

FRONTLINES



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PREVENTING FAMINE



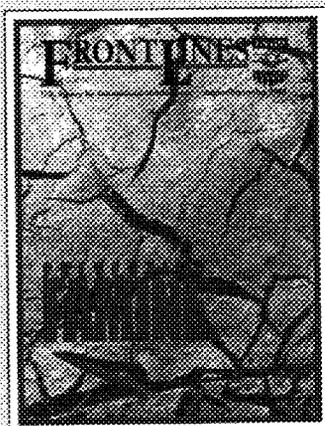
The Front Lines of a Long Twilight Struggle for Freedom

—John F. Kennedy

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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Front Lines

December issue will feature USAID employees and photographs — see page 21 for details.

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By J. Brady Anderson

“Famine averted in the Horn” is a significant achievement — but promoting long-term economic growth is essential to preventing future famine

Despite an extended drought and conflict in the Horn of Africa, famine was averted this summer, largely as a result of USAID activities that provided early warning and prompt delivery of food aid to the region.

Catherine Bertini, head of the U.N. World Food Program, declared Sept. 20 that early action “helped us to avert a famine in the Horn of Africa,” which had threatened more than 16 million people. An additional 3 million people are still at risk in Kenya, however, because of prolonged drought. USAID is continuing to respond to their needs, but the danger of widespread famine seems to have passed as rains have come to Ethiopia and most of the rest of the Horn.

“A tragedy averted does not make the news as often as a tragedy,” the Christian Science Monitor stated in a Sept. 21 editorial praising the swift donation of U.S. food. USAID, in cooperation with the U.S. Department of Agriculture, provided 75 percent of the food aid that had reached the Horn and 60 percent of food aid that had reached Kenya at that time, although the United States’ original commitment was only to provide one-third of the two U.N. requests.

I am enormously proud of the superb efforts by USAID’s offices of U.S. Foreign Disaster Assistance (OFDA) and Food for Peace, our missions in the region and the Famine Early Warning System (FEWS). They deserve much of the credit for preventing a recurrence of what happened in Ethiopia in the mid-1980s, when more than 1



Women and children at a supplemental feeding center near El Kere, in the Somali region of Ethiopia.

million people died as a result of a prolonged drought.

When the Famine Early Warning System gave us notice of worsening conditions in the Horn, Hugh Parmer, assistant administrator, Bureau for Humanitarian Response, went to Ethiopia in March to work out port and transportation arrangements for a major food aid effort. He found people already desperate and dying in Gode and called in an emergency airlift of food to pockets of population where hunger was already acute. Food for Peace diverted non-emergency food shipments to areas in greater need. Millions of tons of

food were put on ships and trucks as relief workers across the region got ready to distribute food and provide immunizations and safe water to millions of people. The administration, Congress and the American people, as always, responded generously to the crisis and made it possible to save many lives.

Now we need to consider what can be done to make the lives and livelihoods of people in the Horn more secure for the future. Without long-term development, the more than 100 million people in the Greater Horn of Africa will remain vulnerable to climate variations and

dependent on prompt external assistance for survival when rains fail.

Many people in the region live on less than \$1 per day, so their capacity to deal with even seasonal downturns in production or income-earning ability is very low. Microenterprise development programs help. Community-based development efforts help. But broad-scale economic growth is vital.

Conflict in many of the countries of the Horn has held back — and, in some cases, stopped — long-term economic development and the health, education and infrastructure improvements that support

future growth. The destruction of food supplies and disruption of planting, harvests, food markets, transportation and communications that occur during conflict often cause conditions that result in hunger and starvation.

Underlying economic problems have been used by demagogues and dictators to sow ethnic, religious and racial conflicts that

to those in need before shortages turn into hunger or famine, and to introduce new technologies that can help prevent shortages from occurring.

Over the past half-century, U.S. foreign assistance helped start the Green Revolution that prevented expected famines in Asia and Latin America, but Africa did not benefit as much from the agricultural tech-

offer their citizens a chance to fully engage in the formation as well as implementation of development policies and priorities.

Health programs, too, assist in the prevention of famine. Many people, particularly children, die long before starvation occurs because their malnourished bodies cannot fight off opportunistic infections. Preventable diseases often contribute to malnourishment, making them more vulnerable when disaster strikes. The increased poverty that results from the HIV/AIDS pandemic also makes people more vulnerable to famine and reduces resources for preventing it.

Obviously, USAID cannot prevent all disasters. There is much we can do, however, to help developing countries anticipate and avoid some of the worst effects of natural disasters. We can fund research to produce crop varieties that resist drought, pests and disease and help make sure that these technologies reach the farmers who need them. We can help find ways to provide more

nutrition on less land with less water to meet the needs of growing populations. We can support the efforts of our partner governments to build sound institutions and expand economic infrastructures that foster increased investment and greater job opportunities.

Our work to prevent famine will not stop with emergency food shipments to Ethiopia and Kenya or the longer-term aid for victims of conflict in Eritrea. The ongoing work of development will continue in USAID bureaus and missions — helping to build democracy, increase economic development and spread the benefits of international agricultural research and weather and market information.

Unlike this year's crisis in the Horn of Africa, most of that work will not make headlines or nightly news broadcasts, but it is vital if we hope to make famine a distant memory in this new century. ■

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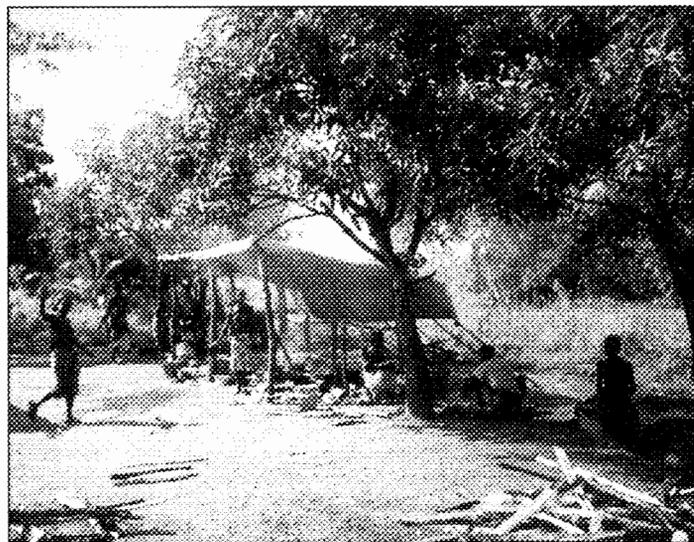
result in famine. When USAID helps establish democratic processes that allow people to settle differences peacefully, that provide all groups a voice in their government and a share in economic opportunity, that, too, helps to prevent famine.

Democracies are not immune to droughts, floods or devastating wildfires — as we have seen this summer in significant areas of Europe and the United States — but they have not had famines in modern times. People in democracies simply will not put up with letting their fellow citizens starve. Democratic governments may make mistakes, suffer from economic downturns, bad weather, water shortages or floods, but governments that have to be accountable and responsive to their citizens know that if they do not find ways to deal with disasters, they will be replaced.

Democracies with market-oriented economies are also generally better equipped to move food from more productive areas

to those in need before shortages turn into hunger or famine, and to introduce new technologies that can help prevent shortages from occurring. Technologies that fueled that agricultural revolution in other regions. Crops suitable for African growing conditions were not the focus of early seed-breeding efforts, transportation and markets were significantly less developed, and management of water resources was a more difficult challenge. Economic policies, such as price controls, often reduced farmers' incentives to invest heavily in new technologies or seek to significantly expand production.

A greatly expanded program of economic development in the Horn of Africa is vital to preventing both famine and conflict. Governments need to do their part — providing the overall policy, institutions, and good governance that enable markets to expand and operate efficiently. They need to make available the agricultural technologies to help their largely rural populations become more productive and ensure that their citizens have adequate access to health and education services. They need to



A cooking area set up for displaced persons outside a school in Sierra Leone in August.

Famine Early Warning System uses U.S. technology in sub-Saharan Africa

The Famine Early Warning System, commonly known as FEWS, was established by USAID in 1986 to help prevent a repeat of the mid-1980s famine in Ethiopia that resulted in more than 1 million deaths. Pictures of mothers carrying dying children with matchstick-like arms and legs and swollen bellies aroused an enormous outpouring of emergency food and other aid from around the world, but it came too late for many who walked for days to reach help.

Most disaster assistance at that time was geared to fast-onset emergencies, such as earthquakes, erupting volcanoes, hurricanes, flash floods or wars. Drought is a slow-onset disaster. People already weakened by chronic malnutrition are particularly vulnerable to opportunistic infections that can bring death long before they reach the stage of starvation. In their desperation, people also eat grasses and leaves and other wild foods that can cause deadly diarrhea and result in other serious

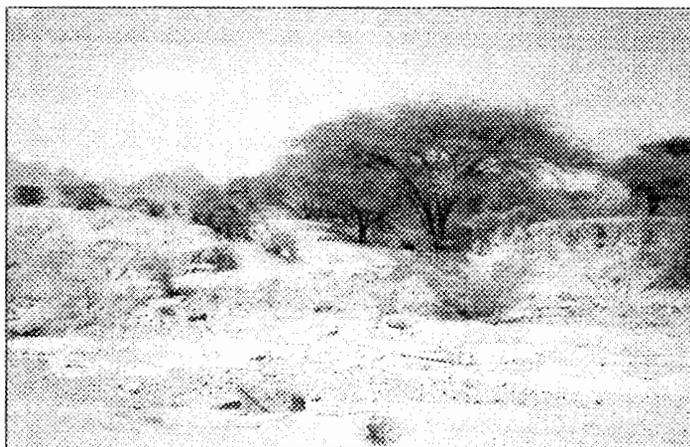
a state of famine. FEWS works closely with USAID missions, others in the Africa Bureau and the Bureau for Humanitarian Response, as well as governments and non-governmental organizations in host countries. FEWS was recently redesigned to be more responsive to the food security information needs expressed by African users and USAID missions in the areas of agriculture, nutrition and health, and food aid. Will Whelan, who heads the renamed FEWS NET in the Africa Bureau's Office of Sustainable Development, explained that by linking networks of user and information providers, FEWS NET's development role will be enhanced.

FEWS NET links the satellite-based knowledge of the National Oceanographic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), the U.S. Geological Survey (USGS) and the U.S. Department of Agriculture (USDA) with the on-

of Africa problems for a decade, she said, "There has never been a year when a disaster was not declared somewhere in the region."

FEWS alerts helped make it

death rates down. However, even when food production is comparatively high, Ethiopia's mortality rates, particularly for children, are extremely high. Someday Ethiopia might become food secure, Pryor



In the Turkana District of northern Kenya, the Kerio River has dried up.

possible for the government of Ethiopia to move 100,000 tons of food to drought areas from areas of the country with food surpluses. "That's an important step," she said.

"Ethiopia is a huge country," Pryor pointed out, with high mountains and deserts with some of the highest temperatures on Earth. She told of visiting a mountain village in 1997 that had just gotten its first real road. Before that, the nearest main road had been more than a day's donkey-ride away on tortuous trails.

Meeting the needs of nomadic pastoralists is particularly challenging because they move around very isolated areas that have no infrastructure. Animals and people may begin to die unseen by the outside world. Pryor said that quick action this year by USAID should make it possible to keep

said, but the challenges are formidable — "40 percent of Ethiopian families never grow enough food or earn enough to buy enough food."

Chemonics provides representatives, most of whom are African, for 17 countries. USGS is providing several field scientists as well. Whelan calls its African field representatives "the unheralded heart, soul and future of this operation." Some of them obtained their advanced degrees through USAID-funded projects, and the typical field representative has four or five years of experience or more with FEWS. "They are all highly trained and dedicated professionals. Their work is not only critical for those who must make timely and complex food aid decisions, but also for USAID missions and others who are seeking better ways to address

(continued on back cover)

FEWS was designed by USAID's Africa Bureau as a drought preparedness and famine prevention activity to help decision-makers identify and address food shortages and other causes of food insecurity before they reach a state of famine.

physical or mental damage.

FEWS was designed by USAID's Africa Bureau as a drought preparedness and famine prevention activity to help decision-makers identify and address food shortages and other causes of food insecurity before they reach

the-ground knowledge of Chemonics International field personnel.

"The Famine Early Warning System is an invaluable tool for us," said Jeanne Pryor, Horn of Africa team leader in the Africa Bureau. Having worked on Horn

By Gabrielle Bushman

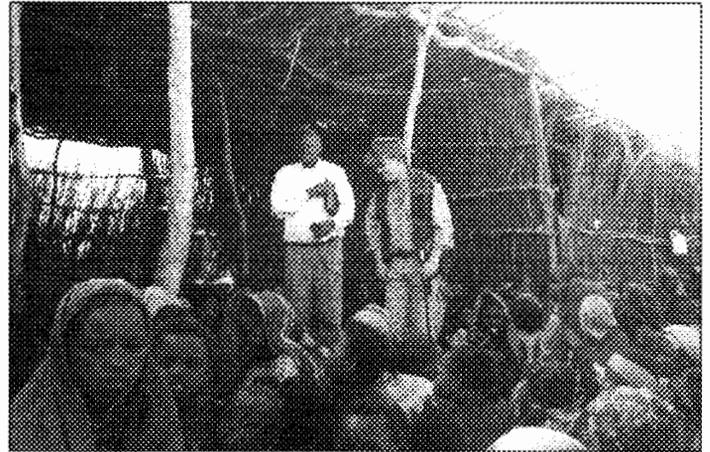
Airlift to Gode began USAID's emergency efforts in Horn

When Hugh Parmer visited a clinic in Gode, Ethiopia, last March and learned that 61 persons — 45 of them children — had died there in the past two weeks, he ordered an immediate airlift of food to southeastern Ethiopia.

That airlift was the first installment of emergency assistance to prevent famine this year in the seven drought-stricken countries in or near the Horn of Africa. Determined that the drought-caused famine in

Ethiopia in the mid-1980s, which caused more than 1 million deaths, would not be repeated, USAID had established the Famine Early Warning System in Africa (see story, page 4), which predicted large-scale emergency food aid would be needed before summer in the region.

Parmer, assistant administrator for USAID's Bureau for Humanitarian Response, was on a two-week trip to the Horn to assess drought conditions in the region and to determine port and



Hugh Parmer (standing, right), assistant administrator for USAID's Bureau for Humanitarian Response, called in an airlift of emergency food to Gode, Ethiopia, when he found people dying of starvation in March.



Women prepare food in Gode, Ethiopia, feeding center.

transport capabilities for getting food to those most in need. Parmer's trip was part of USAID preparations to prevent food shortages from turning into famine. In previous droughts, port and transportation problems have often prevented or delayed shipments from reaching those in desperate need or resulted in loss or damage of emergency food.

Parmer had gone to Gode, in southeastern Ethiopia, because that was the region of the country where drought conditions were considered most severe. "It was quite an appalling scene," Parmer said. "As we drove from the airport into Gode, the fields on both sides of the road were littered with the carcasses of dead livestock, animals of all kinds — cattle, sheep, goats, even a few camels, which are, of course, the heartiest of beasts."

He found that the Ethiopian government, working with USAID-funded Save the Children/US, had instituted emer-

gency therapeutic feeding for children in Gode, but many were getting help too late.

After seeing the desperate conditions, Parmer ordered an airlift of blended foods, therapeutic milk and high-protein biscuits for the most affected populations in southern and southeastern Ethiopia. The airlift arrived in Gode 10 days after his visit.

Parmer announced in March that USAID would contribute \$600,000 toward improving the Port of Djibouti, which is the primary port for transporting food aid into Ethiopia. ■

—Bushman is a senior press officer for USAID/State Department.

Preventing famine in Horn of Africa: more than half a billion dollars in emergency assistance since March

To prevent food shortages in the Horn of Africa from turning into widespread famine, USAID and the U.S. Department of Agriculture are sending \$522.6 million in food aid — over 1.2 million metric tons — enough to feed 6 million people for one year. USAID is also providing \$53 million in health care, safe water and other non-food aid, bringing total U.S. emergency assistance to the region as of Aug. 1 to \$575.6 million since March.

A devastating drought and renewed conflict in the Horn of Africa have put an estimated 20.7 million people in seven countries at risk of starvation—10.8 million in Ethiopia alone. Despite tragic local situations, such as in Gode, Ethiopia [see story, page 5], widespread famine has so far been averted in the Horn, even though the cumulative effects of poor and unreliable rainfall and other shocks have eroded assets and coping strategies over recent years. Conflicts and insecurity have exacerbated the

crisis brought on by weather.

“We are pleased with the progress we have made to date in containing the impact of the severe drought conditions in the Horn of Africa,” Len Rogers said in announcing additional assistance in August. Rogers, the deputy assistant administrator for the Bureau for Humanitarian Response, had just returned from a three-week trip to Ethiopia, Eritrea, Kenya and Sudan. “The U.S. government is treating this crisis as the highest priority humanitarian emergency in the world.”

Poverty root cause of hunger

“While it hasn’t gotten much attention, it’s important to note that the roots of this crisis lie in the deep poverty of each of these countries and the persistent insecurity and armed conflict that afflict them,” Rogers declared. “Even in the best of times, 250,000 children a year die in Ethiopia alone from factors related to hunger and malnutrition. In Somalia, 220 children out of

every 1,000 born die before reaching the age of 5,” he added. The immediate cause of the crisis is drought, which occurs frequently in the region. Whenever drought is prolonged, as it has been in much of the Horn over several seasons, “it pushes this very vulnerable popula-

tional relief effort,” he said, “but we are getting good cooperation from the Ethiopian government in the current effort.”

Early concerns about the capacity of the Port of Djibouti to handle the volume of food that was being delivered to Ethiopia have

“The U.S. government is treating this crisis as the highest priority humanitarian emergency in the world.”

tion over the edge, and you have large numbers of people at risk,” Rogers said. “If it spirals out of control, you can reach a situation as we did in the mid-1980s when over a million people died directly as a result of drought and the failure of the international community to respond as effectively as it might have.” In the 1980s, “There was also a government [in Ethiopia] that did not cooperate fully with the interna-

abated, Rogers said, and enough trucks are available to distribute food aid to those in greatest need in both Ethiopia and Eritrea. He added, “We are now more confident that Djibouti will be able to manage the load. Some food is also coming in for Ethiopia through Berbera, a port in Somalia.

“Ultimately, in all these countries what we need is the ability to return quickly to development programs,” he pointed out. “As long as they remain impoverished as they are, then there will be another drought, and they will face the same sort of problems. A development program that lifts people out of their poverty is the long-term solution.”

Emergency food aid shipped or committed to the Horn of Africa includes bulk grain like corn and wheat and also blended foods — such as a blend of corn and soybeans and milk, which is used for feeding malnourished children.

“It’s important to recognize that this crisis varies from country to country, and within countries it is changing over time,” Rogers points out.



Turkana families waiting for food distribution at Nadoio, near Ledwar, Turkana, Kenya, in July when a truck breakdown delayed delivery of emergency food.

Horn of Africa: food situation

Crisis deepens in Eritrea

Rains have reached Eritrea, said Len Rogers, deputy assistant administrator, Bureau for Humanitarian Response, but the situation in that country has grown more serious. In June, Ethiopian troops overran Eritrea's most productive agricultural area, which normally supplies 70 percent of Eritrea's grain. Food and seed supplies were destroyed and farmers forced to flee.

"The military incursions came just at the time of planting, so the Eritreans effectively have lost most of their domestic production for the entire year. They just have one rain period and they lost that crop. They won't be able to plant again until sometime next spring," Rogers said. "Eritrea will depend heavily on food aid for the next year or so."

By some estimates, the number of internally displaced reached a million people as a result of the conflict. USAID provided emergency airlifts of food, blankets, tents and water jugs to the capital, Asmara, as well as funding half of the World Food Program airlift of high-energy biscuits designed to feed a total of 120,000 people for two weeks.

Ethiopian forces remain inside Eritrea pending the outcome of peace negotiations. Some of the internally displaced have now gone back to their homes as the Ethiopian military has withdrawn from its deepest penetration, but many remained displaced.

Kenya a "major concern," no spring rains

"Kenya is a major concern now," Rogers said. "The rains in Kenya have failed completely, and the rains are not expected to return until the fall. So the earliest that Kenya is going to be able to get crops into the ground is the fall. We're a long way

away from having a harvest that will provide relief in Kenya, even if they get the best possible rains in the fall, and that's still uncertain."

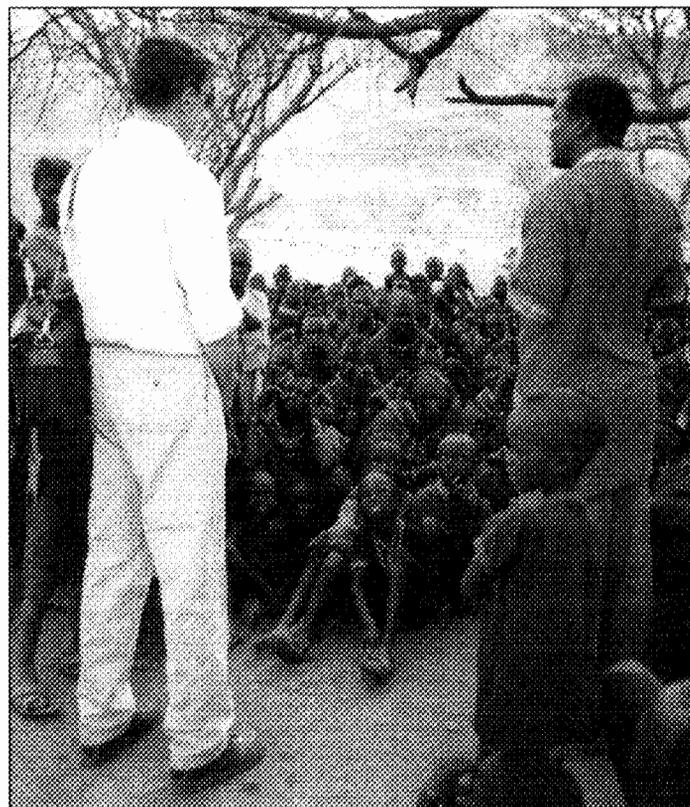
Fortunately, Kenya has a greater capacity to deal with its problems than other countries in the region. "It has a reasonably good infrastructure, and they have a good system for distributing food," Rogers said. Commercially imported food could play an important role in Kenya, which has a middle class that can buy its own food if prices are reasonable. The Kenyan government has already instituted some reduction in tariffs, and Rogers said, "We are hoping that they will continue to reduce tariffs on imported food in order to encourage these commercial imports. In addition, we are providing substantial donated food aid."

Ethiopia

"The greatest concern now in Ethiopia is to give sufficient priority to needs in the Somali region, where there is a great deal of inter-clan conflict and humanitarian workers are regularly threatened," Rogers said. "It's a difficult place to deliver assistance, even under the best of circumstances."

Pastoralists in Ethiopia are at special risk of being missed by emergency assistance because they move around and are often in isolated areas away from roads and services. Their plight may not be known until starving people begin to come in to feeding stations.

The area north of the capital, Addis Ababa, toward the high mountain areas around Gonder is also a concern because people in these areas become isolated during the rainy season, and it is difficult to get the trucks in to deliver food. "These are very densely populated areas so the risk for large numbers



Len Rogers (standing left), deputy assistant administrator, Bureau for Humanitarian Response, and the district representative for North Turkana talk with villagers waiting at a feeding center. Distribution was delayed because the truck bringing emergency food had broken down on the road.

of people being affected is greatest up there," Rogers pointed out.

"If we can solve these continuing isolated logistical problems and we can give adequate priority to the difficult-to-reach areas, we think Ethiopia will be able to manage its problems reasonably well," he said.

Sudan and Somalia: insecurity main concern

"Insecurity is the main concern in both Sudan and Somalia," Rogers said. Most of Sudan and Somalia appear to be having adequate rain and should have reasonably good harvests overall. The exception is the area in Sudan by the Kenya border, which is still experiencing

drought, but rains have been good in other areas of Sudan, particularly to the west in Equatoria.

"The problem in both of these countries is the continuing insecurity that makes it very difficult to deliver assistance," Rogers said. Inter-clan warfare has been going on for many years among the Somali people, he noted. "The government of Sudan was continuing a program of random bombing in the south, and there are inter-tribal conflicts between the Nuer and the Dinka in Sudan. There are areas within Sudan where we think there are people in need where we don't have adequate access." ■

By Dan Deely and Meg Falter

Droughts? Floods? Famines? Water is the key

U.N. figures show that as many as 450 million people may be living under conditions of severe water scarcity and water stress (where the environment's capacity to produce sufficient water for the population is challenged).

The United Nations also projects that more than 2 billion people will be living under water-scarce and water-stressed conditions by the year 2025. Many experts consider both of these standard estimates much lower than the actual numbers.

For example, a recent study by the University of New Hampshire estimates that 1.75 billion people may already be living under a high degree of water stress.

Either way, a water crisis long feared by experts is becoming increasingly evident to others.

Water stress is apparent today not only in arid and semiarid regions, but in many densely populated parts of the humid tropics,

where water was once considered to be plentiful.

"VISION for a Water Secure World," which was released at the World Water Forum in the Hague in March, states that if current trends continue, there simply will not be enough accessible fresh water to meet the needs of growing populations, industry and agriculture.

In an Earth Day statement this April, Secretary of State Madeleine Albright called for a global alliance for water security in the 21st century.

Several interrelated factors are at play in the swirl of relationships among water, food, agriculture, weather variability and extremes like droughts, floods and famine. Both droughts and floods can cause damage to crops. While famine and nutritional deficits may result from conflict, government inaction, persistent poverty and other social and economic factors, most famines are also linked to water.

Water stress is apparent today not only in arid and semiarid regions, but in many densely populated parts of the humid tropics, where water was once considered to be plentiful.

Irrigation

Irrigated agriculture uses more than 70 percent of the world's total water supply — and up to 90 percent in some developing countries. Much of the increase in food production over the past 50 years has required greater use of irrigation. The long upward trend in irrigation has already been reversed in many of the drier areas of the world, including the American West, as over-pumping of groundwater and excessive withdrawals from river watersheds has lowered water tables and river flow.

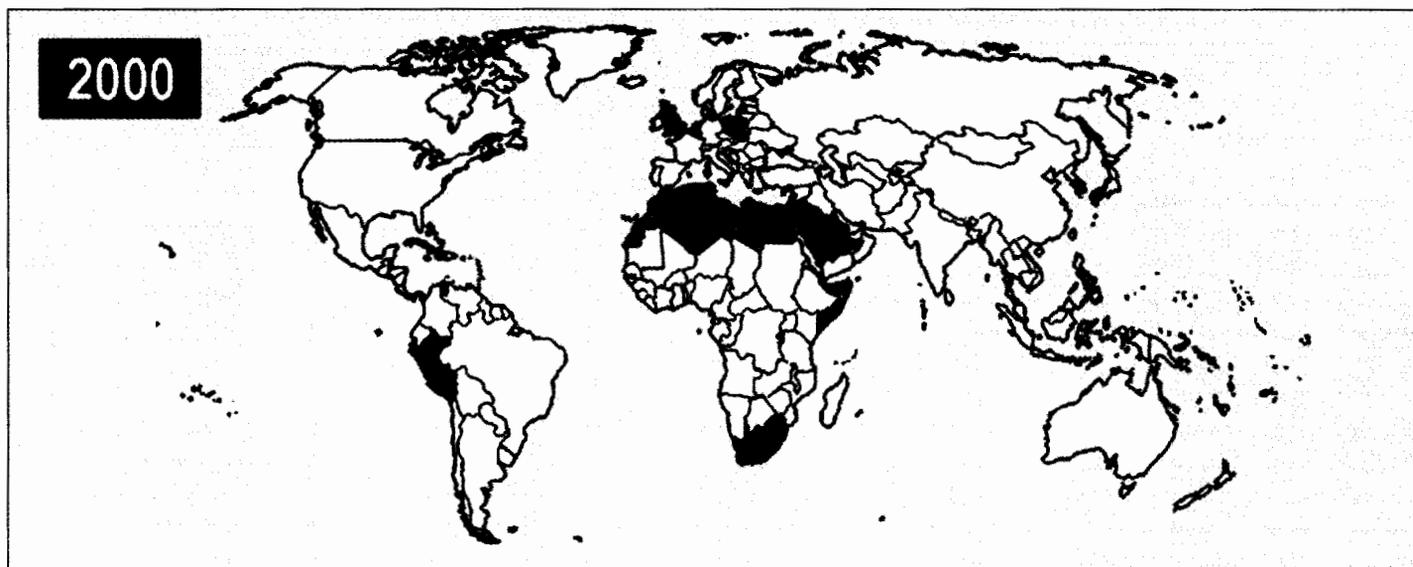
China is currently the world's largest producer of grain, but more

than half its cropland is irrigated. Its largest river, the Yellow River, failed to reach the sea for the first time five years ago. It has since run dry before reaching the sea on as many as 220 days in a single year.

The International Water Management Institute (IWMI) has estimated that even if water is used more efficiently, allocations to irrigation would need to be increased by at least 17 percent worldwide by 2025.

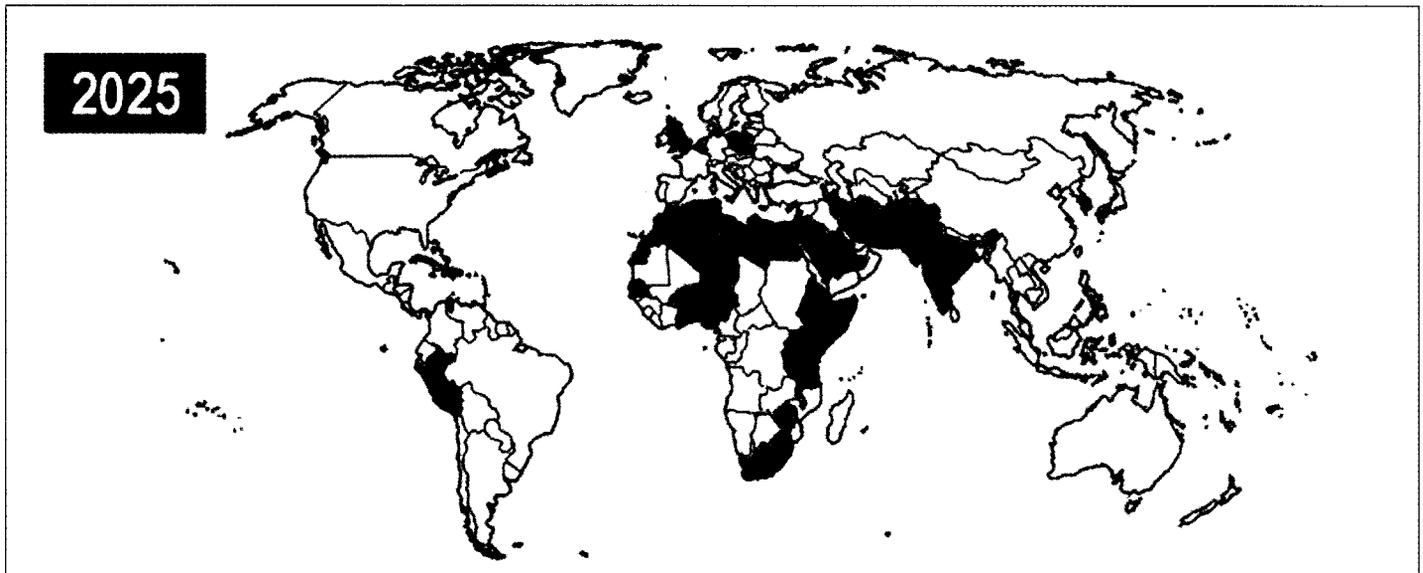
If the additional water needed for irrigated agriculture is not available, pressures to further expand rain-fed agriculture to meet the deficit could have serious environ-

Water scarcity in 2000 affects 450 million people in 31 countries



Source: Population Action International

Water scarcity in 2025 will affect 2.8 billion people in 48 countries



Source: Population Action International

mental consequences. More forest and marginal lands would have to be cleared for crop production.

The gravity of the situation is made worse by a projected 20 percent increase in demand for water by industry, and by a projected 70 percent increase in demand for water by municipalities for domestic uses.

Aquifer depletion

Problems relating to surface freshwater may be eclipsed by the serious and worsening groundwater situation. In what amounts to “mining” the aquifers, water is taken from underground supplies much faster than it can be replenished in many places, which causes wells to go dry or the water to become unusable as groundwater levels drop.

Water and energy subsidies in many developing countries encourage the rapid spread of small pump irrigation, which contributes to groundwater depletion. Worldwatch Institute warns that water shortages may lead to famine unless governments in

water-short countries act quickly to stabilize population and to raise water productivity.

Rising needs for importing grain in water-scarce China and India could make food less affordable in other low-income countries with water deficits. This could make the goal of reducing chronic

malnutrition unachievable. lations already lack basic sanitation and clean water.

More severe and variable weather

Global warming may be a factor in some observed patterns of increasing weather variability and extremes, with more frequent

weather extremes with severe El Niño/La Niña cycles and associated droughts and floods in Africa, Asia and South and Central America, and more people are in harm’s way each year should natural disaster strike. People living in squatter settlements around the margins of urban centers are especially vulnerable.

The Horn of Africa has experienced particularly marked cycles of above-normal and below-normal rainfall. An extended drought put 20.7 million people in seven countries in the region at risk of starvation, but widespread famine was averted in the Horn. Drought in Kenya still threatens 3 million people. In the same sub-region only two years ago, both Kenya and Tanzania declared flood disasters. ■

—Deely and Falter are members of USAID’s Water Team.

The water that would be required to produce the grain and other foodstuffs imported into North Africa and the Middle East last year was roughly equal to the annual flow of the Nile River.

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Most of the expected world population growth will take place in the burgeoning urban areas and megacities of developing countries, where large segments of the popu-

crises caused by severe floods and extended droughts. The theory is that if global warming accelerates the “water cycle”—the process through which water vapor, mainly from the oceans, rises into the atmosphere before condensing out as precipitation — weather could become more extreme and variable.

Recent years have dramatically demonstrated the impacts of

By Dan Deely and Meg Falter

USAID's response to the growing water crisis

To prevent conflicts over water and avert growing shortages, USAID vigorously promotes an integrated or holistic approach to managing water, both within countries and among countries sharing rivers and other bodies of water. Promoted by the agency's multi-disciplinary Water Team, integrated management involves bringing various stakeholders together to plan and implement ways to meet long-term needs for water resources while maintaining essential ecological functions and economic benefits of the watershed.

Accomplishing that often requires decentralization of authority from the national to the local level, working in communities to promote stakeholder involvement and engaging the private sector's participation and partnership where appropriate. USAID is helping governments to

understand that communities must organize and become involved in water allocation decision-making, and local planning for disaster response. USAID is also assisting countries to deal with cross-border (transboundary) water management issues in areas such as Southern Africa, the Middle East, the Central Asian Republics, Central America and the Caucasus. In each region, rivers and other watercourses are shared resources and their management needs to be shared, usually within regionally sanctioned institutional frameworks.

Central America

USAID's post-Hurricane Mitch activities include providing Central American and Caribbean countries river and weather forecasting (hydrometeorological) technologies under an agreement with the National Oceanic and Atmospheric Administration (NOAA) to help

improve their advance warning capability and reduce loss of life as well as lower damage to infrastructure and private property.

Hurricane Mitch left the upper watersheds of Honduras severely damaged and very vulnerable to additional degradation. The

Resolution of water disputes

USAID's FORWARD (Fostering Resolution of Water Resource Disputes) project helps governments and key stakeholders in Asia and the Near East to reach agreement on equitable and sustainable strategies, policies, and

Seventy percent of the world's total water supply is used for agricultural irrigation.

USAID mission in Honduras is carrying out a program of grants to non-governmental organizations to encourage sustainable hillside farming techniques and forestry practices and to strengthen community and municipal practices that will benefit both upland and downstream residents.

plans for managing scarce water resources. While the initial focus has been in Egypt, Jordan, and West Bank/Gaza, new programs are developing in Lebanon and Morocco. The absence of effective mechanisms to resolve water disputes collaboratively is a key reason for many environmental, economic, and social problems across the Middle East region.

Unlike traditional water resource projects that consider water problems as quantity or quality issues, FORWARD strives to provide a mechanism to resolve water disputes. The primary beneficiaries of FORWARD are the parties to the disputes, including urban and rural water users, farmers, commercial and industrial entities, and government institutions. The wider local, national, and international community also benefits from the resolution of water-related disputes, which have historically blocked better water planning, development and management. ■



USAID's mission to Honduras is encouraging sustainable hillside farming techniques and forestry practices to help prevent future lowland damage such as this that resulted from Hurricane Mitch.

— Deely and Falter are members of USAID's Water Team.

Severe water scarcity

USAID is working to assist countries to better manage their water resources under conditions of severe water scarcity.

Morocco

One of the major development challenges facing Morocco is the management of its water resources on a sustainable basis. Two-thirds of its exports are produced by irrigated agriculture, which uses 90 percent of the nation's captured fresh water. Planned expansion of Morocco's network of dams can increase the usable supply of water by perhaps one-fourth, but a projected doubling of the population over the next 30 years will greatly decrease per capita availability unless fresh water is managed more effectively.

Morocco recognizes its looming water shortage and has committed to a program to improve water management. The key piece of this program is the 1995 law decentralizing financial and planning authority for

citizens' groups elected by their peers. USAID selected the Souss-Massa River Basin for a model authority dealing with pressing problems of scarcity, pollution and competing demands.

Jordan

USAID is helping Jordan manage its water resources better and finance capital investment, increase efficiency of water use by reducing wastage caused by leaks, contamination and inefficient irrigation practices and improve wastewater treatment to allow greater reuse in agriculture and industry.

Egypt

Since 1996, USAID has been working to provide an additional 1.8 million Egyptians access to clean water and to increase access to sewerage and wastewater services in selected urban areas for an additional 2.5 million people by 2004. USAID is also supporting a shift from central government responsi-

India

Overexploitation of groundwater by farmers is directly traceable to unreliable energy

Deeper pump irrigation is increasing energy use for pumping and increasing energy costs. Over-pumping is causing



Pumping for irrigation is extracting water from aquifers at two to three times the re-charge rate in some areas.

India...could lose 25 percent or more of its total crop production when groundwater is depleted.

water resources to river basin authorities. These authorities would be directed by councils representing national, regional and local government agencies, private sector agricultural and industrial interests, non-governmental organizations and

ability for planning, constructing, and financing basic services toward greater local utility autonomy and responsibility for operating on a commercial basis responsive to consumer needs.

supplies, and the energy and water pricing policies of the central and state governments. The International Water Management Institute (IWMI) reports that India has more area irrigated by small pump irrigation methods than by all surface water irrigation systems combined. In some Indian regions, water is being extracted from aquifers at two to three times the re-charge rate. Some aquifers are being depleted by one to three meters per year.

lakes, rivers and shallow wells to dry up, threatening the freshwater supply of Indian villages. IWMI has concluded that India, with the second largest population in the world, could lose 25 percent or more of its total crop production when groundwater is depleted. USAID is supporting the design of a new energy/water initiative linking energy, water and health. This initiative seeks to improve energy and water policy and management simultaneously. ■

By Carol Levin

"Seeds of Hope" helps farmers recover from natural disasters and conflict — and feed their people

In 1997, a chartered plane delivered a half-ton of seed from 165 different Somali crop varieties for distribution in the war-ravaged countryside to farmers who had eaten their seed supplies.

The next year, 4,000 farm families in drought-stricken Niger received seed for locally adapted crops with improved drought resistance.

In January 1999, four international agricultural research centers launched a joint effort to re-establish the food production capabilities of Honduras and Nicaragua, which had lost 70 percent of their basic food crops because of Hurricane Mitch.

These efforts — known as "Seeds of Hope" — are part of a dramatic shift toward active response to food crises by the international agricultural research centers that make up the Consultative Group on International Agricultural Research (CGIAR). The centers

institutional strengthening, policy and natural resource management.

Beginning in the early 1990s with the drought in southern Africa, the CGIAR centers have taken on another role — disaster prevention and mitigation to help farmers get back on their feet more quickly after severe drought, flood or conflict depletes locally adapted seed supplies. In the process, they have already helped save millions of lives.

The International Crops Research Institute for the Semi-Arid Tropics conducted the first seed multiplication and distribution project, funded by USAID, using improved short-season, drought-tolerant sorghum and millet varieties. This and subsequent projects have provided seeds and management technologies to help provide people facing instability and upheaval recover from crisis and prevent its recurrence. In the process, the projects help to build new partnerships



A Nigerian mother pounds cassava for the evening meal.

"Seeds of Hope" ...[is] part of a dramatic shift toward active response to food crises by the international agricultural research centers.

were previously best known for their major role in creating the Green Revolution, which prevented expected famines in the 1960s and 1970s. Although the original centers concentrated on increasing the productivity of crops and livestock, the focus has broadened over time to involve

between the international agricultural research centers, non-governmental organizations and the donor community.

This engagement in crisis prevention and mitigation was stepped up following the genocide in Rwanda. With support from USAID's Office of U.S. Foreign

Disaster Assistance, an international effort was mobilized to multiply seed from CGIAR genebanks for delivery to Rwandan farmers, restoring Rwanda's agricultural genetic heritage to the communities that had created it initially. The program became known as "Seeds of Hope." It helped place disaster victims on the road to recovery and allowed refugees to return to their homes.

Since "Seeds of Hope" began, the international agricultural research centers have regularly joined forces with non-govern-

mental and private voluntary organizations to use the science of genetic diversity and genebank conservation — both long-term endeavors — to help countries and communities cope with drought, pest outbreaks and crop disease epidemics. In both cases, research institutions apply the latest technologies to prevent and mitigate famine and help people prevent or prepare for crises. U.S. universities have also helped. The International Sorghum and Millet Program (INTSORMIL), based at the University of Nebraska, has worked with NGOs and PVOs to

distribute improved sorghum and millet seed to thousands of farmers in Africa.

Genebanks key to recovery from war

In 1991, Somalia's government collapsed amid civil war. By mid-1992, a combination of war, drought and banditry produced a famine that killed more than 300,000 people. In

Samples of Somali crops were also maintained at CGIAR collections in India and Nigeria and in genebanks in the United States and Russia. With the help of some farmers, IPGRI scientists planted, harvested and replanted seeds of key Somali crops to build up quantities required to supply Somali farmers' needs.

In 1997, seed from 165 different local crop varieties were

... [W]hen drought hits, one of the first things to go is the seed farmers store for planting the next year's crop.

addition to the loss of human life, Somalia lost key genetic resources — seeds and other planting materials essential for growing and improving the country's major food crops.

Fortunately, before it fell, the former Somali government had asked a plant collector from the International Plant Genetic Resources Institute (IPGRI) in 1989 to deposit 300 samples of Somali sorghum and maize with the Kenyan national government genebank for safekeeping.

delivered to Somalia, returning important native plant genetic resources to the Somali farming communities. Farmers also received technical advice and assistance.

IPGRI holds more than 600,000 samples of some 3,000 crop, forage and pasture species and is the world's largest international institute devoted solely to the conservation and use of plant genetic resources for food and agriculture.



The International Sorghum and Millet Program at the University of Nebraska distributed improved seed to thousands of African farmers.

Cultivating peace — agriculture in a world of conflict

The International Peace Research Institute in Oslo studied 103 armed conflicts over the past decade and found that most conflicts since the end of the Cold War have occurred in countries where agriculture was the mainstay of the economy. Most of the political instability that led to violent conflict in these countries has sprung from economic concerns, rather than ideological differences. The researchers conclude that the rehabilitation of agriculture is a central condition for development, reducing poverty, preventing environmental destruction and reducing violence. Agricultural research is critical to strengthening economies in developing countries. Future Harvest, a U.S. charitable organization that builds public understanding of the role of agriculture through research and outreach on behalf of the 16 centers of the Consultative Group on International Agricultural Research (CGIAR), commissioned the research.

Emergency seed program for Niger

The International Crops Research Institute for the Semi-Arid Tropics, Niger's national program, non-governmental organizations and farmers are working together to address the decades-old problem of drought in Niger by establishing an efficient seed distribution system that provides a storehouse of locally adapted seeds in the aftermath of drought. The new delivery system will not avert drought, but it should help to break the link between drought and famine because when drought hits, one of the first things to go is the seed farmers store for planting the next year's crop. After the drought subsides, farmers will plant virtually any seed they can find, including varieties that are not adapted to local conditions, which can result in poor or no harvests.

During its first year of operation in 1998, the new delivery system provided emergency seed supplies to more than 4,000 farm families. The program also helped

to accelerate the farmers' adoption of improved varieties that are more tolerant to stress from drought, disease and insects. Follow-up studies showed that many of the farmers in the program's target zones have adopted the new seeds and are providing improved seeds and training farmers in neighboring villages.

"Seeds of Hope" for Central America

In January 1999, four CGIAR centers, led by the International Center for Tropical Agriculture, launched the "Seeds of Hope" for Central America project to re-establish the food production capabilities of Honduras and Nicaragua after Hurricane Mitch. Experts estimate that the storm destroyed up to 70 percent of the countries' basic food crops. The project aims to restore critical seed stocks that were lost in the hurricane and teach environmentally appropriate farming techniques that hold promise both for feeding the two countries over the long term and for reducing

(continued on page 21)

By Carole Levin

Root crops – new hope, new problems

Cassava is one of the most important crops in Africa. It is grown by the typical, resource-poor, small-scale farmer because it is simple to grow, drought resistant and can be grown in marginal soil. Because it can be left in the ground for months, it can be held as a food reserve or sold as needed. Sweet potatoes mature in a shorter time and are a good source of vitamin A, which is lacking in the diets of many African mothers and children.

A root crop revolution in Malawi

A program of accelerated multiplication and distribution of improved cassava and sweet potato planting materials was initiated in Malawi as a drought recovery measure in 1991/92 by the International Institute of Tropical Agriculture. The success of that program led to promoting

the crops for diversification and to generate income and improve household food security for resource poor households. The World Bank 2000 study calls it a "root crop revolution."

Between 1991/92 and 1998/99 the area planted to cassava increased by 159 percent and the area planted to sweet potatoes increased by 608 percent. Cassava yields increased by 170 percent while yields of sweet potatoes increased by 428 percent during the period. The combined effect of these improvements led staggering annual production increases of 595 percent for cassava and 3,524 percent for sweet potatoes. Many areas where these crops were not traditional are now producing and utilizing them. Commercial markets have developed for planting material, fresh roots and processed products. Cassava and sweet potatoes have contributed to

Cassava...is grown by the typical, resource-poor ...farmer because it is simple to grow, drought resistant and can be grown in marginal soil.

improved household food security, better nutrition and increased incomes for poor farm families. Both are becoming cash crops, and cassava is being used by the local food processing industry as well.

Cassava mosaic disease pandemic

Since the late 1980s, a pandemic of an unusually severe form of cassava mosaic virus disease (CMD) has covered more than 750,000 square kilometers of East and Central Africa. The effects have been devastating, with farmers typically abandoning cassava production. Region-wide losses have been estimated at in excess of \$100 million annually.

The mosaic virus struck as the region was experiencing great social and economic upheaval during the last three years due to civil insecurity in many parts of the region and the disruptions caused by the El Niño and La Niña climate phenomena.

USAID support enabled the International Institute of Tropical Agriculture to implement a project tackling the cassava mosaic pandemic. In partnership with national programs from the region and non-governmental organizations, the institute monitored the movement of the pandemic, established multiplication centers for CMD-resistant

varieties at strategic locations in the most affected areas, tested CMD-resistant germplasm and multiplied and distributed resistant cassava varieties. This significantly boosted germplasm diversity. Agricultural workers and farmers were also trained in a wide range of cassava cultivation skills.

USAID's mission to Uganda, through PL 480 Title II funds, and the Office of Foreign U.S. Disaster Assistance supported this initiative. Total USAID funding to date is approximately \$5.5 million, and the internal rate of return on this investment is approximately 167 percent. Cassava production in USAID's target areas increased from less than 1,000 metric tons in 1997, to 342,000 metric tons in 1999, with an estimated market value of \$40 million. ■

— Levin is an agricultural research specialist in the Global Bureau's Economic Growth and Agricultural Development Agriculture and Food Security Division. She was assisted by the USAID mission to Uganda, with material from the International Institute for Tropical Agriculture.



Cassava roots can be left in the ground for harvest months later.

Researchers develop non-toxic variety of drought-hardy grasspea

Plant breeders at a USAID-supported research center in Aleppo, Syria, have genetically altered a hardy dryland pea to virtually eliminate its crippling toxin that leaves tens of thousands of people permanently paralyzed.

People facing starvation in severe droughts would no longer risk paralysis from eating drought-resistant peas.

The pea, known as grasspea, chickling pea and by a variety of other names, is widely grown in Africa and Asia as livestock forage. It is very nutritious, and people apparently eat small quantities regularly with little harm,

People facing starvation in severe droughts would no longer risk paralysis from eating drought-resistant peas.

but during severe droughts it becomes a human dietary staple because of its ability to survive conditions that kill other crops.

For many who eat it, however, avoiding starvation becomes a mixed blessing. The pea produces an amino acid that destroys nerve cells, leading to permanent paralysis, mostly in the lower limbs,

and for reasons scientists do not understand, mostly among men in their productive years.

An estimated 100,000 people in Ethiopia, India, Pakistan, Bangladesh and other countries across Africa and southern Asia suffer from the paralysis, known as "lathyrism" from the pea's botanical name, *Lathyrus sativus*.

Scientists at the International Center for Agricultural Research in the Dry Areas (ICARDA) in Aleppo announced in June that they had developed cultivars of grasspea that produce so little of the nerve toxin that they can be considered safe for human consumption.

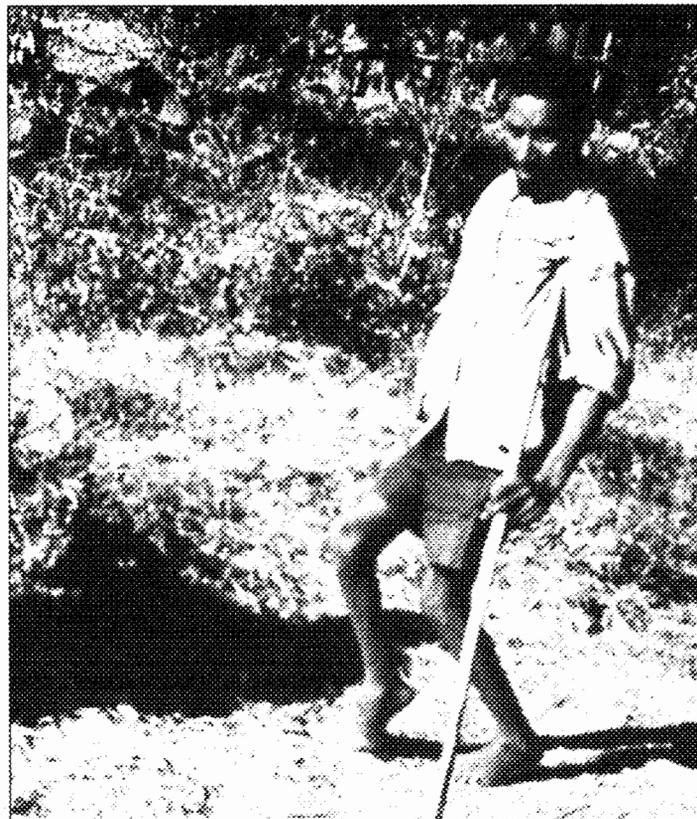
Adel El-Beltagy, director general of ICARDA, told reporters that the new strains retain the tough characteristics that have allowed grasspea to thrive on poor soil and during years with as little as eight inches of rainfall. The new strains also are nutritious and "quite delicious," El-Beltagy said.

ICARDA scientists used a technique known as "somaclonal variation" to trap random mutations in grasspeas. It took 15 years of trial-and-error before one of the mutations led to strains with almost no tendency to produce the nerve toxin.

The safe strains are being introduced in selected communities in countries where grasspea is grown, in the hopes that as

farmers grow it and save seed, it will quickly displace the toxic traditional varieties, El-Beltagy said.

ICARDA is one of 16 international research centers sponsored by the Consultative Group on International Agricultural Research (CGIAR). The consultative group is supported, in turn, by the World Bank, the U.N. Food and Agriculture Organization, the United Nations and a number of national development agencies, including USAID. ■



Paralysis that results from eating toxic grasspea primarily affects men and causes a characteristic "cross-leg gait." Small children can die from eating toxic grasspeas.

Toxic grasspea has left 100,000 paralyzed

Belgian epidemiologists reported in the British medical journal *Lancet* in July 1999 that a recent drought in northwestern Ethiopia had led to at least 2,000 cases of lathyrism (grasspea-induced paralysis).

Droughts in Bangladesh in the 1970s resulted in up to 70,000 cases of lathyrism, scientists say.

The immediate cause of the paralysis is a component of grasspea known as beta-N-oxalyl-L-alpha-beta-diaminopropionic acid, or simply ODAP, an amino acid.

The paralysis is permanent. In less severe cases it forces victims into a tortured cross-step gait in which they cross one leg in front of the other as they walk. In more severe cases they can only crawl, and small children may die.

The toxic substance destroys brain cells. The toxin is water soluble and toxicity of the peas can be decreased by soaking and boiling. However, during the droughts that cause humans to begin consuming grasspeas in large quantities, water is not available to detoxify the peas.

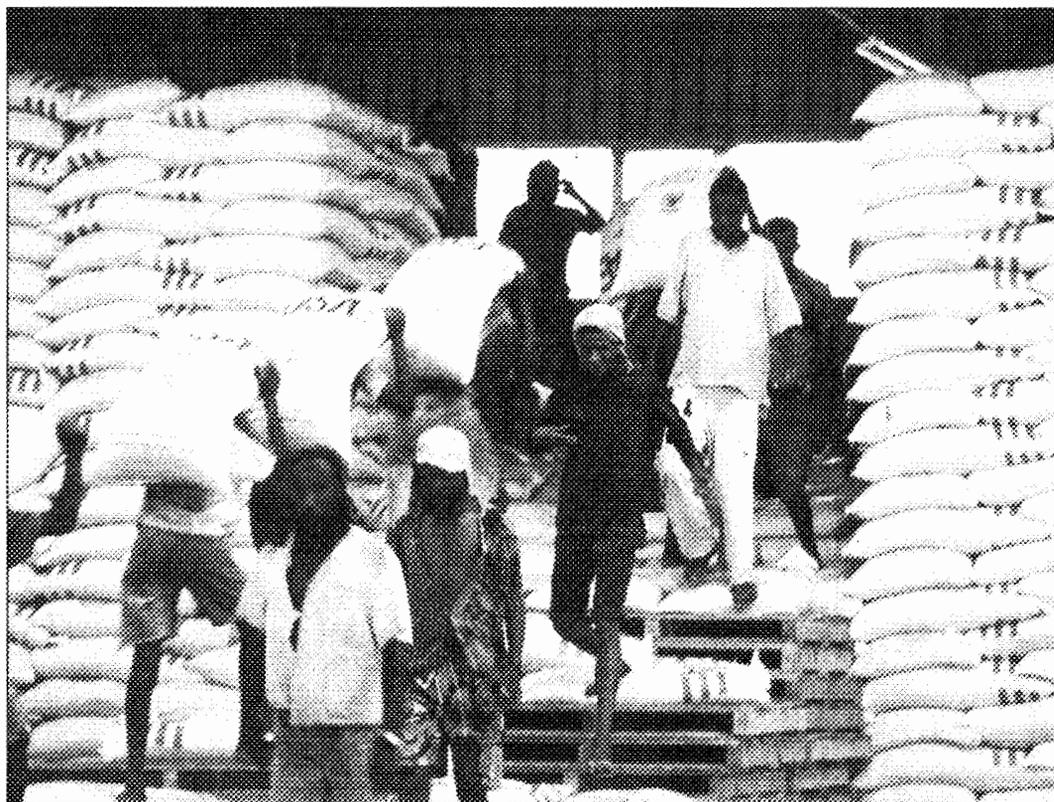
Food for Peace provides food in disasters and for long-term development

Tom Oliver, USAID Food for Peace director, notes that emergency airlifts like those conducted this spring and summer save lives, but most food aid must be delivered by ships and then by trucks.

In addition to emergency airlifts, he said, some Food for Peace shipments were diverted from non-emergency programs in other African countries (and since replaced) when conditions in southern Ethiopia worsened sooner than expected, requiring immediate emergency food.

Droughts are nothing new in sub-Saharan Africa, but USAID and its partners have been able to avert true famine during several food crises brought on by drought during the 1990s. Oliver has been involved in food assistance programs for more than 20 years, and he welcomes computers, instant communications and the Famine Early Warning System in Africa that help speed emergency assistance.

"Wherever possible, we use USDA [U.S. Department of Agriculture] surpluses so we



Loading U.S. grain in a World Food Program warehouse in Ludwar, Turkana, Kenya.

vitamin-fortified food." Blends of corn, soy and sometimes milk are used as supplements, especially for children. Bulk grains

1994 drought in Ethiopia, and there are large grain surpluses this year.

Oliver stressed the importance of immunizations and mother and child health services as part of non-emergency food aid programs to mitigate the impact of food shortages when they occur. USAID's Title II food aid includes food for work programs that help the poor get the food they need while improving agricultural production and marketing through such activities as building farm-to-market roads.

A joint USAID-USDA Working Group meets every two

weeks to coordinate procurement and shipments of both emergency and non-emergency food aid. Food for Peace emergency food aid can be sent to countries that do not have a USAID presence and even where the United States does not have formal relations. This year food has gone to North Korea and Afghanistan, for example. ■

Droughts are nothing new in sub-Saharan Africa, but USAID and its partners have been able to avert true famine during several food crises brought on by drought during the 1990s.

can stretch limited USAID funding to buy other needs, such as pulses and processed and

make up most of USDA surplus foods. Fortunately, there were large U.S. surpluses during the

By Achsah Nesmith

Helping Bangladesh "weather the storm"

Michael Ernst, an American Association for the Advancement of Science fellow at USAID, is headed for Bangladesh as part of a joint effort by the USAID mission and the agency's Office of U.S. Foreign Disaster Assistance (OFDA) to link long-term development work and disaster mitigation.

The aim is to use improved climate, weather and river forecasting to provide better planning and early warning and use relatively low-cost, low-tech ways to accomplish development goals — while at the same time saving lives, decreasing property damage and reducing loss of livelihoods from the annual floods.

"We can't prevent floods in Bangladesh," Ernst pointed out. Even if it were possible, "the soil fertility depends on the annual flooding." Without it, he added, "Bangladesh could never feed its people."

Almost all of the country lies in a delta floodplain, and the entire watershed is subject to heavy monsoon rains. If melting glaciers far away from tropical Bangladesh raise sea levels appreciably, much of Bangladesh could be threatened by sea waters, as coastal areas already are by periodic cyclones.

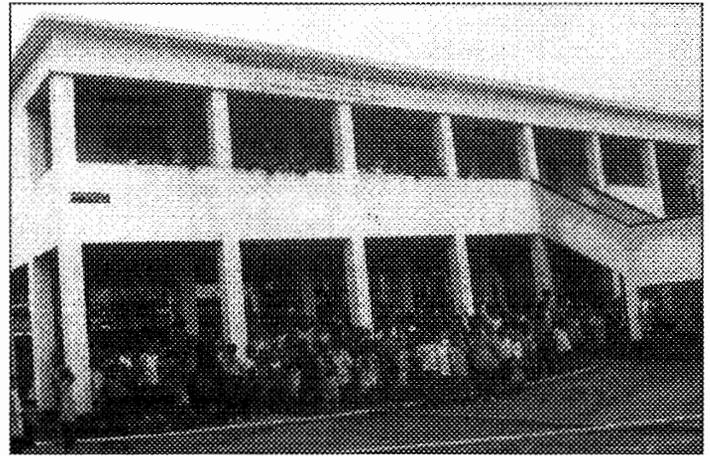
As Ernst prepared to leave, a monsoon deluge left an estimated over 2 million people homeless and hundreds dead in India, Bangladesh and Bhutan, according to Patrick Fuller, South Asia spokesman for the International Federation of Red Cross and Red Crescent Societies. Villages were inundated, roads and railroads washed out, but many people refused to go to shelters, fearful that their few possessions would be looted and their farm animals lost. These are the situations Ernst will be working to help prevent and mitigate.

"We have to keep in mind extreme conditions when we do development. Development should help people weather the storm," he said, adding that improvements in climate and weather forecasting make it possible to do much better planning than was possible even a few years ago.

Ernst, who is a hydrologist, will be working primarily with the USAID mission to Bangladesh and OFDA in the application of hydro-meteorology to vulnerability reduction, in what could serve as a model for mission/OFDA cooperation in other disaster-prone countries.

He will also work with a number of larger projects, including:

- The University of Colorado's Program in Atmospheric and Oceanic Sciences on long-range forecasting of major floods and other activities of hydro-meteorological and donor organizations with operations in Bangladesh.
- The Bangladesh Asian Urban Disaster Mitigation Project, one of two USAID-supported pilot activities of the Asian Urban Disaster



This "cyclone school" in Bangladesh is a shelter for villagers when monsoon rains flood their homes.

including regional hydrological modeling. Ernst will also support the OFDA Southeast Asia regional office in Manila and the Southeast Asia regional office in Kathmandu.

Ernst will be looking for ways to limit the damage — such as building a section of road low near a bridge, knowing it will be washed out but will reduce pressure that could destroy the bridge. "It might be much quicker and cheaper to repair

aimed at meeting the needs of particularly vulnerable low-income communities.

One way USAID is helping Bangladesh improve preparedness through development is by building flood shelters on raised ground and/or stilts. These serve as schools through most of the year, but during floods and cyclones they serve as shelters for villagers whose low-lying homes are flooded or have been swept away, or are in danger. Such shelters on high ground or stilts can also be used to store food and animal fodder during floods.

"The U.S. Geological Survey has developed a hydrological model for the USAID-sponsored Famine Early Warning System project," Ernst said. "The 1997-98 floods in the Horn of Africa showed the need to monitor floods as they are also a threat to food security. The FEWS hydrological model uses globally available datasets and could be implemented in other regions, such as flood-prone South Asia. The model affords the possibility of early-warning for rapid-onset floods, such as the one that hit Mozambique this year," he said. ■

"We have to keep in mind extreme conditions when we do development."

Preparedness Center headquartered in Thailand.

- Activities with CARE and World Vision that are part of a mission strategic objective for Improved Food Security including Improved Disaster Preparedness.

In addition, he will provide technical support for regional efforts exploring climate forecasts and their applications and transboundary water resource management activities,

the road and allow normal food distribution activities that restore people's livelihoods much sooner," he said.

Many activities can help improve food security for both floods and droughts, including mapping of urban areas for improved flood preparedness planning, watershed improvement, water conservation and low-cost water catchment, or simply raising the foundations of low-lying housing a few feet. Special efforts are

By U.S. Rep. Tony P. Hall (D-Ohio)

Preventing famine: a complex challenge

Say the word "famine" and it evokes different images. Some remember Biafra in the 1960s; others think of Ethiopia two decades later; Somalia or Sudan fill the mind's eye of others. The image is almost always a photographic one: The vulture casting its shadow over the dying child, the swollen bellies of young children at feeding centers, how skin stretches taut over adults' knobby bones.

More recent famines tend to be described more by numbers than faces, by statistics that signify catastrophes that were averted through the hard work of USAID, the United Nations and private charities.

As professionals increase their ability to prevent famines, though, a new dilemma arises. Simply put, without the photos that sear the conscience and drive home the horrors of a famine, it is harder to convince the public and policy-makers of the urgency of prevention—and the need to increase funding for this work.

No one would quarrel with the heroic efforts of everyone involved in famine prevention, from accountants to relief teams. But without dramatic news to shock Congress into action, it is likely to continue to cut a foreign aid budget it has halved over the past decade.

Of course, we are not yet to the point where gruesome photos are obsolete. Phenomena like the overwhelming drought now gripping much of Africa and Asia, or the war in Angola, likely will continue to foil efforts to disarm the common triggers of famine—at least in part. But in the absence of full-blown famines, the key to securing public support for



Rep. Hall: "The first challenge is to overcome the disconnect between the reality aid workers know, and what American citizens see."

preventing them must be found.

Many laymen and women think relief work is a matter of dumping grain on a famine-stricken nation's docks. They imagine outrageous diversions of food and medicine are common. The absence of democracy is, to many, a lesser and unrelated concern. And yet aid professionals know just the opposite is true.

Some 265 years after Ben Franklin pointed out the value of an ounce of prevention, U.S. policies—and our funding priorities—seem to be favoring the pound of cure. That is particularly foolish in drought-prone areas, and it is a strategy that is costing African lives and American funds.

The question in these places is not "if" a drought will strike, but "when" it will come again. People who live there are survivors, and we should be doing more to help them become less vulnerable—so that they can better help themselves.

A gravity-fed irrigation project in northern Kenya, funded by

USAID since 1992, is the perfect example. In a region where acute malnutrition has increased to rates three to nine times what ordinarily is considered an emergency, the community it serves is the only one that hasn't needed emergency relief.

I saw it during my visit to Ethiopia and northern Kenya in August; it rose like a mirage from land so dry that even the sagebrush looked dead. If American taxpayers could see such a thing, they would be astonished at how good our investments in development are.

Unfortunately, Americans see a lot less foreign news than they

benefits of genetic engineering and other efforts to improve food production even better than we do.

Even where the common ground is narrower—say, worries about bad drinking water, HIV/AIDS, child labor or other plagues on developing nations—these priorities embody the human values we all share.

Too often, overly technical explanations have turned issues that should concern us all into inside baseball few can follow. The challenges of persuading both the public and policy-makers that famine prevention should be funded will demand new and creative approaches and a jargon-

The challenges of persuading both the public and policy-makers that famine prevention should be funded will demand new and creative approaches and a jargon-free presentation of the problems and solutions.

once did, but they are abundantly capable of understanding that, just as the world is increasingly complex, so might be the challenges to aid efforts. And there is a real basis for understanding. All human beings appreciate efforts to fight disease. A growing number of Americans appreciate the opportunities small businesses offer—especially if it's your own business, or microenterprise.

Education is no less important to people here than to those halfway around the world. And those who live closer to the land may understand the risks and

free presentation of the problems and solutions.

Given the complexity of the challenge, that won't be easy. But the reward could be a level of support that fulfills the promise of famine prevention, a possibility that makes trying to find ways to connect well worth the extra effort. ■

—Hall is ranking member of the House Rules and Organization Subcommittee of the Rules Committee. He is former chairman of the now defunct House Select Committee on Hunger and has traveled extensively worldwide to heighten awareness of world hunger.

By Gabrielle Bushman

USAID-funded AIDS study helps alert world to pandemic's impact

The populations of Botswana, South Africa and Zimbabwe will begin to decrease in 2003 because of the AIDS pandemic, and life expectancy will fall to between 30 and 40 years in those countries and many others. Already, infant mortality rates are higher in some countries than they were in 1990.

These findings of a USAID-supported U.S. Census Bureau study presented on the first day of the 13th International AIDS Conference in Durban, South Africa, dramatized the tragic impact that the AIDS pandemic is having on developing countries. The results of the study were reported to the conference by Dr. Paul DeLay, chief of USAID's HIV/AIDS Division, and Karen Stanecki of the Census Bureau.

This was the first time the international AIDS conference, which took place July 9 - 14, had been held in a developing country. It was also the largest conference ever held in Africa. Over 12,000 delegates, including 4,300 from Africa, were registered, plus 1,200 members of the media.

Children on the Brink

The devastating impact the disease will have on children in Africa by 2010 was outlined in *Children on the Brink 2000*, an update of USAID's 1997 report. Linda Sussman, of USAID's HIV/AIDS Division, presented the report to the Durban conference.

Already, in eight countries in sub-Saharan Africa, between 20 percent and 35 percent of children under age 15 have lost one or both parents. Children will be orphaned

House ups AIDS funding

On the closing day of the conference, USAID received news that the House of Representatives had voted to add \$52 million in new AIDS spending to next year's budget. The front page of *The Washington Post* reported that "Many lawmakers said they acted after alarming reports this week from an international conference in Durban, South Africa, about the spread of AIDS."

at these alarming rates in 11 countries by 2010.

By 2010, at least 44 million children will have lost one or both parents to all causes in the 34 countries most severely affected by AIDS. Where AIDS-related causes accounted for 16.8 percent of parental deaths in those countries in 1990, they will make up 68 percent of parental deaths in 2010.

Nelson Mandela Children's Fund

On the final day of the conference, USAID/South Africa hosted a signing ceremony to announce a \$5 million partnership between the Nelson Mandela Children's Fund and USAID. This partnership will provide orphans and vulnerable children special assistance through a three-to-five-year project aimed at strengthening the ability of families and communities to care for people with HIV/AIDS. Such community-based care is a vital weapon to fight the HIV/AIDS epidemic in South Africa.

Fighting stigma through voluntary counseling and testing

New studies in Africa show dramatic increases in demand for voluntary counseling and testing. Barbara de Zaldondo of USAID's HIV/AIDS Division, Elizabeth Marum of USAID/Malawi and Patrick Osewe of USAID/Zimbabwe presented new information showing that when voluntary counseling and testing services are made accessible, affordable and secure, more Africans want to know their HIV status. Dickiens Matombo of Macro International in Malawi described to reporters the devastating impact that being tested and learning his HIV-positive status had on his life.

LIFE Initiative

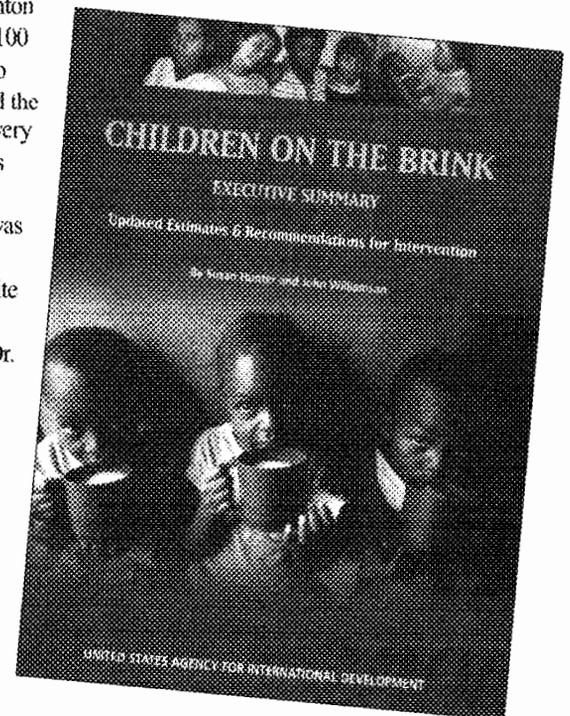
USAID sponsored a briefing on LIFE: Leadership and Investment in Fighting an Epidemic, the Clinton administration's \$100 million initiative to fight AIDS around the world. Vivian Lowery Derryck, USAID's assistant administrator for Africa, was joined by Sandra Thurman, the White House HIV/AIDS coordinator, and Dr. Helene Gayle of the U.S. Centers for Disease Control and Prevention in explaining steps taken during the first year of the initiative and

outlined goals for the future. USAID also scheduled site visits each day of the conference to provide the international media with opportunities to see the impact of AIDS on individuals, communities and development.

Since 1986, USAID has dedicated over \$1.4 billion to the prevention and mitigation of this epidemic in the developing world. USAID's HIV/AIDS budget of \$200 million this year is four times as great as the next-largest donor's budget. ■

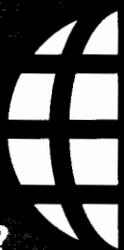
—Bushman is a senior press officer for USAID/State Department.

All press releases, fact sheets and reports released by USAID during the XIII International AIDS Conference are available at www.usaid.gov.



WHERE

In The
World
Are
USAID
Employees?



Moved On

Bordone, Thomas
Brown, Genese
Connery, Kathleen
Eisenbeis, Keri Ann
Elkins, Tim
Fleming, John
Hoover, Larry
Jacobs, Gary
Korponai, David
Prindle, Deborah
Rogers, Mariza
Sanchez, Nelson Jr.
Sarkar, Rumu
Seabright, Jefferson
Whitlock-Brown, Linda
Wolfe, Melinda

Promoted

Anderson, Chivon
Armstead, Delores
Atsalinos, Emmanuel
Bilder, Lisa
Blount, Chermell
Bowman, Lari Nicole
Corbett, Christina
Ferrao, Joaquin
Godden, John
Gray, Bryien
Greenlee, June
Gribble, Christine
Herbert, Mary
Jackson, Yvonne
Lee, Bessie
Levine, Neil
Marburg-Goodman, Jeffrey
Meenan, Vera
Miklaucic, Michael
Payne, Terry
Rosa, Donna
Sadler, Sharon
Scrivner, Tracy
Simpson, Karen

Spragley, Cynthia
Triplett, Kimberly
Williams, Theresa
Wilson-Thomas, Alfreda
Winston, Deidra

Reassigned

Alexander, Timothy, Egypt, project development officer, to supervisory project development officer
Aulakh, Ravinder, AFR/WA, program officer, to program economics officer, Nigeria
Bakken, Jeffrey, Bolivia, supervisory project development officer, to supervisory general development officer, Colombia
Ball Douglas, Hillary, RCSA, project development officer, to COMP/O/S/LT TRNG
Barberi, Kenneth, M/HR/PPIM/PP, executive officer, to contract specialist, M/OP/A/AOT
Bowers, Roxanna, E&E/EMI, secretary (office automation), to program operations assistant (office automation), E&E/MT/PO
Brems, Susan, Bolivia, supervisory general development officer, to supervisory health/population development officer
Brown, Christopher, G/EGAD/AFS/AEMD, agricultural development officer, to supervisory private enterprise officer, E&E/MT/SBA
Brown, Derrick, RCSA, financial management officer budget/analyst, to COMP/O/S/LT
Butler, Letitia Kelly, COMP/LT TRNG, foreign affairs officer, to director, LAC/RSD
Chambers, Elizabeth, COMP/NE/OJT, NEP (financial management), to supervisory financial management officer budget/analyst, Caucasus
Ellington-Banks, Barbara, G/EGAD/AFS/FP, agricultural development officer, to program officer, M/HR/POD-TEAM 5
Flavell, Carol Payne, Haiti, supervisory health/population development officer, to program officer, E&E/ECA
Fritz, Michael, AFR/SA, program officer, to supervisory executive officer, G/AMS
Grant, Stephen, El Salvador, general development officer, to program officer, AFR/WA

Harvey, Ronald, G/EGAD/AFS/AEMD, agricultural development officer, to mission director, Congo
Hudec, Susan, ANE/SPOTS/PMFA, supervisory budget analyst, to budget analyst, AFR/DP/PAB
Hughes, Barbara, COMP/NE/OJT, health/population development officer, to Zambia
Hunt, Kathleen, M/OP/A/HRN, contract specialist, to program analyst, BHR/FFP/DP
Kerst, Thomas, Bosnia-Herzegovina, private enterprise officer, to program officer, LAC/CEN
Kleinberg, Scott, Bulgaria, private enterprise officer, to E&E/MT/ILE
Klenicki, Ana, El Salvador, supervisory special projects officer, to democracy officer
Knox, Mary Hughes, PPC/DP, financial economist, to program analyst, G/WID
Lewis, Gary, COMP/FS/ REASSGN, program officer, to agricultural development officer, E&E/MT/SBA
Lightfoot, Harry, AFR/WA, supervisory regional development officer, to mission director, Benin
Lyons, Christine, REDSO/ESA, contract officer, to India
May, John, India, contract officer, to supervisory contract officer, Haiti
Miller, Paula, M/OP/OD, supervisory contract officer, to education development officer, M/HR/LS
Mohan, Charles, Ukraine, program economics officer, to COMP/FS/REASSGN
Nelson, Francesca, Egypt, population development officer, to supervisory program officer, Malawi
Newton, Gary, Egypt, supervisory health development officer, to health development officer, G/PHN/HN/HIV/AIDS
Ott, Mary Catherine, El Salvador, supervisory general development officer, to deputy mission director, Bangladesh
Pollock, Fred, RHUDO, housing/urban development officer, to supervisory rural development officer, Indonesia
Post, Glenn, Nepal, supervisory health/population development officer, to health development officer, G/PHN/HN/NMH
Rathbun, Daniel, E&E/MT/ILE, private enterprise officer, to supervisory private enterprise officer,

Bosnia-Herzegovina
Redman, Carolyn, ANE/ESA/ PHIL, program officer, to ANE/ESA
Rollins, Denise, Uganda, supervisory program officer, to supervisory project development officer, Nigeria
Rubey, Lawrence, Bolivia, supervisory agricultural development officer, to Food for Peace officer
Sabatine, Paul, G/ENV/UP, financial management specialist, to general business specialist, AA/G/DCS
Salem-Murdock, Muneera, G/WID, social science analyst, to program analyst, PPC/DP
Seegars, Michelle, M/AS/CPD, administrative & operations assistant (office automation), to administrative operations assistant (office automation), E&E/NCA
Smith, Scott, M/FM/APNP, accountant, to M/FM/CMP/GIB
Sorenson, Todd, El Salvador, special projects officer, to democracy officer
Soules, Donald, ANE/ESA/PHIL, program officer, to ANE/ESA
Sterne, Marx, AFR/DP/PAB, budget analyst, to special assistant, AA/G
Witherspoon, Margaret, Rwanda, controller, to supervisory financial management officer, Bolivia
Yates, Michael, Philippines, supervisory natural resources officer, to supervisory project development officer, Ecuador

Retired

Bergman, Jay
Brown, Terrence
Bucher, Clement
Goddard, Paula
Handler, Richard
Jenkins, George
Meehan, Robert
Miller, Thomas
Morse, Wendell Jr.
Olsen, Andrew
Pippitt, Cameron
Stoner, Benjamin
Wall, John Frederick Jr.

Obituaries

Amb. Samuel Adams, 79, died May 24 at home in Houston, Texas. Adams joined USAID's predecessor, the Economic Cooperation Administration, in 1952. He was part of the U.S. Special Technical and Economic Mission to Indochina, Saigon and Vietnam, and the U.S. International Operations Mission to Cambodia, and was chief of the Education Community Development and Health Division in the 1950s. Adams served in Nigeria, was USAID's mission director to Mali and to Morocco in the 1960s and was

U.S. special representative at the Fifth Special Session to the United Nations General Assembly (1967). After serving as U.S. ambassador to the Republic of Niger (1968 to 1969), Adams was USAID's assistant administrator for the Bureau for Africa from 1969 to 1975, when he retired from the agency.

Adams received numerous honors for his public service work, including the Rockefeller Public Service Award, USAID's Distinguished Honor Award, the Ralph Bunche Award from the Opportunities Industrialization Center, the Cross of the Ouizzan

Alouitea award from Morocco's King Hassan and the Arthur S. Fleming Award for the 10 most outstanding young men in federal service.

Joseph P. DeFonzo, 73, died June 1 at Holy Cross Hospital in Silver Spring, Md. After serving in the Army, DeFonzo worked for the State Department and joined USAID's predecessor agency in the 1950s, where he assisted visiting foreign delegations with interpreters.

Nan Ronschein, 92, died in May in Kennet Square, Pa. Ronschein joined USAID's predecessor agency in the 1950s and served in Guinea, Cote

d'Ivoire, Morocco and Tunisia. Before joining USAID, she worked for the American Joint Distribution Committee in Paris and Israel. She retired from USAID in the 1970s.

Oscar P. Yost, 74, died July 10 of a heart attack at home in Vienna, Va. Yost taught elementary school for a short time in Falls Church, worked for the FBI and served in the Army in Europe in World War II before joining USAID's predecessor agency in 1955. He was deputy director for security when he retired from the agency in 1980.

"Seeds of Hope"

(continued from page 13)

their vulnerability to natural disasters in the future. Geographic Information System technology is also being used to maximize the relief effort's efficiency with detailed information on topography, rivers, drainage, soils, crops, roads, bridges, and more, combined with satellite images taken before and after the hurricane, to develop a new digital atlas of Honduras. The resulting frequently updated maps provide an extraordinarily detailed picture of the worst-hit agricultural areas, which guide the efforts of local and international relief organizations and will help national partners determine which areas are most suitable for replanting. To date, about 22,000 farmers and their families have benefited from the project.

In less than a decade, USAID support has helped bring about a

fundamental change in the way that the international agricultural research centers of the CGIAR view their roles and responsibilities in disaster prevention and mitigation. USAID's investment in the CGIAR centers for more than 20 years has provided the foundation for the mobilization of partners and technologies. With USAID's Office of U.S. Foreign Disaster Assistance support, the CGIAR is now working to develop a package of comprehensive, coordinated strategies and tools — based upon research — that illustrate to donors and policy-makers the importance of being prepared for disaster situations. ■

—Levin is an agricultural research specialist in the Global Bureau's Economic Growth and Agricultural Development Agriculture and Food Security Division. The CGIAR centers provided material for this article.

December Front Lines to highlight USAID employees

Front Lines December issue will be devoted to USAID employees in the field and in Washington. If you have suggestions for current or past co-workers who would be good subjects for features because of their careers, volunteer work or other professionally related activities, call, E-mail or write us. Material should be submitted to Editor, Front Lines, USAID, Washington, D.C. 20523. Phone (202) 712-4330, Fax (202) 216-3035, E-mail: anesmith@usaid.gov.

We will also showcase outstanding photographs by USAID employees that highlight agency activities, conditions and people in our host countries. This holiday issue will be our own time to shine and learn more about each other.

Share your best prints, slides, negatives or high resolution digital photographs (200 dpi or higher) and your favorite stories about USAID people. Deadlines: for suggestions, Nov. 6; for completed articles and pictures, Nov. 30.

Famine Early Warning System

(continued from page 4)

the underlying food security problems of the vulnerable groups that FEWS NET helps to identify," he said. Whelan credits Associates in Rural Development (the previous FEWS contractor) "for helping its talented African field staff to grow into strong technical leaders needed to build effective networks within their countries."

Using data from NASA and NOAA satellites, NOAA analyzes rainfall estimates for 17 countries in three sub-Saharan African regions, analyzing when cropping seasons begin, whether rainfall failures will lead to a failed start of the growing season, and the possibility of flooding. NASA and USGS provide data and analyses about whether important land surface areas are "greening up" normally. The U.S. Geological Survey processes these and other data and makes them available to FEWS NET staff and regional institutions in East, Southern and

West Africa so that national meteorology departments have easy access to the NOAA, NASA and USGS data and analyses. When satellite pictures show apparent anomalies in vegetative growth,

slow-onset flooding, in response to the floods that recently devastated the Southern African region. The Supplemental Appropriation for Southern Africa Flood Rehabilitation and Construction,

for the at-risk communities, the exercise has already earned the nickname "NOAA's ARC."

The new FEWS NET Web site, provides full field reports on a monthly basis in an easily accessible format that is more current than when FEWS published its hard copy bulletin. Chemonics also E-mails highlights from these monthly reports on a regular basis to a list of key users in Washington and the field. Ten-day rainfall estimate images, greenness images and other satellite-based data and information can also be found on NOAA- and USGS-related Web sites. A critical aim of FEWS NET is to make it possible for in-country Internet-based networks to be used effectively to: (a) help communities prepare for and respond to drought and flood threats; (b) assist private sector traders identify areas likely to experience food deficits; and (c) help government officials make better food security policy and program decisions. ■

***[The FEWS] African field representatives [are]
"the unheralded heart, soul and future of this
operation..."***

FEWS NET field representatives verify the information on the ground and determine whether an early warning needs to be publicized. Under FEWS NET, NOAA and USGS will provide USAID with briefings on rainfall levels and patterns and other related climatological events, such as El Nino and La Nina cycles in the Pacific Ocean, which often cause extreme weather in Africa and elsewhere.

FEWS NET has also become involved in early warnings for

approved by Congress in August, will support a regional preparedness and early warning component in which FEWS NET will play a part. Over the next two years FEWS NET will be linking climate and weather-threat information to rainfall and flood early warning systems that directly benefit "flood-at-risk" communities. Since the early warning and preparedness component will be linking NOAA's data to USGS flood threat analyses that are useful

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