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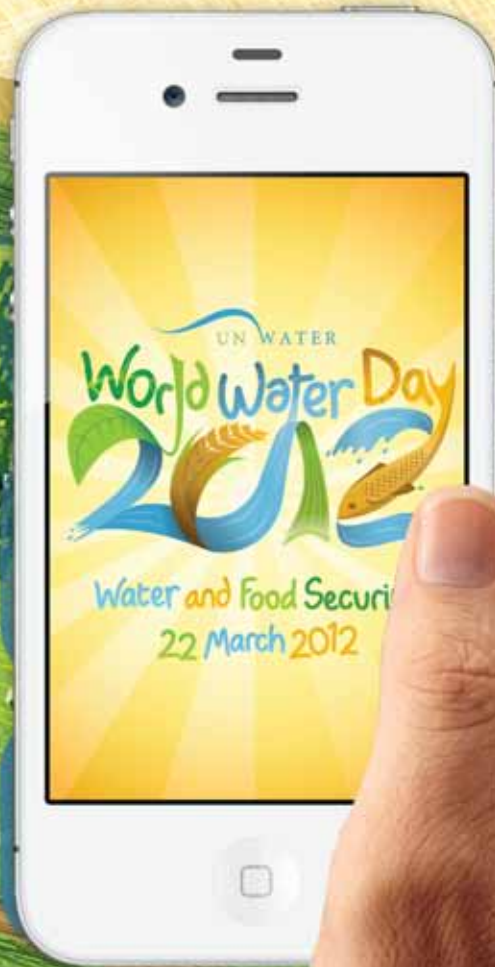
WORLD WATER DAY
Special Edition

VOLUME III ISSUE II SPECIAL EDITION 2012

GLOBAL WATERS

IMPROVING THE ROLE OF WATER IN FOOD SECURITY

IS
THERE
AN APP
FOR
THAT?



WHAT ROLE DOES WATER PLAY IN FOOD SECURITY? A MAJOR ONE!

As we celebrate this year's World Water Day theme, food security, we certainly can't ignore the critical role water plays in agriculture and the degree to which these two sectors of USAID's work are increasingly integrated.

With 70 percent of the freshwater available for human use going to agriculture, one of our primary objectives at USAID is to promote strategies to improve nutrition and stabilize food supplies and markets in regions that have been hit hardest by drought and other extreme weather conditions due to climate change. Never has it been more important or challenging to maximize outputs while minimizing reliance on the very limited water resources available in much of the developing world.

In this special edition of *Global Waters*, we explore some of the innovations that are being developed and implemented to achieve our food security goals with water. From the simple engineering principles of drip irrigation to the sophisticated use of satellites in remote water sensing, we're seeing exciting innovations in accessing and utilizing water that are proving successful in ways no one could have imagined before. For instance, one of the programs highlighted in our cover story, Fishing with 3G Nets, involves the training of fishermen in remote areas of Brazil to use cellular technologies to track weather conditions, fish stocks, and market prices of the day's catch. This is the kind of game changing technology that USAID seeks to replicate in other parts of the world.

Similar innovations can be seen in the development of new drought resistant crops and farming techniques the Bureau of Food Security (BFS) is embracing to help farmers and pastoralists in drought-stricken regions limit and better manage their water use for maximum output. Our interview with BFS' Greg Gottlieb and Moffatt Ngugi provides insights into some of those techniques and how they are being applied both in development and relief efforts.

We're on the threshold of an exciting time in which development and technology can work hand-in-hand to help populations in remote regions not only survive, but thrive. It will take time to cultivate the many ideas we're currently exploring, but knowing that we're on the cusp of developing innovations and technologies that can ultimately move us from challenges to solutions is tremendously good news on the water front.

Happy World Water Day from The Water Team
waterteam@usaid.gov

EXPANDED IRRIGATION: Support from USAID is helping communities in Nepal's Terai region expand agriculture and improve livelihoods through improved irrigation and agricultural practices.

Photo Credit: Moffatt Ngugi

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FISHING WITH TECHNOLOGY: In Cabralia, Brazil, a member of the Pataxó indigenous group learns to use a mobile device through the Fishing with 3G Nets program. The cell phones enable fisherman to obtain and share information useful to their trade – even while out on the water.

Photo Credit: IABS

WHAT DO HUMANS NEED TO SURVIVE?

Water and food top the list, and the two are intimately connected. With World Water Day focusing on food security this year, it's clear that the sustainable provisioning of these two elements to the seven billion-plus inhabitants of the world is a growing challenge—and one that is increasingly being addressed by a range of new technologies.

Water shortages, droughts, and conflicts over water rights do not simply leave people thirsty—they have the potential to shut down the entire agricultural system by which most of the world obtains its food. The astonishing reality is that agriculture accounts for an estimated 70 percent of the world's water use.

Today, using improved irrigation practices, text messaging alert systems, remote sensing techniques, and other technologies, USAID and its partners are implementing innovations in the water sector to improve food security around the globe. Many of these forward-looking approaches are already reaping benefits for families, communities, and governments from Afghanistan to Honduras and from Egypt to Indonesia. While many of these projects embrace the high-tech, they do not ignore the simple but critical fact that technology is meaningless without local acceptance and engagement.

Managing Abundance

A recently completed partnership between USAID and New Mexico State University is a prime example of how technology can be successfully integrated into an ancient practice for obtaining water for irrigation and other uses. The end result? An immeasurable boost to the safety and reliability of water access for hundreds of thousands of Afghan people.

Each spring snowmelt races down the Hindu Kush mountain range and supplies farmers with water for their crop systems, which are predominantly wheat, as grains make up two-thirds of the average Afghan's caloric intake. The problem arises in the summer, when the water runs out. Roger Beck, chief of party for the Afghanistan Water, Agriculture, and Technology Transfer (AWATT) project, recalls observing a farmer



WATER MANAGEMENT: In a village in Afghanistan's Herat province, engineers and locals close down the *karez* for the winter. Built as part of the AWATT project, the newly lined and gated karezes enable farmers to manage the amount of water they can apply to their crops throughout the year.

Photo Credit: Zohrab Samani

irrigating his wheat fields with what appeared to be too much water. "I asked the farmer why, and he gave me an answer I've never forgotten," said Mr. Beck. "He said, 'Well, today I have access to water, and I never know when I will have access to it again.'"

The \$16 million AWATT project was developed to help individuals and communities manage their water and make it last. By installing water-monitoring equipment and conducting research to determine the optimal time to water crops, as well as using techniques such as laser-land leveling, the AWATT team's efforts increased crop yields 50 to 70 percent above provincial averages. "Once you do that, you've met the family's needs, so now they can put some land into higher value crops like vegetables, fruits, and nuts, elevating not only their food security but also their economic standing," said Mr. Beck.

Another element of AWATT, led by NMSU engineer Zohrab Samani, engaged with communities in western Afghanistan to tackle water management at its source by overhauling structures called *karezes*, which provide water for irrigation and other uses. Karezes are horizontally carved wells that access



INNOVATIVE TECHNIQUES: A group listens to an explanation of drip irrigation in Bas Boan, Haiti.

Photo Credit: Ben Edwards, USAID

groundwater by tunneling into hills, where the water table is higher. The work of digging the wells is arduous and dangerous—earthen collapses are not uncommon—and the karezes require regular upkeep.

Mr. Samani, a native of an Iranian village where karezes were commonplace, saw a way to improve their structural integrity. In the fall of 2010, along with other engineers and locals, he led 11 projects to restore karezes and canals, lining the structures with a mixture of rock and concrete and installing gates to control the flow of water. With a total investment of under \$1 million, the work brought 8,440 additional hectares into irrigation and permanently employed 124,500 on farms. A village leader wrote a grateful note to Mr. Samani, saying, “Nobody has ever helped us. First the Russians came, then the Mujahedeen came, then the Taliban came. They all made promises, but nobody helped us. You are the first one who has helped us. May God reward you a hundred times. Our gratitude is the size of these mountains.”

Savoring Every Drop

While springtime gives Afghans the problem of too much water, in many other places around the world each drop of water is precious year-round. That’s why drip irrigation, a technology made widespread by USAID programs, has been so revolutionary

at improving crop yields. By installing a network of valves and tubes in farmed beds, plants receive a small but steady application of water at their bases, where it can be most efficiently absorbed with minimal loss to evaporation. However, this is a technique that requires resources once only available to large, wealthy farming operations.

USAID partner Fintrac, Inc., has changed that, making drip irrigation and other enhanced agricultural practices affordable and accessible to small farmers in countries from Cambodia to Tanzania, as part of the Feed the Future global hunger and food security initiative. One of Fintrac’s efforts, called the ACCESO project, is based in Honduras, where maize is a major crop.

Incorporating drip irrigation there has had many benefits. “You have better control of the plant’s water needs, healthier roots, and an equal distribution of fertilizer and other inputs for pest and disease control,” said Antonio Coello, a monitoring and evaluation specialist for Fintrac.

According to Fintrac’s records, after incorporating drip irrigation and using improved seeds on Honduran family farms, crop yields increased 167 percent and net household incomes increased 573 percent.

“By implementing these practices, families with limited land to produce crops for self-consumption who are food insecure are often tripling their yields, considerably increasing availability of food in their homes, and oftentimes producing surpluses which they can sell to nearby markets,” said Mr. Coello.

Water from Space

While local interventions like Fintrac’s can reap dramatic benefits for communities, other USAID projects are using satellite-based technologies to capture data on water that has the potential to inform water resources policy and management decisions in the Middle East and North Africa (MENA).

Two complementary programs administered by the Office of Middle East Programs (OMEP) in Egypt rely on remote sensing to gather water-related data: the Modeling and Monitoring Agriculture and Water Resources Development (MAWRD) program and the Water Information Systems Platform (WISP). The programs are the result of a collaborative effort among USAID, the World Bank, NASA, USDA, the International Center for Biosaline Agriculture (ICBA), the Arab Water Council, and five countries in the region. They work on the principle that regional-scale water resources data can be collected faster

"3G TECHNOLOGY IS MAKING A DIFFERENCE TO PEOPLE IN THESE AREAS THAT WOULD OTHERWISE HAVE NO ACCESS TO INFORMATION THAT IS CRITICAL TO THEIR SAFETY AND ECONOMIC DEVELOPMENT.."

and more cost effectively from space than from on the ground gauges and monitoring systems.

“Well monitoring, resource availability, and on-farm water application data is not readily available in the Middle East and North Africa,” said Mark Peters, USAID/OMEP’s regional water advisor based in Cairo. “When data does exist, there are barriers to data-sharing between different ministries and agencies within a particular country as well as across borders. As a result, we’re missing a tremendous opportunity to inform water-related decisions with real, verifiable, scalable data.”

SIMPLE YET EFFECTIVE: Drip irrigation lines help keep a farmer's crops well-watered in Honduras. USAID has partnered with Fintrac, Inc., to implement such technologies, which boost yields dramatically.

Photo Credit: Fintrac, Inc.



MAWRD, a three-year, \$2 million project implemented by ICBA, is scheduled to end this December. The project uses NASA satellite data and models “to develop a dataset that will help researchers and decision makers better understand the availability, location, and use of water resources at a regional scale,” said Mr. Peters. The data will also be analyzed to help create a regional model that forecasts climate change impacts.

WISP, launched last October, will provide grants and technical expertise to the remote-sensing agencies of Morocco, Tunisia, Egypt, Jordan, and Lebanon. This investment will leverage satellite-based sensing technologies to inform regional water resource decision-making, including irrigation management, drought, and flood forecasting.

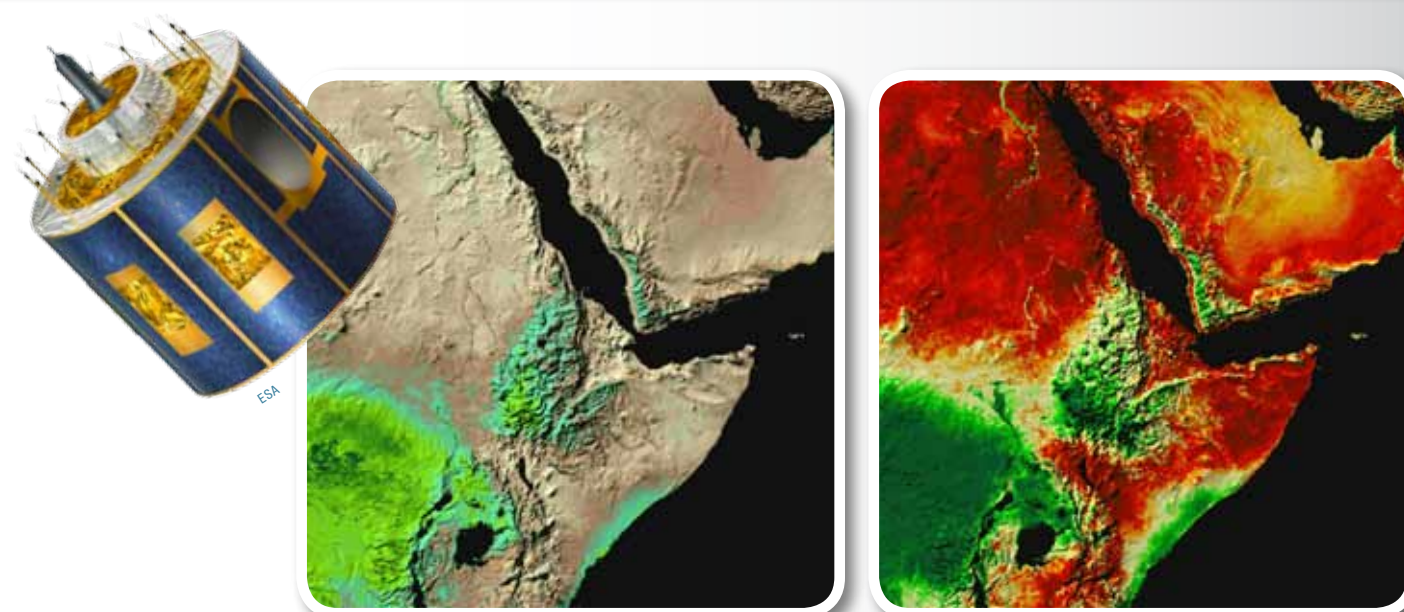
The resulting national- and regional-scale data will be widely available online, with higher-resolution data available to in-country decision makers. “The overarching goal of these projects is to improve the data available to researchers and decision makers and help foster a culture of data-informed water resources policy and management,” said Mr. Peters. Better information sharing could help prevent conflicts over shared water resources and even provide information necessary to predict and avert drought-induced famines.

MENA countries are home to ten percent of the world’s people, but just one percent of the world’s water. Thus, programs such as WISP and MAWRD can play an important role in making the most of increasingly scarce regional water resources. “These programs demonstrate the importance of science and technology in water resources decision-making,” added Mr. Peters. “Ideally, data-driven decision making helps us make optimal use of water resources and mitigate against water related conflict.”

Lesson Learned: The Human Element

Sometimes, however, the most important factor in implementing water projects has nothing to do with technology and datasets, but instead involves human factors such as promoting adoption and ownership in communities that are involved.

In Brazil, the recent launch of a program called Fishing with 3G Nets has brought the human element in touch with the technological side. A collaboration between USAID, the city of Cabrália, the Brazil Sustainable Environmental Institute (IABS), and telecommunications companies Qualcomm, Vivo, and ZTE, sought to address several challenges at once: 1) providing income and employment for fishermen and the indigenous community of Cabrália;



METEOSAT 2G SATELLITE IMAGERY USED TO MONITOR WATER USE AND DROUGHT OVER THE NILE BASIN:

Left: Water loss from land surface: Green indicates high evaporation; Brown indicates low evaporation.

Right: Soil Moisture Conditions: Green indicates wet; Red indicates dry.

Credit: USDA-ARS

2) improving the fishermen’s safety at sea; 3) increasing the communities’ access to the resources of the internet; and 4) preventing overfishing of certain species in the region—thus ensuring a sustainable and nutritious food source for the region.

With funding of \$360,000 and roughly \$25,000 of in-kind donations, the program offered cell phones to fishermen and trained them in their use. Applications, or ‘apps,’ downloaded onto the phones provide information such as weather reports and the current market value of certain types of fish. One app allows fishermen to input their costs and the species they are fishing and indicates whether or not they will break even or make a profit. The phones also allow fishermen to connect with buyers to share “the type of fish they catch and how much of them are coming into the market,” said Alex Alves, environment and partnership development officer for USAID/Brazil.

Serving as more than just a resource for the fishermen of the villages, Fishing with 3G Nets reached out to the larger communities as well. “Indeed, one of the components of the project was to reform an abandoned jail and turn it into a telecenter,” said Mr. Alves. The computing center is now open and available to the community to access the internet for educational purposes.

“Our work with USAID has allowed fishermen and farmers in underserved communities to gain access to information that will improve their trade,” said

Francisco Soares, Qualcomm’s senior director for government affairs. “3G technology is making a difference to people in these areas that would otherwise have no access to information that is critical to their safety and economic development.”

Mr. Alves said he’s already seeing the project’s impact. One fishing unit that had been closed was reopened by Fishing with 3G Nets. Now that group is selling \$4,500 a month in fish. “For this community this is a very considerable amount of money,” he said.

With such measured, meaningful applications of technology, USAID and its partners can make potent changes in people’s lives. The step from food scarcity to food security can be small—a few percentage changes in a crop yield or a bit of knowledge gained from using mobile devices—but potent. Sometimes it can start with just a few drops of water.

K. Unger-Baillie

FOR MORE INFORMATION, VISIT:
 Fishing with 3G Nets: <http://idea.usaid.gov/newsroom/articles/gp/11-10-01-85>
 AWATT Project: http://afghanistan.usaid.gov/en/USAID/Activity/110/Afghanistan_Water_Agriculture_and_Technology_Transfer_AWATT_Project
 WISPS: http://www.usaid.gov/omep/documents/FS_WISP_January_2012.pdf



INCORPORATING TECHNOLOGY: Members of the Pataxó indigenous group learn how to use the Fishing With 3G Nets program.

Photo Credit: IABS

SHEDDING LIGHT

AN INTERVIEW WITH THE BUREAU OF FOOD SECURITY'S GREG GOTTLIEB AND MOFFATT NGUGI



QUALITY CONTROL: BFS' Greg Gottlieb observes the quality of US provided grain.
Photo Credit: USAID

In his 2012 annual letter, which serves as a sort of progress report for the agency, USAID Administrator, Rajiv Shah, said: “We must seize pivotal opportunities that we know can leave behind generational legacies of success: building resilience to disasters, increasing global agricultural productivity to fight hunger and malnutrition and helping countries reap what is known as a demographic dividend.” Perhaps nowhere is progress towards that goal clearer than in the Bureau of Food Security’s (BFS) current water-related programs.



WATER SOURCE: Moffatt Ngugi at Lake Awassa in Ethiopia. The freshwater lake supports a multitude of livelihoods in and around the town of Hawassa.
Photo Credit: Moffatt Ngugi

A recent interview with the Bureau’s Senior Deputy Assistant Administrator, Greg Gottlieb and Program Analyst for Climate Change, Moffatt Ngugi, revealed a substantial slate of projects at work around the globe to help achieve the administrator’s objectives.

GW: WHAT ARE THE TOP PRIORITIES FOR THE BFS AS RELATED TO WATER?

GREG GOTTLIEB: We’re addressing water’s role in food security from several perspectives: WASH, multiple use systems (for example, for irrigation, drinking water, and livestock), adaptation to climate change, and conflict management. These are all critical components of our water strategy.

We need to improve access to water, make communities more resilient to drought, improve irrigation, maintain infrastructure even in its most rudimentary forms, like repairing borehole wells and funneling water from springs, etc. The list of priorities is long. We’re taking a three-pronged approach to them: developing field programs, partnering with the private sector, and conducting research.

GW: CAN YOU OUTLINE SOME OF THE SPECIFIC PROGRAMS THAT ARE ADDRESSING FOOD SECURITY AS IT PERTAINS TO WATER?

GOTTLIEB: Feed the Future, a Presidential Initiative, targets 20 countries, 12 of which are in Africa and were chosen from criteria based on opportunity and need. The Horn of Africa, which has suffered from severe drought for well over a year now, is certainly at the top of the list. One of

our key objectives is to make communities more resilient to drought before it happens, not after it becomes a crisis. We’re trying to bring together our relief work with our development work.

MOFFATT NGUGI: We are taking a value chain approach to food security – from the type of crops we select to determining how to fill the gap of productivity, to maximizing returns by getting more food with less water.

A large part of our focus with regard to water is developing ‘multiple use systems’ that can provide water for home use, cropping, and horticulture.

GOTTLIEB: We also work with universities in the Collaborative Research Support Program, or CRSP community to provide research that helps solve agricultural problems like developing drought-resistant crops.

GW: CAN YOU GIVE AN EXAMPLE OF ONE TYPE OF CROP THAT IS CONSIDERED DROUGHT RESISTANT?

NGUGI: Upland rice is one crop we expect great success with for drought resistance. Traditional paddy rice farming requires a substantial amount of water. But upland rice requires less water. For paddy rice, approaches like the System of Rice Intensification (SRI) irrigation, requiring only a minimal amount of moisture, are being tried out in places like Mali. It requires more labor in weeding and more manure, but in some cases we’ve seen double the yields with far less water than traditional rice farming requires.



SUSTAINABLE PRACTICES: Malian farmers tend to their home garden, which enables their household to grow many horticultural crops for home consumption and sale.

Photo Credit: Moffatt Ngugi

GW: WHAT ARE SOME OF THE OTHER DROUGHT RESISTANT TECHNIQUES YOU'RE HAVING SUCCESS WITH IN THE FIELD?

NGUGI: We are advancing sustainable intensification of agricultural production, for example, conservation agriculture among other climate-smart approaches. Conservation agriculture uses minimum or no tillage, which means keeping plant cover on the ground, and manipulating the soil as little as possible while rotating crops with a diverse set of crop choices that enrich the soil, especially nitrogen fixing legumes.

GOTTLIEB: We've also found success with sand dams, which involves constructing a wall of sand that traps and preserves water longer and works well in areas that are most vulnerable to the unpredictability of climate change.

In Ethiopia, we've used terracing to catch water from rainfall and stabilize hillsides. Trapping the water prevents erosion and helps farmers retain topsoil, which becomes richer as a result.

GW: HOW ARE THE FARMERS RESPONDING TO THESE NEW METHODS?

NGUGI: In some instances it means they have to change their ways after generations of using more traditional techniques, and that can be hard. Some of the new farming methodologies require fencing in farmland, which is rare in places like Namibia, where livestock needs to be mobile to graze, and that can cause conflict.

GOTTLIEB: Our Farmer-to-Farmer mentoring program has proven very successful in helping communities adjust to changes, though. The program pairs farmers in the developing world with volunteer farmers from America who help them with everything from implementing new techniques to organizational development to marketing. It's been a huge success. They send out hundreds of volunteers every year.

GW: WHAT IMPACT ARE THESE PROGRAMS HAVING? FWD IS A MEDIA CAMPAIGN THAT USAID INITIATED TO BRING AWARENESS TO THE DROUGHT AND FAMINE IN THE HORN OF AFRICA. HAS IT PROVEN SUCCESSFUL SO FAR?

GOTTLIEB: FWD—which stands for Famine, War, and Drought—has been an incredibly successful awareness and fundraising campaign. We were able to enlist the help of celebrities like Anthony Bourdain, Geena Davis and Greg Jennings of the Green Bay Packers, to help spread the word about the crisis in the Horn through social media. That's something we never could have done through traditional channels. We may use that concept once a year to address other important causes of that kind.

GW: YOU MENTIONED PARTNERING WITH THE PRIVATE SECTOR. CAN YOU GIVE AN EXAMPLE OF A PUBLIC-PRIVATE PARTNERSHIP THAT IS SPECIFICALLY RELATED TO FOOD SECURITY?

GOTTLIEB: Sure. USAID has a partnership with Pepsico in Ethiopia, which is working with smallholder chickpea farmers to increase the productivity and value of their crops and grow the domestic and export markets for chickpeas, which are high in nutritional value. By supporting farmers in growing higher yield and better quality crops, the partnership is also helping address famine and chronic malnutrition in the region. It's a win-win and only one example of how we're working with the private sector. We have an entire unit focused on developing programs with the private sector called the Markets, Partnerships, and Innovations office to promote new approaches to food security through new and innovative partnerships, tools, and methodologies that improve market access for food insecure households in Feed the Future countries.

For instance, the MPI office is responsible for USAID's partnership with the World Cocoa Foundation and the Sustainable Trade Initiative, which is working to overcome the productivity gap between cocoa supply and demand in Africa. The partnership will foster investments in cocoa and agriculture, improve the quality and productivity of cocoa crops in the region, expand farmer education, and improve the agriculture supply chains that serve the farmers.

GW: WHAT DOES THE FUTURE LOOK LIKE FOR THE BFS?

GOTTLIEB: It's important to integrate with other agencies. There's no question that the work we do is cross-cutting. Nutrition is a fundamental part of the Global Health Initiative so that's a very important partnership. Feed the Future is a whole of government program that involves cross-pollination with other teams such as the U.S. Department of Agriculture, State Department, the Office of the U.S. Trade Representative, and the Millennium Challenge Corporation, among others.

NGUGI: One of our big goals is addressing food security through Inclusive Agricultural Sector Growth – to broaden our beneficiaries to the most vulnerable populations.



SHARING KNOWLEDGE: Volunteers work on a potato farm in a farmer-to-farmer program in Nicaragua.

Photo Credit: Purdue University

GW: WHO ARE THE MOST VULNERABLE?

GOTTLIEB: Communities that have been left out. Folks who have been overlooked in the past. Women-headed households.

NGUGI: A lot of effort has gone into engaging women in the process, for example, through kitchen gardens that bring water closer to the house. Working with individuals and communities allows us to meet their staple needs. It's not enough to just meet their caloric needs. The nutritional component is critical and often there is not enough access to nutritious foods in the market. By improving home gardens, we help strengthen the household's access to good nutrition. And it doesn't stop there. The women can grow veggies, eat veggies, and then sell those veggies in the marketplace. Those are interventions that can help with personal development.

We need to involve all stakeholders in the process. Everybody has a role to play in achieving the goals of food security.

S. Galler, Editor, *Global Waters*



FOR MORE INFORMATION, VISIT:

http://www.usaid.gov/our_work/agriculture/food_security.htm

<http://www.feedthefuture.gov>

http://www.usaid.gov/our_work/agriculture/farmer_to_farmer.htm

USAID WATER-RELATED FOOD SECURITY PROGRAMS

Food security means always having physical and economic access to sufficient food to meet dietary needs for a productive and healthy life. Food insecurity is often rooted in poverty and has long-term impacts on the development of families, communities, and countries. Prolonged undernourishment stunts growth, slows cognitive development, and increases susceptibility to illness.

To ensure that people have sufficient food requires aligning short-term assistance with long-term development strategy. The following is a partial list of USAID-supported water-related programs designed to improve food security in the developing world:

WORLDWIDE



FAMINE EARLY WARNING SYSTEMS NETWORK – FEWS NET

FEWS NET is a USAID funded activity that collaborates with international, regional, and national partners to provide timely and rigorous early warning and vulnerability information on emerging and evolving food security issues. FEWS NET professionals in Africa, Central America, Haiti, Afghanistan and the United States monitor and analyze relevant data and information in terms of its impacts on livelihoods and markets to identify potential threats to food security.

FEED THE FUTURE – FTF

FTF emphasizes country-led plans that reduce hunger and extreme poverty through agriculture-led growth and improved nutrition. The initiative employs strategic coordination among U.S. government agencies and among several multilateral institutions to leverage significant food security investments. Feed the Future holds U.S. programs publicly accountable through benchmarks and targets to measure progress.

FOOD FOR PEACE

For more than 50 years, the Food for Peace program has brought hope and nourishment to the hungry corners of the world. The program targets the most vulnerable populations, including children under age five, pregnant women, the elderly, and



GROWING STRONG: The twelve members of the Wanawake Kwanza (Women First) growers association in Maza village, Morogoro, Tanzania, have received Feed the Future support through USAID to boost their incomes and improve nutrition in the village.

Credit: USAID/Tanzania

the poorest families in a community. Food can be used to compensate people for work, such as building roads or repairing water and irrigation systems. In turn, these projects help protect communities from future hunger by providing them access to local markets for their produce, keeping them healthy, and improving their harvests.

GLOBAL FISH ALLIANCE – G-FISH

G-FISH is a USAID alliance that promotes sustainable fisheries and responsible aquaculture to enhance livelihoods, biodiversity, and food security. G-FISH takes a system-wide approach that balances the economic, environmental, governmental, and social components essential to enhancing livelihoods, ensuring sustainable supplies of fish products critical to the economy, and conserving marine biodiversity.

Feed the Future, the U.S. Government’s flagship Food Security Initiative utilizes innovation, research, and development to improve agricultural productivity, link farmers to local and regional markets, enhance nutrition, and build safety nets. Feed the Future beneficiary countries are chosen based on five criteria:

- Level of Need
- Opportunity for Partnership
- Potential for Agricultural Growth
- Opportunity for Regional Synergy
- Resource Availability

FEED THE FUTURE COUNTRIES



ASIA



BANGLADESH: STRENGTHENING HOUSEHOLD ABILITY TO RESPOND TO DEVELOPMENT OPPORTUNITIES II – SHOUHARDO II

The goal of Bangladesh’s SHOUHARDO II program is to transform the lives of women and men in poor households by reducing their vulnerability to food insecurity. The program aims to achieve this goal by enhancing the availability and access to nutritious food, improving the health, hygiene, and nutrition status of children under two, and empowering poor women to actively engage in initiatives related to reducing food insecurity in their communities (see back cover).

BANGLADESH: POVERTY REDUCTION BY INCREASING THE COMPETITIVENESS OF ENTERPRISES – PRICE

The PRICE program works to alleviate constraints hindering the competitiveness of the aquaculture, horticulture, and leather products sectors in Bangladesh.

NEPAL ECONOMIC AGRICULTURE AND TRADE – NEAT

The NEAT program is focused on improving Nepal’s economic foundations to promote rapid, sustained, and inclusive economic growth that will lessen the potential for conflict, reduce poverty, and improve lives.

TAJIKISTAN: FAMILY FARMING PROGRAM – FFP

The FFP is a project that aims to improve food security in Tajikistan by increasing agricultural production, raising the income of food-insecure households to make food more accessible, and improving the standard of household nutrition.

LAC



HAITI: WATERSHED INITIATIVE FOR NATIONAL NATURAL ENVIRONMENTAL RESOURCES – WINNER

The WINNER program aims to help people living within target watersheds of Haiti to improve their livelihoods by reducing the threat from flooding, and by investing in sustainable economic growth and environmental protection in the watershed.

USAID WATER-RELATED FOOD SECURITY PROGRAMS CONT.

AFRICA



CENTRAL AFRICA REGIONAL PROGRAM FOR THE ENVIRONMENT – CARPE

The CARPE program is aimed at promoting sustainable natural resource management in the Congo Basin. The World Wildlife Fund, with funding from USAID, has helped to strengthen community participation in land management and supported sustainable livelihood activities that both preserve the landscape and provide communities with a greater variety of crops.

COLLABORATIVE MANAGEMENT FOR SUSTAINABLE FISHERIES FUTURE IN SENEGAL – COMFISH

The goal of COMFISH is to help sustain the productivity of marine fisheries ecosystems, reduce post-harvest losses, promote international trade through eco-labeling, and connect artisanal fishermen and women more fully in the fisheries value chains.



MAKING A DEAL: Chief Kafara of Souleymane Samaké in Mali welcomes David Thomas Pearce, a farm management and association specialist working with the MAVEN Farmer-to-Farmer program.

Photo Credit: Bara Kassambara

KENYAN MAIZE DEVELOPMENT PROGRAM II – KMDP II

KMDP II sustains a vital USAID funded food security initiative in Kenya, improving the productivity of smallholder farmers in crops that can be used for both income generation and food security.



SAVING BIODIVERSITY: Groups discuss landscape mapping at a meeting about forestry and natural resources monitoring.

Photo Credit: CARPE/UMD

MADAGASCAR: STRENGTHENING AND ACCESSING LIVELIHOOD OPPORTUNITIES FOR HOUSEHOLD IMPACT – SALOHI

The goal of the SALOHI program is to reduce the food insecurity and vulnerability in 21 districts in eastern and southern Madagascar. SALOHI will improve human capabilities in health and nutrition by reinforcing livelihood capacities in farm productivity, agribusiness and capital mobilization, reducing vulnerability to livelihood risks and shocks, and reinforcing program participants' capacity to influence decisions affecting their food security.

MALI AGRICULTURAL VALUE ENHANCEMENT NETWORK – MAVEN

The MAVEN program is designed to provide solutions and support to facilitate improvements in the Malian agriculture sector. By improving production, processing, storage, and marketing of select agricultural crops, the improvement

of business management skills of farmers soon follow, as well as increased farmer participation in agribusinesses associations and cooperatives.

MALI: INTEGRATED VALUE CHAIN DEVELOPMENT – IICEM

The IICEM program aims to increase agricultural productivity, improve linkages to markets, and facilitate rural finance in Mali. Through value chain assessments and analysis, IICEM staff determines which markets and for what products a country or region can be competitive, as well as how staple food crop supply chains can function more efficiently in meeting domestic and regional food consumption requirements.

MALAWI: MARKETING LINKAGES INITIATIVE BRIDGING ACTIVITY – MLI

The MLI Bridging Activity is a follow-up of the former Malawi Marketing Linkages Initiative (M-MLI). The MLI Bridging Activity will build upon the achievements of its successor program and continue improvement of commodity trading systems in Malawi. Initiatives achieved in this program will improve food security and support USAID's Feed the Future goal of reducing global hunger.

RWANDA INTEGRATED WATER SECURITY PROGRAM – RIWSP

The primary goal of RIWSP is to improve the sustainable management of water quantity and quality to positively impact human health, food security, and resiliency to climate change for vulnerable populations in targeted catchments in Rwanda.

SENEGAL: WULA NAFAA

The Wula Nafaa program is focused on achieving sustainable, profitable, decentralized management of Senegal's agricultural, marine, and natural resources by strengthening community-based organizations, supporting policies that clarify local rights, training communities in sustainable land use, and developing non-traditional agricultural enterprises.



GROWING HOPE: A Haitian farmer tends to her crops.

Photo Credit: USAID's Feed the Future Initiative

A SECURE FUTURE:

A SHOUHARDO II beneficiary maintains her homestead garden using skills she learned from the program.

Photo Credit: Pintu Saha/
SHOUHARDO II

THE EMPOWERED WOMEN OF BANGLADESH'S SHOUHARDO PROGRAM

In honor of Women's History Month, we pay tribute to the women of the SHOUHARDO and SHOUHARDO II programs, USAID-funded food security initiatives in Bangladesh.

The Strengthening Household Ability to Respond to Development Opportunities (SHOUHARDO) program, designed and implemented by CARE with funding from USAID, was launched in 2004 with the hope of reducing malnutrition and vulnerability to food insecurity in Bangladesh's poorest communities. The follow-on, SHOUHARDO II, continues the work and progress of the earlier SHOUHARDO program.

While the project targets poor men and women, its focus is mainly on the women, empowering them to actively engage in initiatives related to reducing food insecurity in their communities. For example, SHOUHARDO offers women self-help groups to address the unique challenges they face in their communities, such as early marriage, violence, and sexual harassment, all of which restrict women's freedom and decision making. The women who join these groups find the courage to move through the community more freely, to buy and sell goods at the markets without fear of intimidation, to contribute to their family's income. They see doctors more frequently when they are pregnant and they have increased say in their children's future. Their families start eating healthier diets, learn about nutrition, and improve their overall well-being. SHOUHARDO is also improving water infrastructure networks by

developing more constant access to a close water supply, which decreases the burden on women for collecting water and maintaining household sanitation.

The idea that educating and encouraging women to actively participate in their communities to transform their livelihoods is not new. When the political, economic, and social barriers holding back women are eliminated, the fight against poverty and food insecurity becomes more powerful. Children learn from their mothers. By educating women on nutrition, health, hygiene, and agriculture, their families grow up with these best practices.

SHOUHARDO is promoting women's empowerment as a transformative strategy against poverty, and it's working. By focusing on women, lasting and measurable results are achieved that benefit future generations.

C. Wixted



FOR MORE INFORMATION, VISIT:

<http://www.sks-bd.org/index.php?link=shouharDO>

[http://www.care.org/careswork/
projects/BGD094.asp](http://www.care.org/careswork/projects/BGD094.asp)