriculture Research Centers in Malawi

Zambia Ministry of Agriculture

UGANDA

Agricultural Engineering & Appropriate Technology Research Centre

Cotton Development Organization

Department of Water Development - Uganda

Ministry of Agriculture Animal Industries and Fisheries - Uganda

Ministry of Finance Planning and Economic Development - Uganda

Ministry of Health - Uganda

Ministry of Health and Nutrition - Uganda

NAADS

National Agricultural Research Organization

National Agriculture Advisory Services

National Agriculture Animal Industries and Fisheries

National Agriculture Research Organization

Uganda Coffee Development Authority

Uganda National Council for Science and Technology

WEST AFRICA

Coffee and Cacao Regulatory Agency

Ministries Agriculture and Inter-Agency Cotton Sector Reform Bodies in 4 countries

Ministries of Agriculture

Ministries of Agriculture - Mali, B. Faso, Niger

Ministries of Environment

Ministries of Transport

Ministry of Agriculture - Cote d'Ivoire

National Agriculture Research Systems

Participating country Natl Ag Res Systems (NARS)

Universities

INTERNATIONAL PRIVATE SECTOR PARTNERS

AFRICA BUREAU, OFFICE OF SUSTAINABLE DEVELOPMENT

Association of Floral Importers of Florida
BASF
Costco
GALVMed
Monsanto

GHANA

Counterpart International
Heifer International
International Business Initiatives

KENYA

Worldwide Sires

MALAWI

Africare
Catholic Relief Services
Emmanuel International
Monsanto
Salvation Army
Save the Children US
World Vision International
Worldwide Sires

MALI

Biotropic
Dakar Fruit
Katope
Monsanto
Ou Jiang Carp Hatchery
Pioneer Hi-Bred International Inc.
Private Farmers in Zhejiang Province (China)
YARA International

MOZAMBIQUE

Barnabas and Associates
Chiquita
International Fertilizer Development Center
Lenovo Corporation
Norsk Felleskjop and Norges Vel
Oxfam-NOVIB Fund
PANNAR Seed LDP
Pioneer Hi-Bred International Inc.
Population Service International
Twin Trading

SOUTHERN AFRICA

Childrens Broadcast Foundation for Africa
The Liberation Connection

UGANDA

Africare
Cooperative League of United States
Informational Technology Industry Council
International Center for Soil Fertility and Agricultural Development
International Federation of Organic Agricultural Movements
Lutheran World Federation
Monsanto
Telecommunications Management Group

WEST AFRICA

Afrique Vert
Armajaro
EDE Consulting
Hellen Keller
International Cotton Advisory Council
International Service for Acquisition of Agriculture-Biotech Applications
Kraft Foods
Monsanto
Pioneer Hi-Bred International Inc.
Rain Forest Alliance

INTERNATIONAL RESEARCH INSTITUTIONS

AFRICA BUREAU, OFFICE OF SUSTAINABLE DEVELOPMENT

Australia Commonwealth Scientific and Research Organization (CSIRO)

CABI Africa

Center for Integrated Pest Management

Citrus Research International (CRI)

Codex Alimentarius Commission

Global Plant Clinic

International Crop Research Institute for the Semi-Arid Tropics (ICRISAT)

International Food Policy Research Institute (IFPRI)

International Institute for Tropical Agriculture (IITA)

International Livestock Research Institute (ILRI)

International Maize and Wheat Improvement Center (CIMMYT)

International Plant Diagnostic Network (IPDN)

International Water Management Institute (IWMI)

Johns Hopkins University

Lousiana State University - Partnerships for Food Industry Development

Michigan State University (MSU)

North Carolina State University (NCSU)

Ohio State University (OSU)

Purdue University

Texas A&M University

The Crop Quality and Fruit Insects Research Unit (CQFIRU)

University of California - Davis

Virginia Tech

World Animal Health Organization (OIE)

KENYA

International Pharmaceutical Federation

MALAWI

International Center for Tropical Agriculture

International Food Policy Research Institute (IFPRI)

International Institute for Tropical Agriculture (IITA)

MALI

Asian Institute of Technology

International Crop Research Institute for the Semi-Arid Tropics (ICRISAT)

Iowa State University

Oregon State University

Shanghai Ocean University

World Vegetable Center (AVRDC) Taiwan

MOZAMBIQUE

International Crop Research Institute for the Semi-Arid Tropics (ICRISAT)

International Food Policy Research Institute (IFPRI)

International Institute for Tropical Agriculture (IITA)

International Maize and Wheat Improvement Center (CIMMYT)

International Potato Center

University of Toronto

SOUTHERN AFRICA

International Center for Tropical Agriculture

International Crop Research Institute for the Semi-Arid Tropics (ICRISAT)

International Institute for Tropical Agriculture (IITA)

International Potato Center

Tropical Soil Biology and Fertility

UGANDA

Food and Agricultural Organization (FAO) / Fisheries

International Food Policy Research Institute (IFPRI)

International Institute for Tropical Agriculture (IITA)

International Network for Improvement of Banana and Plantain

International Potato Center

Michigan State University (MSU)

World Fish Center

WEST AFRICA

Advanced Research and Development Institute

Center for International Forestry Research

Cornell University

International Crop Research Institute for the Semi-Arid Tropics (ICRISAT)

International Institute for Tropical Agriculture (IITA)

Organization for Economic Cooperation and Development

University of California at Davis

West African Farmers' Organization (ROPPA)

ZAMBIA

Michigan State University (MSU)

OTHER DONORS

AFRICA BUREAU, OFFICE OF SUSTAINABLE DEVELOPMENT

Alliance for a Green Revolution in Africa (AGRA)

Center for Disease Control (CDC)

Embassy of Netherlands

European Commission

Food and Agricultural Organization (FAO)

German Agency for Technical Cooperation (GTZ)

Global Donor Platform for Rural Development

International Atomic Energy Agency (IAEA)

International Plant Protection Convention (IPPC)

Kirkhouse Trust

Netherlands Development Cooperation

Rockefeller Foundation

Standards and Trade Development Facilities (STDF)

Swedish International Development Cooperation Agency (SIDA)

The World Bank

UK Department for International Development (DfID)

US Department of Agriculture (USDA)

US Department of Defence

US Food and Drug Administration

World Health Organization (WHO)

World Trade Organization (WTO)

GHANA

German Agency for Technical Cooperation (GTZ)

KENYA

World Food Program

MALI

Alliance for a Green Revolution in Africa (AGRA)

Aquaculture Network for Africa (ANAF)

Netherlands Development Cooperation

Project for Agricultural Competitiveness and Diversification (PCDA) - World Bank

Sasakawa Global (2000)

MOZAMBIQUE

ABY

ASDI

Australian Government Overseas Aid Program (AusAID)

Bill & Melinda Gates Foundation

Buffet Foundation

Center for Disease Control (CDC)

Embassy of Netherlands

European Union

Food and Agricultural Organization (FAO)

Health Alliance International and Child Survival

Irish Embassy

Norwegian Agency of Development Cooperation

Swiss Development Cooperation

The World Bank

United Nations Children Fund

Washington National Cathedral

World Food Program

UGANDA

African Development Foundation

Bill & Melinda Gates Foundation

European Union – Centre for the Development of Enterprise

European Union/ Eco-label scheme/policy on Environment

France

Norwegian Agency of Development Cooperation

Royal Netherlands - Dutch Embassy

WEST AFRICA

Alliance for a Green Revolution in Africa (AGRA)

Belgium

Canadian International Development Assistance

Danish International Development Agency

European Union

Food and Agricultural Organization (FAO)

France

German Agency for Technical Cooperation (GTZ)

International Development Research Center

Italy

The World Bank

UK Department for International Development (DfID)

United Nations Development Program

United Nations Office for Coordination of Humanitarian Affairs

United States Geographic Survey

ZAMBIA

Swedish International Development Cooperation Agency

PRIVATE SECTOR PARTNERS

AFRICA BUREAU, OFFICE OF SUSTAINABLE DEVELOPMENT

Ethiopian Airlines

FRUTIMEL

Jobera Flowers and Freshport

Les Vergers de Madagascar

MetroLux Flowers

Neofresh (Nelspruit)

Oceanfresh Seafoods

Royal van Zanten

SCRIMAD

Western Seed Company

GHANA

Geomar

KENYA

Agri-Outlets

Ideal Business

MALAWI

Beckwood dairy

Bunda Trading Ltd

BVM Enterprises

Corporate Governance Centre

GJJ Animal Health Ltd

Kakoma Estate Lakeshore Agro processors

Nachali farms

Ndatani Investments

Peacock Enterprises

Share Care Vet Ltd

Sheng Enterprises
Siparo Farm
Standard Bank
Transglobe Export Ltd

MALI

FENTRA
Fruitère du Lotio
GIE/AGSA
IB Negoce
Interagro
KeneYiriden
La Sikassoise
Sahel Fruit
Société Yaffa
Tropical Expression Mali (TEM)

MOZAMBIQUE

Banco Opportunidade de Mocambique
Funa & Flora International
Gabinete de Consulatoria e Apoi a Pequena Industria
New Horizons
Pimentos de Mocambique
Qualita Seed Company
Rift Valley Investors
V&M (trader)
VIDA GATT Enterprise and MOZAL

SOUTHERN AFRICA

Agribusiness in Sustainable Natural Plant Products

UGANDA

Ankole Coffeee processors
Balawori Cotton Ginnery
Balton Uganda
Bestlines Ltd
Bon Holdings Ltd
C.N. Cotton Ltd
Charity for Rural development (CHARORD)
COPCOT (E.A) Ltd
Dunavant Uganda Ltd
Ecomax
Ibero (Uganda) Ltd
Kapchorwa Commerical Farmers Association
Kawacom (U) Ltd
Kyagalanyi Coffee Ltd
Main Traders Ltd
Mukwano A.K. Oils & Fats
Mutuma Commercial Agencies
NKG Coffee Alliance
North Bukedi Cotton
Northern Uganda Organic Processors & Producers Association
Nuvita
Nyakatonzi Co-operative Company
Olam Uganda Ltd
Pearl Flowers Ltd
Pramkh Agro Industries
Rafiki Cotton Industry
Rwenzori Vanilla Associoation
Sanyu agro Industries
Savannah Commodities Ltd
SON Fish Farm
South Base Agro Industries
Sunrise commodities & Millers Ltd
Support Organization for Micro Enterprises Development
Transcultural Psychosocial Organization (TPO)
UgaChick Poultry Breeders
Ugacof ltd
Uganda Breweries
Uganda Crop Industries
Uganda Fishnet Manufacturers
Upland Rice Millers Ltd
Vovo enterprises
Western Cotton Company

WEST AFRICA

Agro inputs dealers

Busy Lab

Coffee and Cacao Exchange

INTERFACE

REGIONAL ORGANIZATIONS

AFRICA BUREAU, OFFICE OF SUSTAINABLE DEVELOPMENT

Africa Rice Center

African Economic Research Consortium (AERC)

African Epidemiology Network (AFENET)

African Union

African Union - IBAR

African Union - Inter-African Phytosanitary Council (IAPSC)

Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)

Common Market for Eastern and Southern African (COMESA)

Conference of Ministers of Agriculture of West and Central Africa (CMA/AOC)

Council for the Development of Social Science Research in Africa (CODESRIA)

East Africa Pest Information Committee (EAPIC)

East African Community (EAC)

Economic Community of West African States (ECOWAS)

Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN)

Forum for Agricultural Research in Africa (FARA)

Inter-African Phytosanitary Council (IAPSC)

New Partnership for Africa's Development (NEPAD)

Permanent Interstate Committee for Drought Control in the Sahel (CILSS)

Southern African Development Community (SADC)

Southern African Farmers' Organization (SACAU)

United Nations Economic Commission for Africa (UNECA)

West African Farmers' Organization (ROPPA)

West and Central African Council for Agricultural Research and Development (CORAF)

EAST AFRICA

Common Market for Eastern and Southern African (COMESA)

KENYA

East African Grain Council (EAGC)

MALAWI

African Seed Trade Association (ASEMA)

MALI

African Seed Trade Association (ASEMA)

CORAF

Economic Community of West African States (ECOWAS)

FishAfrica

New Partnership for Africa's Development (NEPAD)

Permanent Interstate Committee for Drought Control in the Sahel (CILSS)

West African Seed Alliance (WASA)

SOUTHERN AFRICA

Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN)

South African Development Community Seed Security Network

UGANDA

East African Regional Programme and Research Network – Biotechnology

WEST AFRICA

Africa Meteo Center

Africa Rice Center

Agence Basin Niger

CORAF

Council of West and Central African States for Research and Agricultural Development

Economic and Monetary Community of Central African States

Economic Community of West African States (ECOWAS)

Permanent Interstate Committee for Drought Control in the Sahel (CILSS)

West African Economic and Monetary Union

West African Farmers' Organizations and Agricultural Producers' Network

ANNEX 2. IEHA OPERATING UNITS' 2008 ANNUAL REPORTS

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN GHANA, FY 2008

USAID's Initiative to End Hunger in Africa (IEHA) has provided additional budgetary and technical support to USAID in Ghana since 2004. The initiative has thus enabled USAID to positively impact the lives of more than 92,000 rural Ghanaian households by helping them to participate in Ghana's growing commercial agricultural sector and helped Ghanaian businesses to increase agricultural exports by approximately $30 million per year. Implementation of the program is based on a comprehensive and sustainable strategic approach to ending hunger in Ghana that targets increased agricultural productivity, an improved policy environment for agribusiness development, and increased opportunities for trade in agricultural commodities.

UNKNOWN

A cowpea farmer field school in Ghana

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

USAID/Ghana's focus on productivity in the agricultural sector, especially for smallholders, has been greatly expanded through participation in IEHA. USAID considers productivity to be the net value producers can gain from their resources, not just physical yield. Farmers are led through a process of productivity analysis that examines yield, costs, post harvest losses and marketing opportunities and the financial implications of each on profit per acre. The scope of commodities covered is considerable: maize, citrus, tomatoes, onions, voacanga and griffonia (medicinal plants), pineapple (fresh and processed), mango, papaya, Asian vegetables, cashews, and soy bean.

A common denominator for all activities is the mainstreaming of new technology and management approaches for productivity increases and commodity quality improvements. This contributes to deepening the link between the small farmer and the end market. The assistance includes putting in place Good Agricultural Practices (GAP) and the Global GAP certification scheme, which individually and combined serve as bases for

sustainable agriculture and are essential steps to participating in major export markets.

Assistance provided to increase productivity under IEHA during FY 2008 has led to the following major achievements:

- An improved variety of maize was disseminated via 281 demonstration sites. Revenue and profit per acre were doubled on these half acre sites; 9,692 farmers were trained during the minor season round (Sept – Jan) and 15,010 farmers were trained during the major season (March – Aug) demonstrations;
- Tomato production, based on the introduction of improved varieties and GAPS, resulted in mean yields that increased from an average of 60 crates (1.5 MT) per acre to 120+ crates (3.0 MT), significantly boosting farmer incomes and enabling them to face price drops in the event of oversupply by being able to supply industrial processing units;
- Fifteen drip irrigation sites were developed and are now operating for smallholder horticultural production. These sites are pilot sites that will serve as the basis for wider extension of this highly efficient technology;
- Fifty-two new agricultural technologies were introduced in FY 2008, making a total of 143 technologies extended to 12,661 farmers as a result of assistance from IEHA; and
- Seven new guides were added to a series of GAP training materials for the targeted commodities: *Organic Mango Production, Papaya Nursery and Farm Management, Papaya Pests and Disease Management, Papaya Harvest and Post-harvest Techniques, Papaya 1-ha Drip Irrigation Operations Guide, Vegetable 1-ha Drip Irrigation Operations Guide, and Family Drip Operations Guide.*

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

Ghana Strategic Support Program. IEHA's success in meeting its goal of ending hunger is dependent on a sound understanding of the growth and poverty dynamics of the national economy, macroeconomic challenges for agriculture and rural development, strengthening capacity in the Ministry of Food and Agriculture, as well as the policy environment that affects investment in the sectors that offer the best prospects for economic growth and pro-poor growth.

The IEHA-funded Ghana Strategic Support Program (GSSP) in FY 2008 continued to support the capacity-building effort of researchers, administrators, policymakers and members of the civil society to develop and implement agricultural and rural development strategies.

Significant progress has been made by GSSP in FY 2008 broadly in the area of policy research and capacity building; specific achievements in those areas are as follows.

GSSP undertook policy research in identifying knowledge gaps in policy debates, assembling of data to answer relevant questions and use of appropriate and creative policy analytical tools.

It facilitated a seminar held by MOFA for about 50 participants from government and the private and public sectors on a policy analysis matrix it developed for the examination of the social and private profitability of maize and rice under different systems and policy regimes.

In FY 2008, GSSP conducted research on the impact of decentralization and its impact on the delivery of services and poverty alleviation. GSSP also completed its analysis of public spending at the district level and the analysis of district performance in service delivery, which are due to be presented at a

policy forum. The spillover of this analysis is the dataset collected, which will assist in the analysis of the challenges and opportunities faced by local governments in providing public and infrastructure in rural areas.

GSSP significantly stepped up its policy research on the institutional aspects of rural development strategy-making in FY 2008 in response to client (Ministry of Food and Agriculture) demand. This included a detailed review of the expenditures and institutional capacity of the Ministry of Agriculture. The World Bank and CIDA used the resulting document as a trigger for their budget support.

GSSP has also enhanced its capacity building program on the supply side of skills and knowledge among policy analysts as well as building demand for same. GSSP has completed its efforts to strengthen the modeling-based policy analysis capability in government in 2008. Over 30 individuals were trained in Ghana and in South Africa, and an on-going modeling interest group was formed at the University of Cape Coast.

Ghana's quest to establish the requisite regulatory and policy framework and to build capacity in biosafety; i.e., for the generation and use of genetically modified products, has remained a key issue for enhancing economic growth, food security and poverty reduction. IEHA funds have propelled the Ghana Program for Biosafety Systems (PBS) over the last three years. Notable strides made under this project in FY 2008 include the following.

PBS facilitated a review of Ghana's draft biotechnology/biosafety law and presented it for stakeholders' consultation prior to submission to cabinet. In the interim a legislative instrument (LI) has been developed to facilitate the conduction of confined field trails, which was passed by Parliament as LI 1887 in May, 2008.

A training session was held for a Parliamentary Subcommittee group on subsidiary legislation made up of 20 members (19 male, 1 female) to inform their understanding on biosafety and biotechnology and their relationship to the LI.

The capacity of scientists, trial managers, and regulatory officials has been built through training, laying the foundation for conducting experimental field trials/ confined field trials (CFT), reviewing applications, and monitoring the trials.

A cross-section of stakeholders have been sensitized and informed about the issues of biotechnology and biosafety to inform their understanding and thus elicit voluntary cooperation and acceptance of the idea.

INCREASED AGRICULTURAL TRADE

With the assistance of IEHA, work is ongoing to integrate smallholder farmers into export-oriented value chains that can consistently meet market demands in quality, volume, efficient logistics, and price. A focus on market information and criteria for export is supported by training in good agricultural practices, testing of new varieties, and linkages to exporters. Additionally, the IEHA program has supported the development and application of grades and standards for several commodities. This has helped Ghana to achieve the following results:

- Export of horticultural products resulting from IEHA-funded assistance has increased by approximately $6.5 million over the past year, rising to roughly $38 million.
- Thirty-four GlobalGAP trainers were trained (24 at internal auditor level and 10 at lead assessor level), making a total of seventy-four individuals who have GlobalGAP trainer, internal auditor, or lead assessor credentials; ten pre-audit assessments were conducted for pineapple and mango; twenty-six firms and three smallholder producer associations have received GAP certification.

- Five commodity standards (griffonia, cashew, voacanga, mango, and okra) have been developed to date and approved by Ghana Standards Board; a private firm funded the printing of 3,000 mango standards posters for the entire industry.
- Two pilot mango inspections were carried out at private exporters' packhouses; Ghana Standards Board (GSB) and TIPCEE staff handled the training of packhouse staff and monitored the inspections program; and a database for the capture and analysis of quality inspection data was developed.
- A growing-supplier database has been developed to assist processors and exporters in sourcing products from local farms. A GIS database was created that links more than 8,000 farmers to exporters and processors. 1,300 outgrower mango farmers and an exporting group (four pineapple exporting nucleus firms) adopted the GIS system for production monitoring. One GIS platform was installed at the West Africa Seed Alliance (WASA). ADRA/Ghana was supported to map over 3,000 citrus farms. GIS mapping is a requirement for obtaining certification for export to Europe and for organic certification.
- Field-to-packhouse software was designed. This application is expected to improve efficiency of field data collection and analyses and also to improve traceability of exported pineapple to the plot from which it was harvested. Exporters view this application as critical to securing the smallholder supply base over the long term, given stringent traceability requirements.
- A menu-driven SMS/GPRS-based system was developed and piloted, which enables transfer of data between remote distribution points and a central control center (GPRS-enabled cell phone to database). Implications include rapid relay of scouting information, reduction in cost for extension services, and the ability to quickly analyze trends (e.g., fruit fly break out) across multiple farms..
- A Market Intelligence Report was produced to detail opportunities in the export horticulture industry. Reports were produced in collaboration with industry stakeholders and Government of Ghana agricultural and export agencies. Plans for transfer of this market information system to the export association were finalized.
- USAID assisted the Federation of Associations of Ghanaian Exporters (FAGE) to produce "Winning the Processing Game," which lays out the drivers of competitiveness for growing the export horticultural processing industry. This publication is targeted at Government of Ghana decision makers, potential investors, and key private sector producers and exporters.
- The third annual Exporters Directory was produced and distributed at key trade fairs to facilitate sourcing from Ghanaian producers.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN KENYA, FY 2008

USAID used FY 2007 IEHA resources to advance policy and institutional reforms to create an enabling environment for greater growth and to improve productivity and competitiveness in targeted value chains in order to increase incomes and food security for rural households. Kenya's food security and overall agricultural sector production were seriously affected by post-election disturbances in early 2008, which disrupted supply chains in Western Kenya, where most of Kenya's maize, wheat and dairy products are produced. Spiraling fertilizer and fuel prices further affected food production, resulting in higher food prices and adversely affecting consumers as well as the many smallholder farmers who are net buyers of maize. The Kenya Food Security Steering Group's July 2008 market study concluded that 2.5 to 4.0 million urban poor, pastoralists and marginal agricultural farmers were extremely food poor. However, USAID programs continued to register reasonable performance in FY 2008 as summarized below:

- Over 543,000 rural households benefited directly from USG assistance, representing a 10.7% increase from FY 2007. The number included 8,005 vulnerable households supported by the Title II sponsoring partners.
- About 490,000 individuals, of whom over 179,000 were female, received short-term agricultural sector productivity training, exceeding last year's result by 14%. Overall, women comprised 37% of all farmers who benefited from training, technical assistance, technology adoption and market development under USAID programs.
- USAID made available a total of 46 new technologies for transfer, including some technologies availed last year but extended to new areas in the reporting period, while another 28 were under research and field testing by USAID supported partners.
- The number of micro- and small enterprises (MSEs) receiving business development services (30% women) increased from 73,321 in 2007 to 74,326, just below the 75,000 target. The number of MSEs receiving finance was 6,687, exceeding the target of 4,500.

The Tegemeo Institute's biennial household income survey completed in November 2008 established that: 1) average productivity increased by 13% for maize and 15% for dairy products between 2006 and 2008; 2) average household income increased in the medium- and high-potential areas (where USAID programs are focused) by 14% between 2006 and 2008; 3) female-headed households grew their incomes more (19.4%) than male-headed households (13.9%); and 4) off-farm income as a share of total household income increased from 45% (2006) to 46% in 2008, reflecting moderate improvements in productivity and trade in the targeted commodities.

D. OTT

Processing avacados for export in Kenya: Oil will be extracted from avocados like these and then exported for use in cosmetics.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

In FY 2008, USAID programs addressed agricultural sector productivity and related issues in the dairy, maize and horticulture subsectors whose supply chains were disrupted by the post-election violence stemming from the December 2007 presidential election. A total of 63 new technologies and management practices were made available to smallholder farmers, and over 489,670 individuals, including 179,430 female farmers, received short-term agricultural sector productivity training. Of these farmers, over 408,000 adopted new technologies, an increase of 6% from 2007. Productivity was not advanced within the maize and dairy value chains as much as had been anticipated due to the multiple impacts of the crisis. In the dairy sector, USAID achieved a 19% increase in annual productivity against a target of 40%, and a 16% reduction in the cost of production compared to a target of 30%. During the year, USAID's new Kenya Dairy Sector Competitiveness Program (KDSCP) established a Dairy Task Force comprising representatives of all key stakeholders in the sector that is expected to lead overall dairy sector recovery and growth.

The crisis also had a serious impact on the maize subsector, where the average yield, targeted at 28 90-kg bags per acre, went down to 24 90-kg/bags per acre, short of target by 14%. However, due to enhanced project field presence and a 15% increase in the number of participating farmers (373,615), overall earnings of maize farmers increased from $206 million in FY 2007 to $232 million in FY 2008. The maize program introduced 15 new technologies and management practices from various companies and research institutions.

The horticultural subsector performed better overall than the maize and dairy subsectors. New crop-specific commercial production techniques for domestic and export crops were pioneered, increasing productivity by an average 59% (target was 12%) over 2007 and by an average of 15% over FY 2008 targets. USAID contributed to the overall impressive growth of the horticultural subsector by helping over 48,000 producers increase their gross annual sales by an average of $307 per grower, or a total incremental income of over $14.7 million.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

In FY 2008, USAID supported the analysis and advancement of three policy reforms under the umbrella of The Agricultural Sector Coordination Unit (ASCU) against a target of three, namely: the National Agricultural Research System (NARS) Policy, the Irrigation and Water Policy, and the Water Storage Policy. Another three policy reforms (target of three) presented for legislation in FY 2008 were: the Biosafety Bill, the Consolidated Agricultural Legislation Bill, and the revised Food and Nutrition Bill. During the year, two individuals (both female) received long-term advanced degree training relevant to the agricultural enabling environment in U.S. universities, against a target of two.

With USAID support, Tegemeo Institute continued to provide analytical guidance to the inter-ministerial Agricultural Sector Coordination Unit, which coordinates implementation of the Strategy for Revitalizing Agriculture (SRA). Following the post-election crisis, Tegemeo analyzed the impacts of disturbances on food security in the country and estimated the extent of loss in assets, in value of production and in terms of other livelihood measures. One key policy conclusion is that Kenya needs to strategize to use the prevailing high food prices to provide incentives to farmers, inducing a supply response. Tegemeo also assisted with a detailed stocktaking exercise to model the Kenyan economy as a step to move the Comprehensive Africa

Agricultural Development Program (CAADP) agenda forward and prepare for signature of a CAADP Compact by all stakeholders. The Government of Kenya continued to play an active role in moving the IEHA agenda forward. Its nascent "Kenya Vision 2030" strategy targets agriculture among the six priority sectors for increasing investment. During the November 2008 conference on the Strategy for Revitalizing Agriculture, the President called for an increase in the GoK FY 2008/09 budget for agriculture to 8% of the overall budget from 6.8% in FY 2007/08.

Under its Biotechnology/Biosafety program, USAID trained and sensitized key Parliamentary Committees on the Biosafety Bill. Consequently, the Bill received strong and consistent support from the Parliamentarians, which led to its smooth sailing in the first and second readings. The bill was finally enacted by Parliament in December 2008 and is now awaiting presidential ascent. USAID will support the development of regulations and continue to build the capacity of the eight regulatory agencies responsible for implementation of the new Act. USAID also provided technical and financial support for the Government of Kenya's newly launched Biotechnology Awareness ("BioAware") Strategy and will be playing an active role in expanding public outreach within the framework of BioAware.

INCREASED AGRICULTURAL TRADE

USAID's program continued to increase competitiveness and trade by addressing constraints within targeted commodity value chains. More than 48,000 smallholder producers of export vegetables were assisted to meet sanitary and phytosanitary standards for EU, Middle East and, to some extent, for U.S. markets. Technical assistance was provided to 37 companies to meet market requirements (against a target of 30), and several private sector partners were assisted to make new investments in fruit processing facilities and vegetable packhouses, which will create long-term and sustainable income for growers. Overall Kenya's horticultural export value increased by 28% to a record $1.018 billion as a result of favorable prices, increased value addition, and improving compliance with market standards.

USAID support to U.S. trade show participation contributed to an increase in Kenya-U.S. trade in horticultural products in 2008. Program-targeted subsectors (flowers, cashew and macadamia nut products), contributed more than 70% to the total export value of $8.64 million to the U.S. One product (green peas), in addition to the earlier two products (carrot and baby corn), was approved by USDA for entry into the U.S. market based on a successful pest risk analysis undertaken by the USAID-supported Kenya Plant Health Inspectorate Services (KEPHIS). Delivery of marketing and business development services (BDS) was provided by 91 private and public partners.

USAID provided technical support to the National Taskforce on Horticulture (NTH), which coordinates overall horticultural subsector development and advises GOK in its response to international regulations. This strengthened Kenya's reputation as a responsible trading partner on global markets. USAID also provided technical support to the NTH for the development of much-needed new urban wholesale markets, and construction of the markets is expected to commence in April 2009 as a result. In FY 2008, the total wholesale market value of domestic horticultural trade increased by 4% ($70 million) to $1.82 billion. It is estimated that smallholder producers contributed more than 90% of this increase and earned more than $460 million from the domestic market and $70 million from exported products, of which $18 million was new income over 2007. Overall, income earned by USAID's horticultural smallholder clients was 23% above target.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN MALAWI, FY 2008

This is Malawi's first full year as an IEHA country, and considerable success has been achieved supporting the Government of Malawi (GoM), smallholder farmers and the private sector to: increase productivity and income from agriculture; reduce food insecurity; strengthen commodity value chains; increase agricultural trading. The program built capacity to access markets, facilitated policy development, built the capacities of key agricultural technocrats, and supported a growing rural financial services sector.

In FY 2008 over 165,000 rural Malawian households[1] benefited from USG activities. This equates to indirect support for over 726,000 people (5.6% of the official population[2]). Program activities have been primarily directed in support of vulnerable rural smallholder farmers through: improved crop and seed production, crop diversification, introduction of new and improved technologies, support to specific commodity value chains (dairy, cotton, natural resource based products), and decentralized financial services.

Resourcing of USAID/Malawi Sustainable Economic Growth (SEG) activities has been in decline for three years, leading to a stratified program portfolio. In FY 2008 a large proportion of these resources came from Food for Peace (FFP) programming, and this trend is set to continue for the foreseeable future.

[1] Nearly 74,000 households are classified as vulnerable.
[2] 2008 Malawi Population and Housing Census.

MAJOR IEHA PROGRAM ACHIEVEMENTS AND IMPACT HIGHLIGHTS IN FY 2008

Dairy subsector. Support by USAID to the dairy value chain has significantly increased milk production and supply, created over 3,200 new jobs, and reduced the requirement for expensive imports. A commercial milk processor has linked with smallholder dairy farmers, supported by USAID partners and by September 2008 had received and processed a quarter of a million gallons of milk (achieving quality standards set by the Malawi Milk Act). The processor has also accepted management responsibility for deducting smallholder loan repayments from milk checks, thereby increasing access to micro-credit by members of the milk bulking groups. The processor now provides loans to selected smallholders, which is expected to further strengthen milk production and supply capacity.

LEVI MANDA/USAID

Because of the income Osman Mohammed generates from selling fruit, vegetables, and fish, he has become one of the wealthiest members of his rural community in Malawi.

Small business grants, matched with own capital and commercial loans, has allowed 14 SMEs to widen the agricultural retail and service industry. This has increased competition and customer choices for dairy products, i.e., specialist dairy feeds, veterinary medicines, and access to improved dairy cattle and financial services. Several SMEs also plan to diversify their products to supply a nascent aquaculture industry. An unplanned success was the provision of a popular dairy cow insurance plan to smallholders by a commercial insurance provider.

Title II - Food for Peace. Food for Peace (FFP) partners have supported nearly 74,000 smallholder households (60% women) to diversify their crop base, raise productivity (by access to 27 new productivity-enhancing technologies), produce and store certified seed, and raise household incomes. Income per household from agricultural activities alone (rainfed and irrigated) was calculated as $248[3], equating to at least $18.5 million of agricultural commodities produced. Over 2,000 village savings and loan groups deposited nearly $270,000 in FY 2008, exceeding targets by 180% and allowing members timely access to capital.

Natural resource products. Over 91,000 participating households have developed and supplied natural resource-based products, primarily honey, baobab, fish and coffee, into national and international markets, generating $1.29 million in revenue.

Financial services. With USAID assistance, the number of clients at four microfinance institutions has risen to 375,000 (31% women) with a $44 million savings portfolio. This is a 100% increase on FY 2008 targets and allowed smallholder clients timely access to finance for agricultural inputs. A $13 million Development Credit Authority (DCA) Loan Portfolio Guarantee (LPG) is operational in Malawi until 2014, targeting SMEs via commercial banks. By September 2008 the loan portfolio stood at $228,545, with loans made to seven enterprises. The DCA is currently being increasingly accessed by SMEs as media attention has engendered increased public knowledge of this facility.

Policy. Technical support from USAID has led to the lodging of two regulatory microfinance bills in the Ministry of Justice for review and tabling in Parliament.

The International Food Policy Research Institute (IFPRI) has assisted the GoM to enact legislation leading to the commercialization of GM crops. In addition IFPRI has developed the capacity of the National Biosafety Committee to draft GM policy and approve implementation of trials. Additionally IFPRI is in the process of setting up a Strategic Analysis for Knowledge Support System (SAKSS) policy unit to support the Agricultural Development Program (ADP) strategy within the Ministry of Agriculture. This will eventually lead to Malawi's achieving Comprehensive Africa Agricultural Development Program (CAADP) Compact status.

Capacity development. Six GoM employees are studying agricultural sector-related subjects at U.S. universities. A Malawian scientist has completed training in the U.S. on GM cotton breeding and will lead the planned Bt cotton trials.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

Dairy subsector. Support for the dairy value chain in Malawi has resulted in significant increases in: local milk production, processing, sale, and availability of dairy animals.

[3] Per capita GDP income of $284 is calculated by the Ministry of Economic Planning and Development. However this does not take into account a very skewed income distribution between the richest and poorest in society. The vulnerable farmers that are serviced by USAID partners are unlikely to meet this annual income.

Documented milk production is 2.78 million liters with revenue generated of $0.85 million. A regional dairy association supports 2,300 members in 22 milk bulking groups, owning approximately 685 pure-bred and 800 cross-bred dairy animals. The October 2008 dairy survey measured the average annual income of a dairy household as $1,880, which is an increase of $526 (39%) from the 2006 survey.

SMEs received 14 business grants, matched by own capital and commercial loans, valued at $2,154 million (segmented by: USAID 35%, own capital 47%, commercial loans 18%). In FY 2008 these SMEs achieved sales of over $100,000 of: improved animal feeds, veterinary services and pharmaceutical products, and dairy animals. In addition a commercial insurance provider has provided a new product, dairy cattle insurance, and 158 smallholders have policies to date.

Food for Peace. Over 74,000 smallholders (60% vulnerable women/child-headed households) have achieved an annual income from agriculture of $248 per household, equating to $18.4 million of commodities and revenue generated by and for project beneficiaries. This has been achieved by the provision of key inputs, capacity development, and the introduction of improved technologies to: improve and diversify crop and livestock production; facilitate aquaculture initiatives; improve business and marketing skills; develop small scale irrigation; establish village savings and loans clubs; facilitate access to financial services; increase access to agricultural inputs. Over 70,000 smallholders have produced and stored 1,000 tons of improved seed (groundnuts, soybeans, pigeon peas, rice, vegetables, sunflower) valued at nearly $600,000 in community seed banks. 1,026 Village Savings & Loans (V&SL) groups with 14,435 members have deposits totaling $269,871. This has become a viable avenue for members to access timely cash resources to assist in the development of business ventures and to increase access to agricultural inputs.

Natural resource management. The number of households adopting Community Based Natural Resource Management (CBNRM) practices is 91,062 (2,334 communities). Revenue generated from honey, aquaculture, mushroom, baobab and managed timber production was $1.29 million. In order to encourage further commercialization of NRM products (honey, baobab, aquaculture and mushroom spawn) 84 loans and 2 co-financing grants to SMEs have been issued, via two financial institutions, amounting to $709,982.

Financial services. Four institutions servicing smallholders (Opportunity International Bank Malawi (OIBM), Malawi Union of Savings and Credit, Foundation for International Community Assistance, and Pride Malawi) have a client base of over 375,000 (61% female) with savings deposits of $43.9 million. These are 100% increases on FY 2008 targets, allowing clients to finance agricultural inputs and other productive investments.

A Development Credit Authority (DCA) Loan Portfolio Guarantee for $13 million is operational until 2014 and guarantees loans that target agricultural SMEs. In FY 2008 the Standard Bank authorized seven loans in the poultry, timber, and dairy feed subsectors valued at $228,545. OIBM has also successfully negotiated access to the DCA for $2 million, and a further three commercial banks have expressed interest.

Research. The International Institute for Tropical Agriculture (IITA), working with Chancellor College, has facilitated a national survey of cassava brown streak disease, which causes significant economic losses. All survey samples are currently being processed and reporting is pending.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

Technical support has led to the lodging of two regulatory microfinance bills with the Ministry of Justice for review and tabling in Parliament. These bills are extremely important for smallholder-based agriculture, as they provide regulation in a largely unregulated financial services sector and will ensure that smallholders can gain secure access to credit and financing, e.g., for agricultural inputs. The two bills are the Financial Services and Microfinance Bills, which are umbrella laws for the financial services sector and legitimize the role of the Reserve Bank as the overall regulatory authority. The final document is under review by the Ministry of Justice, after which it will be tabled in Parliament.

The Financial Cooperatives Bill and Regulations is a separate and distinct bill for savings and credit cooperatives (SACCOs). It ensures that the legal authorities recognize their similarities to banks, microfinance institutions and cooperatives, yet allow for unique differences. The final document has been sent to the Ministry of Justice for final review and then tabling to Parliament.

IFPRI has had a pivotal role in technical and agricultural policy arenas in Malawi in FY 2008 Assisting the GoM to draft, present and successfully enact a law allowing for commercialization of GM crops;Strengthening the capacity of the National Biosafety Committee to comprehend and draft GM policy and approve implementation of GM trials; and

Developing a SAKSS policy unit within the ADP secretariat of the Ministry of Agriculture, which will provide evidence-based policy support and analysis to achieve the objectives of both the Malawi Growth and Development Strategy (MGDS) and the CAADP Compact.

INCREASED AGRICULTURAL TRADE

USAID partners facilitated the export of 90 tons of coffee valued at $381,270 to the U.S. In addition, attendance by Malawian agribusiness enterprises at the Gulf Food Show, Dubai, resulted in $1 million of export orders for spicy sauces, pigeon peas and daal.

INITIATIVE TO ELIMINATE HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN MALI, FY 2008

During FY 2008, the USAID/Mali Accelerated Economic Growth program launched an entirely new portfolio to better align with a severely reduced budget. Eight new implementing partners set targets to report on IEHA indicators. Numbers actually reported exceeded the targets for 10 of the 13 output indicators. In FY 2008 there was an emphasis on improving agricultural productivity through the dissemination and adoption of new technologies and a focus on the integration of programs to better share and leverage knowledge.

MAJOR IEHA PROGRAM ACHIEVEMENTS IN FY 2008

- 5,457 individuals (28% women) were trained in agricultural production and marketing practices;
- 3,885 households (79% considered vulnerable) benefited from agricultural interventions that increased and diversified food crop production and enhanced marketing opportunities;
- 74 new technologies were developed or field tested; 15 additional technologies were adopted by producers, leading to improved production and yield increase;
- 75 organizations (producers' organizations, water user associations, trade and business associations, and capacity building organizations) were strengthened;
- 28 women's organizations were trained in entrepreneurial skills that will enable them to diversify their livelihoods and increase their incomes; and
- 23 public-private partnerships were formed.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

FY 2008 was the year to transfer as many improved technologies as possible into the field and to smallholders. There were a wide variety of activities carried out to improve agricultural productivity, including dissemination of improved seed, assistance in efficient water management and irrigation, training in good agricultural practices, and assistance in the commercialization of products.

As a result of the transfer of seed of high-yielding varieties and improved production practices, FY 2008 sorghum yields doubled those of last year. Many farmers were aware of previous field testing of these methods and the high yields and profits to be achieved, and they were eager to be involved in these activities. A three-fold increase in the number of farmers adopting these new technologies is anticipated within two years.

UNKNOWN

Sorghum Producer Association

Improvements continue on pest-resistant tomato seed, which will greatly increase the productivity of Malian smallholders and, hence, increase incomes. In FY 2008, international seed companies and research institutions provided 31 tomato cultivars to the World Vegetable Center (AVRDC) situated in Mali. Concurrently, the Malian researchers sent 23 tomato cultivars for viral resistance testing to a U.S. university.

Foundation seed made progress in Mali, as three new wheat varieties (Diré12, Diré 15, Diré16) were developed with USAID/Mali support by the Ministry of Agriculture/Institut d'Economie Rural/Unite de Semence Base.

Interestingly, many of the new technologies made available in FY 2008 were due to previous technological advances achieved with USAID/Mali support under past grants and contracts. In particular sorghum, millet, and foundation seed developments can be attributed to earlier USAID-supported academic training and short-term training of host-country (IER) scientists.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

In FY 2008, there were three advances related to Mali's seed policies that will encourage private seed production and regional trade. The first advance is a document on the national seed policy, which was not previously available. In FY 2008 the document was elaborated upon and made ready to be approved by the Government to conform to and serve as the legislative text for the Agriculture Law.

The second advance is with respect to the 1995 law instituting the rules of production, quality control, certification and commercialization of vegetable and plant seeds (Mali N°95 – 052). Previously the law had not been adapted to the actual context of Mali's decentralization and the involvement of the private sector. The law was analyzed in FY 2008 with support from USAID/Mali, and the result is a law with text adapted to be harmonized with CEDEAO, UEMOA and CILSS, and 16 other countries in the sub-region.

The third advance to improve the seed policy environment was the USAID/Mali-supported workshop in Bamako for the 17 countries to harmonize their seed criteria. The cataloging of seed varieties will encourage the participation of the private sector in the production and supply of seed.

INCREASED AGRICULTURAL TRADE

During FY 2008, USAID/Mali channeled support to agricultural trade by focusing on identifying and enhancing market opportunities. For example with sorghum and millet, input credits were provided to producers for purchasing fertilizer and high-yielding varieties of seed. The input credits are repaid to the farmers' association in the form of grain at harvest; revenues from the sales of the grain subsequently become a rotating fund for input purchases and inventory credit. The farmers' associations hold the grain past harvest time until prices increase, and they collectively sell a larger quantity of uniform-quality grain that brings a premium price from processors.

Training and consultation during this past year was provided to rice producer groups in order to access financial services on a sustainable basis. Subsequently, 24 farmer organizations were able to obtain loans in four regions for a total of $212,000 in funding. Of the 24 groups, five (21%) were women's groups who received financial assistance with marketing 28 tons of paddy rice and 22 tons of improved NERICA seed.

To increase mango sales, three exporters and 22 traders received $286,000 in funding

in FY 2008 due to assistance provided by USAID/Mali. This resulted in a 150% sales volume increase from 4.5 tons in 2007 to 11.2 tons 2008. Approximately 45 tons of the mangoes were marketed locally in northern Mali by a women's cooperative.

To improve intra-regional trade, a series of activities strengthened the capacity of actors who conduct business in the sub-regional markets during FY 2008. Potatoes had the greatest sales increase (27%), rising from 1,264 tons in 2007 to 1,603 tons in 2008.

New technologies began in FY 2008 to increase livestock market information. An SMS real-time market monitoring system was put into place at six major markets in Mali. Four of the markets (Gao, Konna, Gossi, and Kidal) are in the northern regions of Mali, where livestock production is the main agricultural activity.

Small enterprise development groups were formed and trained. After these groups, primarily women entrepreneurs, have amassed enough savings, the funds will be used to provide small loans to group members to reinvest in their businesses.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN MOZAMBIQUE, FY 2008

USAID/Mozambique's agricultural and rural income activities continue to suffer from reduced funding levels, a situation that could seriously jeopardize the Mission's ongoing contributions to IEHA objectives in Mozambique. Agricultural and rural income activities, managed under the new office of Agriculture, Trade and Business (or ATB, a merging of the Rural Incomes and Trade offices) have suffered significant and consistent decreases in funding starting with FY 2005; funding levels in FY 2008 remain near the low of last year (and at less than 45% of the 2005 level).

FUNDING LEVELS (MILLIONS OF USD)

Since 2005, the ATB team has been forced to reduce the breadth and depth of the agricultural food security and growth programs supporting IEHA. With the highly integrated nature of the activities, even targeted cuts in one area (e.g., technology development) can significantly impact programs in other areas (e.g., those focused on production and trade). Specific impacts on Mission activities include: no funding of new competitive applied agricultural research grants; a major decrease in sector policy analysis, planning and monitoring; a scaling back of agricultural input (seed/fertilizer) market development; and a reduction in support for staple food crop technology generation and transfer.

More generally, funding constraints have significantly impaired the Mission's ability to support the Government of Mozambique's new Food Action Plan, a three-year plan for reducing Mozambique's dependency on staple food imports that was developed in response to the recent escalation in global food prices. The Plan is largely focused on those commodities that the Mission is already supporting due to their critical role in food security, including maize, cassava, oilseeds, potato, and poultry. USAID is recognized by the GoM as the lead donor agency for several areas of the Food Action Plan, and USAID funding cuts undermine the GoM's ability to attain the Plan's overall objectives.

It should also be noted that in FY 2008, a major segment of the Mission's agricultural activities, those supported as part of the Title II-funded Development Assistance Programs (DAPs), closed out mid-year at the end of a limited extension.

Despite the ongoing funding shortfalls, the Mission continues to achieve significant results in support of IEHA objectives, with prior-year investments and current activities continuing to produce agricultural growth.

Finally, it should be noted that ATB reporting on IEHA results continues to benefit from improvements in the reporting framework. A major revision to data collection and

ANNEX 2 TABLE 1 FUNDING LEVELS (USD$ MILLION)

Fiscal Year	IEHA Funding	Other Ag/EG funding	Total Available
2003	$3.9	$9.7	$13.6
2004	$6.0	$9.8	$15.8
2005	$6.9	$3.8	$10.7
2006	$6.2	$2.2	$8.4
2007	$6.0	$0	$6.0
2008	$3.585	$3.165	$6.75

reporting formats in FY2007 has significantly reduced the administrative burden on the Mission and partners, and the automated process by which data are collected and aggregated across partners has dramatically reduced the likelihood of incomplete or incorrect data entry. A Mission-funded consultant worked closely with the IEHA team from Abt Associates, providing feedback on the limits to the old system with an eye toward simplifying the data-gathering process and yielding improved partner responsiveness and a more robust dataset.

In FY 2008, USG-funded agricultural and rural enterprise activities were consistent with the overall IEHA objective of rapidly and sustainably increasing agricultural growth and rural incomes. IEHA funding allowed the USG to support activities to:

- Identify and disseminate improved technologies and techniques to increase agricultural productivity in key, hunger and poverty reducing crops;
- Assist with assessments and advocacy supporting the policy reform critical to developing the great potential of Mozambique's agricultural sector; and
- Improve conditions for agribusiness and market development, particularly for small-scale rural farmers,

These activities were able to benefit more than 300,000 rural households in 2008.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

FY 2008 saw a major shift in the Mission's agricultural productivity support as the Title II-funded cooperating sponsors involved in DAPs completed their current activities while proposals for new Multi-year Assistance Programs (MYAPs) were evaluated and grants awarded. Support to the DAP partners had been extended through the second quarter of FY 2008, allowing the partners to consolidate gains and close out current activities as required. The Mission is currently supporting the conduct of a comprehensive impact survey to fully document the results of the DAP activities, including those achieved in conjunction with related IEHA-funded programs (e.g., those that generated and adapted technologies to be disseminated by the DAP partners).

Four new MYAP agreements were signed at the end of FY 2008. Focused largely in the provinces of Zambezia and Nampula, the MYAP activities capitalize on current achievements in those areas by offering a new set of activities that integrate support for agricultural productivity with support for the legalization and formation of farmers' associations, unions and federations. Under the MYAPs, agricultural activities will also be introduced in a limited number of districts

SUZANNE POLAND/USAID

Ana Antonio of Mozambique holds a basket with squash leaves that she will dry for later use. These leaves add protein and vitamins, especially vitamin A, to her children's porridge.

in the province of Cabo Delgado.

The Mission continued to support capacity building activities at the Mozambican National Institute for Agricultural Research (IIAM), including technical training for scientists and economists for the conduct of profitability evaluations of different agricultural technologies. Activities also targeted development of other essential capacities, including priority setting, technology adoption studies, and impact assessments of agricultural research.

IEHA funding was provided to three international agricultural research centers in FY 2008 to support testing of new technologies in station and farm trials, primarily for staple food crops, and to work with field partners, including private farmers under contract, to multiply improved seeds and planting material. On-farm trials provided practical testing for new technologies, ensuring that farm conditions such as labor, inputs, climate, and market access are all realistic. Key technologies supported under this activity include the development and/or dissemination of brown streak virus-resistant cassava planting material, improved soybean varieties, and Irish potato and vitamin A-enriched orange-fleshed sweet potato planting material.

Over the past year, the Potato Project has identified several new varieties of Irish potato for dissemination, selected from ongoing multi-location trials. The multiplication process of these candidate varieties is to be done in FY 2008/2009. More generally, the project continues to increase the availability of high-quality potato planting material to participating farmers, and lab and screen house technicians at IIAM have continued to use acquired techniques for in-vitro multiplication of potato, as well as screen house production techniques. Orange-fleshed sweet potato is increasingly viewed as a cash crop. Rural households are using it in both weaning foods and to improve nutrition of older children. Flour containing 38% sweet potato has been successfully used in bread making (to reduce costly wheat imports) in trial locations with high consumer acceptance.

Mission support for the reintroduction of soybeans as a cultivated crop has also been successful, with over 2,000 farmers planting more than 1,200 hectares of soybeans. Just over 1,000 tons of soybeans worth $772,000 USD were harvested this year.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

While funding constraints preclude the implementation of dedicated policy programs, the Mission has nonetheless been successful in achieving substantive policy reform in support of agricultural development in Mozambique. Mission support for targeted assessments and advocacy was responsible for a significant liberalization of the fertilizer sector. Key reforms within the sector eliminated a 2.5 % tariff on fertilizer imports, finally allowed private companies to re-export unused fertilizer, and initiated the development of a "smart" subsidy program to increase access to and use of improved seed and fertilizer (for implementation in 2009). Similar support has led the Government of the Republic of Mozambique (GRM) to recognize that the lack of affordable credit is a critical constraint to achieving food security and accelerated agriculture-led economic growth. As a result, the GRM has agreed to commit $20 million of local currency to match a planned $10 million in equity capital from the private sector (international and Mozambican) for the establishment a new private financial institution to provide credit to agribusiness.

More generally, Mission funding continued to support technical assistance to the Ministry of Agriculture for conducting and analyzing data from regular household income surveys. Data

from these surveys continue to inform an ever-increasing set of stakeholders, including the media and civil society, on measures that may improve the contribution of agriculture to the poverty reduction agenda, and are helping to establish the ongoing impact of mortality and morbidity associated with HIV/AIDS on food security and agricultural growth.

INCREASED AGRICULTURAL TRADE

The IEHA-funded business development services (BDS) program continues to produce excellent results. Over the past year, association and enterprise sales more than exceeded expectations, achieving as much as 133% of 2008 targets. At the same time, farmers' associations continue to grow, with a 62% increase in membership over the past year. Importantly, women represent nearly half of the current association members, making up 49% of the total membership as of the last reporting quarter.

The BDS program continues to support the re-introduction of soybean production in Mozambique to produce local animal feed as part of a larger effort to revitalize the country's poultry sector; costly imported feed has been identified as the major impediment to growth in the poultry sector. As a result of this effort, in FY 2008 more than 1,200 hectares were under cultivation, producing more than 1,000 tons of soybeans (three times the production of 2007). In turn, this has helped to make farmers' access to animal feed more stable and flexible, allowing them to purchase feed as needed. Not surprisingly, the poultry sector has seen dramatic growth over the past three years, with a more than 400% increase in sales of locally produced birds sold in 2008 as compared to 2004 (30 million versus 7 million respectively), when the program started. Private-sector interest in the program led two of Mozambique's largest importers of animal feed to invest their own resources to acquire processing equipment in FY 2007, providing a clear vote of confidence that soybean production and processing is ready to take off in Mozambique. Continued growth of soybean production is expected to significantly reduce the cost of animal feed, which in turn will improve poultry sector competitiveness.

In the confectionary nut value chain, IEHA funding has supported efforts to improve the quality of cashew production, or outturn (a standardized measure of good kernels in one kilogram of raw nuts). As part of this effort, USAID/Mozambique's BDS partner has supported training for farmers to improve harvesting techniques and has also helped replanting schemes to replace older trees. Another critical component of this program has been training of 290 individuals in the methods for sampling and calculating outturn, helping farmers to improve the quality of their cashew production and allowing them to market their produce as a quality product. In FY 2008, more than 2,600 tons of cashews were sold for international trade, down slightly from 2007, though with an increase in the value of exports of just over 5%.

The IKURU/UniLurio University aflatoxin lab, with USAID support, has been functional since May and has conducted nearly three hundred tests of groundnuts (peanuts). These tests have been conducted to examine aflatoxin contamination in current groundnut stocks, as well as to assess the impact of Aflaguard in preventing the spread of aflatoxin. One important finding has been that aflatoxin contamination is significantly higher in warehouse sites than in the field, suggesting that improvements to storage facilities will greatly reduce contamination of groundnut stocks. Aflatoxin contamination restricts exports of groundnuts and is also a significant food safety concern for domestic consumption of groundnuts.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN UGANDA, FY 2008

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

With agriculture contributing 85 percent of export earnings and providing more than 70 percent of national employment, low agricultural growth rates continue to be a major challenge to addressing widespread poverty and hunger in rural Uganda. Efforts to reduce poverty and hunger are further frustrated by rising population growth rates. In Northern Uganda, this situation is compounded by failure of the Government of Uganda (GOU) and the Lord's Resistance Army to sign the long-awaited Peace Agreement to end the 22-year old civil conflict. This has led to the slowed return of Internally Displaced Persons (IDPs) to their original homes and rendered them more vulnerable to food insecurity.

USAID/Uganda's agricultural sector productivity interventions continued to focus on reducing food insecurity and widespread poverty by addressing constraints along the entire commodity chain for targeted crops. More than 380,000 households (over 23,000 of them vulnerable) benefited from agricultural interventions that increased and diversified food crop production, enhanced market access, and increased food security; about 295,000 men and 135,000 women were trained in improved agricultural technologies and/or management practices; and 2,600 farmer-based organizations were supported, particularly in strengthening their capacity to 1) understand and contribute to good governance in matters affecting their operations; and 2) access business development services for their members.

In terms of increasing agricultural productivity, significant improvements in perennial crops (for example, banana, coffee, and vanilla) were realized from a combination of technology adoption, good weather, and better world market prices. During the October 2007-September 2008 coffee year, Uganda's coffee exports totalled 3.2 million 60-kg bags (equivalent to 192,675 tons), valued at $388 million. This represents an overall increase of nearly 19% and 51% in volume and value, respectively, over 2006/07. Yield per tree results from demonstrations and adopters as confirmed by sentinel site data have shown yields of 3.0 kg of kiboko per tree for Robusta and 1.0 kg of parchment per tree equivalent for Arabica, which are 2-4 times the traditional yields. The USAID technology transfer model has also made it easier for corporate partners and associated farmers to meet a number of certification programs including Utz Kapeh, 4C, C.A.F.E Practices and FairTrade. The certification benefits, which allow for traceability and meet consumer demands, are enormous. They include, among others, a premium to farmers of up to USh 300 per kg, improved human

M. HERRICK/CHEMONICS

Maize seed from Uganda

and environmental health, and transparency and accountability in the production chain.

USAID/Uganda's agricultural sector productivity interventions under APEP, and to a limited extent under the Title II MYAPs and the FISH activities, maintained a demonstration approach that essentially emphasizes "a see and practice" concept. This made it possible for the farmers to see the benefits of adopting improved practices. Through field attendance, farmers observed and decided to put into practice what they observed. The benefits of adopting improved management practices continued to be realized, as field observations and farmer responses indicated increased yields and improved quality. The drive to increase productivity also catalyzed the different actors involved in the production/supply chain. USAID concentrated on consolidating the effectiveness of the input supply system and as a result, the number of rural input stockists increased bringing inputs and services nearer to the farmers.

USAID interventions continued to focus on agricultural research as a key component of agriculture sector productivity. There was significant progress in farm trials aimed at refining banana/coffee soil fertility regimes; evaluating the performance of banana hybrids that have been incorporated with resistance to black sigatoka and nematodes; developing wilt-resistant robusta coffee varieties; developing IPM packages for Arabica coffee; and developing IPM technology for controlling termites in rice fields. In many of these field trials, preliminary findings showed encouraging results and are awaiting dissemination after the varieties/technology packages have been certified and are released by the national authorities. USAID, in partnership with the Northern Uganda Organic Producers and Processors Association (NUOPPA), also concluded the first season of research trials to refine technology packages for the production of organic cotton. This research is particularly important for Northern Uganda, where agricultural productivity increases are necessary to ensure food security and re-activate economic activity.

In northern Uganda, agricultural productivity activities focused on reducing food insecurity for IDPs and other populations affected by the end of the 22-year civil conflict. Food for Peace funded MYAP interventions aimed at increasing agricultural yields and reducing storage losses by increasing the use of improved production and post-harvest handling technologies and practices. A new GDA with Heifer Project International (HPI) in the dairy sector provided forty oxen to a group of women to help open up land. The group also received the associated ploughs and carts. This effort is expected to contribute tremendously to increased agricultural productivity and production. Other activities in Northern Uganda focused mainly on improving productions systems for income-generating crops (sunflower, upland rice, sesame, and cotton) and linking producers to markets. Through another GDA, USAID and the Dunavant Cotton Company provided producers with agricultural inputs and training to increase cotton and food crop production and ensured a guaranteed market at an agreed-upon price for all the cotton they produce. In FY 2008, the Dunavant GDA activity benefited about 7,500 farmers growing multiple food crops alongside their organic cotton enterprises, thereby impacting food security and incomes. In sum, IEHA related activities in northern Uganda helped increase food availability, accessibility and utilization.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

USAID continued to directly or indirectly support policy and regulatory reform through dialogue. USAID continued to provide expert opinion and guidance and facilitated industry

and public sector (donor and GOU) dialogue to address key policy issues affecting agricultural productivity. With USAID support, the Uganda Biotechnology-Biosafety policy was passed by Uganda cabinet in March, 2008, and the process of establishing the rules and regulations (the Bill) governing the use of biotechnology tools started.

USAID's collaboration with the Uganda Commodity Exchange, DANIDA-funded ASPSII and Enterprise Uganda resulted in the adoption of quality standards by rice processing firms and several rice traders, and this led to improved quality of paddy, as well as that of milled rice sold in the market. USAID also provided valuable information and technical guidance to the National Planning Authority for the consultancy on the design of a national rice strategy.

INCREASED AGRICULTURAL TRADE

USAID activities continued to focus on strengthening producer-buyer linkages and maintained collaboration with the national associations that boost production and the quality of products. Producer organizations (POs) were assisted to establish strong and lasting relationships with commodity buyers, and some POs were able to engage in bulk marketing. They thereby have become business-oriented farmer organizations benefiting from increased production and profits, greater knowledge of the market, a guaranteed buyer and improved production techniques. In turn the buyers benefited from an increased supply of good quality products, more reliable supply, greater loyalty of farmers, and greater operational efficiency.

The volumes and value traded and USAID's role and contribution are shown in Annex 2 - Table 2 below. For cotton, sunflower, vanilla, and flowers, support provided by USAID covered the entire industry through its Strategic Activities Fund.

ANNEX 2 TABLE 2 TRADE IN AGRICULTURAL COMMODITIES SUPPORTED BY USAID

Crop	Volume Traded (tons)		Value ($ million)		Support Provided
	FY '07	FY '08	FY '07	FY '08	
Cotton	23,096	18,990	25.400	15.698	SAF to 13 of the ginners in the country
Coffee	162,255	192,681	257.041	388.413	SAF to 9 leading exporters, contributing over 70% of coffee exports TA to coffee processors and POs/ DCs
Sunflower	28,100	22,750	5.620	6.090	SAF to two leading buyers/processors
Vanilla (cured)	277	290	4.845	5.065	SAF to vanilla association VANEX
Flowers	6,631	6,3,73	31.610	30.440	SAF to floricultural association UFEA TA for middle level managers in the industry
TOTAL			324.516	445.706	

Good agronomic practices coupled with increased access to markets can dramatically improve farmers' productivity and standard of living.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN ZAMBIA, FY 2008

IEHA resources in Zambia are used to increase private sector competitiveness in agriculture. Focus areas include: access to markets; use of production and value-addition technologies; access to business development services; and enhanced enabling environment for growth. In a year affected by the death of President Mwanawasa and subsequent presidential by-elections, IEHA-supported programs performed well—meeting or exceeding most of their FY 2008 targets.

Major IEHA Program Achievements and Impact Highlights in FY 2008

- IEHA programs assisted the development of a mass-payment system for the out-grower industry using a groundbreaking e-transaction system based on mobile technology. Now registered with the Bank of Zambia, the system will transform the way farmers and rural business access capital when it becomes fully operational in 2009.
- IEHA assistance led to a dramatic increase in commercial milk processors investment in smallholder-supplied milk, with one major processor recording a 100% increase in purchases from smallholders.
- IEHA funds supported the modernization of the Zambian Agriculture Commodities Exchange (ZAMACE), which completed $8.5m of contracts for 22,200 tons of commodities in FY 2008. Additionally, ZAMACE laid the groundwork for the first-ever World Food Program commodity purchase on the African continent.
- In FY 2008, IEHA programs supported significant new smallholder investments in productivity-enhancing products and services at household-level with following results:
  - Fifty-percent increase in yields by farmers adopting new input and service technologies.
  - Fifty-percent decrease in cost of inputs procured through in-community, commissioned-agent networks.
  - Forty-percent decrease in mortality, and 70% decrease in morbidity among cattle covered by the new private veterinary outreach program, the Herd Health Program.

Promoted technologies included conservation farming, modernized honey production, innovative herd health management techniques, private sector input provision, tillage, and spraying. The agricultural retail industry yielded significant dividends, with thirteen clients managing a combined network of agent and spray service providers totaling 1,400 persons.

- IEHA co-sponsored Zambian firm attendance at trade shows that produced $100,000 in direct orders, and led to potential business prospects worth $3 million.

Activities under the three IEHA intermediate results (IRs) are interconnected and mutually supportive. The following sections describe the performance of IEHA-funded activities under the three IRs.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

USAID's production, finance and technology-related activities contributed to the adoption of improved technologies, increased competitiveness and greater market access for over 120,000 farm families. In addition to working to strengthen weak links in selected value chains (cotton, livestock, dairy, honey, maize, horticulture, paprika/chilies, and community tourism), USAID focused on addressing systemic weaknesses in cross-cutting service delivery industries.

These programs addressed systemic constraints to competitiveness and market access by fostering the development of an in-community service sector around commercial land preparation, spraying services, agricultural input provision, veterinary services, financial services, and private sector extension services, leading to fundamental changes in the way the agricultural service delivery industry markets and distributes to small farmers. As a result, rural communities are now connected commercially to a range of services and markets, and to more equitable commercial output markets.

Agricultural retail and service industry. A robust agricultural retail sector—with strong links with the smallholder market—is critical to broad-based agricultural development in Zambia. In their two years, these activities demonstrated that the in-community agent model acted as an efficient and profitable business model for engaging the smallholder market for agricultural inputs. The success of the community-agent model became evident during FY 2008, with rapidly escalating investment by multiple retail firms in developing and expanding their agent networks, and the evolution of a 'sub-agent' network as a means to further expand the commercial outreach of the firms.

Consequently, the work evolved to focus on the lead agricultural input distribution companies and their ability to successfully manage this new business model. The change in approach focused on forward planning and innovations to increase competitiveness. USAID invested significant resources to mentor firms to develop their management capacity. One major innovation was the evolution of solutions to key productivity constraints, particularly through the development of a spray service platform. The industry took tremendous strides toward this goal—through unprecedented industry cooperation—to define standards and a certification process for the spray service providers affiliated to the firms. The project introduced a further innovation, the overlaying of promotional and marketing activities into a wide range of cultural events and social activities that take place in rural areas to significantly expand the outreach of the firms and their interaction with their potential client base.

Closely allied to the retail industry is the development of the fledgling tillage service industry. In response to one of the key constraints to smallholder productivity, that of late and poorly executed land preparation, USAID worked with the agricultural retail industry to develop the necessary skills for commercial ripping services. Through these efforts, major strides were made in the adoption of early land preparation technologies in selected regions, which will impact on productivity during the next agricultural season. Earlier efforts by NGOs to promote conservation farming technologies—through farmer training—have had limited effect, as it has been demonstrated that such technology adoption requires various levels of commercial incentives, from the retailers' promoting and selling equipment to the service provider's pushing adoption through the sale of services.

Livestock subsector. USAID's livestock activities focused primarily on establishing private veterinary services as the first step to achieving broader industry competitiveness. Over the last ten years, the wider livestock subsector—smallholders comprise 70% of production—has not been able to access effective disease management systems, largely due to the long-term demise of an effective public platform. To counter this constraint and to fill the void left by the withdrawal of the public sector, USAID built a sustainable and commercially viable system for providing preventive veterinary services to smallholders.

USAID's veterinary industry initiatives continue to move forward, though growth is constrained by supply-side limitations. The number of qualified veterinarians is limited, and increasing the supply is a slow process, though promising signs are emerging. In FY 2008, the project demonstrated success through three major shifts in the veterinary industry. First, the subsector is witnessing the emergence of an aggressive class of private veterinarians entering, expanding, and innovating to meet the demands of the smallholder market. Initial entrants into the private veterinary services market operated on a semi-commercial basis; they drove the initial growth phase, but did not have the numbers to achieve scale. The next phase of maturity and growth will come from new investment by private veterinarians. Second, there is a growing alliance between the more substantial agricultural retail sector and the private veterinarians, which has the potential to rapidly scale up the commercial provision of basic livestock services, in the absence of a big private veterinary presence in rural areas. Finally, there is an increasing government commitment to capacity building that focuses its role on providing oversight and facilitation, and not directly competing with or sabotaging the efforts of private service providers.

Cotton subsector. Zambia's cotton industry suffered another miserable growing season in FY 2008. The combination of adverse growing conditions, particularly in flood-prone Southern Province, and the destructive buying activities of some of the new entrants to the industry took a toll on overall productivity. Overall, production increased 8% during the 2007-2008 season (95,000 tons of seed cotton).

Pirate buying[1] undermined the sector's two main players, Dunavant and Cargill, damaging all industry participants. The continued poor profitability of the industry leaders is a significant cause for concern, and requires the industry to enhance inter-firm collaboration.

Dairy subsector. In FY 2008, the dairy subsector substantially expanded the utilization of smallholder-produced milk products. Greater engagement occurred on a number of fronts, and in particular in the willingness of commercial input and service providers to provide embedded extension services. As a result, strategic alliances emerged within the commercial sector, with a determined effort to address low dairy productivity and competitiveness. Additionally, for the first time milk processors are seeking to secure the supply of milk from their smallholder suppliers by providing regular milk collection and transport services, injecting sufficient output market confidence in the smallholder dairy community. Increased prices of milk products expanded the profit margins at farm level, thus stimulating further smallholder investment.

Finance. Limited competition and low-risk profits from the large corporate market and government bonds reduced the financial sector's appetite for new business lending, particularly at the lower end of the client market. The industry still suffers

[1] The cotton industry in Zambia is centered around pre-financing farmers to grow the crop by the ginning companies. The companies provide, at great cost, inputs and extension to the farmers (called pre-financing) and expect to buy the crop they pre-finance. Some of the new entrants simply wait until harvest time and buy the crop from farmers pre-financed by other firms, which is called "pirate buying." The prices these entrants offer is normally higher than the agreed price during pre-financing negotiations. The new entrants can afford to pay a higher price because they have not incurred any earlier costs of significance. The phenomenon leaves the firms that pre-financed the crop with very little to buy and consequently little to sell and subsequently losses. The practice of pirating is more prevalent among the firms that entered the industry much later than the immediate privatization of the cotton industry in the early 1990s. The firms that entered in the early nineties are generally referred to as the industry leaders.

from a lack of experienced credit analysts as a result of years of reliance on treasury bills. Using a DCA facility, USAID signed a $5 million DCA agreement with African Banking Cooperation (ABC), while another one, valued at $20 million, is being finalized with Zambia National Commercial Bank (ZANACO). These DCA facilities will increase commercial lending for micro-enterprises. In FY 2009, USAID will seek to unveil a new leasing program for agricultural equipment that could spur further competition in the sector. USAID is also currently exploring an innovative model that will allow SMEs to access the Zambian bond market.

Sustainable natural resource management and the environment. USAID's efforts in this area focus on increasing competitiveness in the honey export industry, which engages about 10,000 producers in the remote North Western Province. Following a disastrous season in 2006-2007 (brought about by a combination of a strong local currency and a very poor tree flower crop), honey producers enjoyed a considerably larger 2007-2008 harvest. One good harvest, however, does not negate the need for the industry to enhance its production and processing efficiency.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

USAID is one of three lead agricultural sector donors in Zambia (together with Sweden and the World Bank) and engages in policy dialogue with the Zambian government. USAID chaired the agricultural sector donor group and is active in consultations with COMESA on the way forward for CAADP in Zambia.

With its regional collaborators, the Food Security Research Project (FSRP) identified strategic options for Zambia to accelerate agricultural growth and contribute to the Government of Zambia's target of 6% annual growth. FSRP made significant contributions to agricultural policy design and implementation through its analytical work.

Support for Concrete Policy Change. In collaboration with the Cotton Ginners' Association, the Cotton Association of Zambia, and the Ministry of Agriculture and Cooperatives (MACO), FRSP assisted sector stakeholders in passing the revised Cotton Act. As a result, the Government established an interim Cotton Board.

Using the Central Statistical Office (CSO)/ MACO/FRSP supplemental survey data, and using time series of CSO/MACO crop forecast data, FSRP analysis showed that subsidized fertilizer usage by smallholders has steadily increased over the years. However, the results showed that the Fertilizer Support Program (FSP) has significantly displaced commercial fertilizer purchases as a channel to service smallholders. The findings indicated that a substantial portion of this subsidized fertilizer is diverted and resold to non-recipient farmers.

FSRP research on cassava and its support to the task force on accelerated cassava utilization activities strengthened private sector commercialization. As a result, Tiger Animal Feeds, a Zambian feed manufacturing company, is now using cassava as a substitute for maize in animal feed.

Capacity Building. In FY 2007 and 2008, FSRP trained 381 government officers from MACO and CSO by incorporating government staff members in the projects surveys.

Improving the Substantive Content of Agricultural Policy Debates. FSRP analysis showed a relative decrease in the 2008 GRZ budget for agriculture. Further, the study highlighted the drain on the budget caused by the two major subsidy programs: the Fertilizer

Support Program and the Food Reserve Agency, which pull funds away from needed investment in the sector's productivity. In cooperation with the Agriculture Consultative Forum (ACF) and Ministry of Agriculture, FSRP presented results on fertilizer promotion in Zambia, and compared the Zambian model with regional experiences and strategies to increase smallholder productivity.

INCREASED AGRICULTURAL TRADE

USAID's market access, trade and enabling environment activities promote increased Zambian exports of agricultural and natural resource products (including tourism services) into regional and international markets. The market access component increases access to local, regional and international markets for Zambian agricultural and natural resource products. Interventions focus on facilitating export deals for Zambian clients. The component works with an increasing number of clients (currently 44) by providing services that enable clients to meet buyer expectations and deal with trade barriers that prevent transactions. USAID utilizes a two-pronged approach: developing markets and serving exporters. USAID supports regional market expansion and value chain development.

Market Development: Regional Trade. Mining activities and retail food chain expansion provide increasing demand for food products in the region. USAID's regional trade efforts fall into two categories: identification and engagement of food distributors and agents who can market products and handle in-country issues relating to distributing and promoting the products; and, increasing the competitiveness of Zambian firms competing across borders. As a result of participation in trade shows, Zambian firms secured orders for peanut butter and groundnuts valued at $612,000 from South Africa. Further discussions to expand the orders are underway. Additionally, an Australian buyer recently agreed to purchase $6 million of canned foods from Freshpikt Ltd, a USAID client, with an MOU signed for the supply up to 300,000 tons of canned foods annually.

USAID targets the development of markets in South Africa, DRC, Namibia, Angola and Botswana for Zambian exporters. Activities in the region include market research, outward trade missions, buyer identification, trade show attendance, and generic industry marketing.

Market Development: Commodity Markets. In FY 2008, U.S. assistance helped ZAMACE secure $8.5 million of contracts for 22,200 tons of commodities. While trading activity is slower than anticipated, industry observers agree that the independent price discovery offered by ZAMACE plays a critical role in determining Zambian commodity pricing, with ZAMACE prices being used as points of reference by commercial and smallholder farmers, millers, and traders. ZAMACE issued comprehensive quality standards for wheat, soy and maize, which have all been adopted as universal standards across the agricultural commodity subsectors.

ZAMACE admitted three new brokers to the exchange, bringing the number of active brokers to ten. One of the new entrants, Dunavant Cotton Company, represents an opportunity for ZAMACE to substantially increase its volume in the coming years.

Negotiations with World Food Program (WFP) laid the groundwork for the first-ever procurement of smallholder commodities through an African commodity exchange. WFP participation as a potentially important partner for the exchange will make ZAMACE more inclusive and push the benefits of a strong and transparent market to the smallholder and small trader levels.

Efforts to bring large institutional buyers such as WFP onto the exchange led ZAMACE

to develop comprehensive risk mitigation measures that will, when finalized and operational in the next quarter, facilitate the completion of a ZAMACE contract template. A settlement bank system will ensure speedy payment to sellers, and a wide-ranging insurance package will cover risks of broker non-performance and default by their selling clients.

ZAMACE upgraded internal systems and controls with independent broker training (accredited to the Securities and Exchange Commission), including an internationally accredited arbitration course for staff and management. ZAMACE also completed a comprehensive set of rules and regulations.

Market Development: Value Chains. USAID continually reviews activities in a number of value chains to determine the type and focus of possible project interventions. Studies consistently pointed to the honey, seed, groundnut, and white bean value chains in FY 2008. Other value chains that received support (mostly at client level) include wood, spices, and horticulture. Increasingly, USAID assists Zambian companies to move up the chain to produce higher-value products. USAID increases linkages in chains to smallholder Zambian producers. There was significant progress in new retail packaging for honey, peanut butter and handicraft products. USAID strengthened ties with small producer groups in the wood, white beans, groundnuts, and handcraft industries.

Client Services: Buyer Linkages and Enterprise Support. The client services subcomponent provides clients with business development services targeting export markets. Services include short-term technical assistance, market linkage support, identifying and screening buyers, addressing grades and standards issues, capacity or technology development, and financing. Client services are demand-driven. USAID helps clients identify buyers for their products and provides the initial buyer/seller link-up. During the period between FY 2006 to FY 2008, a total of 189 market access clients received business development services.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN EAST AFRICA, FY 2008

USAID/East Africa's regional activities that are part of the Initiative to End Hunger in Africa (IEHA) are implemented in partnership with African regional organizations.

- The Common Market for Eastern and Southern Africa (COMESA) is the largest Regional Economic Community in Africa. It coordinates actions by its 19 member states to promote intra-regional trade and integration. The East Africa Mission supports a number of COMESA's programs and activities from several funding sources; IEHA resources support the coordination of the implementation of the African Union's Comprehensive African Agricultural Development Program (CAADP).
- The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) is a sub-regional organization of national agricultural research institutes, universities, extension and advisory service organizations, NGOs, and private sector partners from ten countries. Its Operational Plan, for the implementation of CAADP's Pillar IV to increase productivity, is supported by eight donors working in coordination, who have prepared a formal MOU with ASARECA that will be signed by all nine partners by mid-2009. The donors' group is currently chaired by the USAID/East Africa representative. The European Commission, DFID, and CIDA have combined their resources into a Multi-Donor Trust Fund. USAID/IEHA contributes to ASARECA's overall management system, while maintaining the traceability of its funding for a subset of specific programs: Staple Crops, Agro-biodiversity and Biotechnology; Policy Analysis and Advocacy; and Uptake and Upscaling. ASARECA provides established mechanisms for the regional planning and implementation of adaptive research, testing, and scaling up of improved technologies and knowledge; research on, and advocacy for, improved policies and regulations to increase regional trade; and capacity building.
- Since 2002, the Mission has provided combined IEHA and trade funds for technical assistance to promote increased trade through a contract project called RATES, Regional Agricultural Trade Expansion Support. RATES focused on four commodity value chains: maize and other staples; specialty high-value coffee; cotton lint, yarns and textiles; and processed dairy products. In each case, RATES worked with private sector partners to develop and strengthen regional trade associations to promote cooperation around common interests, and to provide services to their members. RATES also worked closely with COMESA and also the East African Community (EAC) on the implementation of harmonized standards and regulations to promote trade. During 2008, the Mission designed a new project called Competitiveness and Trade Expansion (COMPETE), which has replaced RATES and what was a separate Eastern and Central Africa Trade Hub. The new project will support expanded activities that will strengthen value chains for staple food and other commodities, facilitate trade and reduce transactions costs at borders along key transport corridors, as well as assist African firms to export goods to the United States and other global markets.

Linked with IEHA, the East Africa Mission is implementing activities supported by the Famine Prevention Fund. The overall objective of this program is to break the vicious cycle of chronic food insecurity and dependence on food aid and other forms of emergency assistance that traps millions of rural households in poverty. Specific short-term, two-year activities are designed to catalyze new partnerships and ways of doing business

that lead smallholders to increase their productivity and open up access to markets.

- The Crop Crisis Control Project (C3P), concluded in 2008, was a regionally coordinated response to the regional spread of two catastrophic diseases of staple food crops: cassava mosaic virus and banana bacterial wilt. It was implemented under the auspices of COMESA and ASARECA by Catholic Relief Services (CRS), in collaboration with two CGIAR Centers – IITA and Bioversity International[1] – and nearly 40 local NGOs in six countries. It was linked to other projects implemented by the FAO and other agencies. The program set up mechanisms at the regional and national levels that succeeded in mobilizing diverse partners in a coordinated response to regional threats to food security. Sources of disease-resistant cassava varieties were linked with decentralized, community-based multiplication plots that delivered clean planting material to approximately 100,000 households. No genetic resistance to the banana disease is available, so over 1,100 extensionists working for both public institutions and NGOs were trained in techniques for identifying the disease and in cultural practices that reduce its severity and prevent its spread. The final evaluation estimated that 65,000 households received the messages. A new project, the Great Lakes Cassava Initiative, supported at a larger scale by the Bill & Melinda Gates Foundation, was based directly on C3P and is implemented by CRS with many of the same partners. It includes a second disease, cassava brown streak virus. Key work on both of these staple food crops is being carried forward by ASARECA.

1 With the launch of Bioversity International, the International Network for the Improvement of Banana and Plantain (INIBAP) ceased to exist as an organization (except as a legal entity in France, its host country) but becomes instead the network of collections, curators and information scientists whose responsibility it is to take care of the world's genetic resources of banana (http://bananas.bioversityinternational.org/content/view/98/34/lang,en/).

- The Regional Enhanced Livelihoods in Pastoral Areas (RELPA) project will be completed in 2009. The objectives are to increase the resiliency of pastoralists and agro-pastoralists in drought-prone areas by stabilizing and improving their livelihoods and to lay the foundation for a sustained regional focus on mitigating pastoralist vulnerability and increasing the economic viability of the arid and semi-arid lands of the region. RELPA has been implemented in two components. Pastoral Areas Coordination, Analysis, and Policy Support (PACAPS) is implemented by Tufts University, and has worked closely with COMESA to facilitate communications and policy and regulatory reforms to facilitate trade in livestock and livestock products, and more broadly to raise the profile of pastoralists in regional policy forums. Enhanced Livelihoods in the Mandera Triangle (ELMT) is implemented by a consortium of NGOs. It is focused in a cross-border area that cuts across three countries. Activities are designed to reduce requirements for emergency assistance of populations living in pastoral areas faced with predictable droughts, conflicts, and other shocks, by increasing household incomes and the economic resiliency of populations living in pastoral areas. RELPA has also invested in the coordination of many agencies, both emergency- and development-oriented, that work in arid and semi-arid areas, and in the interchange of best practices and knowledge. An evaluation of RELPA's outputs and contributions to impact will be available in 2009.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

ASARECA's outputs contribute to the enhanced productivity of smallholder-based agriculture by making improved technologies and knowledge available to partners throughout the region more quickly and efficiently than national institutions and bilateral programs could working independently. In 2008, ASARECA completed a major reorganization

to contribute to the implementation of CAADP Pillar IV, expanding their Board of Directors and governance system, and reorganizing into seven new programs. The creation of a Multi-Donor Trust Fund permitted the resumption of funding from a major donor that was interrupted for over a year. Due to the reorganization, a number of the output targets were lower in 2008 than expected. Nevertheless, 11 new technologies were made available from ongoing research, and many organizations, private firms, and other partners participated in planning the scale-up of activities. Capacity building, linked primarily to the planning and implementation of collaborative regional research activities, benefited several hundred scientists in partner organizations. ASARECA is well positioned to scale up its outputs and impact in 2009. Support was provided for the monitoring and evaluation unit, including the adaptation of the IEHA indicator template to meet ASARECA's needs, with technical assistance from Abt Associates.

The Staple Crops program launched field research activities in two of their six priority regional research projects: integrated management of cassava brown streak and cassava mosaic diseases, and integrated management of banana bacterial wilt. Both projects build on the achievements of ASARECA's former networks that were managed with the CGIAR centers IITA and INIBAP, and also on the outreach activities on these same diseases by the C3P project. Surveys of incidence and severity and epidemiological studies have been carried out. Promising sources of resistance to the cassava diseases have been identified, and appropriate approaches for multiplication and distribution are being catalogued. ASARECA has an important role networking and coordinating, and program staff participated in key workshops and planning meetings.

The Agro-biodiversity and Biotechnology Program has carried forward a number of projects established over the past few years. Working with national and international partners, a platform for the genetic transformation of cassava and for the engineering of maize for drought resistance has been set up, and laboratory research is underway. A project to promote tissue culture for improving access to clean planting materials of cassava and sweet potato has been linked to the organization of a private sector tissue culture business network.

The RELPA/ELMT project has made available best practices in improved management of land, vegetation, and water, expanding livelihoods options in pastoral areas. The important roles played by customary governance institutions are recognized in this process. The project is working with private banks to build links with pastoral production groups. Demand-led fodder provision, private veterinary services, and access to financial services are among the many enhanced livelihoods strategies being promoted to build household incomes and assets.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

ASARECA, COMESA, and RATES have all been actively involved in the improvement of the policy and regulatory enabling environment for agricultural development and economic growth. One of the themes of ASARECA's Policy Analysis and Advocacy Program (PAAP) is the harmonization and advocacy of policies, legislation, and regulations. Seed policy harmonization has been a flagship project of ASARECA for ten years. Significant progress has been made through the Eastern Africa Seed Committee (EASCOM), which is composed of the private seed trade associations and the relevant public agencies in the pilot countries: Kenya, Tanzania, Uganda, Rwanda, Burundi, southern Sudan, and Ethiopia. EASCOM has

succeeded in getting regulators and plant breeders from the public sector to work with representatives of national and multinational seed companies to agree on the content of harmonized quarantine lists, varietal registration and release procedures, seed certification standards, and plant breeders' rights and other intellectual property issues. Progress has been made on seed laws and regulatory regimes in several countries, but putting a harmonized regional system in place has been slow. The process was revitalized in 2008 by the decision of the COMESA council of Ministers of Agriculture to work towards harmonized systems for the free movement of seed across all member countries within two years. To move this agenda forward, EASCOM has been reorganized as a technical committee of the African Seed Trade Association (AFSTA). USAID/East Africa has been involved in discussions with COMESA, AFSTA, Pioneer Seeds, ICRISAT, CNFA, and other partners on the formation of a broader Eastern and Southern Africa Seed Alliance (ESASA).

In collaboration with ILRI, the CGIAR's livestock center, PAAP made progress towards harmonized regional regulations and capacity building at the national level to encourage small private traders to engage in regional trade in dairy products. A study with the East African Community identified non-tariff barriers on maize and beef, on which tariffs have officially been removed. An analysis of costs faced by traders found that many costs remain, including permits, licenses, various local taxes, and fees. Delays at frequent roadblocks raise costs considerably, both in time lost and in fees and bribes. The poor quality of the roads translates into high costs in time and vehicle maintenance.

The application of biotechnology has been constrained in the region by the lack of biosafety laws, regulations and implementation procedures. ASARECA/PAAP and COMESA have been collaborating on the RABESA project (Regional Approach to Biotechnology and Biosafety in Eastern and Southern Africa). The first policy research phase analyzed various precautionary regimes in terms of the trade-offs between income from exports to developed countries and economic growth and food security within Africa. The potential benefits far outweighed the potential costs. Phase II, which started in 2008, is focused on the promotion of a roadmap and regional guidelines for national biosafety laws and regulations, as well as an outreach and communications strategy to allay public concerns and the elaboration of plans for regional centers of excellence. The passage of a biosafety law in Kenya in 2008 was an important milestone. COMESA has appointed a panel of ten regional experts to advise on the process, and USAID/East Africa is supporting the COMESA Secretariat to engage a senior person to spearhead its commitment to move the agenda forward.

The impact and implications of the food price crisis of 2008 are the subject of a joint analysis by ASARECA/PAAP, ReSAKSS (the Regional Strategic Analysis and Knowledge Support System), and the Alliance of CGIAR Centers. The chart in Annex 1 shows that the overall impact was significantly buffered in many countries by local production of food in areas with different growing seasons and different staple crops. Short-term crisis interventions by national policymakers, like export bans, price controls, and input subsidies, were inward-looking. Nevertheless, the analysis demonstrated huge opportunities for expanding regional trade, and for linking areas and seasons of surplus with areas and seasons of deficit.

RATES and its partner regional trade associations carried forward policy analysis and advocacy with COMESA, the EAC, and national governments on several issues. Regional maize and dairy product quality standards were successfully concluded.

A simplified trade regime (STR) for small traders and uniform dairy SPS protocols were published, and training was provided for implementation.

RELPA has increased the attention that pastoralism and development issues in arid and semi-arid lands, understood as food-producing landscapes, is given in regional policy forums, particularly through the CAADP process.

INCREASED AGRICULTURAL TRADE

The RATES program was USAID East Africa's flagship trade program, an integral part of IEHA and the Aid for Trade strategy that focuses on reducing poverty and on building the capacity of African institutions to be competitive in regional and global markets. RATES employed a full value chain (from farm gate to consumer) approach rather than focusing narrowly on assistance to individual firms. The overall strategy is to promote structured trading systems, a concept that includes an enabling policy environment, proper storage facilities, appropriate grades and standards, rules of trade where contracts are honored, transparent price discovery, free movement across borders, and reliable, timely market information.

RATES focused its resources on supporting private sector regional trade associations (RTAs) for each of the four commodities, the Eastern African Fine Coffee Association (EAFCA), the African Cotton and Textile Industry Federation (ACTIF), the Eastern and Southern Dairy Association (ESADA), and the Eastern African Grain Council (EAGC). The project has also worked closely with policymakers in public and inter-governmental organizations, including COMESA, the EAC, and national regulatory agencies. The RTAs provide market information on the web and over cell phone instant messaging systems (see www.ratin.net), and are working to develop structured trading systems.

Annex 2 presents the data that RATES has compiled from COMESA's trade database, which is organized on a calendar year basis. Originally, targets were set against figures for 2001 as a baseline – using that metric, the value of trade in the targeted commodities increased by 356% in 2007. The OP indicators have been changed to track change relative to the previous year, which is reported in the tables. It has not been possible to obtain accurate estimates of the quantities that move through formal trade channels. The figures for trade values in 2007 were certainly skewed upward by the spike in global commodity prices, and 2008 figures will probably fall to some degree due to the global economic downturn and the effects of short-term national policy interventions. As the new COMPETE program gets established, new methods will be developed to obtain and cross-check figures on both volume and value of trade in the targeted commodities.

The grains council (EAGC) catalyzed the development in Kenya of a warehouse receipt system as an alliance among a private grain handling and storage company, a Kenyan commercial bank, and farmers' groups affiliated with the Kenya Maize Development Program (KMDP), supported by USAID/Kenya. A farmer brings grain to be dried, graded, and stored, and takes a receipt to the bank, where it serves as collateral for a loan for the next season's production expenses, reducing risk and leveraging assets. $130,000 in loans were provided in the first pilot season. The program was suspended temporarily for the season starting after the post-election violence because the state intervened directly in the maize market, but it will be revived and similar schemes are being promoted throughout the region.

The RATES program helped the coffee association (EAFCA) solidify from a

fledgling organization to an industry leader. The association now provides marketing and educational services to its members, including training in post-harvest processing, roasting and blending, cupping, and marketing, as well as national and regional cupping competitions, and barista (retail coffee service) championships. The biannual African Fine Coffee Conference and Exhibition is a way of earning revenues to cover annual administrative and operational costs of the organization and becoming financially sustainable. In 2008, over 500 international and regional coffee industry players attended the event in Kampala, Uganda and generated over $270,000 in net revenues for the organization. The cotton federation ACTIF has successfully linked companies at different stages of the value chain in different countries, and is promoting a "brand Africa" to increase the profile of the region's cotton products in the world market. The regional dairy association ESADA had significant success in reducing barriers to trade in dairy products.

The COMESA Secretariat has been working closely with RELPA/PACAPS on negotiations to facilitate access to the market for live animals in the Middle East. The same partners have developed guidelines for policies and regulations that will facilitate regional trade in livestock commodities, particularly chilled and frozen meat, a process that was endorsed at the COMESA Council of Ministers meeting in 2008.

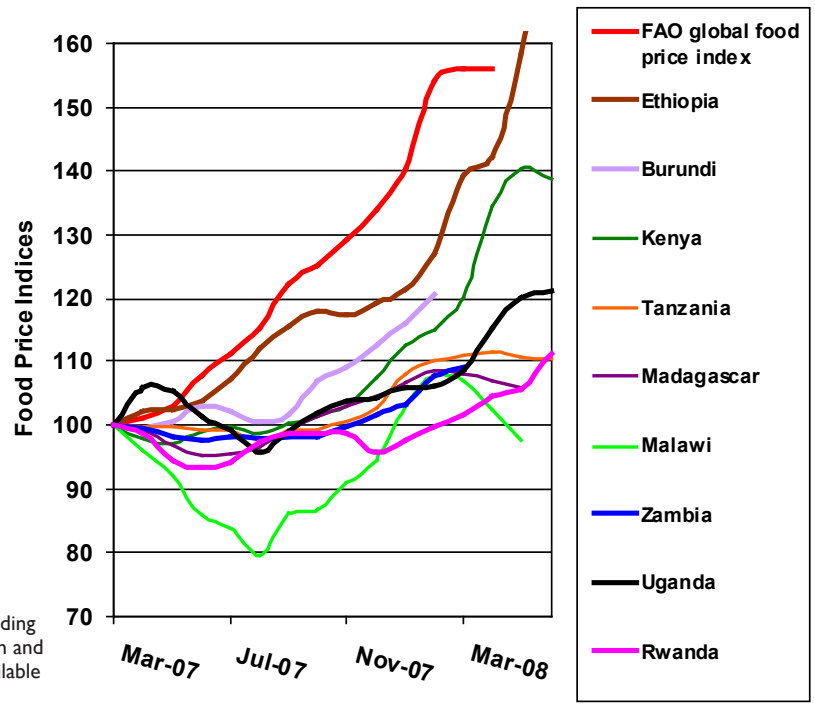
COMESA is developing the Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA) as a platform for coordinating government and donor-supported activities designed to promote and expand regional trade in staple foods, including livestock and livestock products. It is designed to contribute to the Comprehensive African Agriculture Development Program (CAADP) Pillar III, on Food Security, and Pillar II, on Markets and Trade.

ACTESA has three objectives:

1. Improve competitiveness and integration of staple food markets in COMESA member states through improved micro- and macro-economic policies as the drivers of staple food markets;
2. Improve and expand market facilities and services for staple food commercialization to facilitate growth in staple food markets; and
3. Increase commercial integration of staple food producers into national and regional markets to promote growth in food staples and food security.

USAID East/Africa contributed to the design of ACTESA in 2008. Working with USAID/Malawi, the Mission designed a new project supported by the Famine Fund, the Market Linkages Initiative. This will provide funds to COMESA to get ACTESA up and running, and will also support field-level activities in selected target areas to make markets work for chronically food insecure smallholder farmers. Activities in support of regional staple food markets will be scaled up in 2009 as part of the Global Good Security Response (GFSR), as well as IEHA.

ANNEX 1: COMPARISON OF FOOD PRICE INDICES IN SELECTED COUNTRIES IN EASTERN AND CENTRAL AFRICA: MARCH, 2007 – MARCH, 2008



Source: ASARECA, 2008. Responding to the food price crisis in Eastern and Central Africa. In Press, draft available at www.asareca.org.

ANNEX 2 TABLE 2 VALUE OF INTRA-REGIONAL TRADE IN SELECTED COMMODITIES, 2001 - 2007 (US$)

	2001	2002	2003	2004	2005	2006	2007
Maize	3,780,248	52,379,540	28,840,775	41,623,297	59,184,791	65,457,653	188,596,570
Cotton/ Textiles	29,482,547	29,242,102	23,114,092	32,279,004	37,220,451	23,326,552	12,660,467
Dairy	491,525	1,415,259	2,252,708	4,680,451	13,192,748	7,200,680	8,248,039
Total	33,754,320	83,036,901	54,207,575	78,582,752	109,597,990	95,984,885	209,505,076
Change over previous year		146%	-35%	45%	39%	-12%	118%

Source: COMESA official statistics for formal trade, compiled by RATES

ANNEX 2 TABLE 3 VALUE OF TRADE (EX-COMESA) IN SELECTED COMMODITIES, 2001 - 2007 (US$)

	2001	2002	2003	2004	2005	2006	2007
Specialty Coffee	60,099,073	74,390,917	88,344,960	125,848,824	162,122,946	173,690,186	271,628,025
Cotton/ Textiles	215,611,538	209,165,165	209,239,896	440,056,066	288,454,196	352,926,080	417,113,218
Total	275,710,611	283,556,082	297,584,856	565,904,890	450,577,142	526,616,266	688,741,243
Change over previous year		3%	5%	90%	-20%	17%	31%

Source: COMESA official statistics for formal trade, compiled by RATES

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN SOUTHERN AFRICA, FY 2008

Working to end food insecurity in Southern Africa remains a key USG priority. USAID/ Southern Africa's program is focused on increasing the adoption of improved agricultural technologies and on the facilitation of market access for small-scale producers. Targeting the Chinyanja triangle (eastern Zambia, central and southern Malawi, and the highlands of Mozambique), and parts of Angola, Namibia and South Africa, implementing partners achieved significant results in FY 2008 in enhancing productivity, improving policy, and increasing trade.

A partnership among the USG and regional and international research institutions, the private sector, U.S. and regional universities, and non-governmental organizations was strengthened to coordinate regional agricultural research; policy research and analysis; and, commodities marketing for small-scale producers and processors. This partnership is benefiting Malawi, Mozambique, Zambia, Angola and South Africa.

USAID assistance helped the region commit to a seed harmonization process that will enable countries to trade improved seed varieties across borders without lengthy delays that previously required each country to review and approve the new varieties before they could be imported. The former process delayed the distribution of new seed varieties by years. Southern Africa Development Community (SADC) member countries established national committees to review their legislation on seed harmonization. However, the agriculture ministries for each country have failed to sign the memorandum of understanding (MOU) for the implementation of seed harmonization. This remains a challenge for FY 2009, as some SADC member countries will not review their legislation to align with the harmonization system without a signed MOU by their Minister of Agriculture.

Government officials in Malawi, Mozambique and Zambia started reviewing their laws and regulations; they drafted Plant Breeders Rights (PBR) regulations. Malawi drafted a Plant Breeders Bill that still has to be tabled in Parliament; the process was halted by the presidential election. The PBR regulations for Zambia are being discussed with key stakeholders before submitting them to the ministry responsible for legal affairs for the preparation of the Statutory Instrument (SI).

The closure of the SADC Seed Security Network (SSSN) Office in Gaborone at the end of August 2008 due to accounting irregularities will also have a negative impact on the seed harmonization program's progress in FY 2009 and is a challenge for the region. SSSN is the key link between implementing partners and national regulatory bodies in the SADC region. USAID is looking at options to mitigate this problem.

The revitalized regional agricultural commodity research and development networks are now poised to work with SADC and address regional research priorities under the SADC Multi-country Agricultural Productivity Program (MAPP). USG partners identified regional and international markets and linked small-scale producers to them, thereby expanding available markets for crops and increasing the area under production. The region also benefited from a greater number of agricultural enterprises receiving USG technical and business training, leading to an increase in international trade (to the U.S., Japan and the UK).

Prospects for long-term impact on regional food security are mixed. The global food price increase has some negative and positive effects on food security in Southern Africa. The USG will continue to focus on the enabling environment by encouraging the adoption of market-friendly policies that will improve food security, increase exports, and promote sustainable regional development.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

USAID's agricultural productivity program addresses both staple food crops and cash crops; it focuses on both productivity and market access, and it supports both research and the extension of new technologies. USAID assistance helped increase the area under production and productivity in targeted crops and areas through technical assistance and training provided to farmer groups during FY 2008. Over 12,931 rural households benefited directly from USAID interventions. Revitalized commodity research networks focused on market-driven production and productivity research, which increased the availability and use of improved technologies in irrigation and soil fertility, seed, post-harvest handling, product grading, and packaging for niche markets.

USAID support to the international research centers, national research centers and universities through the World Bank Consultative Group on International Agricultural Research (CGIAR) mechanism enabled farmers in the region to receive technical assistance and training as a package. The partners on the ground formed a consortium through which technologies were delivered to farmer groups in a package that addressed needs in irrigation, soil fertility, and seed. Value chain studies were conducted for crop diversification. A cassava ethanol study was conducted to look at alternative uses of cassava. Cassava is gradually becoming an important industrial crop in the region.

Research on crops that serve as nutrition and cash crops is continuing. The International Potato Center (CIP) continued research on diseases affecting the orange-fleshed sweet potato, which is rich in Vitamin A, and other potatoes. These crops are playing a significant role as food security crops. During dry periods, farmers grow these crops under irrigation for both home consumption and as cash crops.

Over 17,762 people were trained from among the ranks of farmers, agribusinesses (processors and small- and medium-scale seed companies), and agricultural extension staff. The training included courses on: business management, planning and finance; technologies such as drip, river diversion, and clay pot; varieties of sweet potato and potato; greenhouse specialty vegetable production; seed multiplication systems; good agriculture practices; quality control and assurance; and grading and standards. Over 1,168 agricultural firms and farms received technical assistance or training from USAID partners, with 233 firms benefiting from firm-level technical assistance. Included are commodity associations, agricultural input dealers, food processors, and small to medium-sized farms throughout the targeted area. USAID provided technical assistance on quality control and market analysis to farmers for niche markets such as specialty vegetables, herbal teas, and essential oils from natural plant products.

Accrued benefits to farmers, processors and small- and medium-scale seed companies in the targeted areas amounted to $11.8 million. Partners were assisted to integrate their activities with existing programs in SADC MAPP, the regional counterpart of CAADP. CAADP is seen as critical to increasing agricultural productivity and trade that will contribute to both African states' economic growth and also to the Millennium Development Goals.

Cassava, potato, and groundnuts provide excellent yields for food security and

commercial production. The improved cassava and potato varieties and crop management practices being promoted offer higher yield compared to traditional varieties and practices. Yield gains for cassava of 50% to 65% have been obtained by small-scale farmers.

Over 1,115 farmers in Malawi, Mozambique and Zambia were contracted by ICRISAT to grow breeder seed for groundnuts for distribution to other farmers within the same country. The breeder seed was certified by government officials in the respective countries. In Malawi NASFAM partnered with ICRISAT and provided technical assistance to the farmers. NASFAM acts as the buyer of the groundnuts and then markets to South Africa and as FairTrade-certified product in the UK. In Mozambique, Mozambique Leaf Tobacco Company acts as the buyer of groundnuts and markets internally in Mozambique as well as to South Africa. During FY 2008 farmers in Malawi sold 1,080 tons of groundnuts through NASFAM for $912,000, which amounts to $844 per hectare. Other cash crops that made significant profits for farmers include herbal teas, spices (paprika) as well as specialty vegetables. Horticulture improved as more farmers adopted new technologies and participated in the growing market for these non-traditional crops.

To support the development of new technologies and ensure the sustainability of improvements in agricultural productivity, USAID collaborated in technology dissemination with national agriculture research centers (NARS), NGOs (Plan Malawi and Zambia, CLUSA in Angola, Land O' Lakes), national universities in the target countries, and the private sector.

Capacity was built at Angola and Malawi laboratory facilities and training was provided to laboratory staff to analyze diseases of potato, sweet potato, and cassava. In FY 2008 equipment for the Angola laboratory was provided for sweet potato, potato and cassava tissue culture. In Malawi a mushroom spawn unit was established at the National Research Center. The unit serves as a supplier of training and spawn to small-scale farmers.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

USAID joined regional institutions FANRPAN, SADC and NEPAD during FY 2008 to develop and implement improved agricultural policies through training and technical assistance. Failed policies and non-tariff barriers continue to hamper food security in Southern Africa, constraining productivity and improvements to rural livelihoods. Policy recommendations were designed to foster regional trade, diversify crops, and improve access to markets and market information systems. An Information Communications Technology (ICT) portal was registered in June 2008 to provide real-time market information to small-scale farmers via e-mail, cell phone SMS, and radio programs in the Chinyanja Triangle. The portal is registered as: www.chinyanjatriangle.com. The SADC web-based seed variety release catalogue is fully operational and is hosted by the International Livestock Research Center (ILRI), while SADC completes the SADC Seed Security Network (SSSN) office move to Lusaka. The web-based catalogue can now be accessed by all stakeholders under the domain name: www.ilri.org/seed/seeddb.

The SADC Council of Ministers approved the seed harmonization process in FY 2007. Technical assistance was provided to SSSN to draft a Memorandum of Understanding (MOU) to be signed by Ministers of Agriculture for member states to start implementation of the harmonization system. The MOU is still pending signatures, as the Ministers failed to meet in FY 2008. This is now delaying implementation, as some member states are not prepared to start reviewing their laws and regulations against the

harmonized system without a signed MOU.

Malawi, Mozambique and Zambia started to review their Plant Breeders Rights regulations without the MOU. Malawi went ahead and drafted a Bill on Plant Breeders Rights that is pending policy decision makers review. USG supported private seed companies in Malawi, Mozambique and Zambia in developing seed manuals.

Through USG assistance under institutional capacity building for policy, FANRPAN has built its reputation as the regional agriculture policy network; as a result FANRPAN has been contracted by COMESA to lead the regional Compact process.

One notable success of FANRPAN is the Household Vulnerability Index (HVI) that FANRPAN developed to assess the impact of HIV/AIDS on agriculture and food security. The HVI has proved to be effective in categorizing households, as well as identifying the sources of their vulnerability. Armed with knowledge on the sources of vulnerability, it is possible to identify the specific types of inputs that will assist particular households reduce vulnerability.

Through evidence-based policy research and analysis, FANRPAN assisted the Government of Malawi to achieve key decisions on the country's fertilizer subsidy. Over the past three years FANRPAN has improved understanding of these input vouchers as a tool to assist vulnerable households meet their input requirements through commercial markets. While this tool has achieved remarkable results as demonstrated by agricultural performance in Malawi, not all households have shared in the successes achieved, thus raising questions on whether uniform support is suitable for all households. FANRPAN has since extended this evidence-based policy analysis to Lesotho, Mozambique, Swaziland and Zambia, which are looking to implement similar policies as Malawi.

INCREASED AGRICULTURAL TRADE

USAID's agricultural program ensures that small-scale farmers' associations are linked to regional markets, increasing their sales of staple and high-value commodities and demonstrating the profitable opportunities in intra-regional trade. With funding from the IEHA, the regional agriculture program, in collaboration with the Trade Hub, mobilized activities that encouraged domestic sales and regional exports of fresh produce (specialty vegetables) as well as traditional crops for alternative uses (e.g., cassava for starch processing). Herbal teas and spices attracted markets in the U.S., and Japan, while groundnuts are now traded under Fair Trade in the UK. South Africa represents the largest and highest-value market for fresh produce, groundnuts and cassava starch products in Southern Africa. Sanitary and phytosanitary issues are of the key constraints to enter the South Africa market. The regional program through collaborative work with the Trade Hub and USDA has been working to address the SPS issue. It is also helping to identify products with South African demand and regional supply capabilities and to foster new market linkages from South African retailers and processors to growers in the region.

Improved, low-cost cassava processing equipment, including solar driers, has allowed farmers in eight countries to take advantage of market opportunities. The solar driers allow processors to dry up to 30 tons of cassava per week, whereas previously a processor would process one ton every three days. Processors are now selling cassava starch for industrial use (in paper making). The low-cost equipment has also improved the efficiency

of processing cassava to flour, which is both consumed in producing households and sold to bakeries. Bakeries mix cassava flour with imported wheat flour to lower the cost of bread production. Bakeries in Malawi, Zambia and Mozambique are substituting cassava flour for 40% of the (imported) wheat flour. This is a cost saving of up to 23% to the bakeries, which then gets transferred to the consumer. A similar process is also being adopted in Mozambique and Malawi by substituting orange-fleshed sweet potato for 30% of the wheat flour. This has been found to reduce the cost of bread making by up to 30% and at the same time provide much-needed Vitamin A to the rural population.

USAID provided support to groundnut producers in Malawi, who are now producing groundnuts for sale to South Africa and as FairTrade-certified product in the UK. Implementing partners linked greenhouse producers of specialty vegetables in Malawi, Zambia and South Africa to South African supermarkets in each country and the hospitality industry (hotels). The demand for vegetables in these countries increased and in Zambia Livingstone alone, farmers increased the area from 9 ha to 45 ha in FY 2008 to meet the demand of the market. Livingstone is the drier part of Zambia and with low-cost irrigation technologies, small-scale farmers are producing the much-needed vegetables and supplying the market. The region has seen an increase in intra-regional trade. The small-scale farmers are now being linked to regional markets. Farmers are now supplying big South African companies with paprika, birds-eye chili and herbal teas.

A significant number of agribusinesses, especially the small and medium-sized seed companies, received business-related training through the BDS program, and this led to an increase in seed sales of over 60%.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN WEST AFRICA, FY 2008

USAID/WA's goal is to enhance agricultural productivity, food security, and natural resource management. This is in recognition that agriculture is the engine for West Africa's economic growth and for the health of its people, because the cycle of hunger in sub-Saharan Africa begins and ends in poverty. The U.S. Government through USAID has fully endorsed the African Heads of State and Governments framework for the restoration of the agriculture sector—the Comprehensive Africa Agriculture Development Program (CAADP) of the African Union's New Partnership for Africa's Development (AU-NEPAD). CAADP provides a framework for collaboration by various partners, both public and private sector, and includes African peer review at the policy level. A key target of CAADP is to achieve an annual agricultural growth rate of 6 percent.

IEHA is the main agricultural program that contributes to meeting USAID/WA's agriculture and food security objectives and to support of CAADP. The major focus of these programs is on capturing the $20 billion potential intra-regional trade in cereals (rice in particular) and livestock (for the Sahel), a critical contributor to the region's economic growth. Increased productivity and regional integration are essential prerequisites for effective regional trade. Cocoa, and to a lesser extent cotton, are important cash crops that complement the staple crops in the region.

USAID/WA continues to support the main regional organizations. The main focus of USAID/WA's support to these regional organizations is on enhancing their institutional and human capacity to be more effective and efficient in their delivery of services, including removing cross-border impediments to the intra-regional markets, such as illegal taxes and poor infrastructure (roads and communication). The main regional organizations include the West and Central African Council for Agricultural Research and Development (CORAF/WECARD), the Permanent Interstate Committee for the Control of Drought in the Sahel (CILSS), the Economic Community of West African States (ECOWAS), and the International Agricultural Research Centers (IARCs). USAID began two new awards that focus on promoting a commercial seed industry in West Africa and on capturing the potential of the intra-regional trade, with initial emphasis on maize, onions/shallots, and livestock. International and private sector organizations also contribute to USAID's development efforts both financially and technically.

Over $28 million was leveraged from non-U.S. Government partners this year in support of these programs.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

The Kraft Cocoa Alliance has made remarkable progress in terms of both cocoa production and increased revenue generation by farmers. Total cocoa production by over 1,700 certified farmers was approximately 8,000 tons, which generated about $10.7 million, compared to $1.4 million for 355 farmers certified in 2007. Only 1,200 tons were sold to the project through the cooperatives, which earned these farmers an extra $240,000 in premia through the certification by the Rainforest Alliance. The rest of the 6,800 tons of certified cocoa was sold to competitors. The farmers knew they were losing an extra premium of $200 per ton plus the recognition they would get on the award day. However, they stated that

they were not happy with the price offered by Armajaro, the private company in the Alliance that is responsible for buying the cocoa on behalf of Kraft. Since the farmers desperately needed cash and at the same time competing buyers were ready to purchase the cocoa from them in their villages for a better price, they were willing to sell the cocoa. They said they are satisfied with the other benefits they derive from the project's capacity building activities, such as increased cocoa yields, environmental conservation awareness, improved sanitation, and better organization of cooperatives. Kraft Foods has already developed a new cocoa product brand from the certified cocoa. However, a shortfall in funding has prevented certifying all the farmers in the six cooperatives requesting certification, as well as others in the rest of the cooperatives in the two regions.

The West Africa Seed Alliance was started late in 2007, based on letters of intent from the partners. The Alliance aims at promoting a commercial seed industry in West Africa. It has developed a database of seed companies; identified and mapped over 800 agro-dealers in Mali and Ghana; established 116 ha under improved technologies and 100 ha under basic seed production in three countries; provided business management and product use training to some 200 agro-dealers; and facilitated during the cropping season visits by about 1,000 clients to the agro-dealer demonstration plots aimed at exposing farmers, agro-processors, and related industries to the benefits of adopting high-quality inputs, including seeds that increase productivity.

The cotton project provided intensive training to some 70,000 farmers and disseminated a number of technologies to about 790,000 farmers, of which 330,000 adopted some of those technologies on 490,000 ha, thereby increasing the likelihood of getting higher cotton and cereal yields. Cereals are grown in rotation with the cotton crop.

The project also provided training to over 7,700 farmers from over 3,900 producers' organizations on the efficient use of inputs.

Students sponsored under the rice yellow mottle virus biotechnology program with The Africa Rice Center (WARDA) are in their final year of graduate studies in Benin and South Africa. They will eventually be instrumental in helping find new solutions to this virus disease in rice.

The various USAID/WA strategic partnerships resulted in providing assistance to a total of over 1,800 agriculture-related firms, over 20 women's organizations, over 4,000 producers and related organizations, and training to over 738,000 men and over 73,000 women. Training areas include business management, ICT use, integrated pest management, impact assessment, improved crop management practices, seed production, biotechnology, and the influence of HIV/AIDS on agriculture. Over 75 new technologies, including improved varieties of crops, were made available for transfer.

CORAF/WECARD worked with its national and international agricultural research institutions to transfer two new technologies on rice and on an integrated Striga control method. More importantly, CORAF/WECARD has identified in a consultative and participatory process the projects to be implemented over the next five years under its Staple Crops and Biotechnology Programs within the CAADP Pillar 4 context—agricultural research, technology, dissemination, and adoption.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER AGRICULTURE

There are two significant policy achievements this year. The first is the adoption of regional seed regulations in the ECOWAS states, with nine of the CILSS countries moving

towards policy analysis and ultimate adoption. The second is the Seed Alliance's hosting two regional workshops with 17 countries participating. One of the workshops is on the development of a science-based plant quarantine pests list to facilitate intra-regional seed trade; the second is on developing process management manuals for putting in place clear procedures for implementing the technical agreements on seed trade.

The cotton program's work in Benin resulted in: 1) that country's authorizing the initiation of research on biotechnology and the introduction of genetically modified organisms, and 2) the introduction of regulatory changes in the handling of farmers' debt in the cotton sector.

CILSS continues to coordinate the food security early warning system in 17 countries to alert donors and national programs on the level of food security. CILSS has been instrumental in the ECOWAS region for the adoption of:

- Seed production and trade regulations;
- Pesticide regulations, thereby improving their safe use and cross-border trade;
- Environmental protection policy; and
- Regional policy on the management of water.

Seventy-three Malian members of Parliament were sensitized on the benefits and risks of biotechnology and biosafety, and 18 individuals from three countries received training on biosafety. CILSS is also supported by the EU, France, Denmark, Italy, and Canada in addition to USAID.

CORAF/WECARD on its part:

- Jointly analyzed with CILSS the biosafety regulatory framework for approval in 2009 by the CILSS Council of Ministers;
- Assessed the competency of six NARSs with respect to their effectiveness in conducting and managing the research agenda; and
- Trained 247 agricultural research and development practitioners on policy related issues.

Other donors supporting CORAF/WECARD are the UK Department for International Development (DFID), African Development Bank (AfDB), Canadian International Development Agency (CIDA), and the Technical Center for Agricultural and Rural Cooperation (CTA) with DFID being the major donor.

USAID/WA continues to fund an Agricultural Advisor in the ECOWAS Department of Agriculture who is leading the West Africa CAADP process. This process continues to be lagging behind and needs closer and more effective leadership.

INCREASED AGRICULTURAL TRADE

The USAID/WA's activities seek to improve the competitiveness of West Africa and the C-4 cotton countries in the international market, and to remove impediments to regional trade respectively. Under the cotton project, a small group of farmers, mostly women, generated about $1.2 million by producing and selling organic cotton under a contract with a consortium including Victoria's Secret. In addition, close to $71,500 was generated from selling a wide range of new artisanal cotton products made by about 400 artisans.

The Seed Alliance works on both harmonization and facilitation of trade in seed regionally, in collaboration with CILSS. It has already developed an initial database for seed companies. This database, along with the mapping of agro-dealers, will help facilitate trade in seed, both nationally and regionally.

USAID has identified 4-5 strategic road corridors, including those identified by the USAID/WA Trade Hub, along which cross-

border trade constraints will be monitored by various agribusiness groups. USAID will: help provide timely information on prices and market opportunities and facilitate the functioning of value chains, especially for the focus commodities (maize, onions/ shallots, and cattle/meat); improve business for producers and traders to respond to production and market opportunities; and provide relevant information on tariff and non-tariff barriers and other policy issues related to intra-regional trade.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN THE OFFICE OF FOOD FOR PEACE, FY 2008

OVERVIEW OF IEHA/FFP STRATEGY

USAID's Office of Food for Peace (FFP) seeks to reduce food insecurity in vulnerable households by assisting those suffering from chronic hunger. In FY 2008, FFP implemented programs in eight IEHA focus countries through integrated programming intended to meet the basic food needs of vulnerable households. Globally, FFP reached more than 56 million people in 49 countries in FY 2008 and 7.8 million people in the eight IEHA focus countries through non-emergency and emergency programs. By meeting the basic food needs of vulnerable households, FFP Title II programs assisted vulnerable households to enhance food security through increasing agricultural productivity, strengthening livelihoods, and improving access to markets, both as sellers and as buyers. Many of the Title II activities in 2008 involved the development of productivity-enhancing technologies, as well as intensive training programs for the communities. These technologies increased food security for many poor farm communities. Other Title II activities in 2008 aimed to improve market access. FFP believes that improving food-related market structures and systems is vital for all IEHA countries.

FFP/IEHA COUNTRY OVERVIEW

Ghana. FFP provided resources to two PVOs to implement non-emergency multi-year assistance programs targeted at children under 3 and pregnant women in the central, northern, eastern, and western regions of the country. In FY 2008, FFP provided 8,490 MT (metric tons) of food assistance. PVOs' specific objectives included improved health and nutrition of children under three and pregnant women; enhanced livelihood capacity and community resiliency; and bolstered human capabilities in health and nutrition.

Kenya. FFP provided resources to three PVOs to implement non-emergency multi-year assistance programs targeted at orphans and vulnerable children, people displaced by floods, and other vulnerable groups in Nyanza province. In FY 2008, FFP provided 11,080 MT of food assistance. PVOs' specific objectives included improved water and sanitation; strengthened asset and savings bases; and improved nutrition for orphans and vulnerable children. FFP also contributed 76,220 MT of food assistance to the World Food Program (WFP) in FY 2008 for emergency programs in Kenya.

Malawi. FFP provided resources to one PVO to implement non-emergency multi-year assistance programs primarily targeted at vulnerable groups in Lilongwe, Mchinji, Dedza, Ntcheu, Mangochi, Thyolo, and Phalombe. In FY 2008, FFP provided 17,120 MT of food assistance. PVO's specific objectives included protecting and enhancing the livelihood capacities of vulnerable groups; enhancing the nutritional status of vulnerable groups; and boosting the capacity of communities and district institutions to strengthen food security.

Mali. FFP provided resources to two PVOs to implement non-emergency multi-year assistance programs in Timbuktu, Mopti, and Gao. In FY 2008, FFP provided $2 million for food assistance. PVO's specific objectives included increased production in agriculture, livestock, and fishing; improved nutrition and health; heightened household purchasing power; and enhanced community resiliency and good governance. FFP also contributed 1,540 MT of food assistance to WFP in FY

2008 for emergency programs in Mali.

Mozambique. FFP provided resources to four PVOs to implement non-emergency multi-year assistance programs in Cabo Delgado, Nampula, Sofala, and Zambezia provinces. In FY 2008, FFP provided 30,940 MT of food assistance. PVOs' specific objectives included enhanced livelihood capacity and community resiliency; expanded sustainable agriculture and rural enterprise; and improved household nutrition. FFP also contributed 3,190 MT of food assistance to WFP in FY 2008 for emergency programs in Mozambique.

Niger. FFP provided resources to three PVOs to implement non-emergency multi-year assistance programs targeted at children under 5 in the Agadez, Dosso, Tahoua, Tillabéri, Zinder regions of the country. In FY 2008, FFP provided 480 MT of food assistance. PVOs' specific objectives included increasing good governance in food security management; making sustainable improvements in agricultural, livestock and natural resource management practices and agro-enterprise; strengthening community-based health and nutrition systems; HIV/AIDS awareness and planning; reducing vulnerability to risk and shocks by diversifying household income-earning opportunities; and improving household health and nutrition status, especially that of children under five and women of childbearing age. FFP also contributed 11,080 MT of food assistance to WFP in FY 2008 for emergency programs in Niger.

Uganda. FFP provided resources to five PVOs to implement non-emergency multi-year assistance programs in the northern and northeastern regions of the country. In FY 2008, FFP provided 33,170 MT of food assistance. PVOs' specific objectives included increasing the agricultural income of smallholder farm families by re-establishing livelihoods and strengthening marketing systems; improving food access and production; raising food utilization; and boosting health and nutrition for women, children, and vulnerable groups. FFP also contributed 47,850 MT of food assistance to WFP in FY 2008 for emergency programs in Uganda.

Zambia. FFP provided resources to two PVOs to implement non-emergency multi-year assistance programs in Chibombo, Chingola, Choma, Kazungula, Kalomo, Kitwe, Luanshya, Mazabuka, Monze, and Mufurila. In FY 2008, FFP provided 5,470 MT of food assistance. PVOs' specific objectives included diversifying and increasing agricultural livelihoods; boosting incomes for smallholder farmers; strengthening nutritional status; and improving their collective ability to identify and respond to developmental issues and external shocks affecting food security. FFP also contributed 3,090 MT of food assistance to WFP in FY 2008 for emergency programs in Zambia.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES OF THE BUREAU FOR ECONOMIC GROWTH, AGRICULTURE AND TRADE, OFFICE OF AGRICULTURE, FY 2008

EGAT supports IEHA goals by broadening and diversifying the sources of competitive advantage of the agricultural sector in target countries. In FY 2008, the Office: supported research, development, and dissemination of improved agricultural technologies that reduced the cost of production and created new market opportunities; strengthened the skills and competencies of producer and processor organizations, individuals, and consumers in production, business management, sustainable use of natural resources, and food-based household nutrition and health management; and strengthened the institutional capacity of public research and extension systems. Highlights of major achievements are as follows.

TECHNOLOGY DEVELOPMENT AND DELIVERY

Advances in agricultural science and technology are necessary to underpin growth in agricultural productivity. Indeed analysis shows that agricultural research has a very high rate of return, and agricultural growth is the most effective growth to reduce poverty in developing countries. Agricultural research leads to new technologies and strategies to improve nutritional quality, support good health, and ensure the environmental sustainability of the natural resources that underpin agriculture. In USAID, the Economic Growth, Agriculture and Trade (EGAT) Bureau is the lead investor in agricultural research and institutional capacity development to support the goals and objectives of the Initiative to End Hunger in Africa (IEHA). The research efforts focus on the development and delivery of high-yielding and stress-resistant crop varieties, innovative soil management techniques, healthier basic food products, and transformation and processing techniques. The capacity-building efforts target both public and private institutions to strengthen the national research, extension, and agribusiness system and small producers and traders to enable them to effectively utilize improved technologies and modern business management practices to be competitive.

The bulk of the Agency-supported research efforts are implemented through partnerships with U.S. land grant universities, including the Collaborative Research Support Programs (CRSPs), and through the multilateral system of the Consultative Group on International Agricultural Research (CGIAR) centers. Agency-funded research is directed to achieve global public goods as well as promote application on the ground in Africa, aligning with the IEHA objectives and development agenda of the Comprehensive Africa Agriculture Development Program (CAADP). Together with the representatives of other donors, EGAT is also engaged in CGIAR management forums that identify emerging challenges, and direct the Centers' research agenda to ensure that it is consistent with the Agency's international development goals. A brief summary of achievements to date is provided below.

TECHNOLOGICAL ADVANCES AND KNOWLEDGE

Biotechnology to enhance production efficiency: Bioengineered crops currently in use around the world, including in countries such as India, China and South Africa, have significantly reduced the cost of crop production and environmental pollution arising from excessive use of agro-chemicals. Despite

such enormous potential economic and environmental benefit, Africa has lagged behind other regions of the world in the development, testing, and adoption of biotech crops. For instance, by the end of 2008, only three countries in Africa—South Africa, Burkina Faso and Egypt—have approved bioengineered crops for cultivation. The total area under cultivation with biotech crops in these countries comprised less than 2% of worldwide acreage of biotech crops, and almost all of the area was in South Africa. A number of factors in the past contributed to this, including concern among policymakers about restrictions in the European market, a low level of technical capacity, and a relative dearth of potential technologies of benefit to small-scale farmers.

Over the last five years as part of IEHA, EGAT has worked to empower African research institutions and scientists to harness biotechnology for improving agricultural production and smallholder income in the region. The program worked with African partners to support the development of bioengineered crops that are resistant to devastating diseases and insects, that can tolerate saline soils, or that grow with less fertilizer. Such technologies lower production cost, increase yield, reduce environmental impact, and thus contribute to enhanced food security and nutrition.

In its assistance program in this area, the Agency adopted a targeted strategy to invest in crop development while at the same time developing regulatory systems that facilitate the safe and effective use of the technology by farmers and traders. The two-pronged approach was critical for the program success. Regulatory systems are necessary to advance research and provide a framework for commercialization of improved varieties. At the same time, when local institutions have technical experience and a stake in the outcome of policy decisions, national governments find it easier to overcome the challenging political dimensions of agricultural biotechnology. The policy element is critical to facilitate safe and effective use of the technology by farmers and traders. Regulatory systems are necessary to also advance research and provide a framework for commercialization of improved varieties. Conversely, the technology development efforts support the institutional and policy development interventions as a case study and hands-on experience. This multidimensional approach received strong support from key stakeholders in the region—researchers, regulators, policymakers, NGOs, and media. This has been extremely important to the success of the program.

After many years of laying the groundwork through policy changes, public communication, and technical capacity building, the various biotechnology and biosafety programs in Africa are beginning to yield significant progress on a number of fronts. Egypt and Burkina Faso approved bioengineered crops (insect resistant maize and cotton, respectively) for cultivation in 2008. USAID provided technical support to regulatory agencies in both countries, ensuring that their regulators and policymakers had access to the information and resources they needed to make politically charged decisions while confidently relying on the best science. In Egypt, this effort built on previous USAID projects going back 10-15 years. Other countries, such as Uganda, Kenya and Nigeria, have begun field trials or enacted new regulatory policies that will facilitate research and deployment of bioengineered crops. Uganda began its first-ever field trial in 2008 of a disease-resistant banana developed with USAID funding. A USAID-supported biosafety program helped build technical capacity at the Ugandan regulatory agencies in advance of their reviewing the applications. Uganda also gave approval for a field trial of insect-resistant cotton in 2008, with the trial now slated to take place in 2009, and Egypt continues to test and develop its own varieties of biotech cotton. Nigeria recently (February 2009) gave approval

for field trials of insect-resistant cowpea and biofortified cassava. USAID support to product developers in Nigeria for the past two years has been especially important to moving the cowpea project forward.

The development of insect-resistant, or Bt, cotton in Africa is largely supported by the private sector in collaboration with national governments. Other crops, such as banana, cassava, cowpea or potato that are important staple crops produced by small-scale farmers in Africa do not receive this level of private R&D support. Accordingly, USAID is the primary supporter of biotechnology crop development focusing on these crops. The Agency is closely collaborating with African stakeholders, especially the public sector, to support research focusing on these crops. The collaborative programs emphasize product development and technology transfer, an area where public institutions in the region do not have much experience, especially when it comes to the complex regulatory processes that biotech crops must navigate. One such partnership between Michigan State University and South African Agricultural Research Council has successfully developed a new insect-resistant potato. An application for general release of the new product was submitted to the South African Government in 2008 after six years of field trials in South Africa. When approved, this scale-neutral technology will be taken to the field for farmers' participatory trials. When fully adopted, the farmers will use less insecticide, increase potato yields, and reduce storage losses to the potato tuber moth. The South African research community gained valuable experience moving this product from the laboratory to the regulators, while reaching out to the potato industry and farmers' organizations to build awareness and market acceptance. This being a pioneer program for the country and the first experience for the South African public researchers, it provides an important model for future publicly developed technologies both in South Africa and the other countries in the region.

In West Africa, the African Agricultural Technology Foundation, in collaboration with African researchers, the Bean and Cowpea CRSP, Australian researchers, and Monsanto Corporation, developed bioengineered cowpea, effective against the legume pod borer (Maruca vitrata). With Bt cowpea lines now being bred for specific agro-ecological zones in the Sahel and savanna regions of West Africa, the program is focusing on the development of an insect resistance management plan, necessary for future release of the transgenic cowpea for commercial production. In collaboration with scientists in Burkina Faso, Niger, Nigeria and Mali, the program will monitor M. vitrata migrations and identify wild host plants for the insect pest. Concomitantly, studies are underway to develop integrated pest management (IPM) strategies to maximize the productivity of the bioengineered cowpeas, maintain low production costs, and protect the environment, including beneficial insects. Information and messages regarding IPM strategies are prepared and disseminated to communities utilizing MP3 players.

On the policy front, several countries in the region took decisive steps towards establishing frameworks that allow for research and commercialization of bioengineered crops in 2008. Kenya and Mali both passed comprehensive biosafety legislation, the result of over five years of outreach by USAID partners and local NGOs to ministries and Parliamentarians. Ghana adopted a legislative instrument that will allow field trails to take place and will soon receive an application from the AATF-led cowpea project. Technical assistance to Malawi and Uganda has been instrumental in the development and adoption of biosafety policies and guidelines in these two countries. At the regional level, USAID supported INSAH/CILSS and ECOWAS in West Africa to develop a biosafety convention that would establish a system for regional

safety assessments of biotech crops. The draft Convention underwent several rounds of country-level input and review in 2008 and will go for ministerial approval in 2009. This framework will allow countries with few technical experts to rely on regional expertise and pool their resources, potentially speeding up the dissemination of new technologies throughout the region. Regional frameworks also reduce duplication and regulatory burden for product developers, making them more likely to serve small seed markets and thereby reach poorer farmers.

Major technological advances achieved over the last five years include: 1) successful introduction of new genes into east African highland banana for resistance to black sigatoka and tomato for resistance to yellow leaf curl virus; 2) successful field evaluation of the bioengineered banana in a confined field trial in Uganda; 3) the development and evaluation of disease-resistant potato in Kenya; 4) successful application of molecular tools to cacao breeding, conferring disease resistance and the quality attributes needed by the confection industry; 5) demonstration of the value and efficiency of herbicide seed treatments for combating Striga infestations in sorghum and incorporating the ALS herbicide tolerance traits into elite sorghum varieties and hybrids and 6) successful negotiation of licenses that provide royalty-free access to private sector-developed technologies that improve the productivity of rice and cowpea. The new rice variety grows with less fertilizer and can tolerate saline soils; it has the potential to double rice yields in target African countries (Uganda, Nigeria and Ghana) in the coming years. The insect-resistant new cowpea variety was successfully field-trialed in Puerto Rico in 2008. It has the potential to overcome the current fifty-percent yield loss in cowpea due to Maruca. Field trials in Nigeria or Ghana of the new cowpea variety are expected to commence in 2009.

Conventional technology to enhance production efficiency. The Agency emphasizes collaborative research when working with U.S. universities and the CGIAR. In this way, we support strengthening research capacity while also conducting research in critical commodity sectors of value to developing countries in Africa. With the inception of IEHA, the development impact of such collaborations has been given greater emphasis. Consistent with IEHA's strategy, the partners are increasingly encouraged to ensure development impact and the extension of their research findings to local public and private organizations, and ultimately to agricultural producers. And they are enthusiastically responding. Over the last five years, many of them, especially the CRSPs, have demonstrated their commitment to achieving diffusion of a suite of market-driven crop improvement, processing, and food technologies into widespread use in target IEHA countries to support sustained economic growth.

Focusing on key staple foods in Africa, EGAT-sponsored research has delivered improved varieties in Africa. Over the last five years, 70 distinct genetic types of cowpea, consisting of important varieties from Africa and the U.S. were systematically characterized for improved traits in Burkina Faso, Cameroon and Senegal by the Bean Cowpea CRSP, creating a valuable database for breeding programs in West Africa. The 70 genetic types showed traits such as increased resistance to drought and to a broad spectrum of economically important pests, including nematodes, aphids, viruses, fungi, insects, and parasitic weeds (e.g., Striga). Using this wealth of resources, certified seed of several stress-resistant varieties of cowpea were successfully released in the three target countries in West Africa. Currently, the released varieties are being multiplied by women farmers' organizations and for-profit seed cooperatives under the Dry Grain Pulses CRSP. The goal is to substantially increase the

share of improved cowpea varieties over the current level of 5% of cowpea area planted.

Over the same period, a sorghum and millet breeding program successfully developed several economically important sorghum varieties and soil management practices. Among them were an integrated pest management practice that increased sorghum yield by 20%; ridging and soil moisture preservation practices that increased yield by 50%; a micro-dose fertilization technique that increased grain and stover yield by 58% and 38%, respectively; a sorghum midge-resistant variety with an economic benefit of $9.90 in yield gain for every $1.00 spent on R&D; a crop residue incorporation practice that increased yield by 12%; and Striga-resistant varieties showing a 94% decrease in Striga plant infestation.

These and other Agency-supported research and development programs involving a broad coalition of development partners and their collaborators (CRSPs, CGIAR, NARSs and SROs) successfully tested and released over 101 high-yielding and stress-resistant sorghum, millet, bean and pigeon pea varieties and improved soil management techniques in 2008. The released technologies were developed and tested by the various programs over the previous five years. The beneficiaries of the released technologies include smallholder producers, including farmers' associations and agribusinesses in IEHA countries in both East and West Africa (see Harnessing the Power of Technology and Knowledge for details). It is expected that this will significantly improve sector productivity over the coming years. In addition, the programs are currently monitoring the performance of 129 new technologies under research and an additional 140 technologies under field evaluation.

Beyond good crop genetics, other production challenges must be addressed to increase productivity. In Mali, a whitefly-transmitted virus devastated a once-vibrant irrigated tomato production and processing cluster. Consequently, the Agency's integrated pest management research program (IPM CRSP) began research in 2001 to develop practical virus management techniques. A "no-host period," in which tomatoes and peppers are not planted for two months, was found to be very effective. By removing tomatoes and other host plants, the titer of virus in the ever-present whiteflies decreases, such that tomatoes can be successfully harvested before the resurgence of the disease. The no-host period has revived smallholders' capacity to profitably grow tomatoes and reinvigorated the supply of local fresh tomatoes to Bamako's market. Without the no-host period, yields were less than half a ton per hectare. With the combination of the no-host period and several improved tomato varieties, yields can be as high as 25 to 40 tons/ha (500% to 800% increase) depending on the variety and time of year. Currently, the IPM technology package is being extended to other tomato-producing areas of Mali and to Senegal. Work on other tomato diseases and insect pests by IPM CRSP researchers at Makerere University also showed Ugandan tomato growers how to use more environmentally friendly pest management techniques. As a result, they decreased pesticide use by 75%.

Drought and low soil fertility are the most pervasive abiotic constraints to crop productivity in sub-Saharan Africa. With support from the Dry Grain Pulses CRSP, plant mineral nutritionists, agronomists, plant breeders and socio-economists are working together to harness root traits and develop new common bean varieties with higher yield potential in the dry, low-phosphorus soils common in many bean production regions in the tropics. Research at Penn State University has identified specific root traits that improve phosphorus and water acquisition. In collaboration with geneticists at CIAT, the genetic control of these root traits is being

characterized to assist breeding efforts. Bean breeders at the Instituto de Investigacao Agraria de Mocambique (IIAM), Mozambique are using this information to develop bean varieties with superior root systems in combination with other traits such as disease resistance and grain quality. Socio-economists are evaluating the possible impacts of the introduction of new stress-tolerant bean varieties on food security in local communities in Mozambique.

HARNESSING THE POWER OF TECHNOLOGY AND KNOWLEDGE

Parallel to the research effort, USAID invests in interventions that promote the transfer or commercialization of improved technologies through regional and continental mechanisms. One such area is promoting the development of private sector-led seed and other input industries that serve small- and medium-scale producers. This is in addition to the broader technology dissemination effort through extension services and NGOs that the Agency supports. Efforts are beginning to have the desired impact, as such technology transfer efforts are complemented by support to improve linkage between producers and markets.

In 2008, two farmer associations in Malawi (NASFAM) and Mozambique (IKURU) and an agribusiness in Kenya (LEDLET) accessed foundation seed of three improved groundnut varieties and were trained to produce and market certified seed. The recipients have since produced certified seed and sold it to small producers in these three countries.

In 2008, an estimated 7,733 farmers adopted new technologies that were practiced or cultivated on 25,111 ha. In East Africa, adoption of new technology and complementary farmers' training and market linkage support services led to an export of 1,500 tons of grain from Kenya to Holland.

Farmers' inability to afford fertilizer, coupled with continuous cropping on ever-shrinking land holdings, has led to degraded and infertile soils and concomitant declines in crop vigor, pest and disease tolerance, and overall system productivity. Determining how to effectively increase the productivity of seriously degraded soils and to maintain the fertility of still productive lands is of paramount importance to all farmers living in many regions of Africa. The Dry Grain Pulses CRSP, through a collaborative project between Cornell University and the Kenyan Agriculture Research Institute is evaluating, using participatory approaches, simple, low-cost strategies for vigorous establishment/growth of pulse crops (common bean, lablab, etc.) across soil degradation gradients. The resultant technology packages with contribute to increased productivity and sustainability of agricultural systems in the East African highlands.

MARKET DEVELOPMENT: LINKING PRODUCERS AND PROCESSORS

Market development is critical to translate improved productivity into sustainable economic growth. EGAT supports IEHA goals and objectives by promoting effective and efficient market development through a range of programs.

The poultry industry is growing rapidly in the Sahel of West Africa. The industry heavily depends on concentrates and cereal purchases for confined feeding, a practice that presents excellent opportunities for parallel growth in the poultry feed industry, increasing cereal production, and value chain development. As a cereal sought after both for food and feed, corn is more expensive than sorghum, another major cereal widely cultivated in the region. Sorghum has been sidelined by the poultry feed industry because of its high tannin content, which affects the taste and nutritional value of the product. On the other hand, the crop is drought- and low soil fertility-tolerant, less susceptible to aflatoxin contamination, and costs less to produce and

procure compared to corn. Cognizant of these facts, a USAID-supported sorghum-breeding program and its national collaborators in West Africa successfully developed six non-tannin sorghum varieties over the past ten years, overcoming these constraints and helping the greater number of sorghum producers take full advantage of a new market opportunity.

In 2008, the program organized sorghum producers in Mali into groups, introduced the new sorghum variety Soumba, facilitated contacts between producers and the poultry feed industry, and helped the two parties negotiate contractual agreements detailing the quantity, quality, and price of sorghum to be produced and exchanged over the coming years. The program also trained the producers in high-quality grain production, collective bargaining strategy, business management, and helped them access credit to procure critical inputs. This integrated development assistance strategy has led to a doubling of sorghum yield at a reduced cost of production and to a significant increase in the profit margins of the participating farmers and of the feed and poultry industries.

The deployment of integrated technologies (improved varieties, inorganic fertilizer, water harvesting techniques, and agronomic best practices) and farmer training led to yield increase in sorghum of 428% (2.14 tons/ha) compared to the traditional average yield of 0.5 tons/ha. An innovative marketing strategy introduced at the same time enabled the producers to sell their harvest at 56%, 55% and 31% more than the conventional sales prices in Niger, Senegal, and Mali, respectively. The total income gain because of the application of the new technologies and marketing strategy ranged from 179% for average farmers to 445% for those who have perfected technology application and farm management techniques.

Under the Farmer-to-Farmer program, US volunteers assisted producers and agribusinesses in IEHA countries by working at various levels of the commodity production and marketing chain, including rural services and input supply; on-farm production, storage and processing; and marketing. In East Africa, the objectives were to improve the efficiency of the maize, dairy and horticultural commodity chains by focusing volunteer resources on increasing the productivity of farmers' organizations in these target sectors; increasing the technical and management capacity of producer associations, cooperatives and individual private enterprises; and increasing agricultural trade at the domestic, regional and international levels.

For example, in Uganda the volunteers assisted dairy farmers to develop a business plan that led to the formation of a business arm of the organization. The objective of the dairy farmers' group was collective marketing of milk from member farmers through the establishment of a collection center. At its inception in 2006, the group handled 60 liters of milk per day and had only one person responsible for operations. With the sustained technical assistance of the Farmer-to-Farmer volunteers over the last three years, the current operational capacity of this organization is 1,900 liters per day, and the organization now employees 10 full-time staff. The impact of this and other volunteer-provided technical assistance over the last five years has been spectacular: the net income of the beneficiaries increased by $13 million, and the gross value of sales increased by $21 million. There were 106,860 direct beneficiaries, of which 44% were women.

Access to markets is also a critical driver of farmer adoption of new technologies and management practices, providing an incentive to increase production or to specialize to gain comparative advantage in domestic and regional trade. Whether market-oriented pulse production expands depends on the level of pulse prices and price risk, quantity premia/discounts, and the cost of bringing products to market. Economists from IIAM/Mozambique and Michigan State University are collaborating

through the Dry Grain Pulses CRSP to analyze the spatial and temporal patterns of bean and cowpea production and marketing, to map market-sheds, and to conduct econometric analysis of the determinants of market participation by pulse-producing households. This research will hopefully lead to national policies that relax constraints to broad-based participation by households in domestic and regional pulse markets.

FOOD-BASED APPROACHES TO REDUCE HUNGER AND IMPROVE THE NUTRITIONAL STATUS OF VULNERABLE GROUPS: WOMEN, CHILDREN AND PEOPLE LIVING WITH HIV/AIDS

One billion people in the developing world live with chronic hunger. Malnutrition contributes to half of all child deaths in developing countries. The rise in global food prices over the past two years will only exacerbate this situation. Poor women and children are the first to become malnourished and the most likely to suffer severe consequences, and they remain the most vulnerable to future price volatilities and shocks. For the past five years, EGAT has supported agriculture-based programs to increase the availability of, access to, and utilization of nutritious foods to improve the nutritional status of vulnerable children, women, and people living with HIV/AIDS. Frequently, increased agricultural productivity and income does not proportionally translate into better food access and utilization for the most vulnerable, especially women and children. In these cases other factors like the distribution of income within the household, nutritional and cultural practices, the lack of safe water, inadequate sanitation, and ineffective illness management have had a significant role in suboptimal nutritional outcomes and food insecurity for the affected populations. A strategy that links agricultural production, nutrition/public health and economic development and that specifically promotes nutrition security is required. Of critical importance to this strategy are the cross-cutting issues of gender, HIV/AIDS, and most recently the agricultural drivers affecting global food prices.

ENABLING CHILDREN IN RURAL HOUSEHOLDS TO ACHIEVE NUTRITIONAL OUTCOMES

In furtherance of this new integrated strategy to enhance food security for the most vulnerable populations, EGAT has supported a pilot activity in three sub-Saharan African countries (Ghana, Nigeria, and Uganda) designed to deliver integrated agriculture and nutrition interventions directly to vulnerable, food-insecure populations with the overall goal of improving the nutritional situation of the most vulnerable, particularly children under five. This integrated approach is clearly distinguished from other agriculture and nutrition activities, which all too often ignore one at the expense of the other. By linking agriculture and nutritional practices, the availability of, access to, and utilization of nutritious food were enhanced, leading to a dramatic reduction in malnutrition rates in children under five across participating countries. An independent impact evaluation found that this integrated approach was an effective model for combating hunger and malnutrition; on average, malnutrition was reduced by over 40 percent in the three countries. EGAT is disseminating lessons learned from this pilot activity within USAID and to other USG agencies and development partners.

AGRICULTURAL INNOVATIONS TO OVERCOME NUTRITION AND HEALTH CHALLENGES

EGAT has supported a global alliance of institutions and scientists seeking to improve human nutrition by developing new varieties of staple food crops that have higher levels of micronutrients, a process called biofortification. Through this alliance, 60 partner institutions

gather information and produce research on reducing micronutrient malnutrition through biofortification. The result has been a substantial body of work in basic and applied research that has significantly contributed to the growing knowledge base of biofortification of rice, wheat, maize, cassava, sweet potato and beans. These six staple foods are consumed by most of world's poor in Africa, Asia and Latin America, making them prime targets for biofortification and ultimately an important vehicle for improving the nutritional status of a significant number of the world's poor and vulnerable groups. The orange-fleshed sweet potato is currently disseminated in Uganda and Mozambique and has been proven to improve the vitamin A status of children.

EGAT has also invested significant resources in deploying agricultural research to improve nutrition and health outcomes primarily through Collaborative Research Support Programs (CRSPs). These programs are designed to enhance the nutritional and health status of vulnerable populations through increased availability, access and utilization of widely consumed animal and plant food sources

Specifically:

- In West Africa, the development and consumption of highly nutritious, fortified cowpea and bean products were significant factors in preventing childhood malnutrition, increasing childhood survival, and promoting normal growth and development of children;
- In Ghana, child nutritional status improved as a direct result of programs involving women engaged in animal source food-based income-generating activities, microcredit programs, business development, and nutrition training. In fact, these women earned 3.5 times more per week than those who were not involved in these programs.
- Research reconfirmed that the immune suppression associated with chronic sub-symptomatic aflatoxicosis (CSA) observed in animals was also occurring in humans; therefore, a program was developed and deployed to reduce aflatoxin exposure in the production, processing and marketing of peanuts.

SCHOOL FEEDING PROGRAMS COMBAT CHILDHOOD HUNGER AND ITS CONSEQUENCES

In recognizing that 62 percent of the world's 72 million school-aged children are malnourished and that 57 percent of these children are girls and nearly all live in developing countries, USAID supports school feeding programs through CAADP and the Global Child Nutrition Foundation. EGAT recognized that opportunities were being missed to develop the next generation of school feeding programs that not only improve access to nutritious foods and life chances of children, but also improve the economic well-being of local communities. EGAT supported new school feeding and nutrition programs in sub-Saharan Africa that improved the livelihoods of smallholder farmers in local communities through the local purchase of food for school feeding programs. EGAT also provided technical assistance, working with partners to disseminate lessons learned in order to strengthen the school feeding programs and build in-country capacity to implement them. With the most of world's poor living in rural areas and dependent on the agricultural sector for their livelihood, EGAT and other development partners have recognized that school feeding provides a promising entry point to jump-start the productivity of local agriculture and food security and to promote education and ultimately better economic performance. In addition, in countries most acutely affected by the global food crisis, school feeding and child nutrition programs are one response to food price shocks. School feeding programs can transform

schools into local centers that promote the health and economic development of the community. As such, EGAT has recognized that school feeding is a key intervention to eliminating child hunger and is a powerful way to make progress on the MDGs.

In Ghana, the Global Livestock CRSP monitored the multiple pathways that might increase availability, accessibility, and utilization of animal source foods (ASF) in targeted communities by supporting a small microcredit program for mothers of children between two and five years of age in conjunction with training on nutrition and business development. The researchers examined the effect of providing microcredit with nutrition education given to caregivers of children. Subsequent evaluation showed that children whose caregivers received the program intervention (PI) had significantly higher intakes of protein, calcium, and zinc. The PI children also consistently had high ASF diversity at each follow-up period compared to the control group. The combination of microcredit with nutrition education was effective in improving children's ASF intakes among the deprived rural communities. The intervention was successful because the participants were not only trained in the importance of child nutrition but also supported in their efforts to generate income, which made it possible for families to afford and provide more adequate nutrition, namely, animal source foods.

RESPONDING TO THE HIV/AIDS PANDEMIC WITH FOOD AND NUTRITION SECURITY RESEARCH AND PROGRAMS

EGAT has recognized that within the context of people's livelihoods, food insecurity and malnutrition stand out as key drivers of the progression of HIV and key mediators of the impacts of AIDS. In addition, it is now clear that agriculture is an important source of livelihood for a significant number of people affected globally by HIV/AIDS and that good nutrition is essential for the efficacy of HIV/AIDS anti-retroviral drugs. Consequently, EGAT has supported a Regional Network on AIDS, Livelihoods and Food Security to strengthen the capacity of research institutions to investigate the interactions between agriculture, food and nutrition security on HIV/AIDS. The network has found that although the complexity and the context-specificity of interactions between HIV/AIDS and food and nutrition security is increasingly understood, the effective incorporation of the dynamics of HIV and AIDS in food and nutrition security programs continues to be constrained by gaps in understanding these dynamic interactions and how to respond, and by the limited capacity to respond. With EGAT support, the network has reduced critical gaps in the understanding of how livelihoods, particularly those deriving from agriculture, contribute to the further spread of HIV and are affected by HIV and AIDS. In addition, the network has generated policy-relevant knowledge on how households and communities may strengthen both their resistance to HIV transmission and their resilience to the impacts of AIDS; it disseminated this information at regional and international HIV/AIDS workshops and conferences. Finally, the network has advised relevant national government institutions on generating and acting upon realistic priorities for responding to the interactions of the AIDS pandemic with food and nutrition insecurity.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES OF THE BUREAU FOR AFRICA, OFFICE OF SUSTAINABLE DEVELOPMENT, FY 2008

Increasing agricultural growth is a high priority for the USG, donors and African leaders as reflected by the African Union's Comprehensive Africa Agriculture Development Program (CAADP), G-8 commitments, agriculture's centrality in the World Trade Organization negotiations, and the USG announcement at the 2005 United Nations General Assembly to align IEHA to support CAADP objectives. In 2008 AFR/SD assisted CAADP partners to undertake a number of reforms and capacity building efforts to address critical constraints to CAADP implementation at the continental, regional and country level, consistent with the AU/NEPAD action plan. This included establishing the institutions, tools, and capacity to enable African leaders to manage the agriculture agenda; making strategic investments; harmonizing and coordinating donor support; incorporating new players; and increasing transparency and mutual accountability.

In 2008 AFR/SD provided significant levels of assistance at the continental and regional levels to give African leaders the capacity, business practices, knowledge and development tools needed to shape, lead and manage the CAADP implementation. AFR/SD provided funding and technical assistance to develop two of the four major Pillar frameworks for CAADP—the Markets, Infrastructure and Trade Pillar and the Food Security Pillar. AFR/SD assistance enabled African leaders to develop the basic CAADP implementation policy frameworks through its support to AU, NEPAD and African technical organizations leading the processes of pillar framework development and further analytical work. AFR/SD also provided support through Michigan State University to assist the Common Market for East and Southern Africa (COMESA) to conduct an applied research and policy analysis program that will provide the empirical basis for the East Africa Regional Compact.

- The NEPAD Secretariat completed Pillar Two's Framework for the Improvement of Rural Infrastructure and Trade-Related Capacities for Market Access (FIMA) and Pillar Three's Framework for African Food Security (FAFS). These frameworks provide the overall strategy and policy to guide the regional economic communities and their member countries on the design and implementation of agricultural and rural development strategies in the respective regions.
- COMESA completed the design of Agricultural Commodity Trade for East and Southern Africa (ACTESA), a multi-donor program to improve staple food markets in the region.
- A technical conference on the "Convergence between Social Services Provision and Productivity Enhancing Investments" brought together African and international researchers, experts and practitioners to discuss the technical and practical aspects of enhancing complementarities and synergies between investments in social services (health, education, and safety nets) and those aimed at increasing agricultural productivity growth. The conference finalized a research agenda that will examine the synergies and trade-offs between social services and agricultural growth investments in order to devise strategies to maximize the impact of future public

expenditures for growth and poverty reduction in rural areas under CAADP.

In each sub-region—East, West, and Southern Africa—AFR/SD made major progress in establishing regional analytical "nodes" by funding and providing technical assistance to the Regional Strategic Analysis and Knowledge Support System (ReSAKSS) program. As a result of this effort, evidence-based planning and monitoring systems are being used at the regional and country levels to ascertain funding priorities, identify policy bottlenecks, and assess progress. These capacity building efforts are strengthening African organizations and their enabling policy environments to stimulate agricultural growth and achieve the objectives of African leaders for agriculture, as reflected in CAADP goals. Approximately 15 countries are now engaged in stocktaking, analysis, and roundtable processes to establish CAADP Compacts.

- Country background papers providing simulations and investment options for meeting the CAADP economic growth and poverty reduction targets were completed for Zambia, Uganda, Malawi and Kenya in East and Southern Africa and for Ghana, Benin, Burkina Faso, Niger and Togo in West Africa.
- ReSAKSS launched the web-based regional information and knowledge platforms (www.resakss.org).
- ReSAKSS completed and received NEPAD Secretariat endorsement of a CAADP monitoring and evaluation framework to document implementation progress and performance at the regional level and among member countries. The framework includes input level indicators such as the share of government expenditure in total government expenditures; intermediate goal level indicators such as the growth rate of real agricultural GDP and real household incomes; and goal level indicators such as the prevalence of underweight children under five years of age and the poverty incidence ratio.

These data and analysis enabled the USG to develop a strategic response to the African food challenge as part of the Global Food Security Response and enabled the USG to lead internationally and leverage other donor support in addressing the food challenge in Africa. Indeed through AFR/SD's support under IEHA, the USG had a solid foundation in responding to the food challenge in Africa.

These results were achieved in a year that saw soaring food prices. AFR/SD's investments under IEHA are having a significant impact at a time when the challenge of food security in the region has never been greater. AFR/SD, in collaboration with our bilateral missions and private sector partners, has clearly established a solid foundation for scaling up activities that are part of a more robust response to high food prices. Over the next year AFR/SD will build on the experience of the Initiative as we contribute to the Agency's global response to the food challenge, a challenge that threatens the well being of millions of Africans.

ANNEX 3: COLLECTION OF IEHA PERFORMANCE DATA

IMPORTANCE OF IEHA PERFORMANCE MONITORING SYSTEM

IEHA's performance monitoring system tackles the difficult problem of reporting on development efforts taking place at the community, national, regional and continent levels. Using a set of common indicators, it tracks and aggregates performance across different geographical areas, commodities, enterprises, and development activities. IEHA has put in place a way to tell its story in a more coherent manner, while still recognizing the richness and diversity of individual efforts.

IEHA is also working on building national level data and analysis systems to track primary development indicators like income, poverty, and hunger. It is examining the linkages between the micro and macro level performance measures, and between outputs, intermediate results, and impacts. Review of performance data allow IEHA management to better understand areas in which improvements or changes of course need to be made.

In 2004 IEHA had about one thousand individuals who were involved in collecting, reporting and analyzing performance data. It is that kind of network of dedicated individuals that produced the data for this report.

IEHA indicators include both quantitative and qualitative information to create the most comprehensive picture of progress made that is possible and that can be aggregated across Operating Units. IEHA indicators are consistent with those in the unified Foreign Assistance Coordination and Tracking System (FACTS) system in the new Foreign Assistance Framework, thereby minimizing reporting burden on Operating Units.

DATA COLLECTION PROCEDURES

IEHA requests data at the end of the USG Fiscal Year for the year just ended. The IEHA annual report is prepared as soon as possible thereafter.

IEHA collects data on outputs and on results from participating Operating Units. Data on higher-level goals and objectives (like rural household income and the MDGs) are also collected. IEHA solicits narratives with all performance data to ensure that the meaning of the data is properly understood and can be incorporated into IEHA reporting. All indicators are defined in the user-friendly template that IEHA sends to Operating Units for use in submitting data.

Data reported reflect the direct effects of USAID interventions; except as noted, they reflect the project scope not national statistics. Data reported are requested to be the incremental amounts for the year being reported, not cumulative amounts that include previous years.

Most indicators have only one or two data elements and reporting is quite straightforward. Most of the IEHA indicators were already in use by some or all of the Operating Units before they were designated as IEHA indicators. Some indicators, like gross margin per unit area, have several data

elements that need to be reported so that results can be properly aggregated across Operating Units and so that a richer story can be told about the progress made.

The IEHA template has been carefully designed so that Operating Units may send these templates to their implementing partners and have them complete the data entry. The template makes it easy for Operating Units to assemble all relevant data and forward them to the IEHA M&E coordinator as one complete report for that Operating Unit. The IEHA M&E coordinator assembles all data from Operating Units and drafts an annual report and associated charts and tables.

In addition to the USAID Operating Units that participate in and report to IEHA, SAKSS and ReSAKSS units/nodes also provide key analytical information that helps IEHA to track progress toward higher-level goals and to understand better the importance and relevance of the results reported by the IEHA operating units.

IEHA PERFORMANCE INDICATORS

The following are the indicators of performance that IEHA uses, shown by Intermediate Result.

Intermediate Result 1: Enhanced Productivity of Smallholder-Based Agriculture

Indicator: Gross margin per unit

Definition: Gross margin (profits) per hectare/animal for targeted commodities. Reporting by crop includes: area, value of sales, quantity sold, total cost of purchased inputs, and production. Reporting by dairy animal includes: number of milking animals, value of dairy product sales, quantity sold, total cost of purchased inputs, and total production.

Sub-Intermediate Result 1.1: Expanded Development, Dissemination, and Use of New Technology

Indicator: Adoption of targeted technologies

Definitions:

- Area under new technology
- Number of farmers who adopted new technology
- Number of processors who adopted new technology
- Volume of produce processed using new technology

Sub-Intermediate Result 1.2: Enhanced Human and Institutional Capacity for Technology Development, Dissemination, and Management

Indicator: Institutional capacity (technology)

Definition: Partner Institution Viability Assessment (PIVA) score of relevant institution (or equivalent quantitative information about the scale and quality of change).

Intermediate Result 2: Improved Policy Environment for Smallholder-Based Agriculture

Indicator: Policy reform (milestones)

Definition: Several stages were defined to measure the progress of reform: analysis completed; dialogue conducted; proposal submitted to relevant body for consideration; legislation (or decree, etc.) passed/signed/approved; implementation begun (e.g., regulations issued)

Sub-Intermediate Result 2.1: Enhanced Human and Institutional Capacity for Policy Formulation and Implementation

Indicator: Institutional capacity (policy)

Definition: PIVA score of relevant institution (or equivalent quantitative information about the scale and quality of change).

Intermediate Result 3: Increased Agricultural Trade

Indicator: Agricultural trade

Definitions:

- Volume and value of international agricultural exports (targeted commodities)
- Volume and value of intra-regional agricultural exports (targeted commodities)

Sub-Intermediate Result 3.1: Enhanced Competitiveness of Smallholder-Based Agriculture

Indicator: Domestic agricultural trade by smallholders (targeted commodities)

Definitions: Volume and value of purchases from smallholders of targeted commodities

Sub-Intermediate Result 3.2: Enhanced Agricultural Market Infrastructure, Institutions, & Trade Capacity

Indicator: Trade-supporting transactions and capabilities

Definitions:

- Value of credit (including working capital) disbursed to targeted beneficiaries;
- Number of targeted enterprises accessing BDS;
- Number of targeted firms achieving international standards; and
- PIVA score of relevant organization (or other quantitative information about the scale and quality of change).

IEHA OUTPUT INDICATORS

The following are the output indicators on which IEHA bilateral operating units report.

- Number of rural households benefiting directly from interventions
- Number of vulnerable households benefiting directly from interventions
- Number of agriculture-related firms benefiting directly from interventions
- Male attendance at training
- Female attendance at training
- Number of producers' organizations, water user associations, trade and business associations, and community-based organizations assisted
- Number of women's organizations/ associations assisted
- Number of public-private partnerships formed
- Number of technologies made available for transfer

The following are the output indicators on which IEHA regional and central operating units report.

- Number of partner organizations and active institutional members of those partner organizations.
- Number of agriculture-related firms benefiting directly from interventions
- Male attendance at training
- Female attendance at training
- Number of producers' organizations, water user associations, trade and business associations, and community-based organizations assisted
- Number of women's organizations/ associations assisted
- Number of public-private partnerships formed
- Number of technologies made available for transfer

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523
Tel: (202) 712-0000
Fax: (202) 216-3524
www.usaid.gov